

Principles that should be applied in ensuring representativeness of the IRB-relevant data impacted by the COVID-19 pandemic and related measures

Definitions

1. The COVID-19 pandemic and in particular the measures implemented by member states and by the EU to counter the health and the related economic crisis impact the IRB-relevant data via two channels:
 - directly, where the contracts of institutions with their obligors have been changed due to the application of moratoria and/or public guarantee schemes (PGS); or
 - indirectly, where the input parameters relevant in the application of a rating model are impacted by COVID-19 support measures (other than moratoria and PGS), such as in the case of direct payments that impact the obligor's financial data or behaviour.
2. For this document, a *furlough scheme* is a temporary full- or part-time leave of employees due to special needs of a company or employer, which may be due to economic conditions of a specific employer or in society as a whole and where the government covers a certain share of the lost wages either directly or via the employer to the affected employees. These furlough schemes may be short- or long-term.

Principles for ensuring representativeness of the IRB-relevant data impacted by the crisis

Principle 1: The guidance laid down in the GL on PD and LGD¹ should apply.

3. The CRR sets out the following requirements regarding representativeness:
 - a) for the data used to build statistical models or other mechanical methods for the purpose of assigning obligors or exposures to rating grades or pools (methodology for risk differentiation) in Article 174 of the CRR; and
 - b) for the data used to estimate the IRB parameters PD, LGD and CCF for a given grade or pool in Article 179, Article 180 and Article 181 of the CRR (risk quantification).
4. Whereas in model development (risk differentiation) non-representativeness of the data used is normally addressed by the adequate choice of a sample, the non-comparability of the historical data underlying risk quantification **should not lead to any data exclusions**, but should instead trigger an appropriate adjustment and increased margin of conservatism (MoC) for the resulting (applied) IRB risk parameter estimates.

¹ [Guidelines on PD and LGD estimation \(EBA-GL-2017-16\).pdf \(europa.eu\)](#)

5. The Commission Delegated Regulation on assessment methodology² (in Article 37(2) for risk differentiation and Article 42(2) for risk quantification) and the EBA GL on PD and LGD estimation³ (in paragraphs 17 to 34 and 83) further specify these requirements by listing the dimensions in which the representativeness of data used for risk differentiation or risk quantification is to be analysed, namely by assessing representativeness of:
 - the scope of application
 - the definition of default
 - the distribution of the relevant risk characteristics
 - lending standards and recovery policies
 - the current and foreseeable economic or market condition (required only for risk quantification)
 - the mix of good and bad years in the historical observation period required only for risk quantification)
6. The EBA GL on PD and LGD provide guidance on the requirements as regards the representativeness of data used in both, model development and calibration, in paragraphs 17 to 34 and in paragraph 83 specifically as regards the required representative mix of good and bad years (covered by the historical time series) for the purpose of estimating appropriate long-run-average default rates (LRADR).
7. Lastly, in the review of estimates in accordance with paragraph 218 of the EBA GL on PD and LGD, specific emphasis should be put on the potential impact of the crisis and the countering measures.

Principle 2: Significantly decreased average risk weights or expected losses compared to end-2019 due to decreased average IRB risk parameter estimates (PDs, LGDs, ELBEs, CCFs) (which are not triggered by recalibration) should be duly analysed with respect to the representativeness of the sample used for model development to the current portfolio.

8. Where institutions observe a significant decrease of the average of a relevant IRB risk parameter estimate compared to end 2019, institutions should analyse the drivers of this decrease paying particular attention to any potential representativeness issues on input parameters whose values have significantly changed as a result of the COVID-19 pandemic, or the countering measures adopted in response. The averages should be considered at least at the level of the relevant rating model (and at the level of relevant calibration segments where these refer to e.g. sectors or geographical areas which are significantly affected by the pandemic).

² <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R0439&from=EN>

³ [Guidelines on PD and LGD estimation \(EBA-GL-2017-16\).pdf \(europa.eu\)](#)

9. For that purpose, institutions should specifically assess if comparable values of those input parameters triggering the improvements can be observed in the historical data set used for the relevant model development. Where the functional relation between the estimated IRB risk parameter and the input parameter has been established based on a sample where the values of the input parameters are significantly different from those currently observed, institutions should ensure that the risk differentiation power and the economic rationale of the functional relationship is preserved. Where this is not the case institutions should:
- a) follow the guidance laid down in section 4.2.3 of the EBA GL on PD and LGD and where necessary redevelop the model on an appropriate sample;
 - b) in addition to (a), consider ad-hoc measures to counteract the reduced risk differentiation power and the potentially resulting unjustified decreases of average risk parameter estimates for example by considering one of the following ad-hoc measures:
 - treating those input values (which are not in the range observed on the development sample) according to their internal policies for missing and outlier values in the application portfolio or treating those as a data deficiency and apply appropriate conservatism in the assignment of exposures/obligors to grades or pools in line with paragraphs 195 to 197 of the EBA GL on PD and LGD; or
 - recalibrating considering the reactivity of the grade assignment process in the calibration process.

10. If institutions can demonstrate that (a part of) the decrease of the average IRB risk parameter estimate is due to improvements in the idiosyncratic risk of the obligors/exposures, i.e. the functional relationship between the improvements in the values of the input parameters and the realisation of the considered IRB risk parameters can be established with and without taking into account the data impacted by the COVID-19 pandemic in the model development sample, no further action is needed to counteract (that part of) the decrease.

Principle 3: Institutions should assess (based on Chapter 9 of the EBA GL on PD and LGD estimation) whether a re-calibration, taking into account data impacted by the COVID-19 pandemic is necessary. Institutions should be mindful of the impact of the COVID-19 pandemic and of the countering measures on the observed IRB risk parameters. Where there are indications of non-representativeness of those most recent realisations, institutions should postpone any recalibration to lower long-run averages including the most recent data until it is sufficiently certain that the trend of decreased realisations (e.g. default rates) is sustainable and is not driven by the extraordinary COVID-19 support measures.

11. In accordance with paragraph 218(a)(i) of the EBA GL on PD and LGD institutions should analyse potential differences between the reference data set used to quantify the risk parameter and the application portfolio, including the analysis of any changes in the portfolio or any structural breaks, in the manners of analysing the representativeness described in section 4.2.4 of the EBA GL on PD and

LGD. When performing such analysis institutions should pay attention to potential representativeness issues triggered by the countering measures adopted in response to the COVID-19 pandemic.

For PD estimation:

12. For PD estimation and in accordance with paragraph 218(c) of the EBA GL on PD and LGD, institutions should analyse whether including the most recent data (i.e. those default rates that are affected by the crisis) leads to a significant change in the LRADR; this analysis should take into account the appropriate redefinition of the period of likely range of variability of default rates and of the mix of good and bad years, if necessary.
13. When assessing in accordance with paragraph 83 of the EBA GL on PD and LGD estimation whether the (new) historical observation period contains a representative mix of good and bad years, institutions should take all relevant economic indicators into account and properly account for the changes in the economic, legal and business environment during the pandemic. Specifically, institutions should follow the guidance for addressing historical observations which are not representative of the likely range of variability of default rates set out in paragraph 85(a) of the EBA GL on PD and LGD to ensure that the change in the mix of good and bad years observed is sufficiently reflected in the estimate of the LRADR. Resulting adjustments (in accordance with 85(a) of the EBA GL on PD and LGD) should specifically be used in case of and to account for increased uncertainty due to significant changes in the economic market conditions observed under the COVID-19 pandemic and their potentially not yet observed impact on default rates.
14. In the exceptional case that institutions conclude on downward revision of the LRADR, institutions should in particular demonstrate that (i) the observed decrease of default rates is not driven by any temporary direct measures adopted in response to the COVID-19 pandemic; (ii) there is no indication, following an assessment of the applicability and magnitude of use of relevant temporary indirect measures, for the exposures covered by the considered rating model, that the observed decrease of default rates during the COVID-19 pandemic is driven by such temporary indirect measures; and (ii) that the increased uncertainty is appropriately considered in the LRADR.
15. In considering the need for recalibration in accordance with paragraph 218 of the EBA GL on PD and LGD, institutions should in their review of estimates be mindful of the following effects of the crisis:
 - Where moratoria have been applied to a significant share of an IRB portfolio the absence of forbearance as a default trigger as well as potentially changed IT systems to monitor days past due might have impacted the default rates downwards. Thus, such situation should be treated as indications of general non-representativeness of the default rates observed during COVID-19 pandemic.

- Where COVID-19-related public guarantees have been granted to a significant share of an IRB portfolio, the default rates might have decreased as the support measures might have kept alive non-viable businesses which would have defaulted had these support measures not been made available. Thus, such situation should be treated as indications of general non-representativeness of the default rates observed during COVID-19 pandemic.
- Due to their very own purpose of supporting businesses and private individuals potentially facing short-term liquidity shortages, other countering measures (indirect measures) adopted in response to the COVID-19 pandemic (such as e.g. furlough schemes, tax relieves, direct payments, etc.) have had an impact on obligors' liquidity and current income. Such measures might have in particular prevented more significant decreases in income which would have occurred without those measures. As many of those measures have already been used by governments in the past (e.g. to suppress the impact of the financial crisis), data impacted by such measures should not a priori be considered as non-representative. However, where temporary indirect measures, relevant to the exposure covered by the considered rating model, were introduced for the first time they should be treated as potential indication of non-representativeness of the default rates observed during COVID-19 pandemic, subject to an assessment of the applicability and magnitude of use for the considered exposure.
- Nevertheless, the EBA considers that decreased default rates observed in 2020 and 2021 may be followed by increased default rates at a later stage. Therefore, institutions should consider postponing any recalibration to lower LRADR including the most recent data until they can be sufficiently sure that any trend of decreased default rates is sustainable and not driven by the temporary impacts of COVID-19 support measures. In this context institutions should also consider the interplay between PD and LGD estimation: indeed, where for example less 90 days past due defaults triggers have been observed, this may decrease PD but may likely be countered by higher observed loss rates or realised LGD and hence LGD estimates in the future.

16. In case the review of estimates results in a need for recalibration, institutions should ensure that the assignment of obligors/exposures to grades or pools is free of distorted/biased effects. Institutions should specifically investigate the need to identify a deficiency in accordance with paragraph 37(a)(iii) of the GL on PD and LGD estimation, and consequently perform a pertaining appropriate adjustment and quantify a (Category A) MoC for the remaining uncertainty. Particular attention and due justification should be given if in light of the Covid-19-impacted data an institution concludes on a downward revision of the PD at grade level(s), whilst keeping unchanged or increasing the long-term riskiness of the portfolio.

17. Furthermore, institutions should compare the distribution of the default triggers in the COVID-19-impacted years compared to "normal" years. Where significant differences are identified, institutions should assess if adjustments to both PD and LGD are necessary in order to avoid biases and/or underestimation of the risk parameters which could negatively affect the management of risk and the calculation of the own funds requirements.

Principle 4: Institutions should postpone any downward recalibration of downturn LGD including the most recent data until it is sufficiently certain that the effect of the COVID-19 pandemic has materialised in the observed loss rates. However, institutions should duly assess the loss data from defaults that occurred during the pandemic and apply appropriate margin of conservatism where there are indications that higher loss rates will be realised.

18. While it is likely that a 12-month period during the COVID-19 pandemic will be identified as one of the downturn periods for many types of exposures in accordance with the Commission Delegated Regulation (EU) 2021/930⁴ (CDR on DT for LGD and CF estimation), the application of Section 5 or Section 6 of the EBA GL on downturn LGD estimation⁵ (GL on DT LGD estimation) for the newly identified downturn period may be hampered in case of scarcity of relevant loss data. In such case, paragraph 15(a)(iv) of the GL on DT LGD estimation should be applied.

19. Generally, a downturn period under consideration should be taken into account in the downturn LGD estimation once the relevant data become available. Institutions should ensure that they have sufficient and relevant data to perform all analyses referred to in paragraph 27 of the GL on DT LGD estimation – especially, but not limited to points (a)(iv) and (c) of the said paragraph – before applying Section 5.

⁴ [EUR-Lex - 32021R0930 - EN - EUR-Lex \(europa.eu\)](#)

⁵ [Final Report on Guidelines on LGD estimates under downturn conditions.pdf \(europa.eu\)](#)