

Questioni di Economia e Finanza

(Occasional Papers)

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EVIDENCE ON IFRS 9 IMPLEMENTATION FROM A SAMPLE OF ITALIAN BANKS AND OTHER FINANCIAL INTERMEDIARIES

by Francesco Giovannini* and Antonio Schifino*

Abstract

Since its entry into force, IFRS 9 has posed significant challenges to financial institutions, partly due to its principle-based nature, which leaves room for the adoption of a wide range of practices, as confirmed by the COVID-19 experience. Given the importance of a sound IFRS 9 implementation, also for supervisory purposes, Banca d'Italia conducted a survey on a sample of banks and non-bank financial institutions to monitor the approaches adopted during the pandemic. The evidence confirms the use of diverse practices, some of which could hamper a sound implementation of IFRS 9 by leading to underestimated ECL or delayed stage transfers. These effects would in turn have a negative impact on institutions' own funds and on the indicators used for supervisory purposes. Moreover, a sound implementation of a financial stability perspective, as the adoption of appropriate provisioning practices helps to mitigate the risk of pro-cyclical effects arising from a possible sudden increase in credit losses during an economic downturn.

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1. Introduction (¹)

IFRS 9 introduced significant changes in the accounting treatment of financial instruments. One major change was the introduction of an impairment model based on the estimation of Expected Credit Losses (ECL), which replaced the incurred loss model established under the previous regime (IAS 39). Since its entry into force in 2018, IFRS 9 has posed material challenges to banks and other financial institutions. Indeed, given its principle-based nature, IFRS 9 leaves room for the application of different practices for the estimation of ECL and the assessment of the Significant Increase in Credit Risk (SICR), thus granting a higher degree of flexibility compared to the detailed rules on credit risk models used for prudential purposes. Moreover, IFRS 9 introduced a requirement to incorporate forward looking information in the measurement of ECL, which adds an extra layer of complexity in the provisioning for credit risk, especially in contexts of high uncertainty, as in the case of the COVID pandemic.

Robust implementation of IFRS 9 is of paramount importance for supervisors, since accounting figures represent the starting point in the definition of the capital requirements for banks and non-bank financial institutions. Robust implementation is also highly relevant for financial stability, since the adoption of the appropriate provisioning policies helps to mitigate pro-cyclicality risks arising from a sudden increase in ECL during economic downturns. The role of supervisors with regard to the accounting choices of supervised entities is clearly affirmed in EU Directive 2013/36 ("CRD4"), which requires institutions to adopt adequate internal control mechanisms, as well as sound administration and accounting procedures. $(^2)$

In light of the aforementioned complexity embedded in IFRS 9, and given the importance of its sound implementation, also for supervisory purposes, in 2022 Banca d'Italia conducted a survey on a sample of less significant institutions (LSI) and non-bank financial intermediaries under its direct supervision – in line with the IFRS 9 benchmarking exercise conducted by the EBA on large European banking groups – in order to monitor the methodological approaches adopted during the pandemic. The evidence garnered from the survey is illustrated in this paper.

The text is organised as follows. After a brief introduction of the methodology and the sample of the exercise (Section 2), the following sections present the evidence observed on the: i) use of management overlays (Section 3); ii) main drivers of ECL across the time span of the exercise (Section 4); iii) trends observed for the IFRS 9 12-month PD (Section 5); iv) practices adopted for the purposes of assessing the Significant Increase in Credit Risk (SICR) and the stage allocation (Section 6); and v) approaches used to incorporate forward looking information in the ECL measurement (Section 7). Section 8 concludes.

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 $^{^2}$ Furthermore, CRD 4 requires competent authorities to ensure the adequacy of systems applied by the supervised entities to identify and manage problem credits and to make adequate provisions; to this end, the Directive requires that competent authorities shall have the power to require institutions to apply a specific provisioning policy or treatment of assets in terms of own funds requirements.

2. Methodology and sample

In line with commonly used methodologies for comparing the outcomes of different models, this exercise was conducted based on a sample of around 1,800 non-financial counterparties reported in the Italian Credit Register (CR) in 2021 by at least 5 financial institutions.⁽³⁾ The objective of using a sample of common counterparties was to disentangle the effects of different modelling choices from the effects of divergent risk profiles in the analysed portfolios. The CR ("Centrale dei Rischi") is a database managed by the Banca d'Italia that collects – on a client-by-client basis – data from banks and other financial institutions on the loans granted and guarantees provided to their customers (households and firms).

In order to avoid biases stemming from the different maturities of the exposures, the analyses on both ECL and the underlying risk parameters were conducted with a 12-month time horizon, including for stage 2 and stage 3 exposures, where IFRS 9 requires measuring ECL over the entire residual maturity of the exposures (lifetime ECL).

The exercise was conducted through a quantitative data collection and a qualitative survey, both of which referred to the following reporting dates: December 2019, December 2020 and December 2021. The quantitative templates were used to collect data on ECL and the underlying risk parameters (e.g. PD, LGD); the qualitative analysis focused on the approaches used by the intermediaries to implement their IFRS 9 impairment models.⁽⁴⁾

The exercise presents some limitations that need to be taken into account for a correct interpretation of the results:

- number of institutions involved: due to the nature of the exercise, the financial institutions were chosen based on a sample of common counterparties in their loan portfolios (see Annex for further details); therefore, the sample is not necessarily representative of the Italian banking and non-banking financial sector;
- time horizon of the parameters: as mentioned above, the quantitative analyses on ECL and PD are based on a 12-month horizon, even for those exposures for which IFRS 9 requires a lifetime ECL. This choice is aimed at enhancing the significance of the benchmarking analyses by allowing us to compare parameters on a consistent basis, by removing biases stemming from the different maturities of the underlying exposures;
- assessment of *management overlays*: the impact of manual adjustments to model results (i.e., *management overlays*) (⁵) was estimated based on the data provided by the financial institutions in the quantitative templates.

The evidence collected showed a limited impact of loss given default (LGD) trends for the institutions in the sample, mainly due to the fact that intermediaries generally reflected the effect of public guarantee

³ Further details on the counterparties are presented in the Annex.

⁴ The qualitative survey allowed to collect further evidence on: i) the use of management overlays, ii) the SICR assessment and iii) the incorporation of forward looking information in ECL.

⁵ This term refers to manual adjustments of different nature applied to ECL models in order to reflect model deficiencies, lack of data or events and risk factors not adequately captured by the models.

schemes (PGS) in the estimation of ECL through ECL overlays, rather than via the LGD estimates.⁽⁶⁾ For this reason, the paper focuses more on those factors that significantly affected the ECL measurement during the pandemic crisis, including: i) the use of overlays; ii) the observed PD trends; iii) the approaches used to assess the significant increase in credit risk (SICR); and iv) the approaches adopted by the financial institutions to incorporate forward looking information in the ECL.

The exercise involved 45 financial institutions (Chart 1):

Institutions in the sample		
Banks (LSIs)	21	
Leasing	19	
Factoring	5	
Total	45	

3. Management overlays

Insight: The use of management overlays



IFRS 9 does not provide a definition of "*management overlay*". However, this term is generally used to refer to different types of manual adjustments to ECL models in order to compensate for limitations related to model deficiencies or the lack of reliable data, or to reflect the implications stemming from specific events or risk factors that are not appropriately captured by the ordinary models.

As highlighted by prudential regulators and supervisors,(⁷) overlays can represent a useful tool for reflecting emerging risk factors in the ECL models, to the extent that the overlays are subject to robust governance and supported by verifiable evidence and sound methodologies. However, overlays should be risk-sensitive and used to address specific issues.(⁸) Moreover, their application must not be considered as an alternative to the stage 2 transfer when a significant increase in credit risk occurs. Against this backdrop, it is paramount that the use of overlays is associated with appropriate practices, based on collective assessment methodologies, and aimed at ensuring a timely transfer to stage 2 of

⁶ See Section 4 on Expected Credit Losses.

⁷ See Basel Committee on Banking Supervision (2015), Guidance on credit risk and accounting for expected credit losses and ECB (2023), Overlays and in-model adjustments: identifying best practices for capturing novel risks.

⁸ In this sense, the use of overlays aimed at covering a broad spectrum of unrelated risks and/or multiple portfolios or borrower groups with different underlying credit risk characteristics (i.e. umbrella overlays) have not been considered as an appropriate practice.

exposures toward the most vulnerable sectors.⁽⁹⁾ This is particularly important when overlays are applied directly at the ECL level, since this choice generally does not affect the SICR assessment.⁽¹⁰⁾

Moreover, as mentioned in the EBA Guidelines on accounting for expected credit losses,(¹¹) management overlays should be used as temporary solutions when there is insufficient time to appropriately incorporate relevant new information into the existing modelling process. Therefore, financial institutions should identify limitations to their models in order to minimise the amount of time that overlays remain in place and to incorporate all the relevant risk factors in their models.

These considerations become even more important in the current economic context, given the emergence of new risk factors (e.g. geo-political risks, supply chain disruptions, inflationary pressures), which may be not adequately captured by IFRS 9 models and, as such, may require the introduction of new types of overlays, in addition to those previously introduced during the pandemic.

The 2020-21 pandemic highlighted the limitations of ECL models, pushing banks and other financial institutions to make wider use of management overlays to take into account the extraordinary circumstances related both to the pandemic and the public support measures introduced by governments worldwide. In order to assess the implications stemming from the use of overlays, the institutions participating in this exercise were required to indicate those exposures on which overlays were applied, specifying whether the related adjustments were introduced directly at the ECL level (so-called "*ECL overlays*") and/or at the level of the risk parameters used in the ECL measurement (e.g. PD, LGD); for these exposures, the institutions were then asked to provide information on the impact of the overlays on the ECL amount resulting from the IFRS 9 model.(¹²)

In 2019, only 25% of the institutions in the exercise had applied adjustments to their IFRS 9 models, mainly with the aim of rectifying data gathered from external providers or to incorporate in their models the effects of specific transactions or events (Chart 2).

⁹ See section 6 on SICR assessment and staging allocation.

¹⁰ See ECB (2023), Overlays and in-model adjustments: identifying best practices for capturing novel risks, according to which: "banks using "overlays at total ECL level" did not reflect the risks driving ECL overlays in their stage 2 classifications. They correctly assumed that increased credit risk should lead to increased provisions within a certain stage, but they simply disregarded the fact that increased credit risk also requires transfers to stage 2. This practice is not just contradictory; it also leads to insufficient risk coverage."

¹¹ See EBA (2017), Guidelines on credit risk management practices and accounting for expected credit losses.

¹² In terms of increase or decrease of the ECL resulting from the model.



Chart 2: Application of management overlays by the institutions in the sample

The left side of the chart provides information on the use of management overlays by the institutions in the sample, distinguishing between: i) those overlays applied at the level of risk parameters (e.g. PD, LGD) and ii) those applied directly at the ECL level (i.e. ECL overlays). Further information on the rationale underlying the use of the ECL overlays is provided in the right side of the chart, with specific reference to those institutions which already applied ECL overlays in 2019 (i.e. before the pandemic crisis).

Following the COVID-19 outbreak, a wider use of overlays was observed. Indeed, by the end of 2021 approximately 70% of the institutions in the sample reported the application of overlays, in order to: i) compensate for limitations in credit risk data, by incorporating in the ECL measurement the effects of public guarantee schemes (PGS), as well as uncertainties related to the creditworthiness of exposures subject to moratoria; and ii) analyse in more detail the impact of the pandemic crisis on the most vulnerable sectors, with particular reference to ECL measurement and SICR assessment.(¹³)

Generally, the financial institutions introduced management overlays at the ECL level; only in limited circumstances were overlays applied either at the level of the risk parameters used in the ECL measurement (e.g. PD, LGD), or to adjust the assumptions and data input underlying the IFRS 9 models (¹⁴) (so called *"in-model adjustments"*).(¹⁵) In this regard, a specific case is represented by overlays related to exposures subject to PGS. Indeed, in this case, more than the 40% of the sample applied

¹³ See section 6 on SICR assessment and staging allocation.

¹⁴ Such an evidence, however, mainly depends on the circumstance that most of the institutions in the sample rely, for the purpose of measuring ECL, on PD and LGD data provided by external outsourcers. In this case, applying ECL overlays is generally the only feasible option, since institutions may not be allowed to directly adjust the PD and LGD estimates developed by the external provider.

¹⁵ In this context, the term "*in-model adjustments*" refers to those adjustments that are performed inside of the IFRS 9 model, either before or during its run time. For instance, adjustments to the model input (e.g. overrides to the component of the forward looking information), adjustments to the model parameters (e.g. on PD model input parameter), or ad-hoc adjustments/recalibration to the model. These adjustments differ from "*post model adjustments*", which result in adjustments to the estimates/data output resulting from the IFRS 9 models, including any adjustments to the final ECL amount (i.e. ECL overlays).

overlays in order to distinguish between the unsecured and the secured component of the exposure, alternatively by applying an ECL overlay or by introducing an overlay at the level of the EAD parameter.

Notwithstanding the greater use of overlays observed during the pandemic, their impact in terms of the ECL amount varied significantly across the sample. This was a consequence of the different methodologies and practices used for calculation, especially with regard to exposures subject to PGS. This is confirmed by the evidence presented in the following Charts 3 and 4, which provide an overview of the impact of ECL overlays on ECL measurement (¹⁶) during the period 2020-2021.



Chart 3: Impact of ECL overlays on the exposures towards the common counterparties

Chart 4: Impact of ECL overlays on the exposures towards the common counterparties (excluding exposures subject to PGS)



The above charts show the contribution of ECL overlays in terms of increase/decrease in the amount of expected credit losses, for those institutions in the sample that applied such overlays during the pandemic (2020-2021). Since in most of the cases the public guarantee

¹⁶ Determined by the ratio between: i) the increase (or decrease) in the amount of expected credit losses due to the effect of ECL overlays, estimated on the basis of data collected through the quantitative templates and ii) the total amount of expected credit losses (i.e. accumulated impairment) related to the exposures toward the common counterparties identified for the purposes of the benchmarking exercise.

schemes (PGS) resulted in a decrease in the ECL estimates compared to the data resulting from the IFRS 9 models, the above charts provide an overview of the contribution of overlays both including (Chart 3) and excluding (Chart 4) exposures subject to PGS.

For some institutions, overlays represented a material component of the estimated expected credit losses, while in many other cases their impact in terms of increase/decrease in ECL was quite limited. The difference in these outcomes may be related to the judgemental nature of the methodology used by the institutions to determine the amount of overlays, which, *de facto*, increases the degree of judgement already embedded in certain aspects of the IFRS 9 impairment model. In this regard, it is worth noting that certain common phenomena, for instance the effects of public guarantee schemes (PGS), were reflected in the ECL using overlays based on different practices and assumptions.

Indeed, as shown in Chart 5, the institutions in the sample mainly reflected the impact of PGS within the LGD parameter (34% of the sample) (¹⁷) or via overlays aimed at distinguishing the unsecured and secured components of the exposures subject to PGS (43% of the sample).(¹⁸) Some institutions (14% of the sample) adopting credit risk models for regulatory purposes also applied for accounting purposes the so-called "*substitution approach*" in line with the methodology followed in the prudential regime.(¹⁹) This aspect deserves further consideration, since using the *substitution approach* for accounting purposes could have some unintended effects on the SICR assessment; indeed, since the PD of the original counterparty is replaced with the PD of the guarantor, this approach potentially could result in a delay in the recognition of a significant increase in credit risk and thus in the transfer to stage 2. In the remaining cases, the impact of PGS was reflected via ECL overlays (9% of the sample).

In addition to differences in the methodological practices applied, even the assumptions on the impact of PGS were found to differ significantly across the sample institutions. In some cases, the ECL measurement was adjusted by attributing to the secured component of the exposure a coverage level equal to the coverage level applied to Italian sovereign bonds, while in other cases a nil expected loss amount was applied to that component. Furthermore, in certain limited circumstances, the adoption of additional overlays at the PD or LGD level was observed in order to increase the coverage ratio of the exposures subject to PGS, compared to the level generally applied in the case of Italian sovereign bonds.

¹⁷ Out of which the 11% via overlays at the LGD level and the remaining 23% by considering the effect of the guarantee in the model used to estimate the LGD parameter used for the purpose of the ECL measurement.

¹⁸ More specifically, those institutions reported to measure the ECL on exposures subject to PGS by applying a different coverage to the secured part of the exposure. This result was achieved alternatively by applying an ECL overlay, or by introducing an overlay at the level of the EAD parameter.

¹⁹ Based on this approach, the PD of the exposure are replaced with those of the guarantor, in line with the approach followed for prudential purposes.





Based on the information provided by the institutions participating in the survey, it seems that, whilst in 2022 the impact of COVID-19 overlays was progressively reduced, new overlays were introduced to the IFRS 9 models in order to incorporate uncertainties related to the conflict in Ukraine, as well as other emerging risk factors such as those related to supply chain disruptions and inflationary pressures. Therefore, even in coming years, improving the practices and methodologies related to the use of overlays will continue to be of paramount importance for banks and other financial institutions, in order to ensure the incorporation – both in the ECL estimates and in the SICR assessment – of events and risk factors that are not adequately captured currently in the IFRS 9 models. However, as emphasized by prudential regulators, it is expected that overlays will be of a temporary nature,(²⁰) subject to robust governance, and supported by the appropriate documentation and methodologies.(21) This could pose significant challenges, especially for small institutions, requiring significant effort to enhance the governance mechanisms related to the use of overlays, as well as for identifying weaknesses in the current IFRS 9 models and implementing the most appropriate and effective remediation measures. Where overlays are applied in order to compensate for structural model deficiencies or for limitations related to recurring significant risk factors, the expectation of prudential regulators is that their use will be considered a temporary solution, pending the implementation of the appropriate enhancements to the core models. $(^{22})$

²⁰ See EBA "Guidelines credit risk management practices and accounting for expected credit losses", according to which: "Credit institutions should use temporary adjustments to an allowance only as an interim solution, in particular in transient circumstances or when there is insufficient time to appropriately incorporate relevant new information into the existing credit risk rating and modelling process [..]. Such adjustments should not be continuously used over the long term for a non-transient risk factor. If the reason for the adjustment is not expected to be temporary, such as the emergence of a new risk driver that has not previously been incorporated into the institution's allowance methodology, the methodology should be updated in the near term to incorporate the factor that is expected to have an ongoing impact on the measurement of ECL.".

²¹ See Basel Committee on Banking Supervision "Guidance on credit risk and accounting for expected credit losses", according to which: "*Temporary adjustments should be directionally consistent with forward-looking forecasts, supported by appropriate documentation, and subject to appropriate governance processes*". Similar considerations were also set out by the ECB, in the December 2020 Dear CEO letter.

²² This, unless the related impact is considered immaterial or any enhancement to the models would result in disproportionate costs.

Main takeaways

The pandemic crisis highlighted the limitations of the ECL models, pushing banks and other financial institutions to make wider use of management overlays in order to take into account the extraordinary economic circumstances related to the pandemic and the public support measures that were introduced. However, the impact of these overlays on the amount of expected credit losses varied significantly across the institutions in the sample, as a consequence of factors such as the differences in the assumptions underlying the overlay estimates and the degree of judgement embedded in the methodology used for their calculation.

Moreover, while most of the banks in the sample reported applying overlays directly at the ECL level, a limited use of the collective assessment of SICR was observed. This aspect should represent an area for further improvement by institutions, in order to ensure a timely transfer to stage 2 of exposures related to vulnerable sectors, since – as also highlighted by the ECB $(^{23})$ – ECL overlays generally lack of risk sensitivity and are not reflected in stage 2 classification.

4. Expected Credit Losses

Insight: Approaches for ECL measurement under IFRS 9

Unlike the prudential credit risk framework, IFRS 9 does not prescribe any specific model to estimate expected credit losses; therefore, financial institutions are left with a margin of discretion to develop models and practices, within the IFRS 9 requirements on the minimum elements to be reflected in the ECL measurement (e.g. forward looking information). In this regard, the most widely spread approaches in the financial industry are the following:

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- model-based approaches according to which ECL are determined by multiplying PD, LGD and EAD. The risk parameters used are often developed leveraging on models used for prudential purposes and duly adjusting them to reflect IFRS 9 requirements;
- model-based approaches according to which ECL are estimated starting from the observed loss rate, which is then duly adjusted to incorporate the current economic condition and forward looking information, as required by IFRS 9;
- analytical approaches, based on which ECL measurement leverages on the analyst's expert judgment of historical trends, current information and forward looking information. This approach is generally used to estimate ECL for stage 3 exposures (i.e. unlikely to pay, past due and bad loans), while its use for stage 1 and stage 2 exposures is mainly limited to idiosyncratic cases.

As described in the previous section, the unprecedented crisis that followed the pandemic outbreak led to a progressive increase in the contribution of management overlays to the total ECL estimated by financial institutions (Chart 6). Furthermore, despite the improved economic outlook in 2021, many institutions did not release the overlays applied during the first stages of the pandemic; to the contrary, some increased the use and/or magnitude of the overlays, in order to reflect in the ECL the uncertainties

²³ See ECB (2023), Overlays and in-model adjustments: identifying best practices for capturing novel risks.

in the macroeconomic environment and the higher degree of risk for exposures still subject to moratoria.⁽²⁴⁾



Chart 6: Overlays impact on ECL coverage (on a 12-month horizon)

The above chart shows the impact of overlays on the average ECL coverage of exposures towards the common counterparties, reported by the institutions in the sample for the period 2019-2021. The overlays impact was calculated in terms of higher(lower) ECL stemming from the use of overlays,(²⁵) as a percentage of the accumulated impairment for exposures towards the common counterparties. As further explained in section 2, the analysis was limited to the ECL estimated over a 12-month horizon also for exposures in stage 2 and stage 3, in order to avoid biases stemming from the different maturities of the exposures.

Besides overlays, the PD is the main driver of ECL, as demonstrated by the comparison between the trends observed for 12-month PD and 12-month ECL coverage over the time span of the exercise (Chart 7). Indeed, the analysis showed that for a significant number of institutions in the sample, the change in expected credit losses was mainly influenced by the change in PD.

²⁴ See also section 1 on management overlays.

²⁵ The ECL amount stemming from the use of overlays was obtained based on the quantitative data submitted by the institutions for the exposures towards the common counterparties.



Chart 7: Comparison between 12-month ECL coverage and 12-month PD between 2019 and 2021

The above chart compares the 12-month ECL and 12-month PD trends observed across the time span of the exercise for the institutions in the sample.⁽²⁶⁾ Institutions in the white "corridor" showed a significant alignment between 12-month ECL coverage and 12-month PD trends between 2019 and 2021, while those in the yellow and red areas showed a change in the ECL coverage, respectively, higher and lower than that observed for the PD. The majority of the institutions falls into the white "corridor", meaning that a substantial alignment between ECL and PD trends was observed across time; this evidence reinforces the expectation that, besides the overlays impact, the PD represents the main driver of ECL. As for the rest of the institutions, the difference is mainly due to the change in LGD over time; the institutions at stake are specialised in leasing and therefore, the ECL estimation is significantly affected by the value of the leased item included in the LGD (see also Chart 8).

This conclusion is reinforced by the evidence obtained with regard to LGD. The majority of institutions in the sample showed a marginal change in LGD over time (Chart 8). Among other factors, such evidence is partly due to the widespread practice of including the effects of public guarantee schemes via overlays, instead of including them in the LGD estimation.⁽²⁷⁾ Lastly, the institutions that had the more significant changes in LGD are mainly those specialised in leasing.

²⁶ The 12-month trend for both ECL coverage and PD is represented in terms of relative change. For the sake of consistency, the ECL coverage considered in the analysis does not include the effects stemming from risk parameter overlays (i.e. applied on PD, LGD or both), but solely those applied directly to the ECL amount resulting from the model (ECL overlays); accordingly, the 12-month PD levels used for the analysis include the effects of overlays applied at PD level.

²⁷ See also section 1 on management overlays.

Chart 8: 12-month LGD trend between 2019 e 2021



The above chart presents, for each institution, the comparison between the relative changes in LGD observed in 2020 (horizontal axis) and in 2021 (vertical axis) for the common counterparties. More specifically:

- institutions in the green area reported higher average LGD levels in 2021 compared to 2020;
- for institutions in the white "corridor", the LGD levels reported for 2021 are in line with the previous year;
- for the sake of completeness, in case there were institutions in the yellow area, those would have showed a decrease in LGD between 2020 and 2021.

The chart shows that majority of the institutions in the sample did not show significant changes in their LGD estimates across the time span of the exercise.

As mentioned above, due to the limited impact of LGD trends for the institutions in the sample, no further analyses were conducted on this parameter.⁽²⁸⁾ Instead, this paper focuses on the factors that influenced the ECL measurement the most during the pandemic crisis: i) the use of overlays; ii) the observed PD trends; and iii) the approaches used for assessing the significant increase in credit risk (SICR). Specific analyses were also conducted on the approaches adopted by the sample institutions to incorporate forward looking information in the ECL, taking into account that it represents a specific IFRS 9 requirement.

Main takeaways

The institutions in the sample mainly apply models based on PD, LGD and EAD, while the use of loss rate-based approaches is marginal (²⁹) and analytical approaches are generally limited to stage 3 exposures. The adoption of similar models by the institutions in the sample represents an additional element supporting the reliability of the results, reducing the risk of biases stemming from structural differences in the models. Such evidence is in line with the results of the EBA benchmarking exercises on large European banks (³⁰) and suggests that models based on PD, LGD and EAD are more widespread among financial institutions because of the possibility to derive the risk factor estimates

²⁸ Moreover, the differences in the nature, quality and amount of guarantees could have affected the reliability of any benchmarking analysis; to avoid this, further analyses on the LGD should have been limited to the unsecured exposures, with the consequence of reducing the sample and therefore, the relevance of the benchmarking analyses.

²⁹ More specifically, the loss rate approach has been explicitly mentioned by only one institution in the sample.

³⁰ EBA (2021). IFRS 9 monitoring report.

from those used for prudential purposes. Furthermore, even for less complex financial institutions that do not have internal risk based models for prudential purposes, the use of accounting models based on PD, LGD and EAD is common due to the widespread use of this approach by external providers.

The majority of the institutions in the sample showed a significant alignment between ECL and PD trends across the time span of the exercise; at the same time, for a majority of the institutions in the sample there was limited change in the LGD estimates from 2019 to 2021, despite the change observed in the ECL. This evidence suggests that, without taking into account the effect of overlays, the PD represents the main driver of the ECL variations.

5. 12-month PD

Insight: Main features of IFRS 9 PD

As explained in the previous section, while IFRS 9 does not prescribe a specific approach to calculate ECL, the institutions in the sample mainly apply models based on PD and LGD. Notwithstanding some commonalities with the models required by the prudential regulation on credit risk, the IFRS 9 framework has significant differences that influence, among other factors, the PD estimation methodology.

A first difference between IFRS 9 and the prudential credit risk framework is the time horizon over which expected credit losses are estimated. While for prudential purposes credit losses are estimated over a 12-month horizon, IFRS 9 requires a 12-month based estimate only for those exposures for which there was no significant increase in credit risk since origination; for all other exposures, a lifetime horizon is required under IFRS 9 for the ECL measurement.

Moreover, although IFRS 9 does not prescribe a specific methodology to estimate PD, it requires that entities measure expected credit losses in a way that reflects reasonable and supportable information about current conditions and forecasts of future economic conditions.(³¹) Therefore, compared to those used for prudential purposes, IFRS 9 PDs are by nature *Point in Time* (PiT) and *forward looking*;(³²) moreover, by also including information on expected macroeconomic scenarios, IFRS 9 PDs tend to be more sensitive to economic cycles compared to the prudential PDs. Further evidence on the sensitivity of IFRS 9 PDs to the economic cycle was collected during discussions held with the institutions in the sample. Indeed, the improved macroeconomic forecast in 2021 would have led to a decrease in PD and, ultimately, to a release of provisions; in order to avoid that, many institutions applied either PD or ECL overlays.

Another aspect to be thoroughly assessed is the effect that public support measures (especially moratoria) had on observed default rates and how this affected PD estimation. As public support measures helped to prevent a sudden increase in defaults, this also affected the representativeness of the default rates observed in 2020 and 2021, which are used as input to estimate PDs. In this regard, the EBA invited institutions to assess whether there are indications of non-representativeness of the most

³¹ IFRS 9, paragraph 5.5.17.

³² As regards the estimation of prudential PDs, the regulatory framework requires their calibration to be based on the longrun average default rate (LRADR), which should reflect a full economic cycle. Therefore, PDs used for prudential purposes tend to have a Through the Cycle (TTC) nature and to be less affected by the economic cycle, in order to produce less volatile credit risk estimates.

recent observed default rates and, if that is the case, to postpone the re-calibration of IRB models.(³³) Although the EBA specifically was referring to models used for prudential purposes, the same assessment should be made by institutions for accounting purposes, taking into account the IFRS 9 requirement on the representativeness of information used to estimate ECL.

Notwithstanding the uncertainties in the economic environment caused by the pandemic crisis, the variability in PD estimates among institutions remained substantially stable across the time span of the exercise; a limited increase was observed in 2021, due to the different ways the institutions in the sample reacted to the improving macroeconomic outlook (Chart 9).(34)



Chart 9: 12-month PD deviation from benchmark across the time span of the exercise

The above chart represents each institution's position compared to the PD benchmark, across the time span of the exercise.⁽³⁵⁾ *The results were obtained as follows:*

- a. for each common counterparty, a benchmark PD was obtained as the simple average of the PDs assigned to the same counterparty by the institutions in the sample;
- b. for each institution, a measure of its conservativeness in the PD estimates relative to the benchmark was obtained as the average of the institution's deviations from benchmark PDs observed for each counterparty across the time span of the exercise;
- c. for each institution, the average deviation from the benchmark PD observed in December 2019 (before pandemic) was then compared to the average deviation in December 2020 (red chart) and in December 2021 (blue chart), in order to

³³ EBA (2022). Principles that should be applied in ensuring representativeness of the IRB-relevant data impacted by the COVID-19 pandemic and related measures.

³⁴ The table in Chart 9 reports the 12-month PD variability in terms of the interquartile range of deviations from benchmark PD observed for the institutions in the sample.

 $^{^{35}}$ Stage 3 exposures (with PD = 1) were excluded from the analysis, in order to increase the significance of the benchmarking.

assess how each institution's position relative to the benchmark PD changed across time. Therefore, the above charts present:

- on the horizontal axis, each institution's average deviation from benchmark PD on December 31st, 2019;
- on the vertical axis, each institution's average deviation from benchmark PD, respectively, on December 31st, 2020 (red chart) or December 31st, 2021 (blue chart);
- in the white "corridor", those institutions for which the position relative to the benchmark in 2020 (red chart) or in 2021 (blue chart) did not significantly change compared to 2019.

As reported in Chart 10, the 12-month PD trend in 2021 was heterogeneous across institutions in the sample:

- in some case, PD estimates in 2021 were aligned to those in 2020;
- many institutions, instead, reduced their PD estimates as a result of the improved economic outlook; notwithstanding this reduction, these institutions reported PD levels in 2021 higher than their prepandemic estimates. Moreover, some institutions increased their use of ECL overlays in order to compensate the effects of the improved economic outlook and therefore avoid the release of provisions, given the enduring uncertainties;
- for a limited number of institutions represented inside the red circle in Chart 10 PD estimates for 2021 were in line with or in some case even lower than those observed in 2019, despite the significant change in the economic context. Moreover, even if most of these institutions applied ECL overlays to compensate the PD trend, the overlays did not always have a significant impact on the final ECL.



Chart 10: 12-month PD trend between 2019 and 2021 and use of ECL overlays

The graph on the left side of the above chart compares for each institution the relative increase in PD between 2019 and 2020 (horizontal axis) with the relative increase between 2019 and 2021 (vertical axis). Therefore:

- institutions in the green area of the graph reported an increase in PD between 2020 and 2021;
- for institutions in the white "corridor", the PD levels in 2021 were aligned to those in the previous year;
- institutions in the yellow area (which account for the majority of the sample) reported lower PD estimates in 2021 compared to 2020; among these institutions, those in the red circle reported in 2021 an average PD lower or in line with 2019 estimates.

In order to distinguish the institutions applying ECL overlays from the others, the former are reported in orange, while the latter in blue.

The graph on the right side of the above chart refers solely to the institutions in the red circle that apply ECL overlays and shows the relative increase in ECL due to overlays. For the purposes of this chart, overlays related to PGS have been excluded.

Indeed, the most widely observed effect of overlays applied to exposures with PGS is a reduction of ECL not aimed to reflect a decreased riskiness (PD) of the counterparties, but simply a lower loss (LGD) stemming from the public guarantee. Therefore, these overlays were deemed not relevant for the purposes of this analysis.

Specific analyses were conducted on the PD trend observed for exposures toward counterparties which were granted moratoria in 2020. Indeed, although moratoria represented a valid countermeasure to the pandemic crisis, the suspension of payments also led to an artificial reduction of observed default rates, making the credit risk assessment more challenging. For these exposures, the analyses showed heterogeneous trends in PD (Chart 11). A majority of the institutions in the sample (64%) reported an increase in PD in 2021 compared to 2020, in order to reflect the higher risk, or at least the higher uncertainty in the credit risk assessment, of exposures subject to moratoria; moreover, half of these institutions transferred these exposures to stage 3. Furthermore, while 12% of the sample kept their PD estimates stable compared to 2020, another 24% reported a lower PD level for these exposures than in 2020; lastly, only a residual part (6% of the sample institutions) offset the effect of the PD decrease with ECL overlays.(³⁶)

With specific reference to exposures toward common counterparties to which a moratorium was granted in 2020 and which were transferred to stage 3 in 2021, the majority (96% in terms of gross carrying amount) were classified as Unlikely To Pay (UTP), while only in limited cases they were classified as bad loans (3%) or past due $(1\%)(^{37})$ (Chart 11).



Chart 11: 12-month PD trend for common counterparties subject to moratoria in 2020 (³⁸)

 $^{^{36}}$ For the purposes of this analysis, a 15% significance threshold was used. Therefore, PDs are defined stable when the increase or decrease was lower than 15%.

³⁷ The evidence is related to exposures subject to moratoria either in 2020 or 2021 and that were classified as past due once the moratoria expired.

³⁸ The analysis is limited to counterparties towards which the institution reported exposures both in 2020 and 2021 and where at least one exposure was subject to moratoria in 2020. This choice, needed to enhance the significance of the trend analysis, limited the sample to 33 institutions. For the sake of completeness, it is worth mentioning that the treatment laid down in EBA's Guidelines on moratoria (EBA (2020) Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis) was not applicable for the vast majority of exposures still under moratoria at December 31st, 2021. Indeed, pursuant to the EBA Guidelines there is no automatic classification as forbearance for moratoria

Main takeaways

A limited number of institutions reported PD estimates in 2021 in line with, or even lower than, prepandemic levels. Although a decrease in PD is justified by the improved economic outlook in 2021, the use of overly optimistic estimates in a context of enduring uncertainty could lead to: i) underestimating ECL and ii) delaying stage 2 transfers, given that the SICR assessment compares the risk of an exposure at the reporting date with its risk at origination (see Section 6). In light of this, many institutions applied overlays to compensate the effects of decreasing PDs, in order to prevent a release of provisions. Nevertheless, for some of these institutions, the overlays did not result in a significant increase in provisions.

As regards the PD assigned to exposures which benefitted from moratoria, heterogeneous practices were observed across the institutions in the sample. The payment suspension granted by moratoria made the credit risk assessment more challenging, since payment delinquency normally represents a relevant objective indicator for the purposes of credit quality monitoring. Indeed, as also reported by Banca d'Italia,(³⁹) firms benefitting from moratoria – either already expired or still in place on 31 December 2021 – showed a significantly higher credit risk compared to others.(⁴⁰) Therefore, it appears crucial for institutions to continue monitoring counterparties which benefitted from moratoria, in order to avoid ECL underestimation; to this end, it is important for banks to closely monitor the respect of payment plans and to implement specific analyses aimed to guarantee a timely recognition of financial difficulty indicators of their counterparties.

The data collected showed that in 2021 several institutions intervened in their internal models, in order to account for the effects that public support measures had on the representativeness of observed default rates, used as inputs in PD and LGD estimation. To this end, some institutions intervened on their PD models by reducing the weight assigned to the PiT component related to 2020 default rates or, in some cases, just by anchoring it to 2019 default rates; other institutions applied manual adjustments to their LGD models in order to reduce the cure rate which was artificially inflated by the payment suspension granted under the moratoria. Such interventions helped to prevent releasing provisions, by reducing the risk of inaccurate and less conservative estimates for PDs and LGDs. In this regard, the EBA principle on representativeness of input data for IRB models in the pandemic,(⁴¹) can also be extended to models used for accounting purposes, in order to prevent biases in the ECL estimation.

6. SICR assessment and staging allocation

Insight: The IFRS 9 impairment model

that comply with a set of requirement, among which a total payment suspension period no longer than 9 months in case of moratoria granted or extended after September 30th, 2020.

³⁹ Banca d'Italia (2022). Financial Stability Report 1/2022.

⁴⁰ Moreover, in its Financial Stability Report n. 1/2023, Banca d'Italia reported that in December 2022 the default rate for firms which benefitted from moratoria, despite its decrease compared to December 2021, has remained higher than for firms not benefitting from any support measure or backed by secured loans alone.

⁴¹ EBA (2022). Principles that should be applied in ensuring representativeness of the IRB-relevant data impacted by the COVID-19 pandemic and related measures.

IFRS 9 introduced an impairment model based on a three stage approach, aimed at reflecting the changes in credit quality of a financial instrument since its initial recognition. In particular, according to the IFRS 9 impairment model:

- **stage 1** includes those exposures which, at the reporting date, either have not had a significant increase in credit risk (SICR) since the origination date, or have a low credit risk.⁽⁴²⁾ Therefore, generally, all the exposures at the time of their initial recognition are allocated within stage 1.⁽⁴³⁾ In case of stage 1 exposures, a 12-month expected credit loss is recognized.
- **stage 2** includes those exposures for which a significant increase in credit risk since the origination has occurred at the reporting date, but that do not show objective evidence of impairment. For these exposures, expected credit losses are recognized on a lifetime horizon.
- **stage 3** encompasses those exposures that show objective evidence of impairment at the reporting date. Also in this case, a lifetime expected credit loss is recognized.

One of the most critical aspects of the IFRS 9 impairment model is the SICR assessment, which triggers the transfer to stage 2 and in turn the measurement of expected credit losses on a lifetime horizon. According to IFRS 9, the SICR assessment shall be based on a comparison between:

- i. the risk of a default occurring on the financial instrument as at the reporting date; and
- ii. the risk of a default occurring on the financial instrument at stake as at the date of initial recognition.⁽⁴⁴⁾

Moreover, in the SICR assessment, consideration shall be given to the reasonable and supportable information, that is available without undue cost or effort.

Against this backdrop, the accounting standard includes a non-exhaustive list of indicators that should be taken into consideration for the purpose of the SICR assessment. Indeed, the SICR assessment should be based on a multi-factor approach,(⁴⁵) encompassing: quantitative indicators (e.g. SICR triggers in terms of PD increase since the origination); qualitative indicators (e.g. watchlist) and backstop indicators (e.g. 30 days past due rebuttable presumption).(⁴⁶)

Finally, with reference to the definition of default, IFRS 9 clarifies that it shall be consistent with the definition used for internal credit risk management purposes and introduces a rebuttable presumption according to which default does not occur later than when a financial asset is 90 days past due, unless an entity has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate. In this regard, the prudential and supervisory expectation is that a definition of default aligned to that used for prudential purposes is applied also from an accounting perspective.(⁴⁷)

⁴² See next Insight box: The low credit risk exemption (LCRE).

⁴³ With the exception of those exposures that at their initial recognition are purchased or originated credit impaired (i.e. POCI), for which specific guidance is provided in IFRS 9.

⁴⁴ See IFRS 9 paragraph 5.5.9.

⁴⁵ Global Public Policy Committee of representatives of the six largest accounting networks (2016). The implementation of IFRS 9 impairment requirements by banks.

⁴⁶ Backstop indicators are generally defined as those indicators which trigger an automatic transfer to stage 2. Given the backstop nature of these indicators, it is paramount that they are applied in combination with further indicators aimed at ensuring an earlier recognition of a significant increase in credit risk.

⁴⁷ See EBA (2017), Guidelines on credit risk management practices and accounting for expected credit losses.

As a consequence of the worsening macroeconomic scenario due to the pandemic and the related lockdown measures, the share of exposures allocated within stage 2 for IFRS 9 purposes increased progressively during the period 2020-2021 (Chart 12).



Chart 12: Trend in the staging allocation of the exposures toward the common counterparties (gross book value)

Nevertheless, in 2020, there was an increase in the share of exposures allocated within stage 1 which showed more than a threefold increase in PD since their origination, whilst, in 2021, the levels dropped below those observed before the COVID-19 outbreak, as a result of the transfers from stage 1 to stage 2 which took place during the year (Chart 13).

Chart 13: SICR assessment indicators and share of exposures in stage 1 with more than a threefold increase in PD since the origination



The right side of the chart shows the main statistics (average, median, percentiles, maximum values) related to the share of exposures toward the common counterparties classified in stage 1 with more than a threefold increase in PD since the origination. Even though IFRS 9 does not prescribe any quantitative threshold triggering the stage 2 transfer, the adoption of a threefold increase in PD for the purpose of this analysis is consistent with the methodological approach used by the EBA both in the stress test exercise and in the IFRS 9 monitoring report published in November 2021,(⁴⁸) as well as with the ECB supervisory expectations applicable to significant institutions.(⁴⁹) As highlighted in the left side of the chart, those institutions adopting a simplified approach (9% of the sample) or basing the SICR assessment only on qualitative or backstop indicators (11% of the sample) were excluded from the scope of this analysis. This exclusion is justified by the following: i) when a simplified approach is applied, the ECL is estimated on a lifetime horizon for all the exposures and ii) when the SICR assessment is based only on qualitative or backstop indicators, the institution into question generally did not provide any reliable information on the PD increase of the exposures in the respective portfolios.

This evidence may indicate potential delays in the transfer to stage 2 in the first months following the outbreak of the pandemic crisis. While this outcome may have been influenced by the high level of uncertainty in the macroeconomic context and by the authorities' recommendations aimed at avoiding excessively pro-cyclical assumptions in IFRS 9 models, it cannot be excluded that this evidence could be affected by the use of practices resulting in potential delays in the SICR recognition. Such an aspect becomes even more relevant considering that, in some cases, this trend was associated with the application of certain practices for the SICR assessment, which, according to prudential regulators and supervisors, deserve further scrutiny, such as:

- the reliance only on qualitative or backstop indicators for the purpose of the SICR assessment. Indeed, in this case, the identification of a significant increase in credit risk is based only on judgmental or delinquency indicators (e.g. past due amounts), resulting in a potential delay in the stage 2 transfer;
- SICR quantitative thresholds based on:
 - absolute levels of PD (⁵⁰) or on a combination of absolute and relative PD thresholds where both criteria need to be met to grant the transfer. Indeed, as recalled in the EBA IFRS 9 monitoring report, triggers based on absolute levels of PD (⁵¹) are generally not in line with IFRS 9.(⁵²) Moreover, depending on how these thresholds are set in practice, such approaches may result in an improper extension of the low credit risk exemption (LCRE) provided in IFRS 9 (see next Insight box), thereby omitting a timely assessment of SICR; or

 $^{^{48}}$ In particular, consistently with the methodological approach applied by the EBA in the 2021 stress test exercise and in the IFRS 9 monitoring report, a threefold increase in PD is intended as an increase of 200% of the initial PD (i.e. (1+200%) * initial PD).

⁴⁹ See ECB (December 2020), Letter to banks - Identification and measurement of credit risk in the context of the coronavirus (COVID-19) pandemic: "In this regard, and also in line with the AQR Manual and the EBA Stress Test Methodological guidance, significant institutions consider, the appropriateness of a threefold increase in the (annualised) lifetime PD from initial recognition as a backstop measure for a significant increase in credit risk".

⁵⁰ Intended as triggers according to which exposures are transferred to stage 2 only in case a pre-defined PD level (or rating) is reached, regardless of the relative increase in PD occurred since the origination.

⁵¹ Either as an absolute PD level or an absolute PD increase.

⁵² According to IFRS 9 B5.5.9 "Unless all instruments to which an absolute trigger is applied share the same initial risk or the instruments still benefit from the low credit risk exemption, an absolute increase in PD is not suitable to determine the significance".

• a "*quantile approach*".(⁵³) Such an approach was already identified by the EBA and the ECB as a practice deserving further supervisory scrutiny since, given a selected quantile, for portfolios with higher volatility in credit risk, it may lead to higher SICR quantitative triggers than for less volatile portfolios. Moreover, depending on the way this approach is implemented, it may result in smoothing stage transfers over time, by defining *ex ante* a desired quantile to be allocated in stage 2 in the long run or by adjusting stage transfer thresholds based on predefined quantiles.

A wider use of SICR quantitative thresholds based on a certain number of rating notches downgrade since the origination was also observed across the institutions in the sample. While the adoption of rating methodologies for the purpose of the SICR assessment is not precluded by IFRS 9, the effectiveness of these approaches in ensuring a timely transfer to stage 2 depends on factors related to their practical implementation, including: i) the granularity of the rating grades;(⁵⁴) ii) the incorporation of forward looking information in the credit grading system; iii) the number of notches triggering the stage 2 transfer;(⁵⁵) and iv) the identification of a pre-defined minimum grading level, under which the exposures at stake are automatically kept in stage 1 (unless the latter are deemed consistent with the application of the low credit risk exemption).

Insight: The Low Credit Risk Exemption (LCRE)

Given the degree of complexity embedded in the IFRS 9 impairment model and, in particular, in the SICR assessment, the international accounting standard envisages some operational simplifications, including the so-called low credit risk exemption (LCRE). According to the LCRE, if at the reporting date a financial instrument has a low credit risk, an entity is allowed to assume that no significant increase in credit risk has occurred since the origination, thereby continuing to allocate it in stage 1 and recognizing a 12-month ECL without further analyses on the related changes in credit risk.

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In this context, for IFRS 9 purposes, the credit risk on a financial instrument is considered to be low if the borrower has a strong capacity to meet its contractual cash flow obligations in the near term and adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce its ability to fulfill the contractual obligations.⁽⁵⁶⁾

⁵³ The term "*quantile approach*" includes a range of different statistical approaches, where: i) stage 1 exposures are grouped on the basis of the distribution of the respective changes in PD and ii) only those exposures presenting an increase in PD higher than the one corresponding to a pre-defined quantile of the distribution are allocated to stage 2.

⁵⁴ In this regard, it is important that risk grades are sufficiently granular in order to ensure that exposures originated at the same risk grade share similar credit risk at initial recognition.

⁵⁵ Indeed, where rating approaches are used, the relevant SICR threshold (corresponding to changes in the number of internal risk grades) may represent many multiples of origination PD depending on the granularity of the internal rating system, and hence the width of each grade. Such an aspect is particularly relevant, considering that significant differences were observed across the entities in the sample with regard to the number of notches needed to trigger stage 2 transfers, with some institutions using higher thresholds compared to the rest of the sample.

⁵⁶ See IFRS 9 B5.5.22.

An external rating of 'investment grade' is provided in the accounting standard as an example of financial instruments with low credit risk. However, an entity may use internal credit ratings or other methodologies to identify whether an instrument has a low credit risk.

The LCRE is aimed at providing relief from tracking changes in the credit risk for high quality financial instruments. However, considering the risks in terms of the timely assessment of SICR stemming from an inappropriate use of this simplification, the expectations of prudential regulators and supervisors is that the use of this exemption should be limited and, in any case, well documented and justified.⁵⁷ Indeed, the adoption of inappropriate (i.e. too high) PD thresholds for the LCRE could result in postponing the SICR assessment and, in turn, the recognition of a lifetime ECL.

Some institutions reported an extensive use of the low credit risk exemption for the loan portfolio. Moreover, significant differences were observed in the criteria for the identification of those exposures with "low credit risk". In particular, as shown in Chart 14, certain institutions apply PD thresholds for the LCRE (⁵⁸) that are higher than the level generally used to identify an external rating of 'investment grade', and higher than the threshold indicated in the ECB Asset Quality Review Manual for the application of the LCRE.(⁵⁹)



Chart 14: Use of the LCRE across the sample and associated PD thresholds

The right side of the above chart exhibits the average PD thresholds associated to the application of the low credit risk exemption for those institutions of the sample, which indicated to make use of this operational simplification envisaged by IFRS 9. The blue line in the chart represents the PD level of 0.3%, indicated in the ECB Asset Quality Review Manual as the threshold for the application of the LCRE. As highlighted in the left side of the chart, those institutions adopting a simplified approach (9% of the sample) or which base the SICR assessment only on qualitative or backstop indicators (11% of the sample) were excluded from the scope of this analysis. Indeed, in these cases the LCRE is, by definition, not applied.

⁵⁷ See BCBS (2015), Guidance on credit risk and accounting for expected credit losses; EBA (2017), Guidelines on credit risk management practices and accounting for expected credit losses and ECB (2017), SSM Thematic review on IFRS 9.

⁵⁸ In terms of PD threshold or of rating grade, depending on the approach applied for the purpose of the SICR assessment.

⁵⁹ The accounting standard indicates an external rating of "investment grade" as an example of a financial instrument that may be considered as having low credit risk. In this regard, it is worth noting that, according to the ECB Asset Quality Review Manual, a 12-month PD equal or below 0.3% is indicated for the application of the LCRE.

Despite the expectations of prudential regulators and supervisors, $(^{60})$ less than 40% of the sample enhanced the practices used for the purpose of the SICR assessment in order to distinguish between obligors for which the credit standing was not expected to be significantly affected in the long term by the effects of the pandemic crisis, from those that were deemed unlikely to restore their creditworthiness at the end of the pandemic. In these cases, generally, some manual adjustments (SICR overlays) were introduced for the purpose of the SICR assessment, in order to ensure the allocation to stage 2 respectively for: i) exposures toward counterparties that, based on an internal assessment, were considered as significantly affected by the effects of the pandemic crisis; and/or ii) those exposures to which moratoria measures were granted. In this latter case, usually the transfer to stage 2 was based on the creditworthiness of the counterparty before the moratorium was granted, whilst some institutions reported to have revised their internal practices in order to ensure that all exposures subject to moratoria are allocated to stage 2. The application of collective assessment approaches, like those illustrated in the examples provided in IFRS 9 (i.e. top-down and bottom-up approaches) was quite limited. However, based on the collected evidence on exposures toward the common counterparties, institutions applying SICR overlays or collective assessment approaches, reported, on average, higher levels of stage 2 transfers during the pandemic (Chart 15).



Chart 15: Share of stage 2 transfers with reference to the exposures toward the common counterparties

Insight: The SICR collective assessment

In case sufficient forward looking information is not available at the individual level, it may be necessary to perform the SICR assessment on a collective basis, by considering information that is indicative of significant increases in credit risk on a group or sub-group of financial instruments.⁽⁶¹⁾ To this extent, financial instruments may be grouped on the basis of shared credit risk characteristics with the objective of facilitating a timely identification of SICR.

⁶⁰ See EBA (2020), Statement on the application of the prudential framework regarding Default, Forbearance and IFRS9 in light of COVID19 measures and ECB (2020), Letters to banks - IFRS 9 in the context of the coronavirus (COVID-19) pandemic.

⁶¹ This might be, for instance, the case of retail loans for which little or no updated credit risk information is routinely obtained and monitored on an individual instrument basis, until a customer breaches the contractual terms.

IFRS 9 provides two different examples of collective assessment approaches, based respectively on a 'bottom-up' and a 'top-down' approach.(⁶²) In particular:

- under the bottom-up approach, the share of a portfolio to be moved to stage 2 is identified by grouping individual exposures into sub-portfolios on the basis of common borrower-specific characteristics, such as the industry or the geographical location;
- under the top-down approach, the transfer to stage 2 is determined by identifying the percentage of the portfolio that has been deteriorated on the basis of available general macroeconomic information (e.g. the impact stemming from higher interest rates).

However, this does not exclude that other methods could be applied under IFRS 9 to perform SICR assessment on a collective basis.

Despite the expectations set out by the EBA and the ECB during the pandemic,(⁶³) the use of collective assessment is still quite limited. However, as an alternative to collective assessment, some institutions applied SICR manual adjustments/overlays in order to move the most vulnerable exposures to stage 2. Nevertheless, depending on how these overlays are applied, they might result in a different outcome in comparison to the application of the collective assessment approaches provided by IFRS 9.

A significant variability was observed across the sample in the classification within stage 3. Indeed, as shown in Chart 16, many institutions still reported as 'performing' exposures toward common counterparties, which were allocated within stage 3 by other institutions in the sample. These differences, generally, dealt with counterparties reported as *unlikely to pay* (UTP).



Chart 16: Degree of alignment in the classification within stage 3

The above chart exhibits, for each institution in the sample reporting more than 10 common counterparties in stage 3 as of December 2021, the degree of alignment in the classification to stage 3, in comparison to the rest of the sample. Higher percentages in the red component

⁶³ See ECB (April 2020). Letters to banks - IFRS 9 in the context of the coronavirus (COVID-19) pandemic and EBA (2021). IFRS 9 monitoring report.

⁶² See IFRS 9 IE 38 and IE 39.

of the bars indicate cases where the institution at stake did not allocate within stage 3 counterparties that were classified in stage 3 by one or more institutions in the sample.

Main Takeaways

As a consequence of the worsening macroeconomic scenario due to the pandemic and the related lockdown measures, the share of exposures allocated within stage 2 for IFRS 9 purposes increased progressively during the period 2020-2021. Nevertheless, as of December 2020, also the share of exposures allocated within stage 1 with more than a threefold increase in PD since the origination increased, whilst in 2021, it dropped to lower levels than those observed before the COVID-19 outbreak. Such an evidence may indicate potential delays in the stage 2 transfers during the first months of the pandemic crisis. While this outcome may have been influenced by the high level of uncertainty in the macroeconomic context and by the authorities' recommendations aimed at avoiding excessively pro-cyclical assumptions in IFRS 9 models, it cannot be excluded that this evidence could be affected by the use of practices resulting in potential delays in the SICR recognition.

This aspect becomes even more relevant considering that, in some cases, this trend was associated to the application of certain practices for the SICR assessment, which have been flagged by prudential regulators and supervisors as worthy of further scrutiny, such as:

- the reliance only on qualitative or backstop indicators for the SICR assessment;
- SICR quantitative thresholds based on absolute levels of PD (⁶⁴) or determined based on a *quantile approach*;
- an extensive use of the low credit risk exemption (LCRE) associated to the application of PD thresholds for the identification of exposures with low credit risk that are higher than that generally used to identify an external rating of 'investment grade'.

Moreover, a limited use of collective assessment approaches or SICR overlays was observed across the sample, despite the recommendations of prudential regulators and supervisors to make a wider use of these approaches in the context of the pandemic, in order to ensure a timely transfer to stage 2 of exposures toward vulnerable sectors. In this regard, it is worth recalling that the use of sound practices aimed at avoiding delays in the SICR recognition when individual assessments are not feasible is paramount also in the current context, in order to ensure a promptly transfer to stage 2 of those exposures that are particularly vulnerable to the effects stemming from the conflict in Ukraine, the higher interest rates or the rising inflation.

Finally, a significant variability was observed across the sample in the classification within stage 3, with potential implications also from a regulatory perspective, given the alignment between the accounting and prudential definition of default.

7. Incorporation of forward looking information

Insight: Incorporating *forward looking information* (FLI) in ECL

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⁶⁴ Or on a combination of absolute and relative PD thresholds, where both criteria need to be met to grant the transfer to stage 2.

According to IFRS 9, ECL shall be measured in a way that reflects an unbiased, probability weighted amount, determined by evaluating a range of possible outcomes and reasonable and supportable information, that is available without undue cost or effort, about past events, current conditions and forecasts of future economic conditions.⁽⁶⁵⁾ Therefore, institutions are expected to develop policies, practices and an appropriate control system in order to, on the one hand, incorporate forward looking information (FLI) in the ECL measurement and, on the other hand, identify relevant information underlying the estimation of credit risk drivers.

Moreover, given its principle-based nature, IFRS 9 leaves significant margins of discretion on different aspects, such as: i) the length of the explicit forecast time horizon, ii) the approaches to incorporate FLI related to the period following the explicit forecast time horizon and iii) the number and probabilities of different macroeconomic scenarios to be used. In the light of this, IFRS 9 requirements were complemented by clarifications of the IFRS Transition Resource Group for Impairment of Financial Instruments ("ITG")(⁶⁶) and by regulatory and supervisory expectations.(⁶⁷) In this regard, with specific reference to the range of scenarios to be used to incorporate FLI, in 2015 the ITG clarified that ECL estimation should follow either of the following approaches:

- defining multiple forward looking scenarios and the associated probabilities and determining the final ECL as weighted average of the ECL estimated under each scenario;
- estimating the ECL under the baseline scenario and applying a separately calculated adjustment (overlay) to reflect the impact of alternative, less likely, scenarios.

Furthermore, the ITG noted that using a single forward looking scenario (i.e. the most likely economic scenario) would not meet the IFRS 9 objectives, unless it is possible to demonstrate the existence of a linear relationship between the different macroeconomic scenarios and their associated credit losses. Indeed, the idea underlying the use of multiple scenarios is to allow capturing the non-linearity of ECL across the different economic outcomes.(68)

Heterogeneous practices were observed across the sample for the following aspects related to the incorporation of FLI in the ECL measurement: i) number of years for which an explicit forecast of economic variables is incorporated in the ECL (explicit forecast time horizon) and the methodologies to estimate those variables in the following years; ii) number of macroeconomic scenarios used; and iii) impact on ECL amount stemming from the non-linearity of the macroeconomic scenarios.

⁶⁵ See IFRS 9 paragraph 5.5.17.

⁶⁶ The *Transition Resource Group for Impairment of Financial Instruments* (ITG) was established in 2014 with the aim to provide support to the implementation of the new requirement introduced by IFRS 9.

⁶⁷ See: Basel Committee on Banking Supervision (2015). Guidance on credit risk and accounting for expected credit losses; EBA (2021). IFRS 9 monitoring report, ECB (April 2020). Letters to banks - IFRS 9 in the context of the coronavirus (COVID-19) pandemic; ECB (December 2020). Letters to banks - Identification and measurement of credit risk in the context of the coronavirus (COVID-19) pandemic.

⁶⁸ ECL could present a non-linear relationship with changes in the macroeconomic scenarios and this can progressively increase based on the scenario severity. For instance, ECL on real estate mortgage exposures increase at faster rate in a decreasing real estate market scenario than what would happen if the real estate market prices were increasing. Moreover, the more severe or prolonged the decrease in real estate prices, the higher is the effect of such non-linearity on the ECL.

Although 75% of the institutions in the sample use a three-year explicit forecast time horizon, a minority of them reported to rely on particularly long time horizons,(⁶⁹) raising concerns on the reliability and reasonability of forward looking information incorporated in ECL (Chart 17). In other cases, FLI was reported to be based on a one-year forecast, which is considered as a proxy over the entire exposure maturity. However, this practice may expose to a recency bias, since the ECL measurement would be overly influenced by recent developments, rather than reflecting expectations of future trends. A limited number of institutions (4% of the sample) reported to not incorporate FLI in their ECL models, since their implications are not deemed to be material.





Similarly, heterogeneous practices were observed for estimating ECL beyond the explicit forecast time horizon (Chart 18). However, some of these practices might affect the significance and reliability of the forward looking information incorporated in the ECL measurement. In particular, relying on the last year of explicit forecast, or reverting to average values over a too long time horizon, could result in an over-reliance on the current economic conditions, potentially resulting in a recency bias in the ECL measurement.



Chart 18: Methodologies to estimate FLI for the period following the explicit forecast time horizon

⁶⁹ In some case, equal to or higher than 10 years.

⁷⁰ Data referred to December 31st, 2021.

The higher degree of uncertainty and volatility in the macroeconomic forecast observed during the first stages of the pandemic crisis significantly influenced institutions' choices in terms of number and severity of the scenarios used for the incorporation of FLI in the ECL. In this regard, Chart 19 shows that compared to 2019, in 2021 30% of the institutions in the sample either moved from a single-scenario to a multi-scenario approach or increased the number of scenarios by introducing more adverse ones, in order to reflect the higher degree of uncertainty. Instead, 22% of the institutions changed the weights applied to the existing scenarios, by increasing those applied to adverse scenarios (*downward* and/or *most downward*).



Chart 19: Changes in the practices for the incorporation of FLI observed between 2019 and 2021

As a result of the abovementioned changes, as of December 2021 a significant reduction in the number of institutions applying single-scenario models was observed, while the majority of the sample reported the use of models based on three scenarios (*downward*, *baseline* and *upward*) (Chart 20).

Chart 20: Number of scenarios used by the institutions across the rime span of the exercise



Nevertheless, the impact of alternative scenarios on the ECL measurement, though increasing compared to 2019, was, overall, still limited (Chart 21). This means that the ECL estimates are mainly driven by the assumptions underlying the baseline scenario, leaving concerns on the degree of conservativeness of

the assumptions underlying the adverse scenarios, as well as on the potential application by institutions of practices aimed to reduce the impact of alternative scenarios. $(^{71})$



Chart 21: Impact of the application of alternative scenarios on ECL

The above chart shows for each reporting date of the exercise, the impact on ECL stemming from the application of alternative scenarios. The impact was determined as the relative difference between: i) total ECL reported in the financial statements, net of any effect stemming from ECL overlays and ii) total ECL that would have been obtained by using only the baseline scenario, also net of any effect stemming from ECL overlays. Data used in this analysis refers only to those institutions that submitted the qualitative questionnaire and the ECL amounts reported refer to each institution's whole credit portfolio and are not limited to the common counterparties of the exercise.⁽⁷²⁾

Main Takeaways

Given its principle-based nature, IFRS 9 leaves room for different practices for the incorporation of FLI in the ECL measurement. In this regard, it is paramount that the practices adopted by financial institutions do not result in a recency bias, which would expose the financial institution, in the case of worsening economic conditions, to the risk of underestimating the expected losses and delaying stage 2 transfers, with a potential cliff effect in provisioning at the onset of the economic downturn.

Cases were observed of financial institutions applying particularly long (sometimes more than 10 years) or excessively short (e.g. only one year) time horizons for the explicit forecast of FLI. Both these practices, although for different reasons, require special scrutiny. Extremely long time horizons for explicit forecasts reduces the FLI reliability, because the availability of detailed and reliable information necessarily decreases for time periods further in the future; therefore, there is a risk that institutions can incorporate information based on unsupportable macroeconomic forecasts in their ECL. By contrast, using too short explicit forecast time horizons could reduce the forward looking nature of risk parameters and their ability to anticipate the effects of changes in the economic outlook;(⁷³) this in turn might expose ECL measurement to a recency bias.

Moreover, it was noted that some institutions apply a single scenario in the estimation of FLI. As clarified by the ITG, using a single scenario without applying overlays to account for non-linearity

⁷¹ For instance, by calibrating scenario weights and/or degree of conservativeness in order to obtain symmetric alternative scenarios that compensate each other, solely for the purposes of limiting the multi-scenario effect.

⁷² For the purposes of this analysis, the institutions that either do not incorporate FLI in the ECL or apply a single-scenario model were excluded from the sample.

⁷³ Unless the short time horizon is justified by the exposures maturity.

effects is not in line with IFRS 9, unless it is possible to demonstrate the existence of a linear relationship between macroeconomic scenarios and ECL estimates.

Lastly, the analyses showed a limited impact of alternative macroeconomic scenarios on the ECL, which continues to be mainly driven by the baseline scenario. This evidence suggests the need for further monitoring of the approaches used to incorporate FLI, in order to assess whether this limited impact is due to the level of conservativeness of the adverse scenarios (⁷⁴) or to the implementation of practices aimed to limit the variability of the profit and loss account driven by the effects of alternative scenarios on ECL.(⁷⁵)

8. Concluding remarks

The pandemic crisis represented an important testing ground for the expected credit loss framework introduced some years ago by IFRS 9, notwithstanding its exceptional nature and features.(⁷⁶) Given the exposure of institutions to credit risk, especially in the case of European banks, and the importance of sound provisioning practices, in recent years, prudential regulators and supervisors issued several guidances for robust and consistent implementation of IFRS 9 models. Having regard to Italian intermediaries, the survey conducted by Banca d'Italia on a sample of institutions aimed at a twofold objective: i) assessing the degree of variability in the practices developed by Italian banks and other financial intermediaries for the implementation of IFRS 9 ECL models; and ii) monitoring the degree of alignment to the guidelines issued at international level, with the aim of identifying possible room for improvement.

The evidence collected for the period 2019-2021 highlighted the following:

• given the unprecedented and exogenous nature of the COVID-19 crisis, the ECL models used by the Italian intermediaries of the sample were generally not able to adequately reflect the extraordinary circumstances and the effects of the public support measures introduced. Therefore, a significant reliance on 'management overlays' was observed. However, the impact of these overlays on the amount of expected credit losses significantly varied across institutions, as a consequence of the differences in the underlying assumptions for the estimates. Moreover, even though in 2022 the impact of COVID-19 overlays was progressively reduced, further adjustments to the IFRS 9 models were introduced in order to account for the uncertainties related to the conflict in Ukraine and other new risk factors. In this regard, as also highlighted by the ECB,(⁷⁷) risk-sensitive overlays represent a useful tool to reflect emerging risks in the provisioning models, but only to the extent that they are

⁷⁴ See ECB (2022), Public hearing with A. Enria, Chair of the ECB Supervisory Board, where it was stated that: "Based on our preliminary assessment, a number of banks seem to use relatively mild macroeconomic assumptions in their adverse scenarios, which translates into a moderate impact on their capital ratios. Consequently, supervisors will closely scrutinise capital planning and challenge management actions to ensure an appropriate level of conservatism"

⁷⁵ For instance, by calibrating scenario weights and/or degree of conservativeness in order to obtain symmetric alternative scenarios that compensate each other, solely for the purposes of limiting the multi-scenario effect.

⁷⁶ IFRS Foundation (2020), IFRS 9 and covid-19. Accounting for expected credit losses applying IFRS 9 Financial Instruments in the light of current uncertainty resulting from the covid-19 pandemic.

⁷⁷ See ECB (2023), Overlays and in-model adjustments: identifying best practices for capturing novel risks.

based on verifiable evidence, sound methodologies and governance, as well as an adequate degree of transparency. In addition, the EBA Guidelines on expected credit losses (⁷⁸) envisage that, where overlays are applied in order to compensate for structural model deficiencies or for limitations related to recurring significant risk factors, the expectation is that their use by institutions will be temporary, pending the implementation of the appropriate enhancement to core models;

- excluding the impacts stemming from the overlays, the trend observed in the ECL during the pandemic was mainly affected by changes in the IFRS 9 PD estimates, while, apart from limited cases, the LGD estimates were broadly stable in the period under assessment. As for the PD estimates, despite the context of extreme uncertainty, the evidence showed a degree of variability for 2020 substantially in line with that observed before the outbreak of the crisis, therefore suggesting a certain degree of homogeneity in how institutions adjusted PD estimates in response to the unexpected changes in the economic outlook. However, an increase in the PD variability was observed in 2021, as a consequence of different reactions to the improvement in the macroeconomic outlook: while some institutions reduced their PD estimates compared to 2020, others either kept their PD stable or further increased them. In particular, among those institutions which reduced their PD estimates in 2021, some showed average PD levels similar to those showed before the pandemic outbreak, suggesting optimism toward the recovery of the economic environment. The materiality of this finding is further enhanced by the fact that, though some of these institutions applied ECL overlays in order to compensate for the lower PD estimates, in many cases the contribution of these overlays turned out to be not material in terms of increasing the expected credit losses;
- as regards staging, in December 2020 the share of exposures allocated within stage 1 with more than a threefold increase in PD since origination increased,(⁷⁹) whilst in 2021 it dropped to levels lower than those observed before the COVID-19 outbreak. As also highlighted by the EBA,(⁸⁰) such an evidence may indicate potential delays in the transfer to stage 2 during the first months of the pandemic. Indeed, while this outcome may have been influenced by the high level of uncertainty in the macroeconomic context and by the authorities' recommendations aimed at avoiding excessively pro-cyclical assumptions in IFRS 9 models, it cannot be excluded that this evidence could have been influenced by the use of practices resulting in potential delays in the SICR recognition. Moreover, despite the expectations set out by prudential regulators and supervisors, the use of collective assessment approaches still remains quite limited. In addition, a significant variability was noted in the classification within stage 3, with potential implications also from a regulatory perspective, given the expected alignment between the accounting and prudential definitions of default;
- different practices were also observed in the incorporation of forward looking information: while some institutions did not include it in ECL models (since they deemed its implication to be

⁷⁸ See EBA (2017), Guidelines on credit risk management practices and accounting for expected credit losses.

⁷⁹ Even though IFRS 9 does not prescribe any quantitative threshold triggering the stage 2 transfer, the adoption of a threefold increase in PD for the purpose of this analysis is consistent with the methodological approach used by the EBA, both in the stress test exercise and in the IFRS 9 monitoring report published in November 2021, as well as with the ECB supervisory expectations applicable to significant institutions.

⁸⁰ EBA (2021). IFRS 9 monitoring report.

immaterial), other banks rely on relatively long forecasting periods for IFRS 9 scenarios.⁽⁸¹⁾ Where the former evidence appears not in line with IFRS 9 requirements, the latter raises concerns on the reliability of forward looking information incorporated in the ECL measurement and the SICR assessment.

Despite the differences across institutions, the findings from the exercise presented in this paper are substantially in line with the main takeaways from a similar exercise conducted by the EBA on sample of larger European banking groups.⁽⁸²⁾ Overall, the efforts of financial institutions to implement IFRS 9 in a sound manner are still under way, also in the light of the novelty represented by the accounting principle. Nevertheless, some of the practices observed during the pandemic suggest the need to continue improving the implementation of IFRS 9 models, in order to avoid a possible underestimation of provisions recognised in the financial statements, or delays in the transfers to stage 2 or stage 3. This might in turn have negative implications on the metrics reported for microprudential purposes, as well as from a financial stability perspective.⁽⁸³⁾ Therefore, it is paramount for banks and other financial institutions to continue to enhance the practices adopted for ECL measurement and SICR assessment, increasing the use of collective assessment and introducing sound approaches and governance mechanisms for management overlays, with the aim of reflecting any information or emerging risk factors not appropriately captured in the ECL models.

⁸¹ In certain cases, even equal or longer than 10 years.

⁸² To note, as a difference compared to the sample of institutions used of the purpose of this exercise, the quantitative analyses conducted by EBA were based on a sample of 33 institutions from 15 EU countries.

⁸³ See ESRB (2019), The cyclical behavior of the ECL model in IFRS 9.

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Annex: Detailed information on the sample of common counterparties

In order to base the benchmarking analyses on a sample as homogeneous as possible, the exercise was conducted on a sample of common counterparties, as reported by the institutions to the Central Credit Register ("Centrale dei Rischi" - CR). The sample was identified following several steps:

- First, all the counterparties reported by at least three institutions on May 31st, 2021 were identified, resulting in a preliminary sample of ca. 117,000 counterparties and ca. 800 institutions;
- As a further step, those institutions deemed not to be relevant for the purposes of the exercise were excluded from the sample (e.g. Special Purpose Vehicles and Significant Institutions); similarly, financial counterparties and counterparties reported as "defaulted" by a significant number of institutions were excluded;(⁸⁴)
- Lastly, in order to further enhance the significance of the sample, all counterparties reported by less than five institutions were excluded. As a final result, the sample used for the exercise is represented by 1,798 counterparties and 45 institutions that on May 2021 reported at least one exposure towards them.

The following charts present further details on the common counterparties of the sample.



⁸⁴ Counterparties reported in CR as defaulted by more than 40% of the institutions were excluded from the sample in order to limit the amount of defaulted exposures; indeed, defaulted exposures could have reduced the significance of the benchmarking results for at least two reasons: i) they would have prevented benchmarking analysis on PD and ii) in most cases ECL for defaulted exposures is not measured using models, but it mainly follows analytical/expert-based approaches.