



EUROPEAN CENTRAL BANK  
BANKING SUPERVISION

## Implementation of the new definition of default

Process guidance for significant  
institutions using the IRB approach

BANKENTOEZICHT

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# 1 Background and rationale

## 1.1 Introduction

Against the backdrop of the requirements set out in Article 178 (6) and (7) of Regulation (EU) No 575/2013 (the “CRR”) and as a result of the work carried out by the European Banking Authority (EBA) to identify the main drivers of variability in the implementation of IRB models, two key regulatory products were issued that make particular reference to the definition of default:

1. the draft Regulatory Technical Standards on materiality threshold for credit obligations past due under Article 178 of Regulation (EU) No 575/2013 ( “draft RTS”), adopted by the European Commission as Commission Delegated Regulation (EU) 2018/171<sup>1</sup> (“Delegated Regulation”);
2. the EBA Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013<sup>2</sup> (EBA/GL/2016/07 – the “Guidelines”).

The Delegated Regulation specifies the conditions according to which a competent authority shall set the materiality threshold for credit obligations past due referred to in Article 178(2)(d) of the CRR. The Guidelines provide detailed clarification on various aspects of the application of the definition of default, namely the criterion for determining the number of days past due for default identification, indications of unlikelihood to pay, conditions for the return to non-defaulted status, the application of the definition of default in external data, the application of the default definition in a banking group and specific aspects relating to retail exposures, and comprise guidance on documentation, internal policies and risk management processes.

Both the Delegated Regulation and the Guidelines apply in relation to the Standardised Approach for credit risk (“SA”) in accordance with Part Three, Title II, Chapter 2 of the CRR (by virtue of Article 127 of the CRR, which references Article 178 of the CRR) and to the internal ratings based approach (“IRB approach”) in accordance with Part Three, Title II, Chapter 3 of the CRR.

The Delegated Regulation entered into force on 26 February 2018. For significant institutions within the SSM, the level of the materiality threshold will be defined according to the conditions set out in the Delegated Regulation through the adoption of an ECB Regulation (“ECB Regulation (EU) YYYY/XYZ”). The preliminary ECB stance with regard to the definition of the materiality threshold and, in particular, to the levels of its components, is presented in the draft text of the “ECB Regulation exercising a discretion under Article 178(2)(d) of Regulation (EU) No 575/2013 in

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<sup>1</sup> Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0171&rid=1>

<sup>2</sup> Available at: <https://www.eba.europa.eu/documents/10180/1597103/Final+Report+on+Guidelines+on+default+definition+%28EBA-GL-2016-07%29.pdf/004d3356-a9dc-49d1-aab1-3591f4d42cbb>

relation to the threshold for assessing the materiality of credit obligations past due”, under public consultation between 3 July and 17 August 2018.

According to paragraph 10 of the Guidelines, these guidelines apply from 1 January 2021<sup>3</sup>; institutions should therefore incorporate the requirements and applicable optional practices of these guidelines in their internal procedures and IT systems by that time, but competent authorities may accelerate the timeline of this transition at their discretion. The EBA encourages institutions to implement the changes before this date<sup>4</sup>. This is particularly important for institutions that use the IRB approach, as the change in the definition of default may require further adjustments in their rating systems and these institutions will therefore have to start building reliable time series as early as possible.

In addition to the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation, ECB Regulation (EU) 2016/445 also has an impact on the definition of default, since Article 4 of said regulation exercises the option provided for in Article 178(1)(b) of the CRR and abolishes the “180 days past due” criterion for all SSM significant institutions from 1 January 2017 for exposures secured by residential property or SME commercial immovable property in the retail exposure class, as well as exposures to public sector entities.

For institutions using the IRB approach, according to Commission Delegated Regulation (EU) No 529/2014 in conjunction with the amendments set forth in Commission Delegated Regulation (EU) 2015/942 (“DR 529/2014”), a change in the definition of default always constitutes a material model change requiring prior permission from the competent authorities.

As anticipated in our letter of December 2016 providing information on the Targeted Review of Internal Models (TRIM) project and other ongoing internal model supervision projects, and further detailed in our letters of June and December 2017, the ECB set up a process to address the implementation of the new definition of default throughout the SSM for significant institutions (“institutions”) using the IRB approach. The ECB’s objective is to address the EBA’s roadmap for the review of the IRB approach while taking into account the institutions’ needs for a manageable and streamlined process that will allow them to finalise the effective implementation of the revised IRB framework by the end of 2020, as required by the EBA. The envisaged approach, referred to as the “Two-Step Approach”, foresees two sequential steps:

1. the implementation of the new definition of default;
2. the necessary adjustments to risk parameters to take into account the new definition of default and other necessary evolutions (principally stemming from other regulatory products and follow-up on previous internal model investigations).

<sup>3</sup> The ECB, as the competent authority for SSM significant institutions, has notified the EBA that it intends to comply with the GL by 1 January 2021. See: <https://www.eba.europa.eu/documents/10180/1597103/EBA+GL+2016+07-CT+GLs+on+application+of+the+definition+of+default.pdf/8797444b-4aa7-4804-a2be-fd941c941c90>.

<sup>4</sup> Cf. EBA/GL/2016/07, Executive Summary, page 3.

The new definition(s) of default to be implemented by institutions should reflect the provisions set out in the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation. However, it is expected that institutions have already incorporated the provisions of Article 4 of ECB Regulation (EU) 2016/445. Should affected institutions have not already requested permission to implement the provisions of Article 4 of ECB Regulation (EU) 2016/445, they are advised to do so as part of the process described in this document to ensure compliance with ECB Regulation (EU) 2016/445.

According to the suggested process, in the first step of the envisaged Two-Step Approach institutions using the IRB approach<sup>5</sup> are encouraged to focus on the alignment of the processes, procedures and IT systems used for the identification of defaults with the new definition of default and to request permission to implement their new definition(s) of default by submitting a single application that covers all rating systems<sup>6</sup>. Within the application, however, permission to make the required material changes in the definition of default must be requested at the level of each rating system (cf. Article 143(3) and (4) of the CRR and DR 529/2014). To this end, and to permit an efficient supervisory review of the applications, institutions should include a self-assessment comprising the following elements in their application package<sup>7</sup> to be submitted according to DR 529/2014:

1. registry of all relevant definitions of default and rating systems used within their organisational structure;
2. gap analysis between the definition of default currently implemented and a definition of default compliant with the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation;
3. quantitative and/or qualitative impact analysis supplementing the gap analysis to gauge the impact of the changes on default rates, cure rates, risk parameters and capital absorption;
4. action plan outlining all necessary changes and their implementation;
5. documentation on the review of the IT infrastructure.

Institutions are expected to work on the registry, gap analysis, impact analysis and a first draft of an action plan with particular focus on the scope of the supervisory

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<sup>5</sup> Exposures under the Standardised Approach are outside the scope of this process.

<sup>6</sup> Note that, according to the DR 529/2014, the requests for approval of a material change in the definition of default would, in principle, be expected separately for each rating system under the IRB Approach.

It is expected that institutions' application packages will cover all definitions of default and, consequently, all rating systems. Nevertheless, in well-reasoned cases, the possibility of excluding a definition of default might be considered. In such cases, institutions should liaise with their respective relevant joint supervisory teams (JSTs) to agree on possible deviations from the general expectations before any application package is submitted to the ECB.

<sup>7</sup> If an institution can demonstrate that there are no gaps between the definition(s) of default currently implemented and one(s) compliant with the GL and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation, it will not be expected to submit an application package.

process and using the methodology developed by the ECB as set out in this document.

The supervisory assessment of the requests for approval will subsequently be carried out, followed by the related decisions.

Institutions will then be expected to collect data according to the new definition of default and – in the second step of the approach – to work on possible adjustments to their rating systems to take account, where necessary, of: changes in the definition of default, other regulatory products that are part of the EBA IRB review;<sup>8</sup> and follow-up from previous internal model investigations, such as TRIM missions. Institutions should also already take into consideration the regulatory technical standards (“RTS”) on assessment methodology<sup>9</sup> (EBA/RTS/2016/03) and the RTS on the specification of the nature, severity and duration of an economic downturn<sup>10</sup> and make any necessary adjustments to their rating systems to comply with the provisions set out in these RTS as soon as they are adopted by the Commission and have become applicable.

Should the above adjustments to rating systems lead to material model changes, institutions will need to submit separate applications pursuant to DR 529/2014. It may therefore be the case that an institution first submits the above application package for a material model change due to a change in the definition of default, and subsequently submits a second application package for a material model change due to adjustments to its rating systems arising from the new definition of default and other regulatory products.

It is worth highlighting that, according to an EBA Opinion<sup>11</sup>, effective implementation of changes arising from the review of the IRB approach should be finalised by the end of 2020.

With this in mind, the aim of this document is to provide guidance on the information that is expected to be produced as part of the first application package requesting approval of the material change in the definition of default. It is organised as follows.

The remainder of this chapter first clarifies the regulatory framework underlying the structured self-assessment, then describes in more detail the supervisory process for addressing the regulatory changes to the definition of default.

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<sup>8</sup> EBA Guidelines on PD estimation, LGD estimation and the treatment of defaulted exposures (EBA/GL/2017/16), the Regulatory Technical Standards on IRB assessment methodology (EBA/RTS/2016/03) and the Regulatory Technical Standards on economic downturn (the work on the economic downturn is still under preparation by the EBA, see EBA/CP/2018/07 and EBA/CP/2018/08).

<sup>9</sup> Available at:  
<https://www.eba.europa.eu/documents/10180/1525916/Final+Draft+RTS+on+Assessment+Methodology+for+IRB.pdf/e8373cbc-cc4b-4dd9-83b5-93c9657a39f0>

<sup>10</sup> The work on the economic downturn is still under preparation by the EBA, see EBA/CP/2018/07 and EBA/CP/2018/08.

<sup>11</sup> Available at:  
<https://www.eba.europa.eu/documents/10180/1359456/EBA-Op-2016-01+Opinion+on+IRB+implementation.pdf>



Chapter 2 defines the scope of the supervisory process.

Chapter 3 summarises the content of the application package to be submitted by institutions.

Chapter 4 provides guidance on completing the registry template accompanying this document.

Chapter 5 details the steps for completing the gap analysis template accompanying this document.

Chapters 6 and 7 set out similar guidance for the impact analysis.

Chapter 8 builds on the results of the analyses described above, setting out the details of the action plan to be submitted as part of the application package.

Chapter 9 goes on to specify requirements for test activities during and on completion of changes to the IT infrastructure as part of the implementation of the new definition of default, where applicable.

Chapter 10 describes the monitoring process designed to track the appropriateness of institutions' rating systems following the go-live of the new definition of default.

Chapter 11 describes the process for frequently asked questions ("FAQ process") that has been set up to support institutions in carrying out their analyses. This process channels and answers questions about the templates, the application package or the process guidance in this document.

## 1.2 Regulatory framework

On 28 September 2016, the EBA published on its website both the draft RTS on the materiality threshold for credit obligations past due (under Article 178(6) of the CRR) and the Guidelines<sup>12</sup> (under Article 178(7) of the CRR). The draft RTS were adopted by the European Commission in the Delegated Regulation, entered into force on the twentieth day following that of its publication in the Official Journal of the European Union<sup>13</sup>. The Guidelines were subject to the "comply or explain" framework in accordance with Article 16(3) of Regulation (EU) 1093/2010 and shall apply from 1 January 2021.

In respect of the Guidelines, the ECB has notified the EBA of its intention to comply in full with the principles set out in them by 1 January 2021<sup>14</sup>.

For institutions supervised by the SSM, the definition of the level of the materiality threshold according to the conditions set out in the Delegated Regulation is currently

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<sup>12</sup> The translation into all EU languages was completed on 18 January 2017.

<sup>13</sup> See OJ L 32, 6.2.2018, p. 1-5.

<sup>14</sup> See <https://www.eba.europa.eu/documents/10180/1597103/EBA+GL+2016+07-CT+GLs+on+application+of+the+definition+of+default.pdf/8797444b-4aa7-4804-a2be-fd941c941c90>.



ongoing and will result in the adoption of ECB Regulation (EU) YYYY/XYZ. The Delegated Regulation prescribes the following conditions for setting materiality thresholds:

- for retail exposures, the absolute component of the threshold should not exceed EUR 100 and the relative component should be between 0% and 2.5%;
- for non-retail exposures, the absolute component of the threshold should not exceed EUR 500 and the relative component should be between 0% and 2.5%;
- the relative component of the threshold should be set at 1% unless the responsible competent authority assesses that this level does not reflect a reasonable level of risk.

Pursuant to the draft text of the “ECB Regulation exercising a discretion under Article 178(2)(d) of Regulation (EU) No 575/2013 in relation to the threshold for assessing the materiality of credit obligations past due”, the preliminary ECB stance is to set the absolute component of the materiality threshold at the maximum levels prescribed in the Delegated Regulation, i.e. EUR 100 for retail exposures and EUR 500 for non-retail exposures, and the relative component of the materiality threshold at the baseline level of 1% for both retail and non-retail exposures. A default is deemed to have occurred when both the limits expressed as the absolute and relative components are exceeded for 90 consecutive days.

Article 178(1)(b) of the CRR also gives competent authorities the option to replace the 90 days past due criterion with 180 days for exposures secured by residential property or SME commercial immovable property in the retail exposure class, as well as exposures to public sector entities. The ECB chose, by means of Article 4 of ECB Regulation (EU) 2016/445, not to exercise the option provided for in Article 178(1)(b) of the CRR, abolishing the 180 days past due criterion for all SSM significant institutions from 1 January 2017. ECB Regulation (EU) 2016/445 should therefore be taken into account when interpreting and applying the provisions of ECB Regulation (EU) YYYY/XYZ and the Guidelines relating to the past due criterion.

## 1.3 Supervisory process

The scope of this supervisory process comprises all IRB rating systems for which the ECB is the competent authority, including those rating systems for which a joint decision process is applicable pursuant to Article 20(1)(a) of the CRR and for which applications for permission are to be submitted to the ECB as the consolidating supervisor in accordance with Article 20(1) of the CRR. Further details are provided in Chapter 2.

The cornerstone of the supervisory process set up to address the implementation of the regulatory changes to the definition of default is the completion by institutions of a structured self-assessment consisting of the following elements.

- (a) A registry in which institutions record all relevant definitions of default and rating systems used within their organisational structure.
- (b) A gap analysis in which institutions should first carry out a self-assessment of their compliance with ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation and the Guidelines and of necessary adjustments to specific procedures and IT systems used in the default identification process, and then produce an implementation plan comprising an estimated timeline for ensuring compliance. The gap analysis is requested at the level of each single requirement and optional practice of the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation.
- (c) An impact analysis in which institutions provide a best estimate of the impact of the change in the definition of default on their rating systems, portfolio properties, risk parameters, expected loss (EL) amounts and risk weighted exposure amounts (RWEA). The impact analysis is requested at the level of each individual rating system.

Since the default data based on the new definition of default are not yet available, institutions should assess the impact by carrying out a “retrospective simulation”, i.e. by comparing the status of historical exposures when simulating the application of the new versus the current “old” definition of default, with the possibility of restricting the analysis to a limited period of time and, subject to certain conditions, a representative sample of exposures. According to the supervisory process, there is no mandatory requirement to implement a (real time) parallel run of the old and new definition of default in order to complete the impact analysis.

The impact analysis is to be conducted for those requirements and applicable optional practices for which institutions have identified gaps between the definition of default currently implemented and a definition of default compliant with the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation. It therefore complements the gap analysis and should be consistent with the information provided in it. It is divided into two parts – a qualitative and a quantitative impact analysis. The qualitative impact analysis provides an overview of all gaps identified and indicates whether a gap is included in the quantitative analysis or assessed qualitatively. If a gap can be assessed quantitatively, this should be done using the retrospective simulation described above. Institutions are strongly encouraged to perform a quantitative impact analysis for as many identified gaps as possible. Qualitative impact analysis is required **exclusively** for those requirements and applicable optional practices that institutions are not able to include in their quantitative impact analysis. They should be regarded as a fall-back option, however, and institutions are expected to avoid or minimise their use wherever possible.

In the case of immaterial rating systems (according to the definition in Section 7.1), institutions may be granted a waiver for the quantitative

impact analysis. In such cases institutions do not need to perform the quantitative impact analysis but will still need to provide the other elements of the structured self-assessment, including the qualitative impact analysis.

- (d) An action plan in which institutions consolidate and record all necessary changes to be made to their rating systems, IT procedures and processes to make them compliant with ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation and the Guidelines in the shortest possible period of time, including an estimated timeline for the implementation of all changes.

As actions and timelines may evolve during implementation, the first action plan may be considered preliminary. Institutions may amend their submission as necessary until the go-live of the new definition(s) of default. In this regard, please note that institutions may carry out implementation activities before submitting their application (and thus in principle while completing the gap and impact analyses). The relevant steps and their degree of completion should be reflected appropriately in the action plan.

- (e) Documentation on the review of the IT infrastructure used in the default detection process to ensure that a given institution is ready to handle the changes in the definition of default by the time of the envisaged go-live. When requesting permission to implement changes in the definition of default, institutions are expected to have a thorough test concept/testing framework in place and should be able to provide a report on the status of their testing activities up to that point to demonstrate progress with the review of their IT infrastructure.

Overall, the supervisory process comprises the following key elements:

1. Application package: According to the process, institutions are expected to submit a single application requesting approval of the material change in the definition(s) of default for all rating systems used under the IRB approach. The registry template, gap analysis templates, impact analysis templates, action plan template and documentation on the review of the IT infrastructure should be part of the application package.
2. Supervisory review: To ensure consistent and comparable outcomes, the ECB will assess all applications using a uniform approach. The assessment will include verification of the compliance of the new definition of default to be implemented by institutions with ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation and the Guidelines, and examination of the appropriateness of the gap analysis, impact analysis and action plan.
3. Supervisory decision: Assuming that the definition of default is compliant with the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation, several outcomes may follow depending on the completeness of the application package submitted by institutions, the

readiness to implement a definition of default compliant with the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation, the expected impact in terms of the direction and magnitude of the gaps identified and the degree of reliability of the analyses presented. Institutions are therefore encouraged to provide a thorough application package containing precise gap and impact analyses and a detailed action plan. This will minimise the need for possible supervisory measures until a complete adjustment of the rating systems has been carried out.

Figure 1: Core elements of the supervisory process



## 2 Scope of the supervisory process

This chapter defines the scope of the supervisory process and hence of the structured self-assessment designed to gauge the impact of the changes in the definition(s) of default on institutions' exposures and ultimately on their requirements in terms of own funds.

The self-assessment should only cover exposures for which permission has been granted to use the IRB approach. Any exposures under the Standardised Approach (including exposures for which institutions have been granted permission for permanent partial use in accordance with Article 150 of the CRR) are outside the scope of this process. This also implies that within an organisational structure in which the parent institution uses the Standardised Approach while a subsidiary has been granted permission to use an IRB approach, only the subsidiary falls within the scope of the self-assessment.<sup>15</sup>

Moreover, only those institutions for which the ECB is the consolidating supervisor referred to in Article 20(1) of the CRR as at 31 December 2017 are expected to analyse whether entities within their scope of prudential consolidation need to carry out the self-assessment. Formally, the scope of this process covers all significant supervised groups ("significant supervised groups") according to Article 2(22) of ECB Regulation (EU) No 468/2014 ("SSM Framework Regulation") and all significant supervised entities according to Article 2(16) of the SSM Framework Regulation ("significant supervised entities") that are not part of a significant supervised group.

"Submitting party"

In this document, a "submitting party" is defined as:

- (i) a significant supervised group, including all subsidiaries within countries that are SSM members as well as subsidiaries in countries that are not SSM members, also taking into account countries outside the European Economic Area (EEA), whose definitions of default and rating systems are used on a consolidated level; or
- (ii) a significant supervised entity that is not part of a significant supervised group.

Importantly, while this encompasses definitions of default and rating systems of non-EEA subsidiaries used at a consolidated level, the subsidiaries' approaches and policies used at an individual level (if different) do not fall within the scope of the self-assessment.

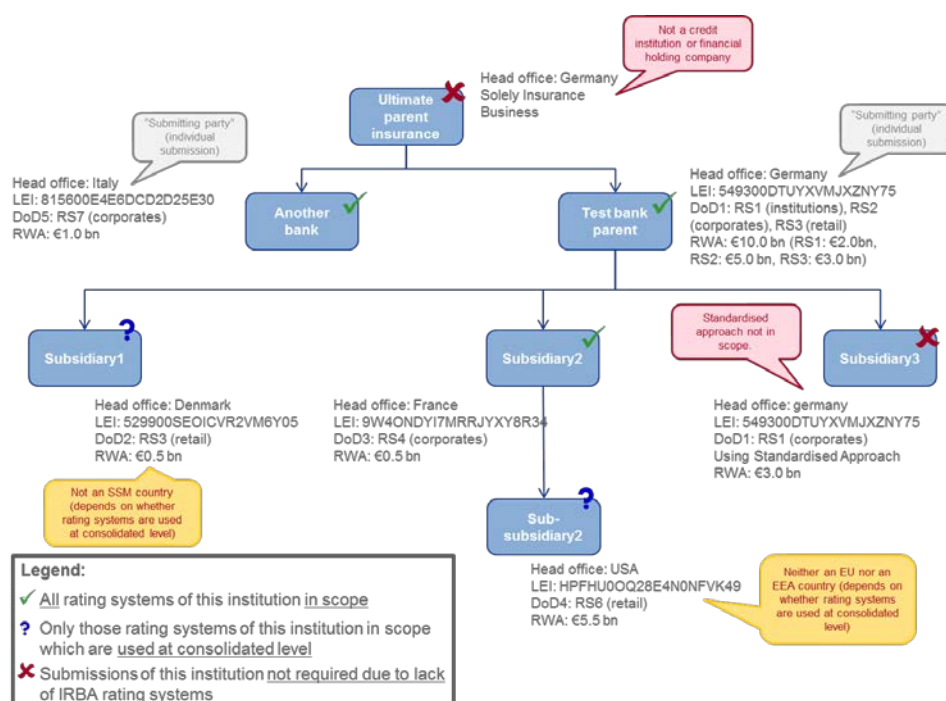
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<sup>15</sup> Institutions currently applying for initial model approval to use an IRB Approach and those planning a roll-out in the near future should liaise with their respective JST for a case-by-case assessment of their particular situation in respect of this process.

The supervised entity at the highest level of consolidation within a submitting party, if it is a significant supervised group, or the submitting party itself if it is not part of a significant group, is asked to submit one application package encompassing all rating systems to request approval to implement the new definition(s) of default for itself and all its relevant subsidiaries. For reference, Figure 2 provides a stylised example of an organisational structure and indicates which entities fall within the scope of the process.

The general reference date for all information to be provided ("reference date") shall be 31 December 2017, unless stated otherwise; any comparisons requested in this document should be conducted relative to the (approved) definition of default implemented for the purposes of the IRB approach on this reference date.

Figure 2: Stylised example of the scope of the process



### 3 Content of the application package

DR 529/2014 prescribes that changes in the definition of default always constitute a material change in a given rating system<sup>16</sup> and defines the general content of the application package to be submitted by each submitting party (Article 8 of DR 529/2014).

Figure 3: Content of Article 8 of DR 529/2014 relating to the application package

Article 8 of DR 529/2014	Application package
Description of the extension or change, its rationale and objective	Gap analysis templates
Implementation date	Action plan
Scope of application affected by the model extension or change, with volume characteristics	Registry template
Technical and process document(s)	<ul style="list-style-type: none"> <li>- Technical and process documents relating to the definition of default policies</li> <li>- Summary of the main changes to the IT implementation</li> <li>- List of all documents affected by the change in the definition of default</li> </ul>
Reports of the institution's independent review or validation	Clearance from the institution's internal audit function
Confirmation that the extension or change has been approved through the institution's approval processes by the competent bodies and date of approval	Confirmation of approval by the relevant bodies
Quantitative impact of the change or extension on the risk-weighted exposure amounts or own funds requirements	Qualitative and quantitative impact analysis templates
Records of the institution's current and previous version number of internal models which are subject to approval	Registry template

Due to its fundamental importance for the accuracy, consistency, and completeness of the data underlying model development, institutions are asked to submit a quantitative impact analysis for the change in the definition of default triggered by ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation and the Guidelines (cf. Article 8(1)(g) of DR 529/2014). The envisaged quantitative impact analysis is in line with Article 3(2) of DR 529/2014.

In line with these requirements (cf. Figure 3), institutions are asked to place particular emphasis on providing the following elements:

- confirmation that the change(s) has (have) gone through the institution's approval processes and has (have) been approved by the relevant management bodies in accordance with Article 189(1) of the CRR;
- the final draft of the updated technical and process documents on the definition of default policies, namely the definition of default internal policy<sup>17</sup>, the default detection process and the return to non-defaulted status process;
- presentation or summary of the main changes to the IT implementation;
- list of all documents affected by the change in the definition of default, for example policies on the credit-granting process and other documents proving the use of the models in the institution's processes (i.e. "use test" in accordance with Article 144(1)(b) of the CRR), clearly distinguishing between those that

<sup>16</sup> Article 4(1)(b) in conjunction with Annex I, Part II, Section 1, Paragraph 3 of DR 529/2014.

<sup>17</sup> In respect of internal policy documentation, the submission is expected to comprise the final draft cleared by institutions' internal audit functions (see below).



have already been updated and those that will be updated at a later date as described in the action plan.

- completed application form as attached to this document;
- completed registry template containing a list of all definitions of default and all rating systems;
- completed set of gap analysis templates covering all definitions of default;
- completed set of qualitative and quantitative impact analysis templates covering all rating systems for which both templates are necessary in accordance with Chapter 7;
- comprehensive action plan<sup>18</sup> for implementing the new definition(s) of default, which should generally include:
  - a description of all changes to be made, based on what is currently implemented, from both a process and technical point of view;
  - a reference to the process and technical documentation that reflects the changes;
  - the expected implementation date(s), also taking into account planned staff training, additional planned validation, audit tasks, etc.;
- clearance from the institution's internal audit function in the form of a report on the appropriateness and completeness of the application package. The expectation is that each application package will go through an independent review, culminating in an independent opinion provided by the institution's internal audit function and documented in a report, which should as a minimum confirm:
  - the completeness of the application package, including confirmation that it includes the final, internal audit-approved versions of all relevant documentation;
  - approval of the changes by all relevant bodies;
  - the accuracy and completeness of the registry and gap templates (in terms of coverage of all relevant definitions of default and rating systems, correctness of the RWEA figures, etc.);
  - the accuracy and completeness of the results of the qualitative and quantitative impact analyses.

Institutions may provide additional documentation and information to supplement that listed above where this is deemed appropriate in order to provide the relevant JST with a comprehensive understanding of the issues in question.

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<sup>18</sup> The action plan may be revised during the course of the approval process.

Institutions should also note the following when completing the templates:

- only make entries in fields with yellow highlighting;
- bear in mind that to obtain consistent and comparable inputs from all institutions, some input fields expect institutions to select from a list of pre-defined answers while others require free-text entries;
- do not change (standardised) identifiers unless otherwise stated;
- respect all automated validation rules and protections – inconsistent inputs may be treated as incomplete at the sole discretion of the ECB;
- provide inputs “from left to right”, as dropdown menu values may depend on answers to previous questions.

## 4 Registry

The registry of definitions of default and rating systems serves as a central reference point for the gap and impact analyses. Its purpose is to collect general information on the submitting party that is relevant across all self-assessments and to link the definitions of default and rating systems in a traceable manner across the analyses without undue replication of details.

A dedicated template (“registry template”) is provided as an attachment to this document. Institutions are asked to complete the registry template using the guidance provided below and include it in the documentation submitted as part of the application package.

This chapter provides details on the information that is expected to be produced for the registry and offers guidance on completing the registry template.

### 4.1 General guidance

As a general rule, where the submitting party is a significant supervised group the template should be completed by the supervised entity at the highest level of consolidation within that group. In other words, each submitting party is expected to submit one template that includes the details for all relevant subsidiaries. It should comprise a complete list of the definitions of default used to comply with Article 178 of the CRR for all types of exposures treated under the IRB approach which fall within the scope outlined in Chapter 2, together with a complete list of the rating systems<sup>19</sup> applied within the submitting party's organisational structure, i.e. including all stand-alone definitions of default and/or rating systems applied by subsidiaries within the scope of the self-assessment.

For the purposes of completing the registry and all subsequent templates, two rating systems are considered to have the same definition of default if they share a single internal guideline on how to identify defaults. This means that the same rules, including the same materiality threshold, are considered for counting of days past due, the same triggers are considered as indications of unlikelihood to pay and the same conditions apply for the return to non-defaulted status. Multiple rating systems may share the same default definition or, conversely, a single rating system may be

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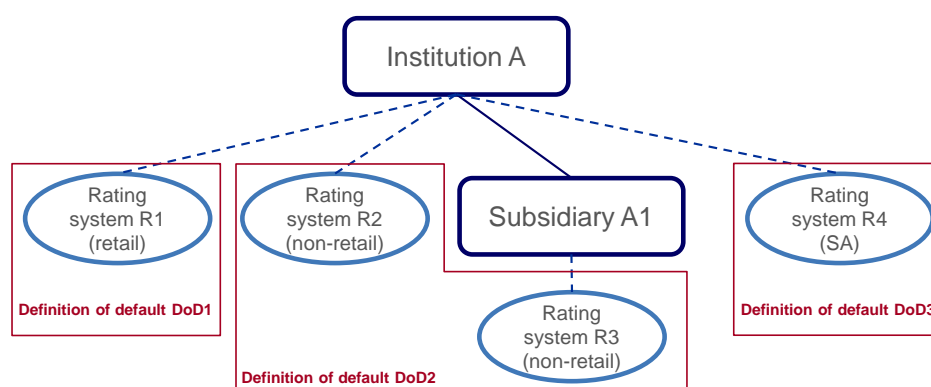
<sup>19</sup> It is expected that institutions will refer to the register of rating systems defined in the upcoming EU Delegated Regulation implementing Article 33 of the Final Draft Regulatory Technical Standards (RTS) on the specification of the assessment methodology for competent authorities regarding compliance of an institution with the requirements to use the IRB Approach in accordance with Articles 144(2), 173(3) and 180(3)(b) of Regulation (EU) No 575/2013, covering the detailed scope of the rating system, specifying which types of exposures are rated by each rating system.

linked to multiple definitions of default<sup>20</sup>. For a single definition of default, the expectation is that an explicit answer can be provided to the question of whether or not it already complies with a certain requirement (or optional practice where applicable) for each provision of ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation or the Guidelines (as if already applicable). Where, in exceptional cases, institutions cannot (yet) meet such an expectation, they should explain in full in what respect and for what reason(s) such an expectation cannot be met in the free-text comments field of Sheet “General Information” (cf. Section 4.2.1 below).

#### Example 1

Institution A has a distinct rating system, R1, for retail IRBA exposures and two rating systems, R2 and R3, for non-retail IRBA exposures. In addition, a fourth rating system, R4, is used solely for management purposes on a portfolio of exposures that are treated under the Standardised Approach (cf. Figure 4). Rating system R3 is applied by a subsidiary, but it applies the same definition of default as the group head for rating system R2.

Figure 4: Sample structure of definitions of default within a group



In this example, rating systems R2 and R3 share a unique definition of default (DoD2). In all templates, this circumstance should be handled by including DoD2 as one distinct definition of default attached to the supervised entity at the highest level of consolidation within the submitting party. DoD3 is outside the scope of any of the analyses, as it does not concern IRBA portfolios and should therefore not be included in the registry template.

All registry templates should be submitted using the following naming convention: "registry\_template\_[LEIcode].xlsx", where [LEIcode] denotes the Legal Entity Identifier (LEI) code of the supervised entity at the highest level of consolidation

<sup>20</sup> Such a case is mentioned in par. 85 of the Guidelines. A concrete example can be the following: a group of homogeneously managed exposures covers two jurisdictions with slightly different materiality thresholds and so with different definitions of default. These differences are not enough to justify the development of distinct rating systems and therefore a unique rating system, associated to two definitions of default, is developed.

within the submitting party (this entry should be identical for all templates submitted by a given submitting party).

## 4.2 Guidance on the template

The registry template is an Excel workbook comprising a total of four sheets:

- General Information;
- List of definitions of default;
- List of rating systems;
- Guidance.

Sheet “General Information” asks for a range of general inputs. For the purposes of transparency and traceability, the definitions of default and rating systems are listed in separate sheets entitled Sheet “List of definitions of default” and Sheet “List of rating systems” respectively. Sheet “Guidance” contains no input fields but provides information on how to complete the other sheets within the template. Detailed guidance on how to complete each input field is provided in the following subsections.

### 4.2.1 Sheet “General Information”

In Sheet “General Information”, institutions are expected to provide a set of basic reference data – name, contact information, LEI code and country code – for the supervised entity at the highest level of consolidation within the submitting party. Institutions should also indicate whether they intend to adjust the number of definitions of default during the course of implementing ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation and the Guidelines (optional input). More precisely, they should record the expected (total) number of definitions of default to be applied within the relevant organisational structure of the submitting party once all amendments have been completed.

In addition to the mandatory fields mentioned above, institutions may provide free-text comments at the bottom of the sheet.

Figure 5: Registry template – Sheet “General information”

Registry Template - General Information	
Template Version: 1.01	
<u>Country: (two letter ISO code)</u>	
<u>Name of the supervised entity at the highest level of consolidation within the submitting party:</u>	
<u>LEI of the supervised entity at the highest level of consolidation within the submitting party:</u>	
<u>Name of the contact person at the institution:</u>	
<u>Telephone number of the contact person at the institution:</u>	
<u>E-mail of the contact person at the institution:</u>	
<u>How many different DoDs will you use after the regulatory review for types of exposures treated under IRBA?</u>	
General / additional comments to the answers provided herein	

#### 4.2.2 Sheet “List of definitions of default”

In Sheet “List of definitions of default”, the supervised entity at the highest level of consolidation is expected to compile a list of all definitions of default applied within the organisational structure of the submitting party as at the reference date, providing the following information in each case:

- a description of the scope of each definition of default, i.e. in which entities and for which IRBA exposure classes (as laid down in Article 147 of the CRR) the definition of default is used;
- the general exposure type (i.e. retail vs non-retail) to which the definition of default applies;
- the name of the supervised entity at the highest level of consolidation applying the definition of default;
- the LEI code of the supervised entity at the highest level of consolidation applying the definition of default;
- the jurisdictions relevant for the exposures to which the new definition of default is applied;

- the name of the gap analysis template submitted for the definition of default.

Crucially, institutions must not – for any reason – change the (standardised) identifiers provided in the first column of the template.

Figure 6: Registry template – Sheet “List of definitions of default”

ID of the definition of default	Description of the scope to which each definition of default is applied: in which entities and for which IRBA exposure classes (i.e. exposure classes as laid down in Article 147 of the CRR) the definition of default is used?	General exposure type	Name of the supervised entity at the highest level of consolidation applying the definition of default	LEI code of the supervised entity at the highest level of consolidation applying the definition of default	Jurisdictions relevant for the exposures to which the new definition of default is to be applied	Name of the gap analysis template submitted
	010	020	030	040	050	060
DOD1						
DOD2						
DOD3						
DOD4						
DOD5						
DOD6						
DOD7						
DOD8						
DOD9						
DOD10						
DOD11						
DOD12						
DOD13						
DOD14						
DOD15						
DOD16						
DOD17						
DOD18						
DOD19						
DOD20						
DOD21						

Input 1: Description of the scope to which each definition of default is applied: in which entities and for which IRBA exposure classes (i.e. exposure classes as laid down in Article 147 of the CRR) is the definition of default used?

The first input field (column identifier 010) is for a free-text entry of answers to the following questions for each definition of default as at the reference date:

- In which entities is the definition of default used (the name of the entity is sufficient)?
- For which IRBA exposure classes (as per Article 147 of the CRR) is the definition of default used?

If considered useful for subsequent analyses, institutions may also supply internal identifiers for their definition(s) of default.

Input 2: General exposure type

For the second input field (column identifier 020), institutions may choose from three possible answers in a dropdown menu:

- “Retail”;
- “Non-retail”;
- “Both retail and non-retail”.

“Retail” should be selected if the given definition of default applies only and exclusively to retail exposures (i.e. exposures assigned to the retail exposure class in accordance with Article 147(2)(d) of the CRR). “Non-retail” should be selected if the definition of default applies only and exclusively to non-retail exposures (i.e. exposures assigned to the exposure classes specified in Article 147(2)(a), (b), (c) and/or (e) of the CRR).

“Both retail and non-retail” should otherwise be selected to indicate that the definition of default covers a mix of retail and non-retail exposures.

Input 3: Name of the supervised entity at the highest level of consolidation applying the definition of default

The third input field (column identifier 030) is for a free-text entry of the name of the supervised entity at the highest level of consolidation within the submitting party's

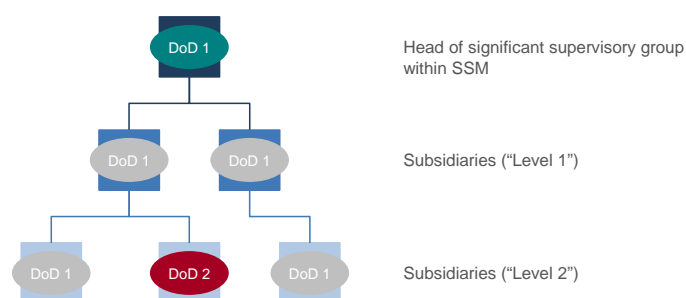


organisational structure that applies the given definition of default to IRBA exposures.

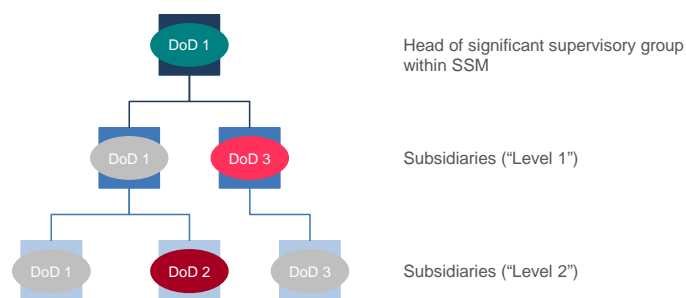
In the example depicted in Panel (a) of Figure 7, institutions would reference the head of the significant supervisory group for DoD1 and the relevant subsidiary at “Level 2” for DoD2. Similarly, in the example depicted in Panel (b), institutions would reference the head of the significant supervisory group for DoD1, the subsidiary at “Level 2” for DoD2, and the subsidiary at “Level 1” for DoD3.

**Figure 7: Stylised examples of the treatment of subsidiaries**

**(a) Separate treatment of DoD2 at subsidiary level**



**(b) Separate treatment of DoD2 and DoD3 at subsidiary level**



Input 4: LEI code of the supervised entity at the highest level of consolidation applying the definition of default

Based on the entry in the column with identifier 030, institutions should provide, in the column with identifier 040, the LEI code<sup>21</sup> of the supervised entity at the highest level of consolidation within the submitting party’s organisational structure that applies the given definition of default.

Input 5: Jurisdictions relevant for the exposures to which the new definition of default is to be applied

In the column with identifier 050, institutions may choose from two possible answers in a dropdown menu:

- “SSM jurisdiction”;
- “SSM and other jurisdictions”.

The input seeks to establish the supervisory regime to which a given definition of default is subject, since this might affect the implementation of the new regulatory requirements.

<sup>21</sup> According to the Global Legal Entity Identifier Foundation, GLEIF: <https://www.gleif.org>.

“SSM jurisdiction” should be selected if the given definition of default falls solely under the SSM supervisory regime (i.e. the significant supervised entity or all entities that are part of a significant supervised group is/are established in one or more Member States participating in the SSM).

Conversely, if the definition of default is (potentially) also subject to national requirements set by local non-SSM authorities, institutions should select “SSM and other jurisdictions”.

Input 6: Name of the gap analysis template submitted

To facilitate cross-referencing with the results of the gap analysis, the column with identifier 060 should be completed with the full name of the gap analysis template submitted for the given definition of default.

### 4.2.3 Sheet “List of rating systems”

The information to be provided in Sheet “List of rating systems” is broadly parallel to that requested in Sheet “List of definitions of default”. In particular, institutions are expected to compile a list of all rating systems applied within their organisational structure for the purpose of determining own funds requirements for credit risk in accordance with the IRBA, by providing the following information as at the reference date:

- the name of the rating system (in accordance with the definition in point (1) of Article 142(1) of the CRR) as used within the institution for which a material change in the definition of default is being notified;
- a description of the scope of exposures to which each rating system is applied, i.e. in which entities and for which IRBA exposure classes (as laid down in Article 147 of the CRR) the rating system is used;
- the ID(s) of the definition(s) of default applied for the rating system;
- the general exposure type (retail vs non-retail) to which the rating system applies;
- the type of exposures as defined in point (2) of Article 142(1) of the CRR that form the range of application of the rating system in accordance with the second sub-paragraph of Article 143(3) of the CRR;
- whether or not the institution has permission to use its own estimates for LGD in accordance with Article 143(2) of the CRR;
- whether or not the institution has permission to use its own estimates for the credit conversion factor (“CCF”) in accordance with Article 143(2) of the CRR;
- the name of the supervised entity at the highest level of consolidation applying the definition of default;
- the LEI code of the supervised entity at the highest level of consolidation applying the definition of default;

- the RWEA covered by this rating system (in EUR million);
- the name of the qualitative impact analysis template submitted for the rating system;
- whether the institution has been granted a waiver for the quantitative impact analysis in accordance with the rules set out in Section 7.1;
- where a waiver has been granted, the estimated RWEA (in EUR million) if the new definition of default is applied.

Figure 8: Registry template – Sheet “List of rating systems”

ID of the rating system	Name of the rating system	Description of the scope of exposures to which each rating system is applied (i.e. in which entities and for which IRBA exposure classes as laid down in Article 147 of the CRR) the rating system is used?	ID(s) of the definition(s) of default applied for the rating system	General exposure type	Type of exposures that trigger the application of the rating system	How the institution has been estimated of CCF?	Name of the institution	Name of the supervisory entity or the highest level of consolidation applying the rating system	IRBA code of the supervisory entity or the highest level of consolidation applying the rating system	Amount of RWEA covered by this rating system (in EUR million)	Name of the qualitative impact analysis template submitted	Has a waiver been requested and granted for the quantitative impact analysis?	If a waiver has been granted, what is the estimated amount of RWEA in EUR million if the new definition of default is applied?
010													
020													
030													
040													
050													
060													
070													
080													
090													
100													
110													
120													
130													
140													
150													
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170													
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190													
200													
210													
220													
230													
240													
250													
260													
270													
280													
290													
300													

Input 1: Name of the rating system

In the column with identifier 010, institutions should provide the name of the rating system. This should be the same name that has been or would normally be used to notify a material change to the ECB.

Input 2: Description of the scope of exposures to which each rating system is applied: in which entities and for which IRBA exposure classes (i.e. exposure classes as laid down in Article 147 of the CRR) is the rating system used?

The column with identifier 020 is for a free-text entry of answers to the following questions for each rating system as at the reference date:

- In which entities is the rating system used (the name of the entity is sufficient)?
- For which IRBA exposure classes (as per Article 147 of the CRR) is the definition of default used?

If considered useful for subsequent analyses, institutions may also supply internal identifiers for their rating systems.

Input 3: ID(s) of the definition(s) of default applied for the rating system

In the column with identifier 030, institutions are asked to provide a cross-reference to the definition(s) of default (i.e. reference to the column value “ID of the definition of default”) used for the rating system (free-text entry). Should a given rating system be associated with more than one definition of default, institutions should provide a comma-separated list of the identifiers of the relevant definitions of default as provided in the first column of Sheet “List of definitions of default”.

Input 4: General exposure type

In the column with identifier 040, institutions may choose from three possible answers in a dropdown menu:

- “Retail”;
- “Non-retail”;
- “Both retail and non-retail”.

“Retail” should be selected if the given rating system applies only and exclusively to retail exposures (i.e. exposures assigned to the retail exposure class in accordance with Article 147(2)(d) of the CRR). “Non-retail” should be selected if the rating system applies only and exclusively to non-retail exposures (i.e. exposures assigned to the exposure classes specified in Article 147(2)(a), (b), (c) and/or (e) of the CRR). “Both retail and non-retail” should otherwise be selected to indicate that the rating system covers a mix of retail and non-retail exposures.

Input 5: Type of exposures that build the range of application of the rating system

To provide a more detailed description of the rating system’s scope, institutions are expected to enter in the column with identifier 050 the type of exposures as defined in point (2) of Article 142(1) of the CRR that build the range of application of the rating system in accordance with the second sub-paragraph of Article 143(3) of the CRR. This column is for free-text entries.

Input 6: Does the institution use own estimates of LGD?

In the column with identifier 060, institutions should indicate whether or not they have permission to use own estimates of LGD for the given rating system. Institutions may choose from three possible answers in a dropdown menu:

- “Yes, for the entire rating system.”;
- “Yes, for some obligors within the rating system.”;
- “No, own estimates are not used.”.

“Yes, for the entire rating system.” should be selected if own estimates of LGD are used for all obligors in the range of application of the rating system. If own estimates of LGD are not used for any of the obligors, “No, own estimates are not used.” should be selected. In all other cases, “Yes, for some obligors within the rating system.” should be selected to indicate that a mix of own estimates and regulatory values of LGD is applied to the rating system.

Input 7: Does the institution use own estimates of CCF?

In the column with identifier 070, institutions should indicate whether or not they have permission to use own estimates of CCF for the given rating system. Institutions may choose from three possible answers in a dropdown menu:

- “Yes, for the entire rating system.”;
- “Yes, for some obligors within the rating system.”;
- “No, own estimates are not used.”.

“Yes, for the entire rating system.” should be selected if own estimates of CCF are used for all obligors in the range of application of the rating system. If own estimates of CCF are not used for any of the obligors, “No, own estimates are not used.” should be selected. In all other cases, “Yes, for some obligors within the rating system.” should be selected to indicate that a mix of own estimates and regulatory values of CCF is applied to the rating system.

Input 8: Name of the supervised entity at the highest level of consolidation applying the rating system

The column with identifier 080 is for a free-text entry of the name of the supervised entity at the highest level of consolidation within the submitting party’s organisational

	structure that applies the given rating system. The named entity should be the hierarchically highest entity using a given distinct rating system.
Input 9: LEI code of the supervised entity at the highest level of consolidation applying the rating system	Based on the entry in the column with identifier 080, institutions should provide, in the column with identifier 090, the LEI code <sup>22</sup> of the supervised entity at the highest level of consolidation within the submitting party's organisational structure that applies the given rating system.
Input 10: Amount of RWEA covered by this rating system (in EUR million)	In the column with identifier 100, institutions should provide the (total) RWEA covered by the given rating system (in EUR million) observed on the reference date.
Input 11: Name of the qualitative impact analysis template submitted	To facilitate cross-referencing with the results of the qualitative impact analysis, the full name of the qualitative impact analysis template submitted for the relevant rating system should be entered in the column with identifier 110.  A cross-reference to the quantitative impact analysis template is not necessary, as all rating systems will be analysed in the same template.
Input 12: Has a waiver been requested and granted for the quantitative impact analysis?	Institutions may request a waiver for certain rating systems with limited materiality in accordance with the rules set out in Section 7.1. Institutions should highlight these rating systems in the 12th input column (identifier 120). Institutions may choose from two possible answers in a dropdown menu: <ul style="list-style-type: none"> <li>• “No, a waiver has not been requested or granted.”;</li> <li>• “Yes, a waiver has been requested and granted.”.</li> </ul> While the first option is the default answer, institutions should choose the second option if they requested and were granted a waiver for the given rating system following consultation with the responsible JST (please refer to Section 7.1 for further details on the relevant process) before submitting the application package.
Input 13: If a waiver has been granted, what is the estimated overall amount of RWEA (in EUR million) if the new definition of default is applied?	In the column with identifier 130, institutions should provide the estimated (total) RWEA covered by the given rating system (in EUR million) when applying the new definition of default. This information only needs to be provided for those rating systems for which a waiver has been requested from and granted by the responsible JST in accordance with the rules set out in Section 7.1. <sup>23</sup>  The RWEA estimate should be evaluated on the portfolio observed on the reference date and should be obtained using reliable methods in accordance with Article 3(2) of DR 529/2014. Institutions are asked to explain the methods they used in the field labelled “General / additional comments to the answers provided herein” in Sheet “General Information”.

<sup>22</sup> According to the Global Legal Entity Identifier Foundation, GLEIF: <https://www.gleif.org>.

<sup>23</sup> Please note that this estimate corresponds to the simulation expected in “Step 2” of the retrospective simulation expected as part of the quantitative analysis, which will be described later in Section 7.2.

#### 4.2.4 Sheet “Guidance”

Sheet "Guidance" contains explanations on how to complete the template. The information presented in the sheet is a summary of the guidance offered in this document.

## 5 Gap analysis

The gap analysis serves as a structured self-assessment of an institution and is one of the key mandatory elements of the documentation to be submitted with the application. The self-assessment identifies all gaps between the current definition of default (as provided in the registry template, cf. Chapter 4) and the requirements and optional practices to be introduced in accordance with the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation, and describes how to remedy them. To this end, it is carried out using a dedicated template (“gap template”), which is attached to this document and comprises a list of questions designed to identify discrepancies with the future requirements and optional practices set out in the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation. The gap template also requests insights on the steps to be taken to achieve compliance with the regulatory requirements and selected optional practices and with the timelines envisaged.

The aim of this chapter is to provide guidance on the information to be provided as part of the gap analysis and the template that institutions are expected to complete as part of their application for permission to apply the material changes in the definition of default within their rating systems.

### 5.1 General guidance

As a general rule, the gap template should be completed by the supervised entity at the highest level of consolidation within the submitting party (if it is a significant supervised group). If an institution uses more than one definition of default, it may be necessary to prepare and submit more than one template.

As the materiality threshold set by the ECB in accordance with the Delegated Regulation (cf. ECB Regulation (EU) YYYY/XYZ) stipulates different materiality thresholds for retail and non-retail exposures, and Chapter 9 of the Guidelines relates exclusively to retail exposures, the gap analysis needs to differentiate between retail exposures assigned to the retail exposure class in accordance with Article 147(2)(d) of the CRR (Sheets “T1” to “T3” in the template) and non-retail exposures assigned to the exposure classes specified in Article 147(2)(a), (b), (c) and/or (e) of the CRR (Sheets “T4” to “T6” in the template).

For convenience, the responses for a definition of default for retail exposures and a (separate) definition of default for non-retail exposures may be combined into a single template. If institutions choose to do this, they are asked to apply the following rules:

- The definitions of default assessed within a given template should be specific to the supervised entity at the highest level of consolidation within the submitting party that applies the given definitions of default.



- If a single definition of default is applied for both retail and non-retail exposures, it should be assessed with respect to both general exposure types separately, i.e. Sheets “T1” to “T6” should be completed even though the self-assessment relates to a single definition of default.
- If a definition of default is applied to (either) retail or non-retail exposures only, the self-assessment should be limited to the particular general exposure type, i.e. only Sheets “T1” to “T3” or Sheets “T4” to “T6” respectively need to be completed.
- If an institution applies different definitions of default for retail and non-retail exposures and they are used at the same level of consolidation, the different definitions may be assessed in the same gap template. If there is more than one distinct definition of default for retail and/or non-retail portfolios, however, institutions should use several gap templates.
- Definitions of default that are outside the scope of the process<sup>24</sup> will not be considered.

The following examples illustrate the approach to be taken in each of these instances.

#### Example 2

In the situation set out in Example 1 (cf. Section 4.1), retail and non-retail definitions of default can be grouped into a single gap template as there are only two relevant definitions of default. The gaps identified for DoD1 in R1, should be entered in the “retail” sheets of the template. The gaps identified for DoD2 in R2 and R3, meanwhile, should be entered in the “non-retail” sheets.

#### Example 3

Institution B applies five different definitions of default within its group structure. Rating systems R1, R2 and R3 are applied at the parent institution, each one featuring a distinct definition of default. Subsidiary B1, which applies its own definition of default, only uses rating system R4 to rate non-retail IRBA exposures, while subsidiary B2, which also applies its own definition of default, only rates retail IRBA exposures using rating system R5.

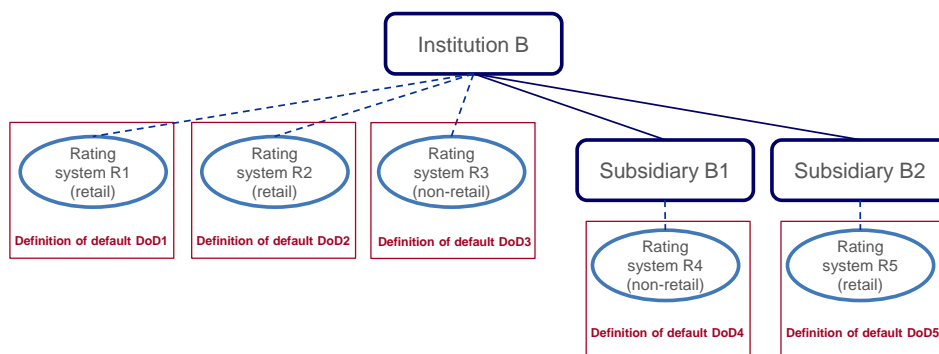
In this example (cf. Figure 9), the group may complete four or five different gap templates. As they are applied at the same level of consolidation, the definitions of default for the retail exposures in R1 and the non-retail exposures in R3 may be included in the same gap template. The definition of default applied for R2 is handled in a separate template, with the sheets for non-retail exposures left blank.<sup>25</sup> Two different gap templates are completed for subsidiaries B1 and B2, since the relevant definitions of default cannot be consolidated into a higher-level institution and

<sup>24</sup> As set out in Chapter 2, the following definitions of default are out of scope: (1) definitions solely applied by institutions that are not within the scope of the process; (2) definitions solely applied to types of exposures for which permission to use rating systems in accordance with Article 143 (2) of the CRR has not been granted as at the reference date; and (3) definitions solely applied to exposures for which permanent partial use has been granted in accordance with Article 150 of the CRR.

<sup>25</sup> Please note that the institution could also have chosen to combine the definitions of default for R2 and R3 into the same template, leaving the definition for R1 separate.

therefore cannot be combined into a single template. The retail and non-retail sheets respectively are left empty in the templates for the subsidiaries.

Figure 9: Sample structure of definitions of default within a group



#### Example 4

Institution C has two rating systems, R1 and R2, for large corporates and corporate SME respectively. While rating system R1 uses external rating data to identify defaults (i.e. a default is recorded if an external rating grade falls below “substantial risks”), no such default trigger is applied to rating system R2. In this case the definitions of default are considered to be different, and Institution C therefore needs to provide a separate gap template for each of the two non-retail definitions of default.

#### Example 5

Institution D has two rating systems, R1 and R2, for large corporates and retail exposures respectively. While R1 is associated with a single definition of default DoD1, R2 is associated with two definitions of default – DoD2 and DoD3. Institution D needs to provide gap analyses for all three definitions of default. As in Example 2 above, the institution may combine DoD1 with one of the retail definitions of default and thus only provide two templates.

All gap templates should be submitted using the following naming convention: “gap\_template\_[LEI Code]\_[NrTemplate].xlsx”, where:

- [LEI Code] denotes the LEI code of the supervised entity at the highest level of consolidation within the submitting party;
- [NrTemplate] is a consecutive number provided for each gap template, e.g. 1 for the first template, 2 for the second template, and n for the nth template.

## 5.2 Guidance on the template

The gap template is an Excel workbook comprising a total of nine sheets:

- General Information
- Index

- Template T1 (Requirements set forth in regulatory technical standards (retail exposures))
- Template T2 (Requirements set forth in guidelines (retail exposures))
- Template T3 (Optional practices set forth in guidelines (retail exposures))
- Template T4 (Requirements set forth in regulatory technical standards (non-retail exposures))
- Template T5 (Requirements set forth in guidelines (non-retail exposures))
- Template T6 (Optional practices set forth in guidelines (non-retail exposures))
- Guidance

Sheet “General Information” comprises the identifier of the supervised entity at the highest level of consolidation using the definition(s) of default assessed in the template together with the relevant definitions of default, while Sheets “T1” to “T6” contain all requirements and optional practices for which the institution needs to explain its compliance as at the reference date. To structure the content, each sheet (only) deals with one specific regulatory product – i.e. either the rules based on ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation or the rules based on the Guidelines – and is concerned with either requirements or optional practices. “Requirements” cover mandatory rules that all institutions must apply, whereas “Optional practices” cover the practices described in the Guidelines that institutions may but are not required to apply. The remaining sheets do not have input fields and are for information purposes only. Detailed guidance on how to complete the input fields is provided below.

Sheets “T1” to “T6” each contain automatic counters that keep track of the number of missing answers. Any counter with a value above zero is highlighted in red. Once all answers have been provided, the highlighting automatically changes to green. Institutions should ensure that all necessary answers are provided, i.e. that none of the counters are left with a value above zero.

### 5.2.1 Sheet “General Information”

In Sheet “General Information”, institutions should provide information on the scope of the gap analysis as applicable within their specific organisational structures. This general information should be provided for the entity (at the highest level of consolidation) within the organisational structure of the submitting party that **applies** the given definition(s) of default as described in Chapter 2 and Section 5.1. However, each gap template should also include a reference to the supervised entity at the highest level of consolidation within the submitting party.

Figure 10: Gap analysis template – Sheet “General information”

Definition of Default Gap Analysis - General Information	
Template Version: 1.01	
Country: (two letter ISO code)	
Institution LEI code:	
Name of institution:	
Name of the supervised entity at the highest level of consolidation within the submitting party (if different):	
LEI of the supervised entity at the highest level of consolidation within the submitting party (if different):	
ID of the definition of default covered by templates T1-T3 (retail):	
ID of the definition of default covered by templates T4-T6 (non-retail):	
General / additional comments to the answers provided herein	

Each submitting party should provide a set of basic reference data (LEI code and country code) for the supervised entity at the highest level of consolidation within its organisational structure that applies the definition(s) of default assessed in the template. To link the data provided in Sheets “T1” to “T6”, institutions are also expected to provide the “ID of the definition of default covered by templates T1-T3 (retail)” and the “ID of the definition of default covered by templates T4-T6 (non-retail)”. These fields should be completed with the ID provided in the registry template (cf. Chapter 4). If either Sheets “T1” to “T3” or Sheets “T4” through “T6” are not completed, the respective field should be left empty. If a definition of default covers both retail and non-retail exposures (cf. Section 5.1), the ID of the given definition of default should be inserted in both the “ID of the definition of default covered by templates T1-T3 (retail)” and “ID of the definition of default covered by templates T4-T6 (non-retail)” fields.

In addition to the mandatory fields mentioned above, institutions may provide free-text comments in a dedicated field at the bottom of the sheet.

#### Example 6

In the situation described in Example 3 above, Institution B is expected to submit either four or five templates. In each template provided for the definitions of default used by Institution B itself, fields “Institution LEI code” and “Name of institution” contain the LEI code and name of Institution B. For subsidiaries B1 and B2, the fields contain the LEI code and name of the respective subsidiary. While the fields “Name

of the highest consolidating entity within the submitting party” and “LEI of the highest consolidating entity within the submitting party” are left empty in the templates for Institution B itself, for the subsidiaries these fields should include a reference to Institution B.

## 5.2.2 Sheet “Index”

Sheet “Index” provides an overview of Sheets “T1” to “T6”, the content of which is detailed in the paragraphs below.

Figure 11: Gap analysis template – Sheet “Index”

Definition of Default Gap Analysis - Index	
TEMPLATES	
Template Number	Name of Template
T1	REQUIREMENTS SET FORTH IN REGULATORY TECHNICAL STANDARDS (RETAIL EXPOSURES)
T2	REQUIREMENTS SET FORTH IN GUIDELINES (RETAIL EXPOSURES)
T3	OPTIONAL PRACTICES SET FORTH IN GUIDELINES (RETAIL EXPOSURES)
T4	REQUIREMENTS SET FORTH IN REGULATORY TECHNICAL STANDARDS (NON-RETAIL EXPOSURES)
T5	REQUIREMENTS SET FORTH IN GUIDELINES (NON-RETAIL EXPOSURES)
T6	OPTIONAL PRACTICES SET FORTH IN GUIDELINES (NON-RETAIL EXPOSURES)

It is for reference only – no input is needed or permitted in this sheet.

## 5.2.3 Sheets “T1”, “T2”, “T4” and “T5”

While the content and details of the requirements to be assessed within Sheets “T1”, “T2”, “T4” and “T5” differ, the questions in the titles of the columns within each sheet are the same. In particular, for each requirement within the Guidelines or ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation covered in the given sheet, institutions are expected to provide the following information:

- whether the institution is already compliant with the cited requirement;
- any deviations of the current implementation from the requirement;
- whether achieving full compliance requires changes to the procedures and/or IT systems;
- a description of the required changes and the corresponding implementation plan;
- the estimated time in months for the required changes to the procedures and/or IT systems to be implemented, including testing and implementation on live systems.

For reference, requirements in Sheets “T2” and “T5” are linked to the relevant paragraphs of the Guidelines while requirements in Sheets “T1” and “T4” are linked

to the relevant articles of the Delegated Regulation containing the regulatory technical standards for the materiality threshold to be transposed into the ECB Regulation (EU) YYYY/XYZ. Institutions are expected to complete all rows.

Figure 12: Gap analysis template – Sheet “T2”

	Requirement identifier	Requirement	Relevant chapter in the EBA Guidelines	Relevant paragraph in the EBA Guidelines	010: Is the institution already compliant with the cited requirement?	020: Please specify the deviations of the current implementation from the requirement.	030: Does the institution fully comply with the requirement?	040: Please describe the required changes and the corresponding implementation plan.	050: Please provide the estimated time in months for the required changes to the procedures and/or IT systems, including testing and implementation on live systems.
					010	020	030	040	050
001	T2.1	For the purpose of assessing the materiality of past due credit obligations, the institution shall take account any amount of principal, interest or fee that has not been paid at the date it was due.	4	16					
002	T2.2	In the event of modification of the schedule of credit obligations, the institution's policies shall ensure that the counting of days past due is based on the modified schedule of payments.	4	16					
003	T2.3	Where the credit arrangement explicitly allows the obligor to change the schedule, suspend or postpone the payments under certain conditions and the obligor acts within the rights granted in the contract, the institution does not consider changed, suspended or postponed instalments as past due and bases the counting of days past due on the new schedule once it is specified. Nevertheless if the obligor changes the schedule, suspend or postpones the payments, the institution analyses the reasons for such a change and assesses the possible indication of solvency to pay.	4	17					
004	T2.4	Where the requirement of the obligation is suspended because of a law allowing the option or other legal restriction, the institution suspends the counting of days past due during that period. Nevertheless, in such situation, the institution analyses, where possible, the reasons for suspending the option for such a suspension and assesses the possible indication of solvency to pay.	4	18					
005	T2.5	Where the obligor changes due to an event such as a merger or acquisition of the obligor or any other similar transaction, the counting of days past due starts from the moment a different person or entity becomes obliged to pay the obligation. The counting of days past due is, instead, unaffected by a change in the obligor's name.	4	20					

Input 1: Is the institution already compliant with the cited requirement?

In the column with identifier 010, institutions may choose from four possible answers:

- “Fully compliant implementation”;
- “Partially compliant implementation”;
- “Non-compliant implementation”;
- “No implementation in current default definition”.

“Fully compliant implementation” should be selected if no further amendments to the institution’s definition of default are necessary to fully comply with the requirement for all types of exposures to which the definition of default covered in the given template is applied (“relevant types of exposures”). This option should **not** be selected if the institution’s corresponding definition of default implementation is already stricter than the requirements proposed, unless such treatment is explicitly allowed under the Guidelines or ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation.

“Partially compliant implementation” should be selected if an institution has largely implemented the requirement for most or all relevant types of exposures, but there are still small deviations whose impact on full compliance with the requirement for all relevant types of exposures can be considered to be limited (cf. Example 7).

“Non-compliant implementation” should be selected if the essence of the requirement is addressed by the definition of default that is currently applied by the institution for all relevant types of exposures, but the current implementation is inconsistent with the requirement set out in either the Guidelines or ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation such that the definition of default would be non-compliant with the requirement once applicable, and the impact of the deviation cannot be considered to be limited (cf. Example 8).

“No implementation in current default definition” should be selected if the cited requirement is not currently addressed at all in the institution's definition of default for all relevant types of exposures (cf. Example 9).

Input 2: Please specify the deviations of the current implementation from the requirement.

In the column with identifier 020, institutions are expected to provide a detailed description of all aspects of the current implementation that deviate from the future requirements of the Guidelines or ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation. This field should only be completed if “Partially compliant implementation”, “Non-compliant implementation” or “No implementation in current default definition” was selected in the column with identifier 010 of the corresponding row. In all other cases this field should be left blank.

Input 3: Does achieving full compliance require changes to the procedures and/or IT systems?

The input in the column with identifier 030 can be either “Yes” or “No” (dropdown menu). If any option other than “Fully compliant implementation” was selected in the column with identifier 010 of the corresponding row, institutions are expected to specify whether the process of fully implementing the requirement in question will require changes to the institution's procedures and/or IT systems, including documentation relating specifically to the recognition of defaults. In all other cases this field should be left blank.

For the purposes of this document, the term “procedures” is intended to refer explicitly to the procedures associated with the recognition of defaults rather than to the risk management and decision-making process referred to in Article 144(1)(b) of the CRR.

Input 4: Please describe the required changes and the corresponding implementation plan.

In the column with identifier 040 (free-text field), institutions should describe the required changes and the corresponding high-level implementation plan for achieving full compliance with the requirement (as if already applicable). The description should make a clear distinction between changes to be applied to the functional processes or documentation and changes to be applied to IT systems. Changes to the functional processes or documentation may include necessary changes to internal guidelines (e.g. for the internal use of the model as set out in Chapter 4 of the final draft RTS on the assessment methodology for the IRBA). This field may only be completed if “Yes” was selected in the column with identifier 030 of the corresponding row. It should otherwise be left blank.

Input 5: Please provide the estimated time in months for the required changes to the procedures and/or IT systems, including testing and implementation on live systems.

In the column with identifier 050, a non-negative integer can be inserted (only) if “Yes” was selected in the column with identifier 030. To determine the appropriate entry for this field, institutions should estimate the number of months that implementation of the changes to procedures and/or IT systems described in the column with identifier 040 is expected to take, starting from the date of submission of the application package. The estimate should include all steps that have not yet been completed (i.e. from writing a business specification to the final go-live with certain release after fully fledged testing). For the purposes of this estimate, institutions should assume that all changes necessary to achieve a fully compliant definition of default that had not already been implemented on the date of submission of the application package will be implemented jointly and in parallel (i.e. that the number of months indicated refers to the same starting point, namely the submission date, for all rows). If the estimated effort includes a fraction of a month,



the estimate should be rounded up to the next highest integer (i.e. 1.5 months should be entered in the template as 2 months).

#### Example 7

Consider a situation in which a definition of default currently used by Institution A already includes a probation period. Rather than being defined as (at least) three months, however, the institution applies a probation period of 90 days.

In this case the answer to the first question (column identifier 010) for requirement “T2-65”/“T5-65” in Templates “T2”/“T5” should be “Partially compliant implementation”, as the definition of default encompasses a probation period and its configuration is largely in line with the provisions of the Guidelines. Assuming for the purposes of this example that the impact on full compliance with the requirement for all relevant types of exposures can be considered to be limited, the institution may consider itself partially compliant with the requirement. In line with Example 8, Institution A needs to explain the deviation and complete the questions about its planned actions as illustrated in detail in that context.

#### Example 8

Consider instead the following scenario: Institution B already applies a probation period, but only for defaults triggered by the past-due criterion. In addition, this period is set to two months rather than “at least three” months as prescribed in the Guidelines.

When answering the questions about requirement “T2-65”/“T5-65” in Templates “T2”/“T5”, the institution should provide the following answers:

*Is the institution already compliant with the cited requirement?* “Non-compliant implementation”: The institution has implemented part of the requirement, but implementation is not yet compliant with it because the number of months needs to be changed and the probation period is only applied to defaults triggered by the past-due criterion.

The example combines two deviations, rendering the implementation non-compliant. Each deviation individually would also render the implementation non-compliant, as the impact of each cannot be considered to be limited.

*Please specify the deviations of the current implementation from the requirement.* The institution should explain that it already applies a probation period, including the current length of the probation period and its current scope of application, but that the period used is too short and only applies for a certain type of default.

*Does achieving full compliance require changes to the procedures and/or IT systems?* “Yes”: To remedy the deviation, the institution must make changes to its IT systems and to processes and documentation relating specifically to the recognition of defaults.

*Please describe the required changes and the corresponding implementation plan.* To answer this question, the institution should explain the necessary changes (IT systems, process change for reclassifying defaults other than those triggered by the past-due criterion, adjustment of corresponding documentation) and provide a high-

level plan of the steps required to achieve full compliance with the requirement, including a high-level timeline.

*Please provide the estimated time in months for the required changes to the procedures and/or IT systems, including testing and implementation on live-systems.*

“5”: The institution estimates that the overall time needed to achieve compliance, including all steps outlined in its response to the previous question (column identifier 040) but excluding any steps already completed at the date of submission of the application package, is about five months.

#### Example 9

The definition of default currently used by Institution C does not include a probation period. In addition, the institution’s internal instructions do not mention that defaulted customers will only be cured after a given probation period.

Since there is no implementation at all, unlike in Example 8 the answer to the first question (column identifier 010) for requirement “T2-65”/“T5-65” in Templates “T2”/“T5” should be “No implementation in current default definition”. In this case (only), rather than explaining the deviations, the institution may simply note that the requirement had not been implemented as at the reference date. Depending on the institution’s action plan, the third, fourth and fifth questions should be answered as illustrated in Example 8.

### 5.2.4 Sheets “T3” and “T6”

Sheets “T3” and “T6” deal with optional practices described in the Guidelines that may but do not have to be factored into the new definition of default. Retail and non-retail exposures are covered in separate sheets – “T3” covers retail exposures assigned to the retail exposure class in accordance with Article 147(2)(d) of the CRR, while “T6” covers non-retail exposures assigned to the exposure classes in accordance with Article 147(2)(a), (b), (c) and/or (e) of the CRR. Institutions are expected to provide the following information:

- whether the institution is (already) applying the optional practice described;
- whether the institution is planning to apply the optional practice described as part of the new definition of default;
- a list of the exposure classes to which the optional practice is supposed to be applied under the new definition of default (in the case of retail exposures, with reference to the sub-classes in accordance with Article 154(1), (3) or (4) of the CRR that the optional practice is being applied to);
- whether applying the optional practice requires changes to the procedures and/or IT systems;
- a description of the required changes and the corresponding implementation plan;

- the estimated time in months for the required changes to the procedures and/or IT systems to be implemented, including testing and implementation on live systems.

For reference, each optional practice is linked to the relevant paragraph of the Guidelines. ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation does not include any optional practices. Institutions are expected to complete all rows.

Figure 13: Gap analysis template – Sheet “T3”

	Optional practice identifier	Optional practice	Relevant chapter in the EBA Guidelines	Relevant paragraph in the EBA Guidelines	Missing answer: 010	Missing answer: 020	Missing answer: 030	Missing answer: 040	Missing answer: 050	Missing answer: 060
					Is the institution applying the optional practice described?	Is the institution planning to apply the optional practice described when changing its definition of default?	Please list the exposure classes to which the optional practice is supposed to be applied under the new definition of default.	Does applying the optional practice require changes to the procedures and/or IT systems?	Please describe the required changes and the corresponding implementation plan.	Please provide the estimated time in months for the required changes to the procedures and/or IT systems, including testing and implementation on the system.
010	T3-1	For the purpose of assessing the materiality of credit obligations, where the repayment of an obligation is subject to a dispute, the institution may suspend the counting of day past due if the dispute over the existence or amount of the credit obligation has been resolved by a court or another formal procedure performed by a dedicated external body that results in a finding ruling in accordance with the applicable legal framework in the relevant jurisdiction.	4	19a						
020	T3-2	For the purpose of assessing the materiality of credit obligations, where the repayment of an obligation is subject to a dispute, the institution may suspend the counting of day past due if, in the specific case of having a formal complaint has been directed to the institution about the object of the contract and the merit of the complaint has been confirmed by independent external audit, internal validation or another comparable independent assurance unit.	4	19b						
030	T3-3	When the conditions for applying the specific treatment for exposures towards central governments, local authorities and public sector entities are met and the institution decides to apply the specific treatment, these exposures are not included in the calculation of the materiality threshold for other exposures in the office.	4	20a						
040	T3-4	When the conditions for applying the specific treatment for exposures towards central governments, local authorities and public sector entities are met and institution decides to apply the specific treatment, these exposures are not considered as defaults.	4	20b						
050	T3-5	When the conditions for applying the specific treatment for exposures towards central governments, local authorities and public sector entities are met and institution decides to apply the specific treatment, the institution documents the exposures subject to the specific treatment.	4	20c						

Input 1: Is the institution applying the optional practice described?

The input in the column with identifier 010 can be either “Yes” or “No” (dropdown menu). If an institution is already fully applying the specific optional practice described in the corresponding row **as at the reference date**, it should choose “Yes”. The same response should also be given if the institution only partially applies the optional practice, but its adherence to the optional practice is already deemed to be high. In all other cases the response should be “No”, indicating that the optional practice is either not applied on a regular basis or is not applied at all.

Input 2: Is the institution planning to apply the optional practice described when changing its definition of default?

In the column with identifier 020, institutions may choose from three possible answers:

- “Yes, to all exposures”;
- “Yes, to some exposures”;
- “No”.

Institutions are expected to indicate whether they intend to apply the given optional practice as part of the new definition of default (i.e. rather than describing the status quo, institutions are asked to refer to the target application of the optional practice following introduction of the new definition of default). If an institution intends to start applying an optional practice or continue to do so, the question should be answered with “Yes, to all exposures” or “Yes, to some exposures” depending on whether this relates to all or only some of the exposures to which the given definition of default is applied. The answer should otherwise be “No” and the fields for the columns with identifiers 030 to 050 within the corresponding row should be left blank.

Input 3: Please list the exposure classes to which the optional practice is supposed to be applied under the new definition of default.

If an institution has selected “Yes, to some exposures” in the column with identifier 020 for a specific optional practice, it should list in the column with identifier 030 the exposures for which it is planning to apply the optional practice under the new definition of default. Institutions should list the retail exposure classes in accordance with Article 154(1), (3) or (4) of the CRR in Sheet “T3”, while Sheet “T6” is for the non-retail exposure classes defined in Article 147(2)(a), (b), (c) and/or (e) of the CRR.

If an institution has selected “Yes, to all exposures” or “No”, this field should be left blank.

Input 4: Does applying the optional practice require changes to the procedures and/or IT systems?

The input in the column with identifier 040 can be either “Yes” or “No” (dropdown menu). If the inputs for the columns with identifiers 010 and 020 are “No”, the corresponding field should be left blank. Otherwise, institutions are expected to specify whether the process of fully implementing the optional practice in question as part of the new definition of default will require changes to the institution’s procedures and/or IT systems, including documentation relating specifically to the recognition of defaults. If it will not, the selection should be “No”.

For the purposes of this document, the term “procedures” is intended to refer explicitly to the procedures associated with the recognition of defaults rather than to the risk management and decision-making process referred to in Article 144(1)(b) of the CRR.

Input 5: Please describe the required changes and the corresponding implementation plan.

In the column with identifier 050 (free-text field), institutions should describe the required changes and the corresponding high-level implementation plan to achieve full application of the optional practice following introduction of the new definition of default. The description should make a clear distinction between changes to be applied to the functional processes or documentation and changes to be applied to IT systems. Changes to the functional processes may include necessary changes to internal guidelines (e.g. for the internal use of the model as set out in Chapter 4 of the final draft RTS on the assessment methodology for the IRBA). This field may only be completed if the input in the column with identifier 040 for the corresponding row was “Yes”.

Input 6: Please provide the estimated time in months for the required changes to the procedures and/or IT systems, including testing and implementation on live systems.

In the column with identifier 060, a non-negative integer can be inserted (only) if “Yes” was selected in the column with identifier 040. To determine the appropriate entry for this field, institutions should estimate the number of months that implementation of the changes to procedures and/or IT systems described in the column with identifier 050 is expected to take, starting from the date of submission of the application package. The estimate should include all steps that have not yet been completed (i.e. from writing a business specification to the final go-live with certain release after fully fledged testing). For the purposes of this estimate, institutions should assume that all changes necessary to achieve full application of the optional practice that had not already been implemented on the date of submission of the application package will be implemented jointly and in parallel (i.e. that the number of months indicated refers to the same starting point, namely the submission date, for all rows). If the estimated effort includes a fraction of a month,

the estimate should be rounded up to the next highest integer (i.e. 1.5 months should be entered in the template as 2 months).

#### 5.2.5 Sheet “Guidance”

Sheet “Guidance” contains explanations on how to complete the template. The information presented in the sheet is a summary of the guidance offered in this document.

## 6 Qualitative impact analysis

The impact analysis builds on the results of the gap analysis by exploring in detail the impact of the new definition of default, approximated by means of the gaps identified, on institutions' exposures and ultimately on their own funds requirements. It comprises two components: a qualitative and a quantitative impact analysis. The qualitative component first compiles all gaps identified in the gap analysis and indicates whether a gap is later included in the quantitative analysis or only assessed qualitatively. A qualitative impact analysis is **exclusively** needed for those gaps for which institutions are not able to provide a quantitative impact analysis. As detailed in Chapter 7, the aim of the quantitative component is to provide a best estimate of the impact of introducing the new definition of default on institutions' portfolios.

Institutions are strongly encouraged to assess all gaps identified in the gap analysis as part of their quantitative impact analysis. This includes those optional practices described in the Guidelines that they are planning to apply for the first time when changing their definition of default as indicated in the gap template (cf. Section 5.2.4). If a large number of gaps are only assessed on a qualitative basis, this will be interpreted as implying a lower reliability of the quantitative impact analysis and may influence assessment under the supervisory decision process.

To carry out the qualitative impact analysis, an institution should assess, at the level of each individual rating system, the materiality of the impact of the changes required to achieve full compliance with the new definition of default on its default rates and, where applicable, on its realised LGDs and realised conversion factors. It is important to note that while the qualitative self-assessment of the impact on default rates and realised LGDs should be carried out at the level of each individual requirement/optional practice, the qualitative self-assessment of the impact on realised conversion factors is to be conducted on an aggregate basis for all gaps identified.

A dedicated template ("qualitative impact template") attached to this document structures an institution's assessment by compiling **all** gaps identified within the gap analysis and indicating which of these are included in the quantitative impact analysis. A qualitative impact analysis should be carried out for all gaps that are not assessed quantitatively.

Level of granularity of the impact analyses

In principle, both the qualitative and the quantitative impact analyses are required at the level of each rating system in accordance with point (1) of Article 142(1) of the CRR, i.e. at the level of the methods, processes, controls, data collection and IT systems that support the assessment of credit risk, the assignment of exposures to rating grades or pools, and the quantification of default and loss estimates that have been developed for a certain type of exposures as defined in point (2) of Article 142(1) of the CRR.

This level of granularity was chosen to simplify the analysis and ensure that the information collected is meaningful and useful.

The link between a given rating system and the definitions of default associated with it as recorded in the registry template (cf. Chapter 4) should form the basis for compiling all gaps, as listed in the gap template for the given definition(s) of default, that are relevant for that rating system. Using this list, institutions should carry out a qualitative self-assessment of each requirement and/or optional practice for which they indicated less than full compliance for each rating system and which are not assessed as part of the quantitative impact analysis. If a rating system is linked to more than one definition of default, institutions should consider them separately by carrying out separate qualitative impact self-assessments. As such, the level of granularity in the qualitative impact analysis should be the combination of a given rating system and the associated definitions of default. As detailed in Chapter 7, the quantitative impact analysis is carried out strictly at the level of each rating system.

This chapter provides details on the information that is expected to be provided in the qualitative impact analysis and offers guidance on completing the qualitative impact template.

## 6.1 General guidance

As a general rule, the qualitative impact template should be completed by the supervised entity at the highest level of consolidation within the submitting party. Each template allows for analysis of up to ten rating systems. If an institution uses fewer than ten rating systems, it may leave the surplus sheets empty; if it uses more than ten, it needs to submit more than one template.

The qualitative self-assessment in respect of changes in the default rate and realised LGD for a given gap that cannot be included in the quantitative impact analysis should be conducted with a view to measuring the expected overall impact on the RWEA and EL amounts (i.e. on the capital absorption) of the exposures assigned to that rating system. The result of the assessment should be carefully documented and should comprise a detailed explanation of the reason(s) why the gap was not included in the quantitative impact analysis together with the rationale for the reported direction and strength of the anticipated qualitative impact. Given that a large number of gaps that are only assessed on a qualitative basis diminishes the reliability of the quantitative self-assessment, the justifications provided within the template are indispensable inputs to the supervisory decision process.

All qualitative impact templates should be submitted using the following naming convention: "qual\_impact\_template\_[LEI Code]\_[NrTemplate].xlsx", where:

- [LEI Code] denotes the LEI code of the supervised entity at the highest level of consolidation within the submitting party;
- [NrTemplate] is a consecutive number provided for each qualitative impact template, e.g. 1 for the first template, 2 for the second template, and n for the nth template.

## 6.2 Guidance on the template

The qualitative impact template is an Excel workbook comprising a total of 12 sheets:

- General Information
- Sheet\_1 to Sheet\_10
- Guidance

Sheet “General Information” asks for basic reference data on the supervised entity at the highest level of consolidation within the submitting party, while Sheets “Sheet\_1” to “Sheet\_10” are the qualitative self-assessment reports to be completed for rating systems 1 to 10. Sheet “Guidance” contains no input fields but provides information on how to complete the other sheets within the template. Detailed guidance on how to complete each input field is provided in the following subsections. Where Sheets “Sheet\_1” to “Sheet\_10” of a single qualitative impact template are not sufficient to cover all relevant rating systems and given definitions of default, institutions should use several qualitative impact templates.

### 6.2.1 Sheet “General Information”

To link the submission to the gap and quantitative impact analyses, in Sheet “General Information” institutions are expected to provide the name and LEI code of the supervised entity at the highest level of consolidation within the submitting party.

In addition to the mandatory fields mentioned above, institutions may provide free-text comments at the bottom of the sheet.

Figure 14: Qualitative impact template – Sheet “General Information”

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Definition of Default Qualitative Impact Analysis - General Information	
Template Version: 1.01	
Name of the supervised entity at the highest level of consolidation within the submitting party:	
LEI of the supervised entity at the highest level of consolidation within the submitting party:	
General / additional comments to the answers provided herein	

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### 6.2.2 Sheets “Sheet 1” to “Sheet 10”

The content and details of each of the qualitative impact reports “Sheet\_1” to “Sheet\_10” are identical. The template is set up in this way to reduce the number of files that institutions need to handle. It is important to reiterate that the analysis must be carried out at the level of each rating system or, where a rating system is linked to more than one definition of default, the combination of a given rating system and each of the associated definitions of default. It may thus be the case that gaps identified for a given definition of default need to be assessed in relation to more than one rating system, i.e. in more than one sheet.

For completeness, in each qualitative impact report institutions are expected to compile a complete list of the gaps identified in the gap analysis and provide the following information for each gap identified:

- whether the gap is included in the quantitative impact analysis;
- if it has not been included in the quantitative impact analysis but a requirement and/or optional practice can be assessed quantitatively (information generated automatically within the corresponding column of the template):
  - a rationale for why the gap was not included in the quantitative impact analysis;
  - a qualitative self-assessment of the impact of the changes required on the default rates of the respective type of exposures;
  - where an institution also applies own estimates of the LGD for the respective type of exposures, a qualitative self-assessment of the impact of the required changes on the realised LGDs of this type of exposures;
  - a rationale for the qualitative impact self-assessment.

For the purposes of the qualitative impact analysis, institutions may understand the term “material impact” as an impact that is significant enough to call into question the validity of the estimates used as referred to in Article 185(e) of the CRR.

Figure 15: Qualitative impact template – Sheet “Sheet 1”

[illegible]

Header

The header of each sheet asks for the name and LEI code<sup>26</sup> of the entity (at the highest level of consolidation) within the organisational structure of the submitting party **applying** the rating system being assessed together with the identifiers of the rating system and definition of default (as given in the registry template) covered by the self-assessment in the corresponding sheet.

Since in many cases the impact on (realised) conversion factors cannot be assessed at the level of the individual requirements and/or optional practices in the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation, the header also requests an answer to the following question: “Where an institution also applies own estimates of conversion factors for the respective type of exposures, please provide a qualitative assessment of the impact of the required changes on the realised conversion factors of this type of exposures (otherwise select N/A).” To determine an entry for this field, institutions are asked to take account of all changes introduced to a given rating system and provide an overall expert qualitative self-assessment of the impact on the estimates for CCFs and thus on exposure values (EAD) when implemented in the rating system, if any such impact exists.

To carry out the self-assessment, institutions may choose from seven possible answers in a dropdown menu:

- “++” should be selected if institutions expect a material impact in the sense that CCFs and exposure values (EAD) are likely to increase considerably;
- “+” should be selected if institutions expect an impact in the sense that CCFs and exposure values (EAD) are likely to increase, but the materiality of the change is limited;
- “o” should be selected if institutions do not expect any impact on their CCFs and exposure values (EAD) when closing the gap;
- “-” should be selected if institutions expect an impact in the sense that CCFs and exposure values (EAD) are likely to decrease, but the materiality of the change is limited;
- “--” should be selected if institutions expect a material impact in the sense that CCFs and exposure values (EAD) are likely to decrease considerably;
- “?” should be selected if institutions cannot assess the materiality of the change – in terms of direction and/or magnitude – with any degree of certainty;
- “N/A” should be selected if institutions do not estimate CCFs when calculating own funds requirements as part of the given rating system for the type of exposures in question.

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<sup>26</sup> According to the Global Legal Entity Identifier Foundation, GLEIF: <https://www.gleif.org>.

In addition to the qualitative assessment, institutions are asked to provide a rationale for their qualitative assessment. If the answer to the previous question was “N/A”, the field should be left blank.

Requirement / optional practice identifier according to the gap template

In the column with identifier “ID”, institutions are expected to provide the identifier of all gaps identified for the corresponding definition of default in the gap analysis. A gap is defined as either: (1) a requirement for which the institution chose any answer other than “Fully compliant implementation” as its answer to the question “Is the institution already compliant with the cited requirement?” (column identifier 010 in Sheets “T1”, “T2”, “T4” or “T5” of the gap template(s)), or (2) an optional practice that the institution does not currently apply but plans to for some or all exposures after changing its definition of default, or an optional practice that it is currently applying but whose application will be discontinued when the definition of default is changed (columns with identifiers 010 and 020 in Sheets “T3” or “T6” of the gap template(s)).

If the identifier is entered correctly, the template automatically reproduces the exact wording of the corresponding requirement or optional practice in the column labelled “Requirement/optional practice”. If the identifier is not entered correctly in a given row, the error message “Identifier not found” will be shown in the column labelled “Requirement/optional practice” for that row. If no identifier is entered, the message “No identifier provided” will be shown in the column labelled “Requirement/optional practice”.

Input 1: Is the gap included in the quantitative impact analysis?

The input for the column with identifier 010 can be either “Yes” or “No” (dropdown menu). If the institution has included an impact simulation for a given gap in the quantitative impact analysis, the answer to this question should be “Yes”. Institutions should also choose “Yes” if a gap does not apply to a given rating system. In both of these cases, none of the other questions need to be answered. Otherwise, the answer should be “No” and the institution should proceed with the remaining questions/inputs.

Input 2 (automated response): Are institutions asked to assess this requirement quantitatively?

The input for the column with identifier 020 is generated automatically by the template based on the ECB’s evaluation of whether or not a meaningful quantitative assessment is possible for the requirement/optional practice in question. It can be either “Yes” or “No”. If a meaningful quantitative assessment cannot be carried out for a given gap, e.g. in documentation, the answer to this question will be “No”. If this is the case, none of the other questions need to be answered, i.e. neither a quantitative nor a qualitative impact self-assessment is requested for such gaps. Otherwise, the institution should provide a qualitative self-assessment of the expected impact when closing the gap and a rationale for why it was not included in the quantitative impact analysis.

Input 3: Please provide a rationale for why the gap was not included in the quantitative impact analysis.

In the column with identifier 030 (free-text field), institutions are expected to explain why a given gap for which a meaningful quantitative assessment is in principle possible was not included in the quantitative impact analysis.

This field may only be completed if the given gap was not included in the quantitative impact analysis even though a meaningful quantitative assessment could be carried out (i.e. the response to the question in the column with identifier 010 was “No” and

the response to the question in the column with identifier 020 was “Yes”). In all other cases, this field should be left blank.

Input 4: Please provide a qualitative self-assessment of the impact of the changes required on the default rates of the respective type of exposures.

In the column with identifier 040, institutions are expected to provide a qualitative self-assessment of the given gap’s impact on default rates when the required changes are implemented in the rating system. This field may only be completed if the given gap was not included in the quantitative impact analysis even though a meaningful quantitative assessment could be carried out (i.e. the response to the question in the column with identifier 010 was “No” and the response to the question in the column with identifier 020 was “Yes”). In all other cases, this field should be left blank.

To carry out the self-assessment, institutions may choose from six possible answers in a dropdown menu:

- “++” should be selected if institutions expect a material impact in the sense that default rates are likely to increase considerably;
- “+” should be selected if institutions expect an impact in the sense that default rates are likely to increase, but the materiality of the change is limited;
- “o” should be selected if institutions do not expect any impact on their default rates when closing the gap;
- “-” should be selected if institutions expect an impact in the sense that default rates are likely to decrease, but the materiality of the change is limited;
- “--” should be selected if institutions expect a material impact in the sense that default rates are likely to decrease considerably;
- “?” should be selected if institutions cannot assess the materiality of the change – in terms of both direction and magnitude – with any degree of certainty.

Input 5: Where an institution also applies own estimates of the LGD for the respective type of exposures, please provide a qualitative self-assessment of the impact of the required changes on the realised LGDs of this type of exposures (otherwise select N/A).

In the column with identifier 050, institutions are expected to provide a qualitative self-assessment of the given gap’s impact on realised LGDs when implemented in the rating system. This field may only be completed if the given gap was not included in the quantitative impact analysis even though a meaningful quantitative assessment could be carried out (i.e. the response to the question in the column with identifier 010 was “No” and the response to the question in the column with identifier 020 was “Yes”). In all other cases, this field should be left blank.

To carry out the self-assessment, institutions may choose from seven possible answers in a dropdown menu:

- “++” should be selected if institutions expect a material impact in the sense that realised LGDs are likely to increase considerably;
- “+” should be selected if institutions expect an impact in the sense that realised LGDs are likely to increase, but the materiality of the change is limited;

- “o” should be selected if institutions do not expect any impact on their realised LGDs when closing the gap;
- “-” should be selected if institutions expect an impact in the sense that realised LGDs are likely to decrease, but the materiality of the change is limited;
- “--” should be selected if institutions expect a material impact in the sense that realised LGDs are likely to decrease considerably;
- “?” should be selected if institutions cannot assess the materiality of the change – in terms of both direction and magnitude – with any degree of certainty;
- “N/A” should be selected if institutions do not estimate LGDs when calculating own funds requirements for the type of exposures in question.

Input 6: Please provide a rationale for the qualitative impact self-assessment in the columns with identifiers 040 and 050.

In the column with identifier 060 (free-text field), institutions are expected to justify the levels of impact they chose as their entries for the columns with identifiers 040 and 050. Answers should explicitly highlight the key arguments underlying the self-assessment.

This field may only be completed if the given gap was not included in the quantitative impact analysis even though a meaningful quantitative assessment could be carried out (i.e. the response to the question in the column with identifier 010 was “No” and the response to the question in the column with identifier 020 was “Yes”). In all other cases, this field should be left blank.

### 6.2.3 Sheet “Guidance”

Sheet “Guidance” contains explanations on how to complete the template. The information presented in the sheet is a summary of the guidance offered in this document.

## 7 Quantitative impact analysis

The quantitative impact analysis constitutes the second, stand-alone component of the impact analysis. While the qualitative impact analysis is carried out at the level of individual gaps relating to a certain requirement of the Guidelines or ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation and/or to a relevant optional practice of the Guidelines, the quantitative impact analysis takes a more general perspective. The latter is mainly concerned with estimating overall future portfolio impacts due to the change in the definition of default. Even so, as indicated in Chapter 6, the quantitative impact analysis, too, is requested at the level of the rating system.

A dedicated template (“quantitative impact template”) is provided as an attachment to this document. Institutions are expected to complete the quantitative impact template using the guidance provided below, and to include it in the documentation submitted as part of their application.

The quantitative impact analysis is requested at the level of the rating system.

The objective of this chapter is to provide details on the information expected to be provided as part of the quantitative impact analysis. The chapter also offers guidance on completing the quantitative impact template accompanying this document.

### 7.1 General guidance

#### Retrospective simulation

Since a live parallel run of both definitions of default would require a vast amount of effort on the part of institutions and a long period of time to collect enough data, institutions can instead use a retrospective simulation to approximate the impact of the required change in the definition of default on all rating systems' results. In particular, the impact of a change in the definition of default on the estimated risk parameters may be achieved by way of a retrospective simulation of the observed default rates (ODRs) and cure rates. The simulation is to be performed without adjusting the models currently in use. Instead, using the existing models in conjunction with expert judgement, institutions are asked to determine how their (defaulted and non-defaulted) exposures would behave if they were to adjust their definitions of default such that they were in full compliance with the definition of default set out in the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation.

This approach implicitly assumes the closure of all gaps identified in the gap analysis set out in Chapter 5. If it is not possible to simulate the closure of a given gap within the quantitative impact analysis, institutions should qualitatively assess the expected impact of closing it (cf. Chapter 6).

#### Time horizon of the simulation

The time horizon of the retrospective simulation should ideally be three years. However, institutions are encouraged to use a longer period of time, as an analysis

based on a longer history increases the accuracy of the impact simulation. If appropriate justification is provided in the dedicated comments field of the quantitative impact template (cf. Section 7.3.1, below), institutions may reduce the time period to two years, although it should be borne in mind that this reduces the precision of the impact analysis. Hence, institutions may choose one of three possible time periods:

- standard time horizon – from 31 December 2014 to 31 December 2017;
- reduced time horizon – from 31 December 2015 to 31 December 2017;
- individual time horizon – from 31 December of a year before 2014 to 31 December 2017.

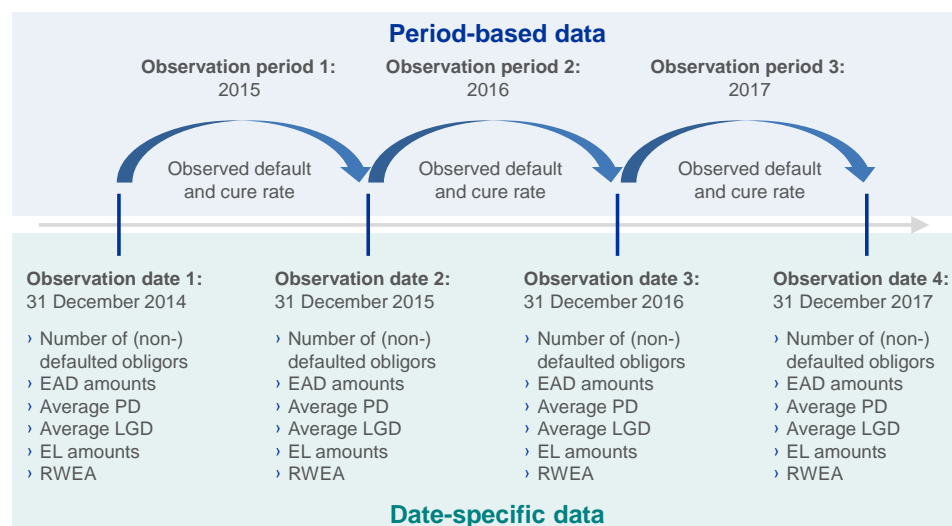
According to the above, institutions are expected to provide simulation results for a minimum time period of two years using the models most recently granted supervisory approval according to Article 143 of the CRR. This means that institutions should base their simulations on a “constant” set of models in the sense that the methodology applied corresponds to the model(s) most recently approved and that the methodology should not be altered during the time horizon considered for the simulation owing to material or immaterial changes requiring ex ante notification to the ECB. Should an institution have undertaken a model change of this sort during the relevant two-year period, i.e. in 2016 or 2017, or if it is planning to do so in 2018 or 2019, it should liaise with its JST as to the approach to be taken in its particular situation. For the purposes of transparency during the assessment of the model change to implement the new definition of default, institutions should thoroughly document the agreement reached with the JST in the comments field of the quantitative impact template.

To simulate the impact of the new definition of default, institutions are expected to assess each obligor’s status on 31 December of each year (“observation date”) within the chosen time period. All reported figures that constitute status information (e.g. default status of the obligor, RWEA of exposures to the obligor, etc.) should be recorded as at the observation dates (“date-specific data”), while all information concerning default rates and cure rates should relate to the behaviour of a given obligor between this observation date and the subsequent observation date (“period-based data”).

Within the quantitative self-assessment template (cf. Section 7.3), all date-specific data are collected in a dedicated sheet comprising all observation dates within the corresponding time horizon. Likewise, all period-based data are collected in a (separate) dedicated sheet comprising all observation years within the corresponding time horizon. Where institutions choose to base their retrospective simulations on the standard time horizon, they need to provide date-specific data for four different observation dates, namely 31 December 2014, 31 December 2015, 31 December 2016 and 31 December 2017, and period-based data for three different observation periods, namely 2015, 2016 and 2017 (cf. Figure 16). If an institution decides to choose the reduced time horizon, the reported data are reduced by the first

observation date (31 December 2014) and the first observation period (2015) respectively.

Figure 16: Information to be included in the quantitative impact analysis



The information depicted constitutes a stylised example for the standard time horizon (only). The number of observation periods and dates is increased by one for each additional year an institution chooses to report. Correspondingly, an institution may reduce the number of observation periods and dates by one if the reduced time horizon is chosen.

#### Example 10

Institution A has not changed its models or its definition(s) of default in five years. However, since the IT system used to compute the institution's own funds requirements was replaced two years ago, it would be a significant burden to simulate the portfolio impact for more than two years. In this case, the institution may choose whether to provide two or three years of simulation results. However, it should be noted that the precision of the simulation results may suffer if only two years are provided and that this potential imprecision will be taken into account in the assessment of the model change as part of the supervisory process.

#### Example 11

Institution B has recently changed its PD model used for the calculation of own funds requirements. The change was approved in 2015. Institution B has two options:

- roll back the model change to 31 December 2014 in order to provide the standard time horizon for the simulation as set out above;
- report the impact simulation starting from 31 December 2015, hence reducing the simulation to the reduced time horizon.

Crucially, the length of the reported simulation should not be less than the reduced time horizon. Had the model change been approved in 2016, the institution would have needed to engage with its JST to decide on an appropriate way forward.



To simplify the treatment of rating systems with low materiality, institutions may choose to exclude a particular rating system from the quantitative impact analysis on the basis of a “low materiality waiver”<sup>27</sup> if **both** of the following conditions are fulfilled:

1. the exposure value covered by the rating system at the reference date is smaller than EUR 500 million (before the application of CCF and credit risk mitigation);
2. the sum of the RWEAs of all exposures rated with rating systems for which the institution considers to apply the waiver is no higher than 5% of the overall RWEA for credit and dilution risk calculated according to the IRBA on the highest consolidated group level.

Before applying the waiver described in this paragraph and submitting the application package, institutions are asked to align with their JST on the rating systems they are considering excluding from their quantitative impact analysis.

While institutions are strongly encouraged to use the full range of application of a given rating system for their self-assessments, owing to portfolio specificities and/or technical constraints, it may – for some rating systems – be impossible or unduly burdensome to conduct the quantitative impact analysis on the full portfolio. For these cases, a standard sampling methodology has been defined for comparing the observed portfolio properties and variables used in the current definition of default and the new definition of default. The sampling methodology is described in Section 7.2.2.

Institutions that apply the retrospective simulation on their full portfolio may ignore the guidance on sampling. Institutions with more than one rating system may choose whether or not to use the sampling approach for each rating system separately.

Institutions may, in general, use their own methodology to calculate the information expected to complete the quantitative impact template, provided this does not interfere with any of the rules or directions set out in this document.

In all cases, institutions are expected to submit one quantitative impact template per submitting party. The template should comprise all simulation results of all rating systems, including – where applicable – the rating systems of subsidiaries. Should a given rating system be linked to more than one definition of default, the institution should aggregate the individual impacts of the definitions of default to the level of the rating system.

The quantitative impact template should be submitted using the following naming convention: “quant\_impact\_template\_[LEICode].xlsx”, where [LEICode] denotes the LEI code of the supervised entity at the highest level of consolidation within the submitting party.

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<sup>27</sup> Nevertheless, even in these cases, institutions are requested to complete a gap analysis template and qualitative impact analysis template.

## 7.2 Methodology

### 7.2.1 General methodology

The objective of the quantitative impact analysis is the quantification of the effects of a change in the definition of default on institutions' PD and LGD estimates and, ultimately, on their own funds requirements. These effects are driven by three main elements.

1. A new definition of default has an impact on the identification of the exposures to be classified as defaulted. In consequence, a new definition of default may bring about the migration of some exposures between the defaulted and non-defaulted status, which has an effect on the capital ratio. For instance, considering that the EL amounts for defaulted exposures are generally much higher than those calculated for non-defaulted exposures,<sup>28</sup> an increase in the number of defaulted exposures is, *ceteris paribus*, likely to imply higher capital absorption.
2. Changes in the definition of default may affect the calibration of the regulatory risk parameter estimates used for non-defaulted exposures. For instance, assuming a constant expected economic loss, an increase in the number of defaults triggered by the new definition of default is likely to raise both the default and cure rates.
3. Changes in the definition of default may influence the risk parameter estimates for defaulted exposures (LGD-in-default and expected loss best estimate, ELBE).

Scenarios of the retrospective simulation

In order to incorporate each of the above effects into the quantitative self-assessment and to properly distinguish among them, a step-by-step simulation aimed at collecting information for different situations and under different conditions is to be used. Figure 17 depicts the scenarios to be simulated within the quantitative impact analysis.

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<sup>28</sup> It is worth mentioning that a new flow of defaulted exposures will presumably imply additional accounting provisions (individual ones instead of collective ones), which will have an effect on the profit and loss account, and consequently on own funds requirements. In this context, any positive difference between "new" EL amounts and "new" provisions shall be deduced from the institution's capital (IRB shortfall).

Figure 17: Scenarios to be simulated within the quantitative impact analysis

		Basis of the estimated values	Granularity	
			Sampling approach	Full portfolio
Step 1	→ Real portfolio before go-live			
	Figures for the historic data as of the reference date	old definition of default, old internal models	portfolio and sample level	portfolio level
Step 2	→ Simulation of go-live			
	Figures for the simulation data set applying the new definition of default	new definition of default, old internal models	sample level	portfolio level
Step 3	→ Simulation of model recalibration			
	Figures according to a (fictitious) simulated recalibration after implementation of Step 2	new definition of default, new(ly calibrated) internal models	sample and (extrapolated) portfolio level	portfolio level

**Step 1:** Reporting the observed portfolio properties<sup>29</sup> and risk figures under the current conditions, i.e. using the definition(s) of default currently applied and the rating system(s) currently in use. Institutions applying the sampling approach need to complete this step twice – once on the full range of application of the rating system (“the portfolio”) and once on the sample(s). Institutions using their full portfolio as the basis for the quantitative impact analysis only need to consider the full range of application of the rating system. No simulations need to be performed at this stage.

**Step 2:** Computing the (observed) default and cure rates based on the (simulated) new definition of default, so that the classification (“flag”) of each exposure as defaulted or non-defaulted follows the new rules. Depending on the approach an institution chooses to use, the self-assessment is either applied to the full portfolio or to the sample. This step **simulates** the implementation of the new Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation without an actual adjustment of the models (i.e. still using the risk parameter calibration of the internal models currently in place).

**Step 3:** In addition to the classification of exposures in line with the new definition of default envisaged in the previous step, in this step the parameter estimates have to be hypothetically adjusted to reflect the new definition of default. Institutions applying the sampling approach need to complete this step on the sample(s) and subsequently extrapolate their results to the full portfolio;<sup>30</sup> a simulation of the new definition of default on the full portfolio is not necessary. Institutions using their full portfolio as the basis for the quantitative impact analysis once more only need to consider the full range of application of the rating system. This step **simulates** a recalibration of the models based on the new Guidelines and ECB Regulation (EU)

<sup>29</sup> As detailed in Section 7.3.2, institutions are generally expected to apply the methodology that would be used for model development or calibration.

<sup>30</sup> The method used to extrapolate the RWEA and other parameters should be consistent with the principles set out in Article 3(2)(b) of DR 529/2014.

YYYY/XYZ in conjunction with the Delegated Regulation. Institutions are, as a rule, expected to apply the same methods to estimate the results in Step 3 for all of the rating systems within the scope of the self-assessment (cf. Chapter 2). The methods applied should be documented within the quantitative impact template. Irrespective of the methods applied for their estimation, the adjusted risk parameters should comply with the minimum levels set in the CRR for the relevant risk parameters, namely:

- the adjusted PD of all exposures shall be at least 0.03% (Articles 160(1) and 163(1) of the CRR) for all exposures except for exposures to central governments and central banks;
- the adjusted exposure weighted average LGD shall be at least 10% for all retail exposures secured by residential property not benefiting from guarantees from central governments and shall be at least 15% for all retail exposures secured by commercial immovable property not benefiting from guarantees from central governments (Article 164(4) of the CRR).

If sampling is applied, institutions are expected to conduct Step 1 twice and extrapolate the results of Step 3 to their full portfolio. Otherwise, institutions are expected to carry out each step only once.

#### Setting the first default status

When simulating the impact on the time horizons as set out in Section 7.1, institutions may, for some rating systems, encounter difficulties when setting the very first default status (e.g. the status on 31 December 2014) for the simulation of the new definition of default without having a simulation before that date. For the sake of simplicity, institutions may in this case use the default status according to the old definition of default to “approximate” the very first status. Alternatively, institutions may simulate the first status by prior simulation of the new definition of default. As set out in Section 7.3, the approach adopted to resolve this difficulty should be documented appropriately, including an insight into whether and to what extent institutions expect a bias in the sample by applying the above-mentioned option.

When carrying out the simulations, institutions are expected to include all future requirements stipulated in the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation, as well as those optional practices from the Guidelines that they intend to adopt as part of the new definition of default. In addition, institutions are expected to provide as realistic a simulation as possible. Notwithstanding these guidelines, institutions are not expected to invest undue effort in assessing unlikelihood to pay requirements manually for retail exposures if they can prove that manual processes play a minor role in the self-assessment of default events for these exposures in daily business operations. This should, however, also be documented appropriately (cf. Section 7.3).

## 7.2.2 Sampling methodology

Institutions are strongly encouraged to use the full portfolio for all simulations and calculations. If an institution does not use sampling, this section can be neglected.

If an institution decides to use a sampling approach, the sampling should be random and stratified according to the rating grade or pool of the exposures, as the rating grade or pool is generally an indicator of closeness to default. All sampling considerations should be based on the full portfolio, i.e. sampling should be applied relative to the range of application of a given rating system. Upon request, institutions are expected to be able to demonstrate that the sampled exposures are representative for the full portfolio.

In practice, based on their default status given the current definition of default and current rating grade, both as at 31 December 2016,<sup>31</sup> exposures should be split into the following three groups (strata) in order to classify the obligors (for this purpose institutions should apply the estimated PD as used for the calculation of risk weights as at 31 December 2016 according to Articles 153 and 154 of the CRR):

- 1) “non-defaulted – low risk”, i.e. rating grades or pools with  $PD < 1\%$ ;
- 2) “non-defaulted – high risk”, i.e. rating grades or pools with  $PD \geq 1\%$  and  $PD < 100\%$ ;
- 3) “defaulted”, i.e.  $PD = 100\%$ .

The assignment to groups based on information as at 31 December 2016 is initially applied in order to properly sample each stratum with the minimum sample size set out below. Once a sample of obligors<sup>32</sup> has been chosen, institutions are expected to use the same sample of obligors for the full time horizon underlying the quantitative impact analysis.

The simulation results should be reported at stratum level for each year included in the analysis. This implies that strata should also be considered for dates before 31 December 2016. Institutions are expected to assign each obligor to one of the three groups on each year-end date of interest and to keep the obligor's status until the next year-end date. Details of the reporting structure are set out in Section 7.3.

To summarise, the sample is to be set up exactly once, in compliance with the minimum sampling requirements, as at 31 December 2016 only. Institutions are then expected to use the same sample for all previous and following observation dates.<sup>33</sup> However, each obligor should be dynamically reassigned to one of the strata, depending on the status and PD of the obligor at each of the observation dates.

### Example 12

<sup>31</sup> This date is independent of the time horizon for which the impact analysis is performed, even though some exposures may be unavailable for earlier observation dates.

<sup>32</sup> Depending on the rating system, institutions may also sample by facility if defaults are recognised independently for different facilities of the same obligor. For simplicity, only the case of obligors is considered in the following.

<sup>33</sup> This may lead to smaller samples in other parts of the sample period, as obligors observed as at 31 December 2016 may have not yet been present in all or part of the first years of the period and/or may not still be present as at 31 December 2017.

Institution A sets up a sample for a specific rating system. The institution decides to use a three-year horizon for the sample (i.e. 31 December 2014 to 31 December 2017). The sample is determined, with respect to the minimum sampling rules, as at 31 December 2016. Once the sample has been determined, it is also used for all other observation dates, i.e. 31 December 2014, 31 December 2015 and 31 December 2017.

Assume that obligor B is part of the institution's sample. As at 31 December 2016, the obligor had a PD of 2%, rendering it part of the high risk stratum. The obligor thus contributes to the minimum sampling requirements of this stratum; the criteria are described below. Obligor B will then automatically (also) be part of the sample for all other observation dates, if available. Assume that, as at 31 December 2015, the obligor had a PD of only 0.5%. In this case, even though the obligor is part of the high risk stratum when setting up the sample, as at 31 December 2015 it should be assigned to the low risk stratum. Moreover, if the obligor was not part of the portfolio as at 31 December 2014, it would not be part of the sample on that specific date.

#### Minimum sampling requirements

Exposures in the worst rating grades or pools as well as defaulted exposures should be sampled more heavily in order to observe more significant effects during the simulation. Therefore, a minimum sample size is imposed for each stratum. As a first step, a sampling ratio  $\alpha$  is considered, which represents the minimum share of total observations in each stratum for which the impact analysis is expected to be conducted. Different values of the sampling ratio are specified depending on the stratum and the general exposure type (retail vs non-retail). Where a specific stratum contains a small number of observations, considering only the minimum share of observations may lead to unreasonably small samples. To avoid such instances, an absolute minimum  $N_{\min}$  of observations to be included in each stratum is defined. As is the case for the relative threshold, this (total) threshold depends on the general exposure type (retail vs non-retail).

Based on this structure, the sample size for each stratum as at 31 December 2016 should be determined as follows:

1. calculate the total number of observations  $N$  in the portfolio for the given stratum;
2. the sample size should be equal to or exceed  $\max(N_{\min}; N \times \alpha)$ ;
3. if the total number of observations  $N$  lies below  $N_{\min}$ , then the total number of observations,  $N$ , should be considered.

Applications involving samples that do not meet these minimum sampling requirements will be considered incomplete.

The values to be applied for the sampling ratio  $\alpha$  and the absolute minimum  $N_{\min}$  depending on the stratum and the general exposure type (retail vs non-retail) are summarised in Table 1.

Table 1: Minimum sampling requirements

	$\alpha$		N_min	
	retail	non-retail	retail	non-retail
<b>Low risk</b>	25%	40%	4500	100
<b>High risk</b>	30%	45%	6000	115
<b>Defaulted</b>	35%	50%	0	0

### 7.3 Guidance on the template

The quantitative impact template is an Excel workbook that comprises a total of seven sheets:

- General Information;
- Full\_Input (date-specific);
- Full\_Input (period-based);
- Sample\_Input (date-specific);
- Sample\_Input (period-based);
- Transition Matrix;
- Guidance.

Sheet “General Information” asks for basic reference data on the supervised entity at the highest level of consolidation within the submitting party. For the purposes of transparency and traceability, the simulation results based on the full portfolio and those under the stratified sampling approach are recorded in different sheets. While Sheets “Full\_Input” (date-specific)” and “Full\_Input (period-based)” are dedicated to the simulation results per rating system when using the full portfolio, Sheets “Sample\_Input” (date-specific)” and “Sample\_Input (period-based)” are devoted exclusively to the results per rating system where sampling has been used. Sheet “Transition Matrix” asks for detailed information on the status transitions of the relevant obligors. The last sheet, Sheet “Guidance”, does not have input fields; it provides information on how to complete the other sheets within the template only. Detailed guidance on how to fill each input field is provided in the following subsections.

### 7.3.1 Sheet “General Information”

In order to link the submission to the gap and qualitative impact analyses, in Sheet “General Information”, institutions are expected to provide the name and LEI code of the supervised entity at the highest level of consolidation within the submitting party.

Besides these mandatory fields, at the bottom of the sheet, institutions may provide free-text comments. Institutions choosing to apply the first default status using the old definition of default (cf. Section 7.2.1) should use this field to provide an insight into whether and to what extent they expect a bias in the sample due to this approximation. All other institutions should use the field to explain the approach they adopted to resolve this issue, providing an appropriate level of detail to enable the assessment of its suitability. If an institution uses different approaches for different rating systems, it should make clear which rating systems were subjected to which treatment.

Figure 18: Quantitative impact template – Sheet “General Information”

Definition of Default Quantitative Impact Analysis - General Information	
Template Version: 1.01	
Name of the supervised entity at the highest level of consolidation within the submitting party:	
LEI of the supervised entity at the highest level of consolidation within the submitting party:	
General / additional comments to the answers provided herein	

### 7.3.2 Sheets “Full\_Input (date-specific)”, “Full\_Input (period-based)”, “Sample\_Input (date-specific)”, and “Sample\_Input (period-based)”

Institutions are expected to clearly differentiate – using dedicated sheets to report the corresponding results – between simulations based on a sampling approach and simulations based on their full portfolio. They should also separate date-specific data from period-based data (cf. Section 7.1). For this reason, the template contains a total of four different sheets relating to the simulation results: Sheet “Full\_Input (date-specific)”, Sheet “Full\_Input (period-based)”, Sheet “Sample\_Input (date-specific)” and Sheet “Sample\_Input (period-based)”. Both “sets” of sheets (i.e. “Full\_Input” and “Sample\_Input”) ask for the same type of information. While Sheets “Full\_Input



(date-specific)” and “Full\_Input (period-based)” should be used to record the results derived from simulations using the full portfolio as their basis, Sheets “Sample\_Input (date-specific)” and “Sample\_Input (period-based)” should be used for those rating systems for which sampling was applied.

Each rating system can only be part of one **or** the other set of sheets. However, institutions may use both sets within the quantitative impact template to report their simulation results, i.e. they may fill in the sheets labelled “Full\_Input (\*)” for some rating systems and the sheets labelled “Sample\_Input (\*)” for others. If sampling is applied, institutions need to comply with the rules set out in Section 7.2.2.

It is expected that institutions will draw their results for the date-specific and period-based data from the same base simulation or data (irrespective of whether they make use of the sampling approach or not). In all cases, this information should be consistent for any given rating system.

Institutions are asked to provide the results for each simulation step separately and on a year-by-year basis. If they chose to adopt a sampling approach, they are also asked to distinguish between the sampling groups set out in Section 7.2.2. Aside from the additional granularity in the case of sampling, institutions should – in general – report nearly identical information across the approaches and for each of the following simulation steps, as depicted in Figure 17:

- Step 1 – Current definition of default, current model. All figures should be reported as at the corresponding observation date.
- Step 2 – New definition of default, current model. All figures should be reported based on the simulated application of the new definition of default while keeping the models to estimate PD and LGD constant (i.e. using the current models).
- Step 3 – New definition of default, simulated model. All figures should be reported based on a fictitious recalibration of the models<sup>34</sup> aimed at embedding the effects triggered by the new definition of default. Institutions should use the same definition of default as in Step 2 (i.e. the new definition of default). When sampling is applied, the variables requested in this step should not only be reported at the sample level, but the results should also be extrapolated to the full portfolio in an unbiased manner.

Institutions need to summarise the methodology they used to arrive at their results for Step 3.

In particular, for each of these steps, institutions are asked to report, for each rating system, the following information:

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<sup>34</sup> Institutions are not expected to actually recalibrate their models. Instead, institutions should try to identify fair calibration levels for their risk parameters. Institutions may use approximated techniques, for example by scaling the risk parameters, in order to calculate adjusted values at obligor or facility level. Institutions should take into account that a real recalibration would include more years than the simulated horizon (which may also have an impact on the calibration level). In addition, for the purpose of estimating the levels in Step 3, institutions should only include margins of conservatism already in place without introducing any additional (i.e. artificial) margins of conservatism.

- observation date (date-specific sheets only);
- observation period (period-based sheets only);
- stratum (Sheets "Sample\_Input (\*)" only);
- number of non-defaulted obligors (Sheet "Full\_Input (date-specific)" only);
- number of non-defaulted obligors [low risk] (Sheet "Sample\_Input (date-specific)" only);
- number of non-defaulted obligors [high risk] (Sheet "Sample\_Input (date-specific)" only);
- number of defaulted obligors (date-specific sheets only);
- EAD of non-defaulted exposures (date-specific sheets only);
- EAD of defaulted exposures (date-specific sheets only);
- PD (date-specific sheets only);
- LGD (date-specific sheets only);
- EL amounts (date-specific sheets only);
- EL amounts for defaulted exposures (date-specific sheets only);
- RWEA (date-specific sheets only);
- explanation of how the simulated PD in Step 3 is derived with respect to the results derived in Step 2 (date-specific sheets only);
- explanation of how the simulated LGD in Step 3 is derived with respect to the results derived in Step 2 (date-specific sheets only);
- ODR (period-based sheets only);
- cure rate (period-based sheets only).

When using a sampling approach, not all of the information included in this list can reasonably be provided for all levels of granularity and all steps. In order to highlight which fields need to be completed for which stratum, Sheets "Sample\_Input (date-specific)" and "Sample\_Input (period-based)" explicitly highlight the fields (in grey) where no input is expected.

Figure 19: Illustrative example of the quantitative impact analysis in Sheet “Sample\_Input (date-specific)”

Identifier			Step 1 (0)			
Rating system	Observation date	Stratum	Number of non-defaulted obligors (low risk)	Number of non-defaulted obligors (high risk)	Number of defaulted obligors	EAD of non-defaulted exposures
010	011	013	021	022	023	024
RS5		Sample (low risk)				
RS5		Sample (high risk)				
RS5		Sample (defaulted)				
RS5		Full portfolio				

Input 1: Rating system

In the column with identifier 010, institutions are expected to provide the identifier of the rating system being assessed, as assigned/recorded in the registry template.

Input 2a: Observation date

The column with identifier 011 should contain the observation date at which the date-specific data are estimated. The observation date is expected in the date-specific sheets only.

Input 2b: Observation period

The column with identifier 012 should be filled with the year over which simulation results are considered to determine the ODR and cure rate. For example, to determine the ODR and cure rate for 2017, all defaults that would occur during 2017 should be considered and the observation period to be entered is 2017. The observation period is expected in the period-based sheets only.

Input 3: Stratum  
(Sheets “Sample\_Input (\*)” only)

The column with identifier 013 should contain the sampling group for which the quantitative results are provided. The stratum only needs to be provided within Sheets “Sample\_Input (date-specific)” and “Sample\_Input (period-based)” for institutions having resorted to a sampling approach for at least one rating system.

For each rating system considered under the sampling approach and for each year, institutions are expected to provide information for each stratum. In other words, for each rating system and observation date or period, institutions need to complete four rows, each one of them corresponding to one of the four options presented in a dropdown menu, namely “Sample (low risk)”, “Sample (high risk)”, “Sample (defaulted)” and “Full Portfolio”. The input in this field determines which of the expected quantitative data should be provided. The meaning of each stratum is defined in Section 7.2.

Input 4: Number of non-defaulted obligors

The input of the information on the number of non-defaulted obligors that is requested differs between the two “sets” of reporting sheets.

- Sheet “Full\_Input (date-specific)”

In Sheet “Full\_Input (date-specific)”, institutions are asked to complete the columns with identifiers 020 and 040 by entering the total number of non-defaulted obligors within the range of application of the rating system at the observation date. The figure sought in the relevant fields is given by the number of all obligors covered by the given rating system that are not defaulted as at the observation date (e.g. 31 December 2016). Entries in this field are limited to non-negative integers (including zero).

- Sheet "Sample\_Input (date-specific)":  
*Sample (low risk) only*

In Sheet "Sample\_Input (date-specific)", in turn, the number of non-defaulted obligors is requested by stratum. The column with identifier 021 is a modification of the column with identifier 020 in Sheet "Full\_Input (date-specific)" for low risk obligors (according to the rules set out in Section 7.2.2). The figure sought in this field is given by the number of all obligors within the respective combination of rating system, observation date and stratum that are not defaulted as at the observation date (e.g. 31 December 2016) and are classified as low risk. Entries in this field are limited to non-negative integers (including zero). The values provided in this field should give an insight into the sampling ratio and the relative number of obligors used in the sample when compared with the portfolio.

*Sample (high risk) only*

Likewise, the column with identifier 022 seeks the number of non-defaulted obligors for high risk obligors (according to the rules set out in Section 7.2.2).

The highlighting used throughout the worksheet clarifies which figures need to be provided for each stratum,<sup>35</sup> e.g. the number of high risk obligors is only sought for the "Sample (high risk)" stratum. Note that for the "Full portfolio" stratum, both columns (identifiers 021 and 022) need to be completed.

Input 5: Number of defaulted obligors

Institutions are asked to use the columns with identifiers 23 and 41 to provide the total number of defaulted obligors within the range of application of the rating system, both for the observation date, and – if sampling is applied (cf. Table 2 below) – for the sample group. The figure sought in these fields is given by the number of all obligors within the respective group that are in default as at the observation date (e.g. 31 December 2016). Entries in these fields are limited to non-negative integers (including zero). The number of defaulted obligors is expected in the date-specific sheets only.

Input 6: EAD of non-defaulted exposures

In the columns with identifiers 24 and 42, institutions are asked to provide the total sum of EAD (in EUR millions) of non-defaulted obligors within the range of application of the rating system, both for the observation date, and – if sampling is applied – for the sample group. The figure sought in these fields is given by the sum of the exposures of all obligors within the respective group that are not in default as at the observation date (e.g. 31 December 2016). Entries in these fields are limited to non-negative numbers (including zero). The EAD of non-defaulted exposures is required in the date-specific sheets only.

Input 7: EAD of defaulted exposures

In a similar vein, in the columns with identifiers 25 and 43, institutions are asked to provide the total sum of EAD (in EUR millions) of defaulted obligors within the range of application of the rating system, both for the observation date and – if sampling is applied – for the sample group. The figure sought in these fields is given by the sum of the exposures of all obligors within the respective group that are in default as at the observation date (e.g. 31 December 2016). Entries in these fields are limited to non-negative numbers (including zero). The EAD of defaulted exposures is expected in the date-specific sheets only.

<sup>35</sup> In the case of sampling, the simulation expected for Step 2 is only requested for the strata. As a consequence, the entry expected for this step in the column with identifier 040 does not distinguish among the strata (cf. the guidance for the column with identifier 040 in Sheet "Full\_Input" above).

#### Input 8: PD

Institutions are asked to use the columns with identifiers 26, 44 and 60 to provide the (simple) average PD of all non-defaulted obligors within the respective rating system, both for the observation date and – if sampling is applied – for the sample group. Averages are calculated such that all obligors are weighted equally, irrespective of their exposure amounts. Both the PD and the defaulted status per obligor should be taken as at the corresponding observation date (e.g. 31 December 2016) and correspond to the particular step of the retrospective simulation. Institutions are asked to use the same probabilities of default to determine the average PD of all non-defaulted obligors that are used for their calculations of own funds requirements. In the column with identifier 60 this relates to the simulated average PD that would be used for the calculation of own funds requirements following a recalibration. Entries in these fields are limited to non-negative numbers (including zero). The PD is expected in the date-specific sheets only.

#### Input 9: LGD

The columns with identifiers 27, 45 and 61 should contain the (simple) average estimated LGD of all non-defaulted obligors within the respective rating system, both for the observation date and – if sampling is applied – for the sample group. Averages are calculated such that all obligors are weighted equally, irrespective of their exposure amounts. Both the LGD and the defaulted status per obligor should be taken as at the corresponding observation date (e.g. 31 December 2016) and correspond to the particular step of the retrospective simulation. Institutions are asked to use the same LGD values to determine the average LGD of all non-defaulted obligors that are used for their calculations of own funds requirements. In the column with identifier 61 this relates to the simulated average LGD that would be used for the calculation of own funds requirements following a recalibration. If an institution does not use own estimates of the LGD for the respective rating system, the field in the corresponding row of this column should be left empty. Entries in these fields are limited to non-negative numbers (including zero). The LGD is expected in the date-specific sheets only.

#### Input 10: EL amount

The columns with identifiers 28, 46 and 62 should in turn contain the sum of all EL amounts (in EUR millions) of all non-defaulted obligors within the respective rating system, both for the observation date and – if sampling is applied – for the sample group. Both the EL and the defaulted status per obligor should be taken as at the corresponding observation date (e.g. 31 December 2016) and correspond to the particular step of the retrospective simulation. Entries in these fields are limited to non-negative numbers (including zero). The EL amounts are expected in the date-specific sheets only.

#### Input 11: EL amount for defaulted exposures

Correspondingly, institutions should use the columns with identifiers 29, 47 and 63 to provide the sum of all EL amounts (in EUR millions; cf. Article 158 of the CRR) of all obligors in default within the respective rating system, both for the observation date and – if sampling is applied – for the sample group. Both the EL and the defaulted status per obligor should be taken as at the corresponding observation date (e.g. 31 December 2016) and correspond to the particular step of the retrospective simulation. If an institution uses own estimates of the LGD for the respective rating system, the sum of all EL amounts should be based on the ELBE for the defaulted exposures. Entries in these fields are limited to non-negative numbers (including

zero). The EL amounts for defaulted exposures are expected in the date-specific sheets only.

Input 12: RWEA

Finally, the columns with identifiers 30, 48 and 64 should be used to provide the sum of all RWEAs (in EUR millions) of all obligors/facilities within the respective rating system, both for the observation date and – if sampling is applied – for the sample group. Both the RWEAs and the defaulted status should be taken as at the corresponding observation date (e.g. 31 December 2016) and correspond to the particular step of the retrospective simulation. Hence, institutions are asked to use the same risk-weight function and the same input parameters (potentially subject to simulated adjustments in the corresponding steps) that are used for their calculation of own funds requirements. Entries in these fields are limited to non-negative numbers (including zero). The RWEA is expected in the date-specific sheets only.

Input 13: Please provide an explanation of how the simulated PD in Step 3 is derived with respect to the results derived in Step 2

The column with identifier 065 provides a free-text field in which institutions are asked to summarise the general approach they used to estimate the average PD in Step 3 based on the simulation results derived in Step 2.

If the methodology remains identical over time, it is sufficient to provide one explanation per rating system. The explanation may be provided for a single observation date (e.g. 31 December 2017) and may be left blank for other years for the same rating system. This information is expected in the date-specific sheets only.

Input 14: Please provide an explanation of how the simulated LGD in Step 3 is derived with respect to the results derived in Step 2

Likewise, the column with identifier 066 provides a free-text field in which institutions are asked to summarise the general approach used to estimate the average LGD in Step 3 based on the simulation results derived in Step 2. If an institution does not use own estimates of the LGD for their calculation of own funds requirements for the respective rating system, the field in the corresponding row of this column should be left empty.

If the methodology remains identical over time, it is sufficient to provide one explanation per rating system. The explanation may be provided for a single observation date (e.g. 31 December 2017) and may be left blank for other years for the same rating system. This information is expected in the date-specific sheets only.

Input 15: ODR

The columns with identifiers 51 and 53 should contain the ODR within the respective rating system, observation period and – if sampling is applied – the sample group. To determine the ODR, institutions are expected to use the methodology that would be used for model development or calibration. Entries in these fields are limited to non-negative numbers (including zero). The ODR is expected in the period-based sheets only.

Input 16: Cure rate

The columns with identifiers 52 and 54 should contain the observed cure rate within the respective rating system, observation period and – if sampling is applied – the sample group. To determine the observed cure rates, institutions are expected to use

the methodology that would be used for model development or calibration.<sup>36</sup> Since the simulated time horizon is limited, institutions may not detect all cures. In any case, the time span considered for observing cures should be consistent among the different steps. If an institution does not use own estimates of the LGD for the calculation of own funds requirements for the respective rating system, the field in the corresponding row in this column should be left empty. Entries in these fields are limited to non-negative numbers (including zero). The observed cure rate is expected in the period-based sheets only.

For those institutions adopting a sampling approach, Table 2 provides a summary of which information needs to be provided for each stratum and simulation step.

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<sup>36</sup> Where institutions do not have a definition of “cure rate”, they should use the number of facilities (or obligors) – out of those that defaulted within the observation period – that were defaulted at the observation date but are no longer defaulted 12 months after the observation date, divided by the total number of defaulted facilities (or obligors).

Table 2: Information to be provided for each stratum and simulation step

<b>Metric \ Stratum</b>	<b>Sample (low risk)</b>	<b>Sample (high risk)</b>	<b>Sample (defaulted)</b>	<b>Full portfolio</b>
<b>Number of non-defaulted obligors (low risk)</b>	Step 1	–	–	Step 1
<b>Number of non-defaulted obligors (high risk)</b>	–	Step 1	–	Step 1
<b>Number of non-defaulted obligors</b>	Step 2	Step 2	–	–
<b>Number of defaulted obligors</b>	–	–	Step 1 Step 2	Step 1
<b>EAD of non-defaulted exposures</b>	Step 1 Step 2	Step 1 Step 2	–	Step 1
<b>EAD defaulted exposures</b>	–	–	Step 1 Step 2	–
<b>ODR</b>	Step 1 Step 2	Step 1 Step 2	–	Step 1
<b>Cure rate</b>	–	–	Step 1 Step 2	Step 1
<b>PD</b>	Step 1 Step 2 Step 3	Step 1 Step 2 Step 3	–	Step 1 Step 3
<b>LGD</b>	Step 1 Step 2 Step 3	Step 1 Step 2 Step 3	–	Step 1 Step 3
<b>EL</b>	Step 1 Step 2 Step 3	Step 1 Step 2 Step 3	–	Step 1 Step 3
<b>ELBE</b>	–	–	Step 1 Step 2 Step 3	Step 1 Step 3
<b>RWEA</b>	Step 1 Step 2 Step 3	Step 1 Step 2 Step 3	Step 1 Step 2 Step 3	Step 1 Step 3

Figure 20 provides a summary of all information to be provided within a given simulation step.



Figure 20: Information to be provided per simulation step

	Number of non-defaulted obligors	Number of defaulted obligors	EAD of non-defaulted exposures	EAD defaulted exposures	ODR	Cure rate	PD	LGD	EL	ELBE	RWA
Step 1	x	x	x	x	x	x	x	x	x	x	x
Step 2	x	x	x	x	x	x	x	x	x	x	x
Step 3							x	x	x	x	x

### 7.3.3 Sheet “Transition Matrix”

While Sheets “Full\_Input” and “Sample\_Input” strive to capture the quantitative impact on the relevant portfolio properties and risk parameters for each simulation step, Sheet “Transition Matrix” investigates in detail the status transitions that occur during simulation Step 2, i.e. transitions resulting from the evolution of the definition of default. Institutions are expected to be able to assign all obligors within their portfolio or sample in Step 2 to a unique cell of the transition matrix depicted in Figure 21.

Figure 21: General structure of the transition matrix to be provided in Sheet “Transition Matrix”

Counts		New DoD				Sum
		Will not default (ND)	Will default (WD)	Will not cure (NC)	Will cure (WC)	
Old DoD	Will not default (ND)	NDND	NDWD	NDNC	NDWC	ND(old)
	Will default (WD)	WDND	WDWD	WDNC	WDWC	WD(old)
	Will not cure (NC)	NCND	NCWD	NCNC	NCWC	NC(old)
	Will cure (WC)	WCND	WCWD	WCNC	WCWC	WC(old)
Sum		ND(new)	WD(new)	NC(new)	WC(new)	Σ

More precisely, based on its status as per the old and new definition of default on a given observation date, institutions are asked to allocate each obligor to one of the following four categories:

- Will not default (ND);

- Will default (WD);
- Will not cure (NC);
- Will cure (WC).

The four categories are defined as follows:

#### Will not default (ND)

An obligor should be classified as “Will not default (ND)” for a specific definition of default and a given date if the obligor is not in default at the corresponding observation date and does not default within the next 12 months.

#### Will default (WD)

An obligor should be classified as “Will default (WD)” for a specific definition of default and a given date if the obligor is not in default at the corresponding observation date, but will default within the next 12 months.

#### Will not cure (NC)

An obligor should be classified as “Will not cure (NC)” for a specific definition of default and a given date if the obligor is in default at the corresponding observation date and is also in default after 12 months.

#### Will cure (WC)

An obligor should be classified as “Will cure (WC)” for a specific definition of default and a given date if the obligor is in default at the corresponding observation date and no longer in default after 12 months.

After each obligor has been assigned to one of the categories for both the old and the new definitions of default, they can be assigned to one of the cells within the transition matrix.

Apart from two columns seeking reference information, i.e. the identifier of the rating system being assessed (column with identifier 010) and the 12-month period over which the transitions are considered (column with identifier 020),<sup>37</sup> the columns of Sheet “Transition Matrix” correspond to one of the cells depicted in Figure 21. As their entry, institutions are asked to report the total number of obligors per cell of the transitions matrix.

#### Example 13

As an example, field NCWD should be filled with the number of obligors that are in default at the observation date according to the old definition of default and are also in default after 12 months (NC). However, according to the new definition of default these obligors are not in default, but will be defaulting within the next 12 months (WD).

Institutions are expected to ensure that the sums reported in Sheet “Transition Matrix” correspond to the values reported in Sheets “Full\_Input” and “Sample\_Input”. In particular, it is assumed that the following relationships will hold:

- $ND(old) + WD(old) = \text{Column 020 in Sheet “Full\_Input”}$ , or alternatively,  
 $ND(old) + WD(old) = \text{Column 021} + \text{Column 022 in Sheet “Sample\_Input”}$ ;

<sup>37</sup> In accordance with the period-based entries provided in the other sheets of the quantitative impact template, an entry of “2016” refers to the period between the observation dates 31 December 2015 and 31 December 2016 (cf. Figure 16).

- $NC(old) + WC(old)$  = Column 023 in Sheets “Full\_Input” and “Sample\_Input” respectively;
- $ND(new) + WD(new)$  = Column 040 in Sheets “Full\_Input” and “Sample\_Input” respectively;
- $NC(new) + WC(new)$  = Column 041 in Sheets “Full\_Input” and “Sample\_Input” respectively.

Any deviations from these presumptions should be explained clearly within the comments field in Sheet “General Information”.

#### 7.3.4 Sheet “Guidance”

The sheet “Guidance” comprises explanations on how to complete the template. The information presented in it is a summary of the guidance presented in this document.

## 8 Action plan

Another relevant component of the application package, besides the gap and impact analyses to be submitted by institutions, is the action plan (cf. Figure 1 in Chapter 1). It aims to:

- (i) present a timeline showing the implementation dates of all activities that need to be performed in order to allow for the full implementation of the new default definition and, if applicable, the calibration of the regulatory risk parameters;
- (ii) identify dependencies between sequential activities.

A dedicated template (“action plan template”), attached to this document, sets out the structure of institutions’ activities. Institutions should ensure that the action plan is consistent with the information disclosed in the gap template, the qualitative impact template, and the quantitative impact template. This means that the activities included in the action plan should cover the changes and implementation plan described in the columns with identifier 040 on Sheets “T1”, “T2”, “T4”, or “T5” of the gap template on the requirements of the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation and/or in the columns with identifier 050 of Sheets “T3” and “T6” of the gap template relating to the optional practices in the Guidelines that institutions are planning to apply when changing the definition of default. However, institutions may, subject to their organisational structure and implementation strategy, appropriately group certain similar activities if their implementation is closely linked.

This chapter provides details on the level and depth of information expected to be provided in the action plan and offers guidance on completing the action plan template.

### Example 14

Submitting Party A has a centralised implementation plan in the sense that all legal entities within the group follow the same plan and timeline. This institution lists all functional and technical activities attached to this plan within the template.

In contrast, submitting Party B has a more decentralised implementation plan, where the same activities are performed, yet different legal entities follow different timelines. To capture all activities to be performed within the group, submitting Party B may, for instance, group the activities by each group of legal entities that share similar implementation timelines.

### 8.1 General guidance

As a general rule, the action plan should be completed by the supervised entity at the highest level of consolidation within the submitting party. It is therefore expected to comprise the consolidated activities across the full organisational structure of the

submitting party. Consequently, each application package contains one unique action plan comprising the activities.

As actions and timelines may evolve during the course of implementation, upon submission of the application package the action plan may be preliminary in some details and deadlines. Nevertheless, institutions should – at least on a high level – be able to provide an insight into how they intend to schedule the activities necessary to implement the new definition of default and (approximately) how long each activity will take. A revised version of the action plan can be submitted during the course of the approval process.

Institutions may include in the action plan all types of activities that are closely linked to the implementation of the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation. If this implementation requires activities that are also closely linked to other regulatory products, institutions are free to list those activities as well.

The action plan template should be submitted using the following naming convention: “action\_plan\_template\_[LEICode].xlsx”, where [LEICode] denotes the LEI code of the supervised entity at the highest level of consolidation within the submitting party.

## 8.2 Guidance on the template

The action plan template is an Excel workbook consisting of three sheets:

- General Information;
- Action Plan;
- Guidance.

While Sheet “General Information” asks for basic reference data on the supervised entity at the highest level of consolidation within the submitting party, Sheet “Action Plan” compiles a list of all implementation activities envisaged by institutions alongside the estimated duration for their completion, ultimately rendering them fully compliant with the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation. Sheet “Guidance” does not have input fields and is for information purposes only. Detailed guidance on how to fill each input field is provided in the following subsections.

### 8.2.1 Sheet “General Information”

In order to link the action plan to all other templates, in Sheet “General Information”, institutions are expected to provide the name and LEI code of the supervised entity at the highest level of consolidation within the submitting party.

Besides these mandatory fields, at the bottom of the sheet, institutions may provide free-text comments.

Figure 22: Action Plan template – Sheet “General Information”

Action Plan - General Information	
	Template Version: 1.01
<u>Name of the supervised entity at the highest level of consolidation within the submitting party:</u>	
<u>LEI of the supervised entity at the highest level of consolidation within the submitting party:</u>	
General / additional comments to the answers provided here in	

## 8.2.2 Sheet “Action Plan”

The action plan should comprise all completed, ongoing, and envisaged activities necessary to achieve full compliance with the new definition of default, i.e. all activities relevant to changes in the functional processes, documentation and/or IT systems pursuant to Article 143(3) of the CRR. To facilitate a well-founded supervisory decision process, institutions should – where these are already known – also include relevant sub-activities/tasks.

In order to structure the action plan and ensure a sequential identification of relevant activities, the template distinguishes among the following categories:

- A – Changes to the definition of default (according to macro areas as set out in the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation);
- B – Changes in the calibration of the regulatory risk parameters used for non-defaulted and defaulted exposures;
- C – Complementary activities related to the implementation of the new definition of default.

In addition, the first two categories distinguish among a number of sub-categories. While each of the categories covers different types of activities, they all seek the same type of information for deliverables, responsibilities, and timeline (columns).

Figure 23: Action plan – Sheet “Action Plan” (excerpt)

ID	Activity	Expected deliverables	Unit responsible for the activity	Planned start date	Planned finish date	Duration (in days)	Dependencies
010	020	030	040	050	060	070	080
<b>A Changes to the definition of default (acc. to EBA macro areas)</b>							
<b>A.1 Materiality thresholds and past due criterion in the identification of default</b>							
A.1.1	(please list all sub-activities. If necessary, add additional rows)						
A.1.2	...						
A.1.3	...						
A.1.4	...						
A.1.5	...						
<b>A.2 Indications of unlikelihood to pay</b>							
A.2.1	(please list all sub-activities. If necessary, add additional rows)						
A.2.2	...						
A.2.3	...						
A.2.4	...						
A.2.5	...						

Information to be provided in Category A

Within Category “A – Changes to the definition of default”, institutions are expected to identify the activities necessary to ensure the completeness of the implementation of (a) definition(s) of default compliant with the requirements and applicable optional practices of the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation. In particular, they are asked to compile a list of all activities relating to the following issues:

- A.1 – Materiality thresholds and past due criterion in the identification of default;
- A.2 – Indications of unlikelihood to pay;
- A.3 – Application of the definition of default in external data;
- A.4 – Criteria for the return to a non-defaulted status;
- A.5 – Consistency in the application of the definition of default;
- A.6 – Application of the definition of default for retail exposures;
- A.7 – Documentation, internal policies and risk management processes.

If certain activities overlap between any of these categories, they should be listed/replicated in each relevant sub-category.

Information to be provided in Category B

For Category “B – Changes in the calibration of the regulatory risk parameters used for non-defaulted and defaulted exposures”, where applicable, institutions are expected to present all activities required to ensure the recalibration of the risk parameters by rating system. Even though, as part of the application itself, institutions do not need to adjust their rating systems, where the new definition of default significantly impacts the models, institutions will be expected to recalibrate and/or modify their models to improve their risk measurement by 31 December 2020. All such rating systems should be identified in the action plan. In each case, institutions should (also) provide an estimate of the period required for recalibration and the submission of an application for any material changes to the competent authority.

When recording the rating systems within this category, institutions should distinguish between rating systems applied to retail exposures and those applied to non-retail exposures. Moreover, institutions will need to clearly designate which rating systems are covered in which specific sub-category.

#### Information to be provided in Category C

For Category “C – Complementary activities related to the implementation of the new definition of default”, institutions are expected to identify the planned validation and audit tasks,<sup>38</sup> planned staff training and any relevant activities not included in Categories A and B. As part of the latter, institutions should provide a list of all tasks related to adjustments of processes fulfilling the “use test” requirement (in accordance with Article 144(1)(b) of the CRR), e.g. a review of lending policies.

For each of the above-mentioned categories of activities, institutions should provide the following information:

- activity;
- expected deliverables;
- unit responsible for the activity;
- planned start date;
- planned finish date;
- dependencies.

Alongside this information, the action plan comprises two columns that are automatically filled in by the template based on the inputs provided (“ID” and “Duration in days”). They are highlighted in grey and must not be overridden.

#### Input 1: ID

The column with identifier 010 is prefilled with a generic task ID. The identifier is generated in a particular row as soon as an entry is made in the column to the right-hand side (column identifier 020). This ID is relevant for linking activities that are performed in a sequential manner and must therefore not be changed.

#### Input 2: Activity

In the column with identifier 020 (free-text field), institutions are expected to list all activities needed to ensure the complete execution of the implementation of the new definition of default.

If necessary, additional rows can be added to each (sub)section of the action plan.

#### Input 3: Expected deliverables

In the column with identifier 030 (free-text field), institutions should identify the expected output(s) of each activity. Examples of expected outputs include the update of an internal policy, the setup of new procedures or the update of an IT system.

#### Input 4: Unit responsible for the activity

In the column with identifier 040 (free-text field), institutions are asked to identify the unit(s) responsible for ensuring the completeness of the activity. If necessary, this

<sup>38</sup> In particular, the action plan is expected to include an internal audit of the new definition of default after its implementation, assessing the correct implementation and use of this new definition as soon as the supervisory approval is granted.



may be a reference to a single entity within the submitting party considered responsible for a specific activity.

#### Input 5: Planned start date

Within the column with identifier 050, institutions are asked to identify the expected start date of the activity. Institutions should be aware of dependencies between activities and how the start date of an activity may be dependent on the completion of another (related) activity. The input must be a valid date format.

#### Input 6: Planned finish date

Analogously to the column with identifier 050, in the column with identifier 060, institutions are asked to provide the expected end date of the activity. The input must be a valid date format.

#### Input 7: Duration (in days)

Based on the planned start and end date, the template automatically computes the planned duration of the activity (in days) and records the result in the column with identifier 070. The entry in this field must not be modified.

#### Input 8: Dependencies

In order to illustrate dependencies among different activities, in the column identifier 080, institutions may insert the ID of one or more activities. Institutions are expected to identify the dependency of an activity whenever that specific activity can only be accomplished after the completion of another activity.<sup>39</sup> The activity ID(s) must correspond to one of the IDs provided in the column with identifier 010.

Figure 24: Action plan – Sheet “Action Plan” (annual calendar)

Before start of self-assessment	Year 2018								
	Apr 2018	May 2018	Jun 2018	Jul 2018	Aug 2018	Sep 2018	Oct 2018	Nov 2018	Dec 2018

#### Input 9: Annual Calendar

Besides the columns described above, the action plan allows for the visualisation of institutions’ planned activities in a sequential manner. An annual calendar permits an allocation of the activities on a monthly scale starting from the month this guidance was provided to institutions until the end of 2020; the latter corresponds to the timeline proposed in the EBA Opinion for the effective implementation of the changes stemming from the review of the IRB approach. To demarcate relevant activities already completed before the initiation of the self-assessment, the template also includes a column related to the recent past (labelled “Before start of self-assessment”).

<sup>39</sup> Example: an institution will need to perform two activities, A and B, but Activity B can only be performed after the completion of Activity A because the outputs of Activity A constitute mandatory inputs for Activity B. In this situation, the institution is expected to provide a reference to Activity A in the column with identifier 080 for Activity B.

To complete this component of the action plan template, institutions are expected to enter the duration of each activity by selecting the relevant months. To select a given month in the calendar, institutions need to enter the letter “y” in the relevant field.

### 8.2.3 Sheet “Guidance”

The sheet "Guidance" comprises explanations on how to complete the template. The information presented in it is a summary of the guidance presented in this document.

## 9 IT infrastructure

The changes in the definition of default not only imply changes in the methods for developing and validating internal credit risk models, but may also impact institutions' IT infrastructure. New cash flow types may have to be incorporated into the amount past due (e.g. fees), new thresholds may become relevant, and new events may trigger a default. Hence, the IT infrastructure is likely to be transformed, which entails operational risks. Within their application package, institutions are therefore expected to provide proof that operational risks arising from IT implementations have been assessed and adequate tests or procedures to mitigate those operational risks to an acceptable level have been introduced.

### 9.1 General guidance

Institutions are expected to submit the changes to their IT systems stemming from the new definition of default on an aggregated level in the gap templates and the action plan template. These changes may result in one or more of the following:

- new parameters for existing and already tested functions/procedures and data models/entities;
- new functions/procedures for existing and tested data models/entities;
- new data models/entities.

On completing the implementation of the changes to their IT infrastructure, institutions are expected to perform tests that demonstrate unambiguously that the relevant changes to the IT infrastructure have been implemented properly and do not have any unintended side effects. Since the implementation of all necessary changes will not yet have been effective at the time of the submission of the application package, the documentation of the review of the IT infrastructure is expected to include tests that were initially conceived and carried out in a laboratory environment (before the go-live).

Types of tests to be performed  
(if applicable)

All tests can usually be assigned to one of the following categories, listed in ascending order of complexity:

- (1) unit/component/module tests;
- (2) integration tests (between whole units and/or systems);
- (3) system tests (including functionality, performance, security, and portability tests);
- (4) user acceptance tests (functional tests);
- (5) regression tests.

In order to carry out a given type of test, the test process typically prescribes the definition of test cases and/or test scenarios. A test case is a set of conditions under which the tester determines whether an application is working as it was specified. A test scenario simulates the operational use of the tested application, including interactions with other applications and humans. The preparation of the test scenario is particularly important.

For each test, the tester should specify an expectation for the test case's outcome. The expectation should be consistent with the specified requirements on the application. Owing to the usually large number of data combinations and possible paths in an application, a large number of distinct test cases and test scenarios may be necessary in order to properly test an application. Deviations from the expected outcome are considered defects that need to be resolved before a final sign-off of the application is admissible.

When applying for the changes in the definition of default, institutions are expected to have in place a thorough test concept/testing framework and to provide a report on the status quo of its testing activities up to that point. Nevertheless, it cannot be expected that all unit/component/module tests will have already been completed before the submission of the application package. Even so, institutions are expected to have designed adequate tests and procedures to mitigate all relevant (operational) risks to an acceptable level; this includes those units/components/modules for which the tests have not yet been completed at the date of submission of the application package. On completion of all tests/test cycles, but before the go-live of the new definition(s) of default, institutions should submit a final report on their testing activities. However, institutions are not expected to provide an updated overview of all tests performed after each test cycle.

Outstanding test activities should be highlighted in the application package. As indicated in Chapter 3, the internal audit function of the respective institution is asked to attest to the completeness of all documents on test activities. Irrespective of their test concept and progress, institutions are expected to have resolved all defects before the final go-live of the new definition(s) of default. In other words, the closure of all defects is a precondition for receiving supervisory approval to implement the new definition of default.

## 9.2 IT test checklist

This section describes a range of general and well-known issues relating to the definition of default and its implementation. The list is not intended to be exhaustive and needs to be adjusted to the situation of each individual institution. Nevertheless, it is strongly recommended that institutions consider and, where relevant, address the stated issues. Should additional aspects covering the specificities of an institution's implementation be relevant, these should also be included in the

development, implementation, and testing process. Likewise, if certain issues do not apply to an institution, they may be disregarded.

#### Methodological aspects

1. **Calculation of the materiality threshold:** Are the absolute and relative components of the materiality threshold implemented correctly? For customers with many different financial products, for instance, the materiality threshold may need to incorporate the products' specificities. Moreover, implementation in the case of syndicated loans and credit lines that are shared by more than one customer must be consistent with regard to the effect of fees, deferral amounts, and interest amounts on the threshold.
2. **Calculation of the amount past due:** Is the amount past due consistent with the level of the materiality threshold at all times? This includes tests on different customers, products, contracts and transactions.
3. **Calculation of days past due:** Are days past due derived from a comparison of the materiality threshold with the amount due on an absolute and a relative basis? A day is labelled as a due day if both the absolute and the relative thresholds are exceeded. The longest and most current sequence of due days defines the days past due. One special focus of the testing activities should be on the effect of weekends and public holidays when counting days past due.
4. **Identification of defaults:** Are exposures whose days past due exceed 90 days classified as defaulted in a timely manner? Testing activities should also include other default triggers, such as forbearance measures.
5. **Consistency in the identification of defaults:** Does the scope considered for the assessment of the default of a single obligor encompass all exposures towards this obligor in all relevant legal entities? Testing activities should aim to establish whether there are adequate mechanisms and procedures to ensure a consistent application of the definition(s) of default both within a particular legal entity and within a group as a whole.
6. **Treatment of defaulted exposures:** Is the treatment of defaulted exposures for dependent events implemented correctly (e.g. contagion effect if the exposure is to a group of connected clients, synchronisation of defaults across group levels, and the return to non-default status)?
7. **Unlikelihood to pay criteria:** Are all relevant data fields (to store information necessary for the various unlikelihood to pay triggers) available and working as expected? Have existing data fields been equipped with new values where applicable? Are the new unlikelihood to pay triggers delivered across the entire interface chain from front desk over various interfaces to the central data warehouse?

#### Aspects relating to infrastructure

8. **Data model:** Are adjustments to the data model required (e.g. due to new entities, new relationships, or new triggers)? If so, have the changes been tested and are they compatible with the previous data model?

9. **Workflows:** Does the new definition of default require new automated transactions or processes (e.g. batch runs)? If so, are there any dependencies to/on other jobs which must be resolved?
10. **User interfaces:** Is there a need to extend existing graphical user interfaces with respect to the information displayed and/or to record additional information? If so, are the new interfaces compatible with the existing processes?
11. **Documentation:** Is the documentation up to date and a versioning of changes in place?
12. **Test concept:** Is the number of test cases and the coverage of test cases sufficient to verify the correctness of the implementation of the new definition of default and its data storage?
13. **Test process:** Is the follow-up process for flaws and errors detected during testing transparent and sufficiently efficient? Is the distribution of tasks and responsibilities clearly defined?

Functional aspects

## 10 Monitoring

In order to corroborate the soundness of the results of the retrospective simulation carried out by institutions for the purposes of their quantitative impact analyses, the actual impact of the change in institutions' definition(s) of default will need to be monitored closely once the change will have been implemented. To this end, institutions are asked to set up a structured process for monitoring the risk figures and portfolio properties of their rating systems and to check whether they are still suitable for deriving their own funds requirements during the quarters following the implementation of the new definition of default. By way of this process, institutions should be able to collect a sufficient amount of information to complete a dedicated template ("monitoring template").

With a view to helping institutions to promptly set up the monitoring process, its structure (e.g. the submission cycle) and the inputs required in the monitoring template are outlined in Section 12.2 of the Annex. Nevertheless, it is worth highlighting that institutions will be required to fill in the monitoring template for their rating systems at a later stage, namely following the issuance of the related supervisory decisions. Therefore, this template should not be submitted as part of the application package for a material model change due to a change in the definition of default as described in Section 1.1.

Institutions will be asked to provide both current and historical data. Each institution should thus set up its monitoring process such that it will be able to provide information based on both the new definition of default and the old one until it has been changed. Moreover, institutions will be asked to collect and provide information at two levels of granularity:

1. capital adequacy information akin to that required for Common Regulatory Reporting (CoRep)<sup>40</sup> but at the level of each rating system covered by the application for material model change;
2. information on portfolio properties similar to the figures derived for the quantitative impact analysis.

The monitoring template will need to be submitted to the respective JST on a quarterly basis, from the quarter following the notification date of an institution's supervisory decision. Rating systems for which institutions have not yet implemented the definition of default do not have to be included in the monitoring process. Depending on the outcome of the ECB decision, further rating systems might be exempted.

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<sup>40</sup> Implementing technical standards with regard to supervisory reporting of institutions, Commission Implementing Regulation (EU) 2017/1443 of 29 June 2018 amending Implementing Regulation (EU) No 680/2014 laying down implementing technical standards with regard to supervisory reporting of institutions according to Regulation (EU) No 575/2013 of the European Parliament and of the Council (OJ L 191, 28.6.2014, p. 1).

The ECB will use the monitoring data to assess the performance of an institution's rating systems upon the go-live of the new definition of default and will liaise with institutions in the event of unwarranted developments. As the monitoring process may lead to supervisory action/measures, institutions should ensure high data quality in their monitoring results. In particular, institutions should rectify any errors as soon as they become apparent and should retrospectively update the monitoring results as soon as possible (i.e. as part of the next submission of the template).



# 11 FAQ process

## 11.1 General guidance

This chapter describes the process for frequently asked questions (“FAQ process”) that has been set up in order to support institutions in carrying out the self-assessment. This process categorises and answers questions about the templates, the application package or the process guidance.

In order to allow institutions to submit questions about the templates, a dedicated email address – [dod@ecb.europa.eu](mailto:dod@ecb.europa.eu) – has been set up, which institutions are asked to use to submit questions. The ECB will provide answers to all questions submitted between 16 July 2018 and 14 December 2018. These answers will be made available every two weeks.

The FAQ service provided by the ECB is not intended to answer questions unrelated to the application process set out here. For questions on the Guidelines or the draft RTS, institutions should refer to the EBA’s question and answer (Q&A) process. The ECB reserves the right to decide whether a question is within the scope of the FAQ service on a case-by-case basis.

All questions provided by institutions are to be sent via a dedicated question template (“FAQ template”), which is part of the template package attached to this document. The template is a standard Excel file to be submitted using the following naming convention: “FAQ\_question\_template\_[LEI Code].xlsx”, where [LEI Code] denotes the LEI code of the supervised entity at the highest level of consolidation within the submitting party. The structure and name of the file must not be changed; otherwise questions cannot be considered. Questions submitted without the use of the template (e.g. within a flat text email) are not taken into account during the FAQ process.

All answers by the ECB will be provided via a dedicated answer template that contains a complete list of all questions asked hitherto to the contact point(s) of each institution. This includes answers to questions submitted by other institutions. Institutions are therefore asked to submit their questions in a sufficiently general format that they can be disclosed to other institutions. In case of highly institution-specific questions, it is possible to prevent disclosure to other institutions; the ECB will assess the sensitivity of questions on a case-by-case basis.

The ECB reserves the right to rephrase questions in a way that allows for disclosure to other institutions or to group different questions of different institutions into a single question. Where it is deemed appropriate not to disclose a certain question and answer to other institutions, the institution will, in addition to the answer template published and made available to all institutions, receive a separate answer template containing the undisclosed answer only.

Institutions are expected to submit questions that are clear, correct, and precise. Moreover, before submitting a question, institutions should review the answer templates provided as part of the process to see whether a similar question has already been answered. The ECB reserves the right to neglect overly vague questions as well as duplicates.

## 11.2 Guidance on the template

### General remarks

The ECB aims to offer standardised support for all questions related to the self-assessment templates provided to institutions. Therefore, all questions must be submitted using the FAQ template and sent to [dod@ecb.europa.eu](mailto:dod@ecb.europa.eu).

In order to provide the most appropriate support, it is vital to refer precisely to the paragraph or requirement/optional practice in question. To this end, the FAQ template provides dropdown menus for referring to the document, chapter, and/or worksheet underlying the institution's structured self-assessment. Institutions are strongly encouraged to make use of this possibility.

The ECB reserves the right to exclude FAQ templates that have been changed in structure or functionality during processing. As indicated above, the ECB may in addition combine one or more questions received by one or more institutions. This includes rephrasing the questions, if deemed appropriate.

The FAQ template contains seven columns:

- Institution Question ID;
- Document;
- Chapter;
- Row ID;
- Question Date;
- Question;
- Additional Comments.

Figure 25: FAQ template

Institution Question ID	Document	Chapter	Row ID	Question Date	Question	Additional Comment
001						
002						
003						
004						
005						
006						
007						
008						
009						
010						

Input 1: Institution Question ID

The first column serves as an identifier for all questions. It must not be changed.

Input 2: Document	Column “Document” seeks a reference to the document in question; the options are provided in a dropdown menu. Institutions may choose “Guidance”, if the question refers to this process guidance document, a particular template (e.g. “Gap Analysis Template”) if the question refers to one of the templates delivered alongside this document, or “Other”, if the question concerns general issues (e.g. about the submission process).
Input 3: Chapter	Column “Chapter” allows the entry of reference to a chapter of the process guidance document or the sheet identifier of the chosen template. If “Other” was selected as the document in question, only “Other” may be chosen here.
Input 4: Row ID	Where questions arise about one of the templates, institutions are also asked to provide a reference to the row identification that is provided within the respective sheet.
Input 5: Question Date	Institutions are encouraged to provide a question date for their own reference. However, this field is not mandatory.
Input 6: Question	Institutions should use Column “Question” to provide their questions, comprising all information important to the query.
Input 7: Additional Comment	<p>If deemed necessary, institutions may also provide additional comments, comprising non-essential details or clarifications.</p> <p>A question is regarded as complete and ready for submission when the “Document”, “Chapter”, and “Question” fields have been filled. The “Institution Question ID” of a submitted question is then saved by the ECB. As a consequence, institutions wanting to adjust a previously submitted question should submit a new question (in a new row/with a new ID).</p> <p>Any email sent to the central email address (<a href="mailto:dod@ecb.europa.eu">dod@ecb.europa.eu</a>) is regarded as a submission. If an institution does not find one of its questions answered during the FAQ process, it should – as a first step – verify that it has been submitted appropriately. It may also check whether the question has been slightly rephrased. If neither is the case, the institution may send an email indicating this fact to the central email address.</p>

## 12 Annex

### 12.1 Clarifications

The requirements and optional practices considered in the gap template are drawn directly from the Guidelines and ECB Regulation (EU) YYYY/XYZ in conjunction with the Delegated Regulation. In order to provide assistance on some terms used within these regulatory products as well as the requirements/optional practices considered in the template, this section endeavours to offer clarification by supplying reference(s) to supporting documentation provided by the EBA or other regulations.

However, it is neither the purpose nor the objective of this section to define legal terms deliberately left undefined by the EBA. Any further inquiries on concepts and terms deemed unclear by institutions should be addressed to the EBA through its question and answer (Q&A) process in order to receive a detailed explanation.

In keeping with the gap template, the clarifications presented below are separated into clarifications on “requirements” and clarifications on “optional practices”.

#### 12.1.1 Clarifications on requirements

Clarification 1

No of the requirement in the template: T2-1, T5-1	Paragraph in the Guidelines: 16
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*For the purposes of assessing the materiality of past-due credit obligations, the institution takes into account any amount of principal, interest or fee that has not been paid at the date it was due.*

In accordance with Articles 1 and 2 of the Delegated Regulation, the absolute component of the threshold is set as a limit to the sum of all past-due amounts, whereas the relative component is set as a percentage of the sum of all past-due amounts (as in the absolute component) versus the total amount of all on-balance-sheet exposures excluding equity exposures. The sum of all past-due amounts, in both components of the threshold, should include any amount of principal, interest, or fee that has not been paid at the date on which it was due.

As for the choice of denominator in the relative component of the threshold, in the “Background and rationale” chapter of the draft RTS the EBA clarifies as follows:

“The use of on-balance-sheet exposures as the denominator of the relative threshold provides a simple and comparable solution. As only the outstanding exposures, unlike unused credit lines, can in fact become past-due, it ensures consistency between the numerator and denominator of the ratio. Furthermore, it prevents the impact of the relative threshold being diminished by the inclusion in

the denominator of off-balance-sheet exposures that cannot in practice be drawn by an obligor and do not have credit characteristics.”

#### Clarification 2

No of the requirement in the template: T2-9, T5-9	Paragraph in the Guidelines: 23b
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*A technical past-due situation is considered to have occurred where an institution identifies that the defaulted status was a result of the non-execution, defective or late execution of the payment transaction ordered by the obligor or where there is evidence that the payment was unsuccessful due to the failure of the payment system.*

Delays in payments can be triggered either by errors in the data or IT systems of the bank or of the counterparty, or by failures of the payment system between the bank and the counterparty. In its responses to the questions on EBA Consultation Paper EBA/CP/2015/15, the EBA clarifies the approach for each case:

“Delays in payments resulting from errors in the data or IT systems of the counterparty should not be considered technical past-due situations, as it is the obligation of the debtor to provide the payment to the institution in a timely manner. It would be difficult for an institution to verify whether an error has actually occurred at the counterparty and such a possibility, if granted, could be misused. The obligors should not be encouraged to pay their obligations only on the last day before the recognition of default; rather, they should provide the payments in accordance with contractual obligations. However, it has been clarified that the failure of the payment system between the bank and the counterparty could be considered a source of technical defaults alongside errors on the part of banks; however, in that situation the obligor has to provide evidence that it attempted to make a payment but that it was unsuccessful due to the failure of the payment system.”

#### Clarification 3

No of the requirement in the template: T2-13, T5-13	Paragraph in the Guidelines: 24
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*In the event that the institution uses the IRB approach, technical past-due situations are removed from the reference data set of defaulted exposures for the purpose of estimation of risk parameters.*

In its responses during the consultation phase on the Guidelines, the EBA clarified that the technical past-due situation should not be considered as a default and therefore the criteria for a return to non-defaulted status do not apply. Any identified errors should be corrected as soon as possible. Thus, in case of technical past-due situations, the obligors should keep their non-defaulted status and be treated as if they would have been non-defaulted during the timespan for which they were

considered to be under a technical past due if no other triggers of default apply.

Clarification 4

No of the requirement in the template: T2-32, T5-32	Paragraph in the Guidelines: 41
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*Sales of traditional securitisations where there is a significant risk transfer are also considered sales of credit obligations.*

The term “significant risk transfer” is governed by Articles 243 and 244 of the CRR and the EBA Guidelines on significant risk transfer (EBA/GL/2014/05).<sup>41</sup>

Clarification 5

No of the requirement in the template: T2-37, T5-37	Paragraph in the Guidelines: 46
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*The sale of credit obligations may be performed either before or after the default. In the event that the institution uses the IRB approach, regardless of the moment of the sale, if the sale was related with a material credit-related economic loss, the information about the loss must be adequately recorded and stored for the purpose of the estimation of risk parameters.*

In its responses to the questions on EBA Consultation Paper EBA/CP/2015/15,<sup>42</sup> the EBA clarifies this requirement:

“The sale of credit obligations as a default trigger is relevant for exposures that are not yet defaulted at the moment of the sale. In the case [of] exposures defaulted before their sale, such sale will not define the moment of default but will determine the level of loss related to the previously defaulted exposure. In the case of institutions that use the advanced IRB approach this information should be adequately recorded and stored for the purpose of [the] LGD estimation process.”

Clarification 6

No of the requirement in the template: T2-42, T5-42	Paragraph in the Guidelines: 49
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*For the purposes of unlikeliness to pay as referred to in Article 178(3)(d) of the CRR, a distressed restructuring is considered to have occurred when forbearance measures, i.e. concessions, have been extended to a debtor facing or about to face difficulties in meeting its financial commitments as specified in paragraphs 163-167 and 172-174 of Annex V of the ITS on supervisory reporting.*

<sup>41</sup> EBA Guidelines on significant credit risk transfer relating to Articles 243 and Article 244 of Regulation 575/2013.

<sup>42</sup> EBA Consultation Paper on Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013

In its responses to the questions on EBA Consultation Paper EBA/CP/2015/15, the EBA states:

“The definition of distressed restructuring has been aligned with the definition of forbearance used for the purpose of supervisory reporting. As forbearance refers only to such changes of terms and conditions resulting from financial difficulties of the obligor, only such situations should be treated as potential indications of unlikelihood to pay in accordance with Article 178(3)(d) of the CRR”.

Therefore, the identification of distressed restructuring should follow the same rules as those implemented by institutions to identify forbearance as defined in Annex V of the ITS on supervisory reporting.<sup>43</sup>

Clarification 7

No of the requirement in the template: T2-44, T5-44	Paragraph in the Guidelines: 51-52
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*The institution has set a threshold for the diminished financial obligation that is considered to be caused by material forgiveness or postponement of principal, interest, or fees, and which is calculated according to the following formula, and is not higher than 1%:*

$$DO = (NPV_0 - NPV_1) / NPV_0$$

*where:*

*DO is diminished financial obligation;*

*NPV<sub>0</sub> is net present value of cash flows (including unpaid interest and fees) expected under contractual obligations before the changes in terms and conditions of the contract discounted using the customer's original effective interest rate;*

*NPV<sub>1</sub> is net present value of the cash flows expected based on the new arrangement discounted using the customer's original effective interest rate.*

*Where the diminished financial obligation is higher than this threshold, the exposures should be considered defaulted.*

With the term “original effective interest rate” the EBA aims to align with International Financial Reporting Standards (IFRS) common practices. However, in its responses to the questions on EBA Consultation Paper EBA/CP/2015/15, the EBA clarifies as follows:

“It has been specified that NPV should be calculated with the use of the original effective interest rate as a discounting factor in order to align the rule with

<sup>43</sup> Commission Implementing Regulation (EU) 2015/227 of 9 January 2015 amending Implementing Regulation (EU) No 680/2014 laying down implementing technical standards with regard to supervisory reporting of institutions according to Regulation (EU) No 575/2013 of the European Parliament and of the Council (OJ L 48, 20.2.2015, p. 1)

accounting practices. Therefore, any approximation of such rate or treatment of variable rates that is used for accounting purposes should also be used in the calculation of NPV for the purpose of default identification.”

Institutions applying accounting standards other than IFRS (i.e. national Generally Accepted Accounting Principles, GAAPs) are supposed to align this rate with the definitions applied within their respective accounting frameworks.

#### Clarification 8

No of the requirement in the template: T2-47, T5-47	Paragraph in the Guidelines: 54
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*Any concession extended to an obligor already in default leads to the classification of the obligor as a distressed restructuring. All exposures classified as forborne non-performing in accordance with Annex V of the ITS on supervisory reporting are classified as default and subject to distressed restructuring.*

The term “concession” is to be interpreted in line with paragraphs 163-165 and 172-174 of Annex V of the ITS on supervisory reporting.

#### Clarification 9

No of the requirement in the template: T2-64, T5-64	Paragraph in the Guidelines: 70
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*For differences between the definition of default used in the external data and the definition of default as implemented which prove to be non-negligible in terms of the impact on all risk parameters and own funds requirements, and which at the same time prove impossible to overcome by means of adjustments to the external data, the institution adopts an appropriate margin of conservatism in the estimation of risk parameters. In such a case, institutions should ensure that this additional margin of conservatism reflects the materiality of the remaining differences in the definition of default and their possible impact on all risk parameters.*

In its responses to the questions on EBA Consultation Paper EBA/CP/2015/15, the EBA states:

“The Guidelines set minimum standards and a common understanding of the main concepts related to the definition of default. [...] The clarification of terms such as ‘material’, ‘significant’ or ‘large’ has been proposed wherever it was considered that harmonisation is appropriate. Otherwise it is left to the expert judgement of institutions.”

Against this background, it is left to the expert judgement of the institution to assess when the impact of a difference on all risk parameters and own funds requirements is to be considered “non-negligible”. Nevertheless, the self-assessment of the impact is part of the analyses to be documented according to paragraph 67(c) of the Guidelines.



**No of the requirement in the template:**  
**T2-89, T2-90, T5-89, T5-90**

**Paragraph in the Guidelines:**  
**81-82**

*Where the exchange of client data among different legal entities within the institution, the parent undertaking or any of its subsidiaries is prohibited by consumer protection regulations, bank secrecy or other legislation resulting in inconsistencies in the identification of default of an obligor, the institution informs the competent authorities of these legal impediments and, if using the IRB approach, also estimates the materiality of the inconsistencies in the identification of default of an obligor and their possible impact on the estimates of risk parameters.*

*Further, where the identification of default of an obligor in a manner fully consistent across the institution, the parent undertaking or any of its subsidiaries is very burdensome, requiring development of a centralised database of all clients or implementation of other mechanisms or procedures to verify the status of each client at all entities within the group, the institution does not need to apply such mechanisms or procedures if it demonstrates that the effect of non-compliance is immaterial because there are no or a very limited number of common clients among the relevant entities within a group and the exposure to these clients is immaterial.*

In its responses to the questions on EBA Consultation Paper EBA/CP/2015/15, the EBA states:

“The application of the default of an obligor on a group-wide basis is required by Article 178(1) of the CRR. The CRR also specifies the relevant level of consolidation.”

In order to address operational aspects of the application of the definition of default at a group-wide level, paragraphs 81 and 82 specify situations where simplified processes may be applied.”

**No of the requirement in the template:**  
**T2-106**

**Paragraph in the Guidelines:**  
**97**

*Where the conditions of points (a) or (b) or both of Article 178(1) of the CRR are met for a joint credit obligation of two or more obligors, the institution considers all other joint credit obligations of the same set of obligors and all individual exposures to those obligors as defaulted, unless the recognition of default on the individual exposures, too, is not appropriate because (a) the delay in payment of a joint credit obligation results from a dispute between the individual obligors participating in the joint credit obligation that has been introduced to a court or another formal procedure performed by a dedicated external body that results in a binding ruling in accordance with the applicable legal framework in the relevant jurisdiction, and there is no concern about the financial situation of the individual obligors; or (b) the*

*joint credit obligation is an immaterial part of the total obligations of an individual obligor.*

In its responses to the questions on EBA Consultation Paper EBA/CP/2015/15, the EBA states:

“The Guidelines set minimum standards and a common understanding of the main concepts related to the definition of default. [...] The clarification of terms such as ‘material’, ‘significant’ or ‘large’ has been proposed wherever it was considered that harmonisation is appropriate. Otherwise it is left to the expert judgement of institutions.”

Against this background, it is left to the expert judgement of the institution how to assess whether the joint credit obligation is an immaterial part of the total obligations of an individual obligor.

## 12.1.2 Clarifications on optional practices

Clarification 12

**No of the opt. practice in the template: T3-14, T6-14**

**Paragraph in the Guidelines: 59f**

*For the exposures to an individual, the institution may consider as an indicator of unlikelihood to pay on the basis of internal information a situation of default of a company fully owned by a single individual, where this individual provided the institution with a personal guarantee for all obligations of a company.*

The term “an individual” in the guidelines only refers to a natural person and not to a legal person (e.g. a holding company). In the guidelines, the expression “an individual” is used various times in relation to a natural person:

Paragraph 96: “This notion does not extend to a credit obligation of an individual obligor secured by another individual or entity in the form of a guarantee or other credit protection.”

The reference “by another individual or entity” illustrates that in this case “an individual” refers to a natural person.

Paragraph 100: “[...], but excluding credit obligations of an individual obligor secured by another individual or entity in the form of a guarantee or other credit protection.”

The reference “by another individual or entity” illustrates that, in this case, “an individual” refers to a natural person.

Paragraph 101: “Where an individual is fully liable for the obligations of a company, default of that company should result in that individual being considered defaulted

as well.”

The first sub-sentence illustrates that in this case “an individual” refers to a natural person.

Paragraph 102: “Additionally, in the specific case of an individual entrepreneur where an individual is fully liable for both private and commercial obligations with both private and commercial assets the default of any of the private or commercial obligations should cause all private and commercial obligations of such individual to be considered as defaulted as well.”

The reference “where an individual is fully liable for both private and commercial obligations” illustrates that in this case “an individual” refers to a natural person.

Clarification 13

**No of the opt. practice in the  
template: T3-24**

**Paragraph in the Guidelines:  
88**

*The institution may apply the definition of default at the level of an obligor for some types of retail exposures and at the level of a credit facility for others, where this is well justified by internal risk management practices, for instance due to a different business model of a subsidiary, and where there is evidence that the number of situations where the same clients are subject to different definitions of default at different levels of application is kept to a strict minimum.*

An institution applying this optional practice should always provide solid justification for it on the basis of its internal risk management practices. In assessing the number of situations where the same clients are subject to different definitions of default at different levels of application, the institution should consider that “the wording ‘strict minimum’ suggests that the extent of acceptable overlap should be limited to very few individual cases” as specified by the EBA in its responses to the questions on EBA Consultation Paper EBA/CP/2015/15.

Clarification 14

**No of the opt. practice in the  
template: T3-27**

**Paragraph in the Guidelines:  
94**

*Additionally, where a significant part of the exposures to the obligor is in default, the institution may consider it unlikely that the other obligations of that obligor will be paid in full without recourse to actions such as realising collateral and treat them as defaulted as well.*

An institution adhering to this optional practice defines an indication of unlikeness to pay that specifies when the part of the exposures in default of that obligor is significant and, as a consequence, other obligations of that obligor should be treated as defaulted. This is relevant for retail exposures, where the definition of default is applied at credit facility level.

In the context of the identification of non-performing exposures according to paragraph 155 of Annex V of the ITS on supervisory reporting, an approach consistent with this optional practice is applied “[w]here an institution has on-balance-sheet exposures to a debtor that are past due by more than 90 days and the gross carrying amount of the past-due exposures represents more than 20% of the gross carrying amount of all on-balance-sheet exposures to that debtor, all on- and off-balance-sheet exposures to that debtor shall be considered as non-performing”. Moreover, as specified in the “Background and Rationale” chapter of the Guidelines (Section 2.7.2): “Institutions may either use the same threshold as for the purpose of supervisory reporting (currently 20%) or specify a different level of threshold.” This threshold is based on the ratio between the gross carrying amount of the defaulted facilities and the gross carrying amount of all on-balance-sheet exposures towards the same obligor (paragraph 155 of Annex V of the ITS on supervisory reporting).

## 12.2 Further details on monitoring

The objective of this annex is to provide detailed guidance on the level and depth of information to be tracked as part of the monitoring process and to offer guidance on completing the monitoring template. As indicated in Chapter 10, the monitoring template should be submitted at regular intervals. More precisely, it should be submitted to the respective JST for each full quarter (“monitoring period”) following the notification date of a supervisory decision on an institution and its implementation in the calculation of own funds requirements in the rating systems (cf. Table 3).

Table 3: Monitoring periods and their submission dates

Period No	Monitoring period	Data to be submitted
1	1 April 2019 – 30 June 2019	30 September 2019
2	1 July 2019 – 30 September 2019	30 December 2019
3	1 October 2019 – 31 December 2019	31 March 2020
4	1 January 2020 – 31 March 2020	30 June 2020
5	1 April 2020 – 30 June 2020	30 September 2020
6	1 July 2020 – 30 September 2020	30 December 2020
7	1 October 2020 – 31 December 2020	31 March 2021

## 12.2.1 General guidance

As a general rule, the monitoring template should be completed by the supervised entity at the highest level of consolidation within the submitting party. It is therefore expected to comprise the consolidated results for all relevant rating systems across the full organisational structure of the submitting party.

In order to monitor the adequacy of institutions' rating systems on a timely and targeted basis, institutions are asked to provide both current and historical data. The term "historical data" is meant to refer to (all) data before the current observation period. Hence, each submission should also contain the relevant data for previous reporting periods, rather than only the observation period as shown in Table 3. As part of the parameter-related monitoring process, for instance, institutions will be asked to provide three-month default rates and different vintage cure rates for all relevant rating systems derived using the new definition of default as well as comparative/reference data from the period before implementation of the new definition of default. The respective realised and historical default and cure rates will then be compared in order to gauge the appropriateness of a given rating system in the light of the new definition of default.

Definition of default to be used to derive the entries for the monitoring template

When determining the figures to be provided in the monitoring template, institutions are asked always to use the values as per the definition of default that is applied for the calculation of own funds requirements on the given date/in the given monitoring period. Therefore, institutions should use the old definition of default before implementation of the new definition of default, and subsequently the new definition of default. Should the respective figures of preceding months have to be adjusted owing to errors and/or corrections, the results should be updated within the next submission of the template.

The monitoring template should be submitted using the following naming convention: "monitoring\_template\_[LEI Code].xlsx", where [LEI Code] denotes the LEI code of the supervised entity at the highest level of consolidation within the submitting party.

## 12.2.2 Guidance on the template

The monitoring template is an Excel workbook consisting of five sheets:

- General Information;
- Common Input;
- F-IRBA Specific Input;
- A-IRBA Specific Input;
- Guidance.

While Sheet "General Information" asks for basic reference data on the supervised entity at the highest level of consolidation within the submitting party, Sheet

“Common Input” seeks a range of CoRep-like inputs at the level of each relevant rating system. Sheets “F-IRBA Specific Input” and “A-IRBA Specific Input”, in turn, are the input templates for the monitoring data for (i) rating systems for which institutions do not have permission to use own LGD estimates and (ii) rating systems for which they do have such permission, respectively. Sheet “Guidance” does not have input fields; it provides information on how to complete the other sheets within the template only. Detailed guidance on how to fill each input field is provided in the following subsections.

#### 12.2.2.1 Sheet “General Information”

In order to clearly identify the submitting party, Sheet “General Information” has five input fields requesting the name and LEI of the supervised entity at the highest level of consolidation within the submitting party, and the details of a contact person able to respond to queries about the template’s content.

Figure 26: Monitoring template – Sheet “General Information”

<b>Name of the supervised entity at the highest level of consolidation within submitting party:</b>	
<b>LEI of the supervised entity at the highest level of consolidation within submitting party:</b>	
<b>Name of the contact person at the institution:</b>	
<b>Telephone of the contact person at the institution:</b>	
<b>E-mail of the contact person at the institution:</b>	

#### 12.2.2.2 Sheet “Common Input”

The “general” component of the monitoring process involves an assessment of the evolution of aggregated own funds-level figures by rating system. To this end, institutions are expected to provide the following information:

- RWEAs for non-defaulted exposures;
- RWEAs for exposures in default;
- EL amounts for non-defaulted exposures;
- ELBE amounts for defaulted exposures;
- exposure amounts not in default;
- exposure amounts in default.

All input fields in this template require numerical and/or free-text entries.

[illegible]

The column with identifier 010 should contain the unique identifier for each rating system as assigned in the registry template.

The column with identifier 020 should be filled with the date on which the new definition of default within the given rating system was implemented, i.e. the day when the application of the new definition of default became effective.

The columns with identifiers 030 through 046 should contain the RWEAs derived using the definition provided for Column 260 of CoRep Template C 08.01 ("Risk weighted exposure amount after SME-supporting factor") for the given rating system, for exposures not in default on the given date.

The columns with identifiers 050 through 066 should contain the RWEAs derived using the definition provided for Column 260 of CoRep Template C 08.01 (“Risk weighted exposure amount after SME-supporting factor”) for the given rating system, for exposures in default on the given date.

The columns with identifiers 070 through 086 should contain the EL amounts derived using the definition provided for Column 280 of CoRep Template C 08.01 ("Expected loss amount") for the given rating system, for exposures not in default on the given date.

The columns with identifiers 090 through 106 should contain the EL amounts derived using the definition provided for Column 280 of CoRep Template C 08.01 (“Expected loss amount”) for the given rating system, for exposures in default on the given date.

The columns with identifiers 110 through 126 should contain the exposure amounts derived using the definition provided for Column 110 of CoRep Template C 08.01 (“Exposure value”) for the given rating system, for exposures not in default on the given date.

The columns with identifiers 110 through 126 should contain the exposure amounts derived using the definition provided for Column 110 of CoRep Template C 08.01 ("Exposure value") for the given rating system, for exposures in default on the given date.

#### 12.2.2.3 Sheets “F-IRBA Specific Input” and “A-IRBA Specific Input”

Sheet “F-IRBA Specific Input” and Sheet “A-IRBA Specific Input” have the same structure. However, as the two approaches have different scopes of application, Sheet “A-IRBA Specific Input” contains some additional fields that are not part of Sheet “F-IRBA Specific Input”. The differences are clearly marked in the guidance set out below.

Sheet “F-IRBA Specific Input” should only be completed for rating systems that do not provide own estimates of LGD and fall within the general scope of the monitoring process. Therefore, rating systems for retail exposures should not, under any circumstances, be considered within this sheet. On the other hand, Sheet “A-IRBA Specific Input” should be filled in for all rating systems that do provide own estimates of LGD. In each case, institutions are expected to provide the following information:

- the ID of the rating system;
- the implementation date of the new definition of default;
- the number of non-defaulted obligors;
- the number of new defaults in the given quarter;
- the number of new defaults due to a technical past-due situation in the given quarter;
- the vintage cure rate according to time in default based on the old definition of default from 1 January 2017 onwards (Sheet “A-IRBA Specific Input” only);
- the vintage cure rate according to time in default based on the new definition of default (Sheet “A-IRBA Specific Input” only).

All input fields in this template require numerical and/or free-text entries.

Figure 28: Monitoring template – Sheet "F-IRBA Specific Input" (excerpt)

[illegible]

Input 1: Rating System ID

The column with identifier 010 should contain the unique identifier for each rating system as assigned in the registry template.

Input 2: Implementation of the new DoD as at

The column with identifier 020 should be filled with the date the new definition of default within the given rating system was implemented, i.e. the day when the application of the new definition of default became effective.



Input 3: Number of non-defaulted obligors

The columns with identifiers 030 through 046 should contain the number of obligors<sup>44</sup> within the range of application of the given rating system who are not defaulted on the given date.

Institutions are asked to calculate this number according to the rules set out in Section 12.2.1, especially regarding the relevant definition of default to be used.

Input 4: Number of new defaults in the given quarter

The columns with identifiers 050 through 065 seek the number of new obligor<sup>45</sup> defaults within the range of application for the given rating system that occurred during the given time period. Institutions are asked to include all defaults in these fields, even those that may later be identified as related to a technical past-due situation (i.e. “Number of new defaults in quarter” is a superset of “Number of new defaults due to a technical past-due situation in a given quarter”).

Institutions are asked to calculate this number according to the rules set out in Section 12.2.1, especially regarding the relevant definition of default to be used.

Input 5: Number of new defaults due to technical past-due situation in the given quarter

The columns with identifiers 070 through 085 should contain the number of new obligor<sup>46</sup> defaults within the range of application for the given rating system that occurred during the given time period, and which were identified as related to a technical past-due situation. Each value in these fields is a subset of the “Number of new defaults in quarter” of the corresponding quarter.

Institutions are asked to calculate this number according to the rules set out in Section 12.2.1, especially regarding the relevant definition of default to be used.

Input 6: Vintage cure rate according to time in default – Old Definition of Default from 2017 onwards

The inputs for the columns with identifiers 090 through 095 should be based on defaults that occurred (were triggered/started) between 01 January 2017 and the implementation of the new definition of default.

Institutions are asked to categorise these defaults according to the time remaining in default before curing (“time to cure”) into time buckets (“vintage buckets”). The definition of a cure should follow institutions' own definition<sup>47</sup> in accordance with their LGD model and the definition of default in place. The classification should only depend on the time in default, i.e. the vintage, and should be irrespective of the specific occurrence date of the default. The time to cure is always calculated as the difference between the cure date and the date of the default.

Institutions are expected to consider each cure for all vintage buckets with a horizon smaller than or equal to the time to cure. Defaults that do not cure should not be considered.

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<sup>44</sup> For rating systems where the PD model(s) and default recognition work on a facility basis, institutions may use the facility level instead of the obligor level for the purpose of this monitoring.

<sup>45</sup> For rating systems where the PD model(s) and default recognition work on a facility basis, institutions may use the facility level instead of the obligor level for the purpose of this monitoring.

<sup>46</sup> For rating systems where the PD model(s) and default recognition work on a facility basis, institutions may use the facility level instead of the obligor level for the purpose of this monitoring.

<sup>47</sup> Where institutions do not have a definition of “cure rate”, they should use the number of facilities (or obligors) – out of those that defaulted within the observation period – that returned from defaulted to non-defaulted status divided by the total number of defaulted facilities (or obligors) within the period between 1 January 2017 and the implementation of the new definition of default.

Therefore, the difference between the date of the default and the monitoring date determines the highest vintage bucket possible. For example, if the monitoring date is 31 December 2019, a default that occurred on 23 December 2018 may only have a maximum vintage bucket of one year. In addition, all defaults that are considered in the one-year vintage bucket should also be considered in the three, six and nine-month vintage buckets. However, those shorter vintage buckets may also contain additional cures with a time to cure of less than one year.

Institutions are asked to calculate this number according to the rules set out in Section 12.2.1, especially regarding the relevant definition of default to be used.

This field is only part of Sheet “A-IRBA Specific Input”.

Input 7: Vintage cure rate according to time in default – New Definition of Default

The inputs of the columns with identifiers 100 through 105 should be based on defaults that occurred (were triggered/started) after the implementation of the new definition of default and its use for the calculation of own funds requirements.

Apart from this difference, it is defined analogously to “Vintage cure rate according to time in default – Old Definition of Default from 2017 onwards”.

Institutions are asked to calculate this number according to the rules set out in Section 12.2.1, especially regarding the relevant definition of default to be used.

This field is only part of Sheet “A-IRBA Specific Input”.

### 12.2.3 Sheet “Guidance”

Sheet “Guidance” comprises explanations on how to complete the template. The information presented in it is a summary of the guidance presented in this document.

# Glossary/list of abbreviations

Term/abbreviation	Explanation
<b>action plan template</b>	template “action_plan_template_[LEICode].xlsx” as provided by the ECB
<b>CCF</b>	credit conversion factor in accordance with Article 4(1)(56) of the CRR
<b>CRM</b>	credit risk mitigation in accordance with Article 4(1)(57) of the CRR
<b>CRR</b>	Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ L 176, 27.6.2013, p. 1)
<b>cure rate</b>	the ratio between the number of recovering exposures occurred during a period that starts from one year before a date T and the number of defaulted obligors one year before that date; the one-year horizon may be changed to a different period if explicitly stated otherwise
<b>default rate</b>	default rate in accordance with Article 4(1)(78) of the CRR; unless stated otherwise referring to a one-year period
<b>DoD</b>	definition of default
<b>EAD</b>	exposure at default in the sense of exposure value in accordance with Articles 111 and 166 of the CRR
<b>EBA</b>	European Banking Authority
<b>ECB</b>	European Central Bank
<b>EL</b>	expected loss in accordance with Articles 5(3) and 158 of the CRR (in EUR millions)
<b>ELBE</b>	expected loss best estimate in accordance with Article 181(1)(h) of the CRR (in EUR millions)
<b>EU</b>	European Union
<b>FAQ process</b>	the process for the submission of frequently asked questions by participating institutions during the execution of the self-assessment by institutions and the distribution of answers by the ECB
<b>FAQ template</b>	template “FAQ_question_template_[LEI/Code].xlsx” as provided by the ECB
<b>gap template</b>	template “gap_template_[LEI/Code]_[NrTemplate].xlsx” as provided by the ECB
<b>Guidelines</b>	EBA Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013 (EBA/Guidelines/2016/07)
<b>IRB/IRBA</b>	internal ratings based approach in accordance with Article 143 CRR
<b>IT</b>	the collection of all relevant IT systems in the sense of Article 142 of the CRR
<b>ITS on supervisory reporting</b>	Commission Implementing Regulation (EU) 2015/227 of 9 January 2015 amending Implementing Regulation (EU) No 680/2014 laying down implementing technical standards with regard to supervisory reporting of institutions according to Regulation (EU) No 575/2013 of the European Parliament and of the Council (OJ L 48, 20.2.2015, p. 1)
<b>JST</b>	joint supervisory team according to Article 3 of the SSM Framework Regulation
<b>LEI</b>	Legal Entity Identifier, <a href="https://www.gleif.org">https://www.gleif.org</a>
<b>LGD</b>	loss given default in accordance with Article 4(1)(55) of the CRR
<b>LGD-in-default</b>	loss given default in accordance with Article 4(1)(55) of the CRR for defaulted exposures
<b>monitoring period</b>	each quarter for which the monitoring template should be submitted to the respective JST as described in Chapter 10
<b>monitoring template</b>	template “monitoring_template_[LEI/Code]_[NrPeriod].xlsx” as provided by the ECB
<b>N_min</b>	minimum absolute size of the sample where sampling is applied as set out in Section 7.2.2
<b>NCA</b>	national competent authority according to Article 4(1)(40) of the CRR
<b>observation date</b>	date at which the status of all obligors is determined in order to set the denominator for the calculation of default or cure rates; unless stated differently, 31 December of each year is assumed to be the observation date

<b>observation period</b>	period over which the status of all obligors is determined in order to set the denominator for the calculation of default or cure rates
<b>ODR</b>	observed default rate, see “default rate”
<b>PD</b>	probability of default in accordance with Article 4 (1)(54) of the CRR
<b>portfolio</b>	range of application of the corresponding rating system
<b>PPU</b>	permanent partial use according to Article 150 of the CRR
<b>qualitative impact template</b>	template “qual_impact_template_[LEI Code]_[Nr].xlsx” as provided by the ECB
<b>quantitative impact template</b>	template “quant_impact_template_[LEI Code].xlsx” as provided by the ECB
<b>reference date</b>	date as at which all simulations and portfolio reports should be run unless stated differently – the reference date is set to 31 December 2017
<b>registry template</b>	template “registry_template_[LEI Code].xlsx” as provided by the ECB
<b>relevant types of exposures</b>	all types of exposures in scope to which a certain definition of default is applied
<b>Delegated Regulation</b>	Commission Delegated Regulation (EU) 2018/171 of 19 October 2017 on supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for the materiality threshold for credit obligations past due (OJ L 32, 6.2.2018, p. 1)
<b>DR 529/2014 / Delegated Regulation 529/2014</b>	Commission Delegated Regulation (EU) 2015/942 of 4 March 2015 amending Delegated Regulation (EU) No 529/2014 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council as regards regulatory technical standards for assessing the materiality of extensions and changes of internal approaches when calculating own funds requirements for market risk (OJ L 154, 19.6.2015, p. 1)
<b>RW(E)A</b>	risk weighted exposure amount in accordance with Articles 113 and 151 of the CRR
<b>SA</b>	Standardised Approach for credit risk in accordance with Part Three, Title II, Chapter 2 of the CRR
<b>significant supervised entity</b>	significant supervised entity as defined in Article 2(16) of the SSM Framework Regulation
<b>significant supervised group</b>	significant supervised group as defined in Article 2(22) of the SSM Framework Regulation
<b>SSM</b>	single supervisory mechanism according to Article 2(9) of Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions (OJ L 287, 29.10.2013, p. 63)
<b>SSM Framework Regulation</b>	Regulation (EU) No 468/2014 of the European Central Bank of 16 April 2014 establishing the framework for cooperation within the Single Supervisory Mechanism between the European Central Bank and national competent authorities and with national designated authorities (OJ L 141, 14.5.2014, p. 1)
<b>TRIM</b>	targeted review of internal models
<b>α</b>	minimum relative size of the sample where sampling is applied as set out in Section 7.2.2