16 December 2016

# Instructions for the EBA qualitative survey on IRB models

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# 1. Introduction

1. The EBA published the consultation paper (CP) on the guidelines (GLs) on PD, LGD and defaulted assets on 14th of November[1]. These GLs are published on the EBA's own initiative in order to reduce the unjustified variability and as part of the broader review of the IRB Approach that is carried out by the EBA. This plan is outlined in the Report on the regulatory review of the IRB Approach published in February 2016[2].

2. These GLs are focused on the definitions and modelling techniques used in the estimation of risk parameters for both non-defaulted and defaulted exposures. Given the focus of these GLs on the Internal Ratings Based (IRB) approach for credit risk, this survey is only addressed to institutions applying the IRB approach.

3. Furthermore, the EBA is currently finalising the CP of the Draft Regulatory Technical Standards (RTS) on the specification of the nature, severity and duration of an economic downturn in accordance with Articles 181(3)(a) and 182(4)(a) of Regulation (EU) No 575/2013 (CRR). It is envisaged that the EBA will publish this CP in the first quarter of 2017.

4. It is expected that the changes resulting from these GLs and these RTS have significant impact on the modelling practices in some institutions. Therefore, the EBA has decided to carry out a qualitative survey, in order to assess the impact of these GLs and RTS, in terms the expected materiality of modelling changes resulting from the GLs, and taking into account that the overall impact of the policy decisions on the level of these risk parameters should be limited.

5. In particular, this qualitative survey contains detailed questions about institutions' modelling practices, on topics which are directly addressed or closely related to the GLs (and draft RTS), and for which EBA would like to know how institutions currently model these aspects. The analysis of these responses will then allow the EBA to adjust the proposed policy where necessary and to roughly estimate to what extent banks will have to change their models. It should be stressed that the purpose of this survey is to take informed policy decisions as regards the amount and severity of modelling changes, rather than to assess the impact of the policy proposals in terms of PD or LGD estimates and according capital requirements.

6. The goal of this qualitative survey is therefore distinct from the goal of the questions included in the CP of the GLs: whereas the questions included in the CP aim to directly ask institutions on their views of the proposed policy choices, the goal of the survey is to ask institutions about the modelling choices and practices that are currently applied. The

[1] https://www.eba.europa.eu/regulation-and-policy/model-validation/guidelines-on-pd-lgd-estimation-and-treatment-of-defaulted-assets

[2] https://www.eba.europa.eu/-/eba-sets-out-roadmap-for-the-implementation-of-the-regulatory-review-of-internal-models

combined input from both sources will allow the EBA to gather the information necessary to take final decisions to be included in the GLs (and the draft RTS).

7. The EBA is also mindful of the burden for the institutions, and therefore it has been decided that it would not be appropriate to carry out an in-depth Quantitative Impact Study (QIS). Instead, this qualitative survey should provide the most relevant information whilst limiting the required resources from the institutions.

8. The qualitative survey is composed of 3 parts:

- Sheet A. General Information contains general questions for the participating institutions regarding: the name of the institution, the Legal Entity Identifier (LEI), general questions on the number of PD and LGD models used within your entity, general features of these models, and an overview of the models for which the survey is completed.
- Sheet B. Info on individual PD model contains detailed questions about the development, calibration and application of individual PD models selected by the participating institutions.
- Sheet C. Info on individual LGD model contains detailed questions about the estimation and application of individual LGD models[3] selected by the participating institutions.

# 2. General information

## 2.1 Scope

9. This qualitative survey will be carried out on a voluntary basis. In case some information is not available within the institution, it may be impossible for the institution to respond to some questions. In this case, the institution is asked to provide a short explanation why it is not possible to provide the answer.

10. Given the focus of the GLs (and the draft RTS) on the IRB modelling practices, this survey is only addressed to institutions that use the IRB approach.

## 2.2 How to choose the models for which to complete this survey?

11. Institutions are requested to complete these questionnaires for at least 3 PD models and 3 LGD models, which (1) cover the highest share of exposure values. Institutions should also take into account (2) which models cover the largest share of obligors and (3) which models reflect the current modelling practices, and institutions may decide to choose an appropriate model on the basis of criterion (2) and/or (3) if justified.

[3] Non-defaulted as well as LGD in-default and Expected Loss Best Estimate (ELBE).

12. The EBA is aware that several notions exist of what should be considered as a model, and has proposed a common definition of a PD and LGD model in paragraph 8 of the GLs. For the purpose of choosing the models to be described in the survey institutions are requested to use the definition of PD model and LGD model as proposed in the GLs, in particular:

    - A PD model refers to all data and methods used as part of a rating system within the meaning of Article 142(1) point (1) of Regulation (EU) No 575/2013, that relate to the differentiation and quantification of own estimates of PD and which are used to assess the default risk for each obligor covered by that model. A PD model can contain several different methods for ranking the obligors as well as different calibration segments.

    - An LGD model refers to all data and methods used as part of a rating system within the meaning of Article 142(1) point (1) of Regulation (EU) No 575/2013, that relate to the differentiation and quantification of own estimates of LGD, LGD in-default and $EL_{BE}$ and which are used to assess the level of loss in the case of default for each facility covered by that model. An LGD model can contain several different methods, especially with respect to different types of collateral, which are combined to arrive at a LGD or LGD in-default and $EL_{BE}$ for a given facility.

13. However, where the information is requested on the overall number of models institutions may use their own notion of what constitutes a model.

14. Institutions should take into account the level of governance of the models (central model or local model) when deciding which model to select in accordance with the following criteria: (1) only local models should be selected by subsidiaries, (2) parent entities may choose central or local models but should coordinate with their subsidiaries in order to avoid double reporting, and (3) if the model was developed centrally but is applied only in a subsidiary, such model may be selected by a subsidiary and should not be selected by the parent entity. Institutions are requested to indicate the level of governance of the chosen models in the respective sheets for both PD and LGD models.

15. The responses to this survey should be submitted for several models:

    - Sheet A (General information) should be completed once, by all institutions.

    - Sheet B (Info on PD model) should be completed by all institutions for at least 3 PD models, chosen according to the above criteria, unless less than 3 PD models are used within the institution.

    - Sheet C (Info on LGD model) should be completed by those institutions applying the A-IRB approach or the IRB approach for the retail exposure class, for at least 3 LGD models, chosen according to the above criteria, unless less than 3 LGD models are used within the institution.

## 2.3 Selected information as reported under COREP – but at model level

16. In order to obtain a view on the materiality of the chosen models within the applicable exposure classes, within the institution and within the EU banking sector, limited quantitative information (exposure values, the use of credit risk mitigation and the number of obligors) is requested for the chosen models in Sheet A (General Information).

17. Institutions are asked to complete this information using the same terminology as used for completing the COREP templates (template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014), although this information should refer to the *scope of application of the chosen model* instead of the class of exposures as reported in COREP. This will allow the EBA to assess the coverage of the chosen models as compared to the total exposures of each institution.

18. Although the EBA does not have COREP information for all EU institutions which are required to complete COREP (see the "Decision of the European Banking Authority on Reporting by Competent Authorities to the EBA" below), the EBA will liaise with the CAs to obtain the corresponding and relevant COREP information for those institutions for which the COREP information is not submitted to the EBA.


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## 2.4 Reporting date

19. The responses in Sheet A (General information) should be as of the reporting date of 30 June 2016, but the responses in Sheet B and C should include the most up-to-date information about the currently approved model. If any changes are under approval process these should not be included.

20. In case data are not available for that reporting period, please amend the reference date in Sheet A (General information).

## 2.5 Filling in the survey

21. This qualitative survey should be completed on a best efforts basis. Where a participating institution is unable to answer a question or where it would be too burdensome to collect a required information, the corresponding cell should be left empty, and a short explanation of why the institution is unable to respond to that question should be given in the corresponding comment box. No other symbols should be used in these cases, in particular zeros should not be confused with not applicable or not available. For some specific questions, the answer ‘not available’, ‘not applicable’ or ‘not known’ is already foreseen within the list of possible answers.

22. However in general, no white cells should be left empty, apart from comments and where it is indicated in the instructions that the question should not be answered in some specific cases. The cells marked in grey should not be filled in.

23. Answers to the questions should only be provided in the dedicated cells. Additional comments, where necessary, should be provided in the dedicated cells for comments.

24. Percentages should be entered as such and in with 2 decimals (i.e. for example 75.00% instead of 0.75).

25. Whenever an option is selected from a drop-down menu that requires additional explanations, these explanations should be provided in the field for comments.

26. In case of doubts which option to choose more information should be provided in the relevant field for comments.

27. The glossary provided in the Excel template may be helpful in understanding various acronyms used in the survey.

28. Please note that this survey generally does not require institutions to follow the Consultation Paper (CP) of the draft Guidelines (GLs) on PD estimation, LGD estimation and the treatment of defaulted exposures. This survey aims to enquire about institution's current modelling practices, in order to take more informed policy decisions on the aspects covered in these GLs and in the CP of the Draft Regulatory Technical Standards (RTS) on the specification of the nature, severity and duration of an economic downturn in accordance with Articles 181(3)(a) and 182(4)(a) of Regulation (EU) No 575/2013 (CRR). Please note that the EBA is currently in the process of finalising the CP of these draft RTS; it is envisaged that EBA will publish this CP early 2017.

## 2.6 Process

29. In the first stage of the process institutions are encouraged to review the questions and instructions and raise comments and questions if anything is unclear. Any comments or questions regarding the qualitative survey should be sent to a dedicated mailbox: EBA-IRBsurvey@eba.europa.eu. If necessary, based on this review, the template and/or the instructions will be adjusted to ensure unanimous understanding of the exercise.

30. Institutions should submit the completed questionnaires to the respective Competent Authorities (CAs), which will forward them to the EBA. After receiving the completed templates, the CAs, together with the EBA, will carry out preliminary data quality checks. If necessary, institutions might be asked for additional clarifications or adjustments.

## 2.7 Timeline

31. The timeline for this qualitative survey is the following:

| | |
|---|---|
| 19/12/2016 | Publication and distribution of the questionnaire and instructions |
| 27/01/2016 | Deadline for submitting the completed questionnaires to relevant CAs. Until this time the mailbox: EBA-IRBsurvey@eba.europa.eu will be available for the participating banks. |
| 03/02/2016 | Deadline for submitting the completed and reviewed questionnaires by the relevant CAs to the EBA. During the week following the submission of the responses of the institutions to the CAs, preliminary data quality checks will be performed by the CAs in collaboration with EBA. |
| 06/02/2016 - … | Quality checks to be performed by the EBA. During this period the participating institutions may be contacted by the EBA in order to clarify potential issues or concerns related to the quality of provided information. |

# 3. Specific instructions

32. Information on how to fill the different sheets of the questionnaire template can be found below.

## 3.1 Sheet A. General information

| Row | Column | Heading | Description |
|---|---|---|---|
| 5 | C | Legal Entity Identifier (LEI) | Please provide the Legal Entity Identifier of the legal entity or head of the group (depending on the level of consolidation as requested in cell C9). |
| 6 | C | Name of the institution | Please provide the name of the legal entity or head of the group. |
| 7 | C | Jurisdiction of National Competent | Please choose one from the defined list of countries. |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | Authority (NCA) | |
| 8 | C | Scope of consolidation | Please choose whether the data is provided in this sheet at the individual or at the consolidated level. The level of consolidation should be the same as used for COREP reporting (i.e. reporting under Commission Implementing Regulation (EU) No 680/2014). |
| 11 | C | How many PD models do you have within your entity? | Please specify how many different PD models are used within your entity, i.e. the number of models which have been approved for the purpose of the IRB approach. Only those models that are used (i.e. that have exposures assigned to them) at your level (consolidated or individual) should be reported. |
| 14 | C | How many LGD models do you have within your entity? | Please specify how many different LGD models are used within your entity, i.e. the number of models which have been approved for the purpose of the IRB approach. Only those models that are used (i.e. that have exposures assigned to them) at your level (consolidated or individual) should be reported. |
| 15-19 | C | Which types of LGD models do you use within your entity? | Please tick the boxes of all types of LGD models that are used for the purpose of the IRB approach (the question is related to the models referred to in the previous question, cell C15). |
| 23-25 | C | Name of the PD model | Specify here the name of the PD model which you selected to complete the qualitative survey. Make sure that the name of the model corresponds to the name you mention in Sheet B (Info on PD model), cell D4. |
| 23-25 | D | Internal model ID (as in EBA 2016 Benchmarking exercise, if available) | For those institutions that participated in the EBA 2016 benchmarking exercise (end of 2015 data), please specify the Internal model ID, i.e. the code assigned by the EBA to each portfolio in the context of the EBA 2016 benchmarking exercise, in case this model was included in that exercise. The Internal model ID can be found in column 010 of template C105.01 of Annex IV of the ITS for templates, definitions and IT-solutions to be used by |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | institutions when reporting to the European Banking Authority and to competent authorities in accordance with Article 78(2) of Directive 2013/36/EU of the European Parliament and of the Council (ITS on Benchmarking)[4]. |
| 23-25 | E | Reporting date (DD/MM/YYYY) | This cell should in principle not be changed, as institutions are asked to complete this table with the reporting information as of 30/06/2016. If it is however not possible to complete the information for that date, please indicate another date for which the information is reported, and give a short explanation for that in the comments. |
| 23-25 | F | Total value of exposures covered by the model (as in COREP) | Please report here the exposure value as is required in column 110 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the PD model. In particular, this should be the exposure value in accordance with Article 166 of CRR and Article 230 (1) sentence 2 of CRR, i.e. the exposure value of on-balance sheet exposures after applying the credit conversion factor without taking into account any credit risk adjustments made. |
| 23-25 | G | Unit | Please indicate whether the numbers are given in ones, thousands or millions. |
| 23-25 | H | Currency | Please choose one from the defined list of currencies. It should be the same currency as used in the COREP reporting (i.e. reporting under Commission Implementing Regulation (EU) No 680/2014). |
| 23-25 | I | Number of obligors (as in COREP) | Please indicate the number of obligors as is required in column 300 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the PD model, and as referred to in Articles 172 (1) and (2) of CRR. For all exposure classes except retail, the institution shall report the number of legal entities /obligors which were |

[4] https://www.eba.europa.eu/regulation-and-policy/other-topics/regulatory-and-implementing-technical-standards-on-benchmarking-portfolios

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | separately rated, regardless of the number of different loans or exposures granted. Within the exposure class retail the institution shall report the number of exposures which were separately assigned to a certain rating grade or pool. In case Article 172 (2) of CRR applies, an obligor may be considered in more than one grade. |
| 32-34 | C | Name of the model | Specify here the name of the LGD model which you selected to complete the survey. Make sure that the name of the model corresponds to the name you mention in Sheet C (Info on LGD model), cell D4. |
| 32-34 | D | Internal model ID (as in EBA 2016 Benchmarking exercise, if available) | For those institutions that participated in the EBA 2016 benchmarking exercise (end of 2015 data), please specify the Internal model ID, i.e. the code assigned by the EBA to each portfolio in the context of the EBA 2016 benchmarking exercise, in case this model was included in that exercise. The Internal model ID can be found in column 010 of template C105.01 of Annex IV of the ITS for templates, definitions and IT-solutions to be used by institutions when reporting to the European Banking Authority and to competent authorities in accordance with Article 78(2) of Directive 2013/36/EU of the European Parliament and of the Council (ITS on Benchmarking)[5]. |
| 32-34 | E | Reporting date (DD/MM/YYYY) | This cell should in principle not be changed, as institutions are asked to complete this table with the reporting information as of 30/06/2016. If it is however not possible to complete the information for that date, please indicate another date for which the information is reported, and give a short explanation for that in the comments. |
| 32-34 | F | Total value of exposures covered by the model (as in COREP) | Please report here the exposure value as is required in column 110 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the PD model. In particular, this should be the exposure value in accordance |

[5] https://www.eba.europa.eu/regulation-and-policy/other-topics/regulatory-and-implementing-technical-standards-on-benchmarking-portfolios

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | with Article 166 of CRR and Article 230 (1) sentence 2 of CRR, i.e. the exposure value of on-balance sheet exposures after applying the credit conversion factor without taking into account any credit risk adjustments made. |
| 32-34 | G | Unit | Please indicate whether the numbers are given in ones, thousands or millions. |
| 32-34 | H | Currency | Please choose one from the defined list of currencies. It should be the same currency as used in the COREP reporting. |
| 32-34 | I | Guarantees | Please report here the value of guarantees which are included in the LGD estimation, as required in column 150 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the LGD model. In particular, the nominal amount of the guarantees shall be reported. |
| 32-34 | J | Credit derivatives | Please report here the amount of the value of credit derivatives which is reflected in the LGD estimates as is required in column 160 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the LGD model. |
| 32-34 | K | Other funded credit protection | Please report here the value of other funded credit protection which is reflected in the LGD estimates as is required in column 170 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the LGD model. The relevant value used in the internal modelling of the institution. |
| 32-34 | L | Eligible financial collateral | Please report here the amount of eligible financial collateral which is reflected in the LGD estimates as is required in column 180 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the LGD |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | model. In particular, please report here the financial collateral taken into account in the LGD estimates according to Article 181 (1) points (e) and (f) of CRR. The amount to be reported shall be the estimated market value of the collateral. |
| 32-34 | M | Real estate | Please report here the value of real estate collateral which is reflected in the LGD estimates as is required in column 190 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the LGD model. The amount to be reported shall be the estimated market value. |
| 32-34 | N | Other physical collateral | Please report here the amount of other physical collateral included in the LGD estimates as is required in column 200 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the LGD model. The amount to be reported shall be the estimated market value of collateral. |
| 32-34 | O | Receivables | Please report here the amount of receivables included in the LGD estimates as is required in column 210 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the LGD model. The amount to be reported shall be the estimated market value of collateral. |
| 32-34 | P | Number of obligors (as in COREP) | Please indicate the number of obligors as is required in column 300 and row 010 of template 8.1 of Annex 1 of Commission Implementing Regulation (EU) No 680/2014, but corresponding to the scope of the LGD model, and as referred to in Articles 172 (1) and (2) of CRR. For all exposure classes except retail, the institution shall report the number of legal entities /obligors which were separately rated, regardless of the number of different loans or exposures granted. Within the exposure class retail the institution shall report the number of exposures |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | which were separately assigned to a certain rating grade or pool. In case Article 172 (2) of CRR applies, an obligor may be considered in more than one grade. |

## 3.2 Sheet B: Info on PD model

### 0. General information about the chosen PD model

| Row | Column | Heading | Description |
|---|---|---|---|
| 4 | D | Name of the PD model | Specify here the name of the PD model which you selected to complete this survey. Make sure that the name of the model corresponds to the name you mention in Sheet A (General information), cell C23-C25. |
| 5 | D | Scope of application (type of exposures covered by the model) | Please give a brief description of the type of exposures covered by this model, i.e. criteria for exposures to be assigned to this model and not to another. |
| 6 | D | Level of governance | Please select one of the options, i.e. whether it is a central model, a local model, a local model but centrally developed, a central model partly developed on an external pool, a local model partly developed on an external pool or any other type. |
| 7-17 | D | What are the exposure classes (as in COREP) covered by this model? | Please tick all relevant boxes of exposures are covered by this PD model, structured along the categories which are used in COREP. Please tick the box also in the case where only part of exposures in a given exposure class are covered by the scope of the model. |
| 18 | D | Do you apply the Foundation or Advanced IRB Approach for this model? | Please select whether you apply Foundation or Advanced IRB approach to these exposures. Please note that Advanced IRB refers to the case where the institution has received permission of the competent authority to use both PD and own LGD estimates, whereas Foundation IRB refers to the case where the institution has only received |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | permission to use own PD estimates. |
| 19 | D | Which type of PD model is this? | Please select the relevant type of PD model. Note the difference between quantitative criteria and quantitative data, where quantitative data refer to the use of dataset(s) with several data points for several institutions and/or several points in time, whereas quantitative criteria refers to the use of quantitative cut-off value(s) for risk drivers in the scorecard(s). |
| 20 | D | Level of PD assignment | Please indicate whether the PD is assigned at obligor level, at obligor level by product type, at facility level, at single exposure level, or at any other level. Please note that single exposure level refers to the case where one PD is assigned to each contract. When one PD is assigned to each obligor, irrespective of the product type, the option 'Obligor level' should be selected, whereas the option 'Obligor level by product type' refers for instance to the case where one PD is assigned to two mortgages related to two properties of one obligor but a credit card of this obligor receives a different PD. The option 'Facility level' should only be selected if it does not refer to the single exposure, obligor or obligor by product type, for instance, several mortgages with different durations of one obligor related to the same property could be seen as one facility. |

## 1. General Requirements of PD estimation

| Row | Column | Heading | Description |
|---|---|---|---|
| 24 | D | Are there any obligors or exposures which are in the scope of application that do not receive an individual PD estimation? | If all obligors or facilities within the scope of application of a rating systems are separately assessed with the considered model then a 'no' should be responded. Any situations which could lead to an exclusion of the rating assessment should be explained. A drop down-menu is provided with some reasons EBA considers to be used in practice. |
| 25 | D | Does your bank have a | If your answer is 'yes', please specify in terms of |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | policy or practice regarding the inclusion of newly available rating relevant information to be incorporated in the rating assignment? | prescribed frequency, triggers and timing. For instance, 'new balance sheet information has to be added into the rating assessment at the latest 3 months after they have been published'. |

## 2. Data requirements specific to PD estimation

### Data requirements for the reference data set for the purpose of model development for risk differentiation

| Row | Column | Heading | Description |
|---|---|---|---|
| 30 | D | Is the default definition used during the model development the same as the one defined in the CRR? | Please indicate whether the definition of default used in the PD model differs from the CRR definition, and if yes please specify (e.g. the application scorecard is developed based on defaults that happen over the whole lifetime of a product, the ranking model is based on an ECAI assessment which refers to an EL-rating,…). In particular, please note that such different definition could for instance refer to a different time horizon as in the above example of lifetime PD (i.e. different from one-year). In case different modules with different definitions of default are used within your PD model, please answer 'yes' in case the definition of default in any of the modules is different from the CRR definition. |
| 31 | D | How many years are included in the reference data set (RDS)? | Please specify the number of years included in the RDS, in whole numbers. |
| 31 | E | Please select how many months (if any) | Please select from the drop down menu how many months, in addition to the number of years (if any), are included in the RDS. |

## 3. Observed default rates

### Calculation of the one-year default rate

| Row | Column | Heading | Description |
|---|---|---|---|
| 36 | D | For retail exposures: what type of records is considered in the one-year default rate calculation? | Please select one of the options, selecting only 'Not applicable' if the PD model is for non-retail exposures. Only indicate facility if it does not refer to the individual exposure, i.e. at a higher level than the single exposure level (for instance several mortgages with different durations of one obligor could be seen as a facility). |
| 37 | D | For retail exposures: at what level does the institution recognise default? | Please select one of the options, selecting only 'Not applicable' if the PD model is for non-retail exposures. Only indicate facility if it does not refer to the individual exposure, i.e. at a higher level than the single exposure level (for instance several mortgages with different durations of one obligor could be seen as a facility). |
| 38 | D | For retail exposures: if the answer to the previous question is different from 'Obligor level', do you perform any analysis in order to compare the DR at that lower level versus the DR at obligor level? | An example of such analysis would be to compare the default rate calculated at obligor level (i.e. the number of obligor ratings in the denominator) with the default rate calculated at facility level (i.e. the number of facility ratings in the denominator), in order to verify whether this leads to a different default rate. The purpose of such analysis would be to verify the potential effect of the inconsistency between the recognition of default and calculation of the DR. |
| 39 | D | What is the frequency at which the one-year default rates are calculated? | Please select the calculation frequency from the drop down menu, ranging from daily to annually. |

### Calculation of the observed average default rate for the purpose of risk quantification

33. Note that questions 3.05. – 3.08 are only for those institutions that calculate observed average default rates. If this is not the case, please go straight to question 4.01. on the long-run average default rate.

34. Observed average default rate should be understood as the calculated average (equally weighted or weighted average) of one-year default rates over the historical observation period.

35. Institutions should however provide answers to these questions in case the long-run average default rate is calculated on the basis of an observed average default rate, even if this includes some one-year default rates which have not been observed but which have been estimated.

| Row | Column | Heading | Description |
|---|---|---|---|
| 43 | D | Do calculate this default rate using overlapping or non-overlapping windows? | Please read page 48 (below paragraph 58) of the CP of the GLs for further clarification on the difference between overlapping and non-overlapping windows. |
| 44 | D | Was there any specific analysis done to justify the choice for overlapping or non-overlapping windows? | Please select one of the options. |
| 45 | D | Is there a significant share of short term or terminated contracts within the period over which the observed average default rate is calculated? | Please select one of the options. |
| 46-50 | D | For which of the following did you apply adjustments or data exclusions to overcome issues in the calculation of the observed average default rate? | Please select yes if adjustments to the observed average default rate were applied due to one of the listed reasons or select yes for 'other' if for any other reason the observed average default rate has been adjusted. If possible, please specify whether the issue is treated with adjustments (at default rate level, PD estimation level or other) or with data exclusions in the comment box. |

## 4. Long-run average default rate

| Row | Column | Heading | Description |
|---|---|---|---|
| 55-58 | D-G | What's the start and end date of the historical observation period used for PD estimation for internal, external or pooled data? | For the notion of historical observation period, please use the definition as specified in Article 180(1)(h) and 180(2)(e) CRR. Furthermore, only the start and end dates for the internal, external or pooled data that are actually used for the purpose PD estimation, should be reported. If external or pooled data are not used within your entity, please leave these cells blank.<br><br>Only in case the historical observation period is a non-consecutive period, the columns F-G should be completed: columns D-E should cover the first time period, and F-G should cover the second time period[6].<br><br>If some of the one-year default rates within the observation period are estimated or inferred from external or pooled data, these periods should also be included within the reported start and end date.<br><br>Institutions should not limit the start or end date to the level of the governance of the chosen model (local or central model), i.e. the start and end date reported to should cover all data used for the purpose of the model. |
| 55-58 | H | Overall number of observations** | One observation could refer to one obligor for non-retail exposures. For retail exposures, one observation should refer to one obligor, one obligor by product type, one facility, one single exposure, or other, depending on your response to question 3.01. Please leave this cell blank of you do not use external or pooled data. |

[6] In the exceptional case where more than two individual time periods make up the historical observation period, please explain the different start and end dates in the comments.

| Row | Column | Heading | Description |
|---|---|---|---|
| 61 | D | Is the length of the whole period, for which one-year default rates are available, different from the length of the historical observation period as referred to in the table? If yes, please provide an explanation. | This question aims at finding out whether the time series of available one-year default rates available within the institution is longer than those one-year default rates which are actually used in the historical observation period. If the answer to this question is yes, please give a short explanation why these one-year default rates are discarded. |
| 62 | D | Does the observation period, used for PD estimation, span over years for which no one-year defaults are available in the institution (and for which the one-year default rates are therefore estimated or inferred from other data)? | Please indicate (yes/no) whether some of the one-year default rates used for the estimation of the observed average default rate or long-run average default rate, are inferred or estimated, for instance by relying on default rates from external data sources, of by estimating those default rates on the basis of the relationship between one-year default rates and risk drivers. |
| 63 | D | What method (simple average or weighted average) is used to determine the long-run average default rate? | This question aims to identify whether the entity takes the simple average of one-year default rates within the historical observation period, or whether a special weighting is applied, for instance by assigning higher weights to more recent observations. If a special weighting is applied, please give a short explanation. |
| 64 | D | Do you apply any adjustments to the observed average of default rates for the purpose of PD estimation? | When responding to this question, please use the notion of 'margin of conservatism' (MoC) and 'data adjustment' as specified in the CP of the GLs in paragraphs 23 and 26, i.e. MoC relates to the expected range of estimation error, which is distinct from the data adjustment, i.e. the data adjustment relates to the adjustment made in order to correct the identified error). |
| 65 | D | If the answer to question 4.05. is yes, what is the direction of | Please indicate whether the PD estimate is adjusted upwards, downwards or not |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | the adjustment? | adjusted. |
| 66-75 | D | If your answer to question 4.05. is yes, what are the main reassons for that adjustment? | If you do not apply any adjustments to the observed average of default rates for the purpose of PD estimation, this question should not be answered. |

## 5. PD estimation methodologies

### Design of grades and pools

| Row | Column | Heading | Description |
|---|---|---|---|
| 80 | D | Do you use a continuous or a discrete rating scale? | A discrete rating scale refers to a scale whether the number of rating grades is a finite number where that number is smaller than the number of obligors (exposures) in that PD model. A continuous rating scale refers to a scale where each obligor (exposure) is assigned an individual PD estimate and where these obligors (exposures) are not grouped together along a range of grades. |
| 81 | D | If a discrete rating scale is used, please specify the number of living grades or pools provided by the model | Living grades or pools refer to those grades or pools to which non-defaulted obligors (exposures) are assigned. |
| 82 | D | How would your rating assignment process capture changes in the economic conditions? | When responding to this question, please have the (theoretical) design of the model in mind, rather than the actual behaviour of the model, which is also affected by the changes in the economic conditions observed over time. |
| 83 | D | Please describe the rating philosophy of the considered model! | Free text. Please give a description of how sensitive the PD model is to capturing changes in the economic conditions in the assignment of obligors (exposures) to grades or pools and hence to reflect changing economic conditions in the assignment of the PD estimate. |

## Calibration

36. For the purpose of question 5.05. (cell 87D), please consider the following calibration types:

**Type 1:** Implicit calibration according to Article 180 (1)(a) CRR at grade or pool level: the PD estimate per grade or pool is achieved by calculating the long run average default rate of the according grade or pool. Therefore, the according grade or pool may have to be reconstructed if a newly relevant risk driver has been incorporated into the model. The calibration sample equals the sample where the long-run average default rate is calculated.

**Type 2:** Explicit calibration according to Article 169 (3) CRR at portfolio level. The rating model produces individual PDs per obligor or facility ('raw-PDs'). The underlying definition of default may deviate from the regulatory notion of a default. The raw-PDs are shifted such that the average of the raw-PDs is equal to the long-run-average default rate (usually on the level of the whole portfolio or a calibration segment where relevant). The calibration sample equals the sample on which the raw-PDs are assessed for this purpose.

**Type 3:** Explicit calibration according to Article 180 (1)(a) CRR at grade or pool level, based on individual estimates (which may be scores as well) according to Article 169 (3) CRR to a predefined master-scale. The PD estimate is achieved by determining intervals of estimates (or score)values such that the long-run-average default rate of obligors or facilities carrying these values is equal to a predefined default rate on a master-scale (which will then be the PD estimate for obligors with score-values within the considered interval). The calibration sample equals the sample on which the individual estimates are assessed.

**Type 4:** Explicit calibration according to Article 180(1)(g) CRR at portfolio level, based on averages of individual estimates according to Article 169 (3) CRR to a predefined master-scale. PD estimates are achieved by first shifting the individual estimates such that the average of the individual estimates equals the long-run average default rate on portfolio level and then averaging the individual estimates that fall into a predefined interval on the master-scale. However this type should as well be chosen if the shifted individual estimates are sorted into predefined PD-intervals on the master-scale. The calibration sample equals the sample on which the individual estimates are assessed.

**Type 5:** Explicit calibration in accordance with Article 180 (2)(b) CRR at portfolio level. PD estimates are derived from an estimate of total losses and appropriate estimates of LGD. These PD estimates are shifted such that the average of these estimates equals the long-run average default rate at portfolio level.

**Type 6:** Implicit calibration in accordance with Article 180 (2)(b) CRR at portfolio level. PD estimates are derived from an estimate of total losses and appropriate estimates of LGD over the relevant observation period.

| Row | Column | Heading | Description |
|---|---|---|---|

| Row | Column | Heading | Description |
|---|---|---|---|
| 87 | D | Please indicate which type of calibration is used. | Please indicate which type of calibration is used in this PD model. |
| 88 | D | If you use Type 2 or 4 calibration, how many points in time were reflected in the calibration sample? | Please select one of the options: All time slices contained in the development sample, only 1 time slice, 2-5 time slices, more than 5 time slices or any other option. If just 1 time slice is used, the calibration sample deviates from the RDS used for the long-run average default rate calculation, and the calibration sample would be fully representative of the current portfolio. If on the other hand all time slices that underlie the long-run average default rate calculation would be used in the calibration, the calibration sample would be equal to the RDS used for the long-run average default rate calculation, and the calibration sample would be fully representative of the default rates used for the long-run average default rate calculation. Also other responses are possible, for instance in the case where the calibration sample is chosen in order to be comparable to the current portfolio in terms of obligor and transaction characteristics (as required in Article 171(1)(d) CRR) and reflecting the evolution of one-year default rates of the historical observation period). |
| 89 | D | If you use Type 1 or 3 calibration, which method do you apply when calculating the long-run average PD per grade? | Please indicate whether the model is applied backwards to be able to calculate the observed average default rate per grade or pool or whether another approach is followed. |
| 90 | D | Do you conduct the calibration before or after the application of margin of conservatism (MoC) and the PD floor? | In case the calibration is done before the PD floor is applied, please indicate 'Before', and otherwise indicate 'After'. For any other option, please give a short explanation. |
| 91 | D | Do you include margin of conservatism (MoC) in the estimates? How? | Please indicate whether a margin of conservatism is included in the PD estimates. Please answer yes in case such margin of conservatism is explicitly included as well as implicitly (for instance in the case where a |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | missing risk driver is assigned the worst value). |
| 92-97 | D | Please indicate what are the main triggers for including a margin of conservatism in your estimates | Please tick boxes all relevant boxes of the aspects which triggered the inclusion of a MoC in your estimates. Please note that the third and fourth option (changed underwriting standards or changes in the rating system) should be understood as referred to in Article 180(1)(e) CRR. An example of the last option (Other (please specify) would be a change in the legal environment. |
| 98 | D | How many calibration segments are there in your PD model? | A calibration segment should be understood as defined in paragraph 8 (page 35) of the CP of the GLs, i.e. a subset of the range of application of the PD model which is uniquely identified via the subset of obligors that are treated with the same methods for the purpose of risk differentiation and that are jointly calibrated. |

## 6. Application of risk parameters

| Row | Column | Heading | Description |
|---|---|---|---|
| 102-106 | D | Please indicate what are the main triggers for including additional conservatism in the application of your PD model | Please tick all relevant boxes. Please note that this question enquires about the use of additional margin of conservatism in the application of the PD model (as referred to in the CP of the GLs in chapter 8, i.e. paragraphs 185-197). |

## 7. Redevelopment and re-estimation triggers

8. It should be clarified, that even though Chapter 9 of the CP of the GLs applies to both the estimation of PD and LGD, this series of questions in this template applies only to PD estimation.

| Row | Column | Heading | Description |
|---|---|---|---|
| 110 | D | What was the date of the last model redevelopment, re-estimation or (re-)calibration? | Please specify the date of the last (re-) calibration of the model in format [dd/mm/yyyy]. |
| 111 | D | Is the next redevelopment, re-estimation or re-calibration planned? If yes, please indicate | If your next redevelopment, re-estimation or re-calibration is planned, please specify the planned date in format [dd/mm/yyyy]. If this |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | the planned date. | date is not known yet, please insert 01/01/1950. |
| 112 | D | Regarding previous question, what is the trigger for that? | Please select one of the options. |
| 113 | D | Do you have a pre-established frequency for developing a (re)calibration? If yes, please specify the frequency. | Please select one of the options. |
| 114 | D | What is the frequency at which the observed average default rates are calculated? | Please select one of the options. |

### 8. Quantitative information

| Row | Column | Heading | Description |
|---|---|---|---|
| 119 | D | a. the observed average default rate*** (in %) during the historical observation period | The observed average default rate should be reported in % with two decimals (i.e. 3.00% instead of 0.03) and this average should span the historical observation period. Note that this average can be obligor weighted, or weighted by obligor by product type, facility or single exposure, depending on your answer to question 3.01. |
| 120 | D | b. average final PD estimate*** used for regulatory purposes (in %) | The average final PD estimate should also be reported in % with two decimals (i.e. 3.00% instead of 0.03). Note that this average can be obligor weighted, or weighted by obligor by product type, facility or single exposure, depending on your answer to question 3.01, i.e. institutions should report here the simple average of all assigned PDs in this portfolio. |

## 3.3 Sheet C: Info on LGD model

### 0.1. General information about the chosen LGD model

| Row | Column | Heading | Description |
|---|---|---|---|

| Row | Column | Heading | Description |
|---|---|---|---|
| 4 | D-F | Name of the model | Specify in cell 4D the name of the LGD model which you selected to complete this qualitative survey. Make sure that the name of the model corresponds to the name you mention in Sheet A (General information), cell C32-C34. Specify in cells 4E and 4F the names of the models you use for LGD in-default and Expected Loss Best Estimate (ELBE) which cover the majority of the exposures in the scope of the chosen LGD model. |
| 5 | D-F | Scope of application (type of exposures covered by the model) | Please give a brief description of the type of exposures covered by these models, i.e. criteria for exposures to be assigned to this model and not to another. |
| 6 | D-F | Level of governance | Please select one of the options, i.e. whether it is a central model, a local model, a local model but centrally developed, a central model partly developed on an external pool, a local model partly developed on an external pool or any other type. |
| 7-17 | D-F | What are the exposure classes (as in COREP) covered by this model? | Please tick all relevant boxes of the types of exposures are covered by this LGD model, structured along the categories which are used in COREP. Please tick the box also in the case where only part of exposures in a given exposure class are covered by the scope of the model. |
| 18 | D-F | Which type of LGD model is this? | Please select one of the options from the drop down list. |
| 19 | E | Please indicate what is your approach to the estimation of LGD for defaulted exposures and ELBE | Please select one of the options from the drop down list for LGD in-default:<br>- The 'distributional approach' refers to the approach where the LGD in-default is estimated as ELBE plus an add-on where the add-on reflects the uncertainty (for a given confidence interval) around the ELBE as a |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | function of the distribution of past errors (i.e. differences between estimated ELBE and the observed losses at the end of the recovery period).<br><br>- The 'ELBE + Add-on' approach refers to the approach where the Add-on is estimated in a different way than under the 'distributional approach' and reflects adjustment in economic conditions considered (e.g. downturn conditions rather than current economic conditions) or any other possible sources of unexpected loss or margin of conservatism.<br><br>Where a direct estimation of LGD in-default is used, please specify the type of model that is used, and in particular whether it is the same model as for non-defaulted exposures, or whether the model for defaulted exposures is based on the LGD model for non-defaulted exposures but includes additional risk drivers (such as for instance time in default, recoveries realised so far, recovery scenario or status of the recovery process) or whether a different model is used for defaulted exposures that uses a different methodology than an LGD model for non-defaulted exposures.<br><br>An example of the option where LGD in-default and ELBE are 'not specified - risk weight is derived directly', is the case where institutions determine the risk weight as a fixed percentage of the exposure at default. |
| 19 | F | Please indicate what is your approach to the estimation of LGD for defaulted exposures and ELBE | Please select one of the options from the drop down list for ELBE. Where accounting provisions are used as ELBE, regardless of whether these are collectively or individually assessed provisions, please mark a relevant option.<br><br>Where ELBE is estimated based on a model please |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | select one of the options for the type of model that is used.<br><br>An example of the option where LGD in-default and ELBE are 'not specified - risk weight is derived directly', is the case where institutions determine the risk weight as a fixed percentage of the exposure at default. |
| 20-24<br><br>20-21 | D<br><br>E-F | Please indicate whether you use any of the following model components | Please indicate if you use any of the following model components. Please specify any other model components used in the category 'other'. For columns E and F please specify whether you take into account time in-default and recoveries realised so far. |
| 25 | D-F | What type of scale applies to this model? | Please indicate whether the LGD scale is a continuous scale, a discrete scale of facility grades, whether the LGD model contains several facility pools, or whether another approach is used. In case several answers are valid, please select 'other' and specify it in the comments. |
| 26 | D-F | Please indicate to what part of the exposure the final LGD estimate is assigned | Please indicate whether the LGD is assigned to the whole exposure, the unsecured or the secured part of the exposure. Where other approach is used or more than one option applies please select 'other' and specify it in the comments. |

## 0.2. General information about the treatment of defaulted exposures

| Row | Column | Heading | Description |
|---|---|---|---|
| 30 | F | Which economic conditions are reflected by ELBE? | Please select one of the options from the drop down list. |
| 31 | F | If your answer to the previous question is 'current economic conditions', how are these incorporated in | Please select one of the options from the drop down list. This question aims to identify how economic conditions are incorporated in the ELBE estimates. For example this could be done |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | the ELBE? | including directly macroeconomic or credit factors within the model or by assigning a higher weight to more recent data. If however other approach is used to calibrate ELBE to current economic conditions please specify it briefly in the comments. |
| 32 | E | Which economic conditions are reflected by LGD in-default? | Please select one of the options from the drop down list. |

## 1. General estimation methods

| Row | Column | Heading | Description |
|---|---|---|---|
| 36 | E-F | What is the reference date for the estimation? | The reference date should be understood as the date at which the outstanding amount of the exposure is evaluated as well as the time to which cash flows are discounted for the purposes of realised LGD calculation (i.e. the date of default is the reference date for the LGD estimation for non-defaulted portfolio). Please select one of the options from the drop down list. Among the options proposed, the current date for a defaulted exposure should be understood as the current time of evaluation. The definition of reference date should be understood according to the draft guidelines as specified in section 7.3 of the CP on the GLs. |
| 37 | D-F | Do you include margin of conservatism in the estimates? How? | Please select one of the options from the drop down list. If margin of conservatism is explicitly or implicitly included in the model development process please select the relevant option. |
| 38-44 | D-F | Please indicate what are the main triggers for applying a margin of conservatism (MoC) in your estimates | Please tick all relevant boxes of the aspects which triggered the inclusion of a MoC in your estimates or would trigger MoC if such situation occurred. |

## 2. Calculation of realised LGD

## Discounting rate

| Row | Column | Heading | Description |
|---|---|---|---|
| 49 | D-F | Which methodology do you use for determining the appropriate discounting rate? | Please select one of the options from the drop down list. Funding rate refers, for example, to those cases where institutions use as discounting rate the weighted average cost of capital (WACC) or simply the average yields offered on bonds issued by the institution. |
| 50 | D-F | On which level of granularity do you specify the discounting rate? | Please select one of the options from the drop down list. The question refers to the level at which discounting rate is differentiated between different exposures. |
| 51 | D-F | What is the average level of the discounting rate (in %) in the reference data set (RDS)? | In case a different discounting factor is specified by grade or pool please compute the exposure weighted average discounting rate. Please specify the number in % and with two decimals, for instance 5.00% (instead of 0.05). If the exact calculation of the average discounting rate is not possible please provide an expert based estimate or a range of discounting rates in use. |

## Events after default

| Row | Column | Heading | Description |
|---|---|---|---|
| 55 | D | How do you incorporate additional drawings after default into the calculation of realised LGD? | Please select one of the options from the drop down list. Realised LGD is understood as a ratio of economic loss on a defaulted exposure and the amount outstanding at default. Institutions should understand economic loss realised on an instrument (i.e. defaulted facility) (as referred to in point (2) of Article 5 of Regulation (EU) No 575/2013) as a difference between, from one side, the outstanding amount of the credit obligation at the moment of default including any amount of principal, interest or fee, increased by material direct and indirect costs associated with collecting on that instrument discounted to the moment of default and, from the other side, any recoveries realised after the moment of default discounted to |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | the moment of default. |
| 56 | D | How do you incorporate unpaid late fees (late meaning after default) into the calculation of realised LGD? | Please select one of the options from the drop down list. |
| 57 | D | How do you incorporate capitalised interest (meaning interest after default) into your calculation of realised LGD? | Please select one of the options from the drop down list. |
| 58 | D | Do you include additional drawings after default in the estimation of the credit conversion factors (CCF)? | Please select one of the options from the drop down list. |

## Other aspects of economic loss

| Row | Column | Heading | Description |
|---|---|---|---|
| 63-64 | D | Do you include direct and indirect costs incurred before default in the calculation of realised LGD? | Please select one of the options from the drop down list. If only part of the costs incurred before default are included please specify the types of costs that are included. |
| 65 | D | How do you treat cases with no loss or positive outcome? | Please select one of the options from the drop down list. The question enquired whether cases with no loss or where the realised LGD is negative are in any way adjusted and in particular whether a floor is applied to the realised LGD. |
| 66 | D | How do you measure the economic loss for a | Please select one of the options from the drop down list. An exposure should be considered as |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | cured case? | cured if it returns to non-defaulted status. |

## 3. Data and long-run average LGD

### Length of the historical observation period for LGD non-default, LGD in-default and ELBE estimation

| Row | Column | Heading | Description |
|---|---|---|---|
| 72-74, 76-78, 83-85, 90-92 | D-G | What's the historical observation period used for the calculation of long-run average LGD and for the estimation of LGD, LGD in-default and ELBE? | For the notion of historical observation period, please use the definition as specified in Article 181(1)(j) and 181(2) CRR. The historical observation period should be understood as the timespan between the oldest default considered in the RDS (start date) and latest date for which the defaults are taken into consideration or the moment of LGD estimation (end date).<br><br>Only specify the start and end dates for the internal, external or pooled data that are actually used for the purpose LGD estimation. If external or pooled data are not used within your entity, please leave these cells blank and provide a relevant comment.<br><br>Columns F-G should be completed only in case the historical observation period is a non-consecutive period: columns E-F should cover the first time period, and columns F-H should cover the second part of the time period[7]. |
| 72-74, 76-78, 83-85, 90-92 | H | Overall number of observations used for the purpose of calculation of long-run average LGD and for the | One observation should refer to one defaulted facility. Please leave this cell blank of you do not use external or pooled data and provide a relevant comment. |

[7] In the exceptional case where more than two individual time periods make up the historical observation period, please explain the different start and end dates in the comments.

| Row | Column | Heading | Description |
|---|---|---|---|
| | | purpose of estimation of LGD, LGD in-default and ELBE | |

## Specification of the historical observation period

| Row | Column | Heading | Description |
|---|---|---|---|
| 96 | D-F | Did you exclude some of the available historical data from the specification of the historical observation period? | Please select one of the options from the drop down list. Note that if the only reason for data exclusion is that your historical observation period is composed by non-consecutive periods this should be reflected in question 3.01-3.04 and the answer 'no' should be selected here. |
| 98-103 | D-F | How do you treat non-representativeness of data in terms of … | For each of the indicated aspects of (non)representativeness, please select one of the options to indicate how this aspect is taken into account. Please note that 'margin of conservatism' (MoC) and 'data adjustment' should be understood as specified in the CP of the GLs in paragraphs 23 and 26, i.e. MoC relates to the expected range of estimation error that may stem from the non-representativeness, whereas data adjustment relates to the adjustment made in order to correct the identified error. |

## Treatment of incomplete recovery processes

| Row | Column | Heading | Description |
|---|---|---|---|
| 107 | D-F | How do you incorporate incomplete recovery processes in your risk parameter estimates? | Please select one of the options from the drop down list. Note that the two options 'As an adjustment at grade or pool level' and 'As an adjustment at portfolio level' imply that the information from incomplete recovery processes is used to adjust the risk parameter estimates obtained using only closed, or treated as closed, recovery processes. |

| Row | Column | Heading | Description |
|---|---|---|---|
| 108 | D | What is the average time of the recovery processes (expressed in months) in the reference data set (RDS)? | Please indicate what is the average time of the recovery processes, expressed in months, that you actually observe in your reference data set. |
| 110-112 | D | What is the share of incomplete recovery processes (calculated in terms of the number of defaulted exposures) regarding all defaults occurred during the historical observations period? | Please indicate the share of incomplete recovery processes in terms of the number of exposures that defaulted during the observation period. Please provide this information separately for internal, external and pooled data. In case external or pooled data are not used, please leave the corresponding cells blank and provide a relevant comment. |
| 113 | D | Do you define a maximum period after which incomplete recovery processes are treated as closed for the purpose of calculating the average realised LGD? | Please select one of the options from the drop down list. If your answer is yes, please specify the length of this period. |

## Calculation of long-run average LGD

| Row | Column | Heading | Description |
|---|---|---|---|
| 117 | D | What type of weighting do you use in the calculation of long-run average LGD? | Please select one of the options from the drop down list. |
| 118 | D | How do you calculate the long-run average LGD? | Please select one of the options from the drop down list. Please note that 'average' can refer to any type of weighting as referred to in question 3.11. |

| Row | Column | Heading | Description |
|---|---|---|---|
| 119 | D | At which level do you calculate long-run average LGD? | Please select one of the options from the drop down list. |

## 4. LGD estimation methodologies

### Credit risk mitigation

| Row | Column | Heading | Description |
|---|---|---|---|
| 124 | D | Are there any (types of) collaterals in the considered portfolio which are not taken into account into your LGD estimates? | Please indicate (yes/no) whether there are any (types of) collateral in the considered portfolio which may lead to recoveries but which are not taken into account in the LGD estimates. If your answer is yes, please describe these (types of) collateral. |
| 125 | D | If your answer to question 4.01. is yes, please indicate the reasons for not recognising certain types of collateral in your LGD estimates. | Please specify the reason for not recognising collateral into your LGD estimates. |
| 126-131 | D | How is collateral included in the LGD estimation? | Please indicate how collateral is taken into account into your LGD estimation. You may select multiple boxes, for instance in case different approaches are used for different types of collateral. |
| 132 | D | How do you include in the LGD estimates the protection in the form of guarantees and credit derivatives? | Please select one of the options from the drop down list. |

### Repossessions

| Row | Column | Heading | Description |
|---|---|---|---|
| 136 | D | Do you repossess collateral in the course of the recovery process? | Please select one of the options from the drop down list. |
| 137 | D | If you repossess collaterals at least occasionally, which value of recovery do you recognise in the calculation of realised LGD? | Please select one of the options from the drop down list. |

## 5. Downturn LGD

### Downturn adjustment

| Row | Column | Heading | Description |
|---|---|---|---|
| 142 | D | How do you define a downturn period? | Please select one of the options from the drop down list. Please note that the option 'Based on macroeconomic and credit factors both historical and forward-looking' should be understood as the case where downturn conditions are (partly) established according to expectations on macro-economic and credit factors, for example, because no sufficiently severe conditions have been observed in the past on these factors. |
| 143 | D | How do you select the data used in downturn estimation? | Please select one of the options from the drop down list. Please note that the option 'According to the recoveries occurred in the downturn period' implies that the assignment of an exposure to the downturn period is made according to the time when the majority of the realised recoveries are observed rather than the date of default. Otherwise the option 'According to the closed recovery processes that occurred in the downturn period' links the assignment to the downturn |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | | period to the closure date of the recovery process. |
| 144 | D | At which level do you specify the downturn adjustment? | Please select one of the options from the drop down list. |
| 145 | D | What is the main methodology used by the institution to determine LGD estimates that are appropriate for an economic downturn? | Please select one of the options from the drop down list. For understanding the notion of model components, please consider the following examples: rate of return to performing portfolio, recovery rate conditional on returning to the living portfolio, recovery rate conditional on returning to the living portfolio, recovery rate with respect to collateral value and recovery rate with respect to the loan amount. Regarding the fact that different model components might be related to different (i.e. non-simultaneous) downturn periods, two options are provided in case where the methodology for obtaining downturn LGD is performed at model component level. These are respectively 'Apply the LGD estimation methodology using the downturn period value for all model components', where the downturn LGD is obtained using the downturn period value for each model component, and 'Apply the LGD estimation methodology using the downturn period value just for the more relevant model components', where the downturn LGD is obtained using the downturn period value only for the more relevant model components. |

## 6. Application of risk parameters

### Credit risk adjustments

| Row | Column | Heading | Description |
|---|---|---|---|
| 151 | E-F | Do you use the information on SCRA (specific credit risk | Please select one of the options from the drop down list. Please note that SCRA at portfolio basis refer to SCRA which are collectively determined, |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | adjustments) calculated on a portfolio basis in the LGD in-default and ELBE modelling? | i.e. where the assessment is not related to a specific exposure. Even in the case the SCRA or any risk parameters used to determine the value of SCRA are assessed on the basis of a model but assigned to individual exposures, these are considered as SCRA which are calculated on a portfolio basis (i.e. assessed collectively). |
| 152 | E-F | Do you use the information on SCRA (specific credit risk adjustments) assessed individually in the LGD in-default and ELBE estimation? | Please select one of the options from the drop down list. Please note that individually assessed SCRA refer to SCRA where the SCRA are based on projected cash flows which are assessed individually for a specific exposure and where the SCRA are not based on any models. |

## 7. Redevelopment and re-estimation triggers

9. It should be clarified, that even though Chapter 9 of the CP of the GLs applies to the estimation of all risk parameters, this series of questions in this template applies only to the estimation of LGD, LGD in-default and ELBE.

| Row | Column | Heading | Description |
|---|---|---|---|
| 156 | D-F | What was the date of the last model redevelopment or re-estimation? | Please specify the date of the last (re-) calibration of the model in format [dd/mm/yyyy]. |
| 157 | D-F | Is the next redevelopment or re-estimation planned? If your answer is yes, please specify the date. | If your next redevelopment or re-estimation is planned, please specify the planned date in format [dd/mm/yyyy]. If this date is not known yet, please insert 01/01/1950. |
| 158 | D-F | Regarding previous question, what is the trigger for that? | Please select one of the options. |
| 159 | D-F | Do you have a pre- | Please select one of the options. |

| Row | Column | Heading | Description |
|---|---|---|---|
| | | established frequency for redeveloping or re-estimating? If yes, please specify the frequency. | |

## 8. Quantitative information

| Row | Column | Heading | Description |
|---|---|---|---|
| 164 | D | a. average realised LGD*** (in %) over the historical observation period | The average realised should be reported in % with two decimals (i.e. 3.00% instead of 0.03) and this average should span the historical observation period. Note that this average value should be the equally weighted average over the total number of observations, i.e. the equally weighted average over all assigned LGDs. |
| 165 | D-F | c. average final LGD estimate*** used for regulatory purposes (in %) | The average final LGD estimate should also be reported in % with two decimals (i.e. 3.00% instead of 0.03). Note that this average value should be the equally weighted average over the total number of observations, i.e. the equally weighted average over all assigned LGDs. |