EBA /RTS/2018/04

16 November 2018

Final Draft Regulatory Technical Standards

on the specification of the nature, severity and duration of an economic downturn in accordance with Articles 181(3)(a) and 182(4)(a) of Regulation (EU) No 575/2013

Contents

1. Executive summary

The Basel II framework requires that loss given default (LGD) and conversion factor (CF) estimates should reflect downturn conditions if these estimates are more conservative than the long-run averages. This has been implemented in EU law through Articles 181(b) and 182(b) of Regulation (EU) No 575/2013 (Capital Requirements Regulation — CRR). The identification of robust estimation methods for LGDs appropriate for such downturn conditions (LGD DT) and CFs appropriate for such downturn conditions (CF DT) has proven challenging. In addition, different practices around downturn conditions and the use of collateral information have been identified as potential drivers of divergence of risk-weighted exposure amounts (RWAs) in an EBA benchmarking report (2014 Low default portfolio exercise[1]) and an EBA report on comparability and procyclicality[2].

A precondition to limiting unjustified variability stemming from LGD DT estimation is a common specification of 'economic downturn' conditions as referred to in the relevant CRR articles. In this regard, the EBA has been mandated in Articles 181(3)(a) and 182(4)(a) to specify an economic downturn in terms of its nature, duration and severity.

There has been considerable debate about the extent to which the specification of an economic downturn can and should be disentangled from estimation of LGD DT and CF DT. The EBA consulted on an approach that tackled, to some extent, both the specification of an economic downturn and some aspects of CF DT and LGD DT estimation. Owing to the complexity of the proposed approach, which was noted by the EBA in its consultation and in the feedback received from the industry, a simpler approach was chosen. Therefore, the approach chosen in the final draft regulatory technical standards (RTS) aims to specify the identification of an economic downturn independent of the applied LGD or CF estimation methodology. Guidance on how LGD DT should be estimated is provided in guidelines (GL) on downturn LGD estimation, which will be published separately.

The notion of an economic downturn to be taken into account for the purpose of LGD DT and CF DT estimation and introduced in these draft RTS comprises all downturn periods that may be relevant for the type of exposures under consideration. In more detail, the economic downturn is specified via three aspects: its nature, severity and duration. The nature of an economic downturn is specified through macroeconomic or credit-related factors ('economic factors') that are explanatory variables for or indicators of the business cycle of the type of exposures under consideration.

In particular, the nature of the economic downturn is defined as a set of economic factors relevant for the type of exposures under consideration. The severity of an economic downturn is specified as the set of the most severe values observed over a given historical period on the relevant

[1] http://www.eba.europa.eu/documents/10180/950548/EBA+results+from+the+2014+Low+Default+portfolio+%28LDP%29%20exercise.pdf

[2] https://www.eba.europa.eu/-/eba-publishes-reports-on-comparability-of-risk-weighted-assets-rwas-and-pro-cyclicality

economic factors. Finally, the duration of an economic downturn is specified as the set of durations of the downturn periods constituting the economic downturn under consideration. A downturn period in the context of these RTS is defined as a period of time of at least 12 months during which the most severe values (i.e. the severities) of several correlated relevant economic factors are reached simultaneously or shortly after each other.

An institution's identification of an economic downturn for a considered rating system has to be reviewed annually and updated in case a new downturn period is identified.

Next steps

The draft RTS will be submitted to the Commission for endorsement before being published in the *Official Journal of the European Union*. The technical standards will apply from 1 January 2021, as this will allow institutions to prepare for the implementation of RTS and to integrate the approach into existing modelling practices.

2. Background and rationale

1. Articles 181(1)(b) and 182(1)(b) of Regulation (EU) No 575/2013 (CRR) specify that institutions shall use LGD and CF estimates that are appropriate for an economic downturn if those are more conservative than the respective long-run averages. In this regard, Articles 181(3)(a) and 182(4)(a) of the CRR mandate the EBA to specify the nature, severity and duration of an economic downturn, appropriate for LGD DT and CF DT estimated by institutions. According to the CRR mandates, these draft RTS specify the three characteristics of the economic downturn — its nature, severity and duration — but do not cover the estimation methodology used by institutions to reflect these downturn conditions in LGD DT and CF DT estimates. Guidance on the estimation methodology to be used for LGD DT parameters will be provided in the GL for downturn LGD estimation. Ultimately, these RTS and the GL, which will be integrated into the GL on PD, LGD estimation and treatment of defaulted assets (EBA/GL/2017/16) published on 20 November 2017 (EBA GL on PD and LGD estimation[3]), will provide a comprehensive approach to the identification and incorporation of the downturn component into an IRB model.

2. The requirement for LGD and CF estimates to reflect economic downturn conditions was introduced in the Basel II framework and stems from the general economic model that is applied to derive the formula used in that framework to calculate own funds requirements. In the Basel II framework, the own funds requirements for unexpected losses relies on the conditional expected loss, which again is based on a conservative value of a single systematic risk factor. This factor, representing the global business conditions, entails that the conditional expected loss corresponds to the level of expected losses in an economic downturn. The conditional expected loss is defined as the conditional PD multiplied by the conditional LGD and the conditional exposure at default (EAD). At the same time, although the regulatory formula includes a supervisory mapping function to derive conditional PDs from average PDs estimated by the institutions, it does not provide an explicit function that would transform average LGDs and EADs into conditional LGDs and EADs. Instead, it is specified only that 'banks are asked to report LGDs that reflect economic downturn conditions in circumstances where loss severities are expected to be higher during cyclical downturns than during typical business conditions'.

3. The proposed draft RTS focus on the current mandate — the specification of an economic downturn in terms of nature, severity and duration — and set aside the assessment of the impact of an economic downturn on the losses of a specific portfolio or LGD estimation model or on CFs.

4. Figure 1 visualises the economic downturn as a multi-dimensional object defined by its nature, severity and duration. The draft RTS specify an economic downturn with respect to the business cycle relevant for the type of exposures under consideration; therefore:

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

- The nature of an economic downturn is specified through the economic factors that are explanatory variables or indicators of the business cycle for the type of exposures under consideration. Therefore, the nature of the economic downturn is defined as a set of relevant economic factors identified in accordance with Article 2.

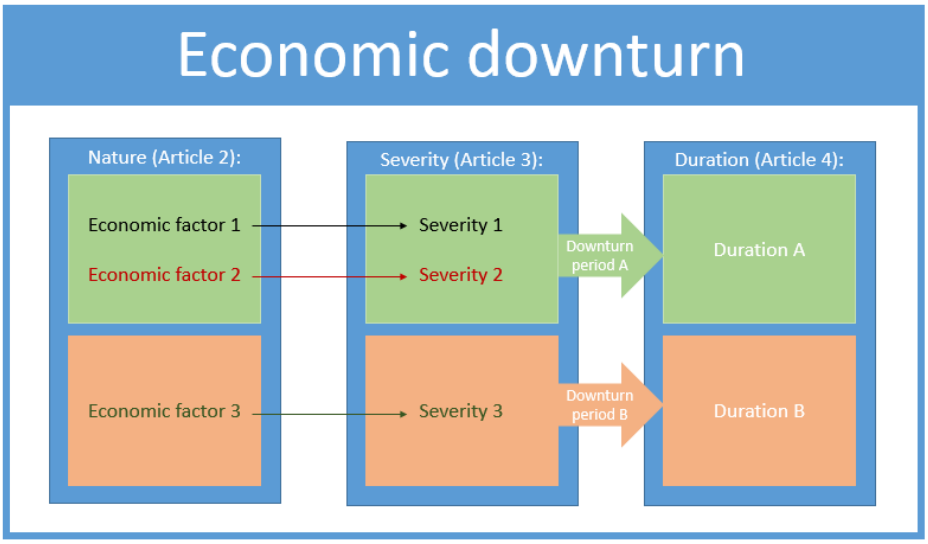
- The severity of an economic downturn is specified as the most severe values observed on the relevant economic factors over a given historical period. In other words, the severity of an economic downturn is specified as a set containing one distinct severity for each relevant economic factor.

- Finally, the duration of an economic downturn is specified via the concept of the 'downturn period'. In this respect, the notion of downturn period is introduced in Article 1 as a period of time in which the peaks or troughs, which relate to the most severe values in accordance with Article 3, of one or several economic factors are observed.

According to the above concepts, a downturn period could include either one or several economic factors identified based on their associated severities. Put differently, a downturn period is characterised by a set of economic factors the most severe values are reached simultaneously or are the effect of one overall economic condition.

5. It should be noted that, according to this, the duration of an economic downturn is specified by the duration of the identified downturn periods, where the duration of a downturn period refers generally to the 12-month period in which the downturn conditions are observed on the economic factor related to this downturn period. However, some flexibility is provided with respect to the duration of a downturn period, e.g. where the most severe realisation of an underlying economic factor is observed over a longer period of time. It should be stressed that the duration of an economic downturn (specified by the set of durations of the downturn periods covered) is therefore independent of the institution's loss experience and should not be confused with the period in which the impact of a downturn period can be observed on an institution's loss data.

Figure 1: Economic downturn



6. The notion of a downturn period and its nature, severity and duration is further explained and illustrated in the sections below relating to Articles 1, 2, 3 and 4 respectively.

Article 1: General

7. Article 1 sets out the structure of the RTS by pointing to the relevant articles in which the nature, severity and duration of an economic downturn are specified. In particular, paragraph 2 introduces the concept of a downturn period as a period of time in which the peaks/troughs of one or several relevant economic factors are reached simultaneously, or respectively when they are not reached simultaneously, but are nonetheless the effect of one single economic condition. Moreover, Article 1 specifies in paragraphs 3 the level at which an economic downturn should be specified. The proposed policy requires that an economic downturn is identified for each type of exposure, as defined in Article 142(2) of the CRR. Such an approach ensures alignment with the scope of application of a rating system.

8. The concept of a downturn period is relevant for identifying the duration of an economic downturn. The latter in fact comprises a set of durations, one for each downturn period. Moreover, as explained above, the concept of several downturn periods constituting one economic downturn to be considered for the purpose of estimating LGDs and CFs appropriate for an economic downturn reflects that different economic factors may reach their peaks/troughs in different periods of time and these periods of time may reveal different impacts on an institution's loss and credit line use data depending on their underwriting, collateralisation and workout processes (respective to their limit policies for CF).

9. In this respect, the design of the economic downturn to be considered for the purpose of LGD DT and CF DT estimates may consist of either:

   - one downturn period, if the peaks or troughs related to the severities of the relevant economic factors are reached simultaneously or are related to the same overall economic condition;

   - several downturn periods, if the peaks/troughs of the relevant economic factors are observed in different time periods and are not related to the same overall economic condition.

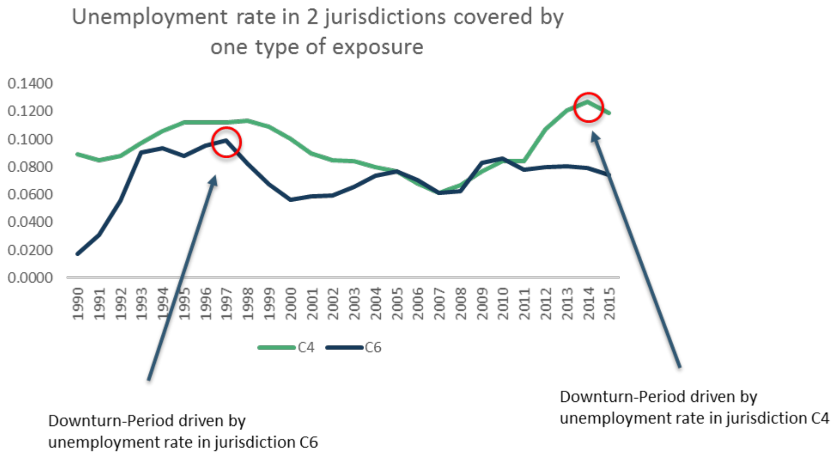
   In the latter case (i.e. in which there is more than one downturn period), the GL on downturn LGD estimation clarify how to treat multiple downturn periods in the context of LGD downturn estimation.

Article 2: Nature of an economic downturn

10. Article 2 of the revised draft RTS specifies a list of economic factors that are relevant for the purpose of specifying the nature of an economic downturn for a considered type of exposures. This article clarifies (i) that all the economic factors listed in Article 2(1) shall be relevant and (ii) that these economic factors should reflect the geographical distribution and, where relevant, the distribution across sectors of the type of exposures under consideration. In doing so, institutions should ensure that an economic factor is included in the set constituting the nature of an economic downturn

once for each jurisdiction and, where relevant, the sector, which is covered by a material share of the type of exposures under consideration. Moreover, the economic factors referred to in Article 2(1) shall be considered in levels or changes in levels, as most appropriate.

11. This means that GDP and unemployment rates for the jurisdiction(s), which cover material shares of the portfolio under consideration, are relevant for the specification of an economic downturn. In this context it is worth noting that the draft GL on downturn LGD estimation will account for the situation in which the set of economic factors relevant for the whole type of exposure may contain factors that will only have an impact on an institution's loss data for a considered subset (say, one of several jurisdictions) but not on other subsets. As an example, assume that a portfolio covers two jurisdictions: country C4 and country C6 (with equal shares of exposure). When specifying the nature of an economic downturn for this portfolio, the institution needs to include GDP and unemployment rates for both C4 and C6. For example, consider the time series for the unemployment rates of C4 and C6 in the following illustration:



12. In this example, the institution would need to consider two downturn periods: one in 1996 driven by the peak in unemployment rate in country C6 and one in 2014 driven by the peak in unemployment rate in country C4. The rationale for this customisation of economic factors to the relevant geographical areas and sectors is that it ensures that the most appropriate economic factors are considered and that it harmonises the notion of an economic downturn regardless of the institution's modelling or risk management choices. Another example of reflecting the distribution across sectors of the type of exposures under consideration would be a case in which the main sectors covered by a considered rating system for corporate exposures were agriculture and tourism. In this example, the industry indices for agriculture and tourism would be the relevant economic factors according to Article 2(1)(b)(i).

13. It is important to note that the RTS may indeed require the use of a set of factors for one of the economic factors listed in Article 2(1), each one reflecting a subset of the type of exposures under consideration. For example, an institution may need to consider a set of GDP series to reflect the geographical distribution of the exposure covered by the rating system under consideration. Moreover, no weighting should be applied to aggregate different relevant economic factors reflecting subsets of exposures stemming from, for example, different jurisdictions. Instead, these

should just be considered to be part of the set of economic factors specifying the nature of an economic downturn of the type of exposure under consideration.

14. The list in Article 2(1) specifies the economic factors that are relevant for the purpose of identifying the nature of the economic downturn of a type of exposure (i.e. portfolios) under consideration. It should be noted that the externally provided aggregate default rates and credit losses may refer to a different definition of default from the one specified in Article 178 of the CRR, which is fine, as these factors are considered for the purpose of revealing cyclical behaviour and not for the purpose of estimating long-run average loss rates as defined in Article 181 of the CRR. Moreover, it should be emphasised that these economic factors are relevant only if publicly available or if the costs of acquiring such data are not disproportionate with respect to the materiality of the type of exposures under consideration. In particular, aggregate credit losses may not be available for all jurisdictions.

15. As the list in Article 2(1) may not contain all economic factors relevant for the economic cycle related to the type of exposures considered, Article 2(3) requires institutions to consider additional economic factors, beyond those contained in the mandatory list in Article 2(1), that are explanatory variables for or indicators of the business cycle of the type of exposures considered. As a general example, interest rates or stock indices could be considered as additional relevant economic factors.

Article 3: Severity of an economic downturn

16. For the purpose of specifying the severity of an economic downturn, institutions are requested to select the most severe value for each of the relevant economic factors based on historical values observed over the last 20 years. Therefore, the severity of an economic downturn can be understood as a set of severities containing one severity for each relevant economic factor identified in accordance with Article 2. To avoid an overly mechanistic approach, the RTS also specify conditions under which the severity identified, over the last 20 years, would not be considered sufficiently severe. In these cases, institutions are required to use longer time series of the various economic factors. This approach avoids the situation where, for example, a resulting downturn LGD estimation would significantly change as a result of a recalibration conducted at a point in time at which a previously detected downturn would drop out of the 20-year period sliding time window. Moreover, it covers the situation in which no significant variation in values can be observed within the last 20 years, as may be the case in individual jurisdictions that have not experienced any significant downturn conditions in the preceding 20 years for a particular economic factor. For the purpose of harmonisation, observations of relevant economic factors relate to a 12-month period in these draft RTS.

17. Regarding the length of the time series, looking at only 10 years of data history, i.e. approximately one economic cycle, might not be sufficient to capture the severity of an economic downturn. For the sake of simplicity and comparability a uniform backward-looking period of 20 years is therefore considered in the RTS.

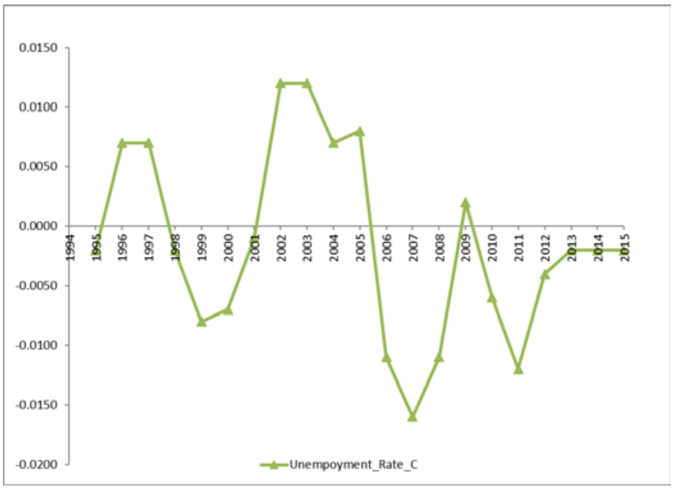
18.In summary, severity corresponds to the worst 12-month average value for the economic factor realisations under consideration. Paragraph 2 of Article 3 clarifies that, when identifying the worst 12-month average value of the economic factor, the 12-month period can start at any point in time within the identification period, if the historical data for the considered economic factor is available more frequently than annually.

Article 4: Duration of an economic downturn

19.Article 4 of the draft RTS refers to the duration of an economic downturn. As such, the duration of an economic downturn is a set of durations, one for each identified downturn period.

20.If the downturn period relates to only one economic factor, the duration will be the 12-month period in which the most severe value of the considered economic factor is observed. However, where this severity is observed over a period longer than 12 months (i.e. the economic factor does not significantly move or fluctuate from its most severe 12-month observation), the duration of this downturn period, relating only to one economic factor, may last longer. Figure 2 below displays an example in which the duration of a downturn period with unemployment rate as the unique economic factor is longer than 12 months due to prolonged severe conditions affecting the unemployment rate. As Figure 2 shows, the unemployment rate peaks, i.e. the severity of the unemployment rate is observed, during both 2002 and 2003. In this case, the duration of the downturn period should be 2 years.

Figure 2: Duration longer than 12 months due to prolonged severity observed for one economic factor — Article 4(2)(a)

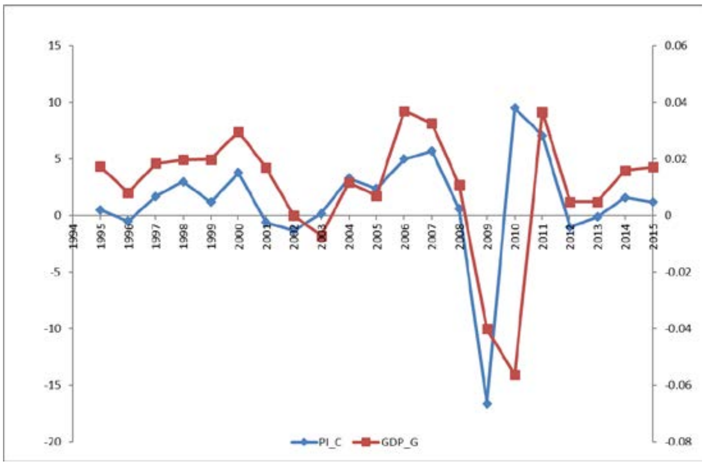


21.A longer duration could be also considered for a downturn period relating to one economic factor, according to Article 4(2)(c), where the peak and trough related to the severity of that economic factor show adjacent peaks and troughs related to the same economic conditions. Figure 3 below plots again a hypothetical time series for unemployment rate. The severity of the unemployment rate is defined according to the worst observed value (referring to a 12-month period), which, according to the figure below, is 2003. Unemployment rate shows an adjacent peak in 2005, which could be related to the peak in 2003 (if it is the result of the same economic conditions), leading to a duration of the downturn period of 3 years (2003-2005).

Figure 3: Duration longer than 12 months due to one economic factor with adjacent peak/trough related to its severity — Article 4(2)(c)

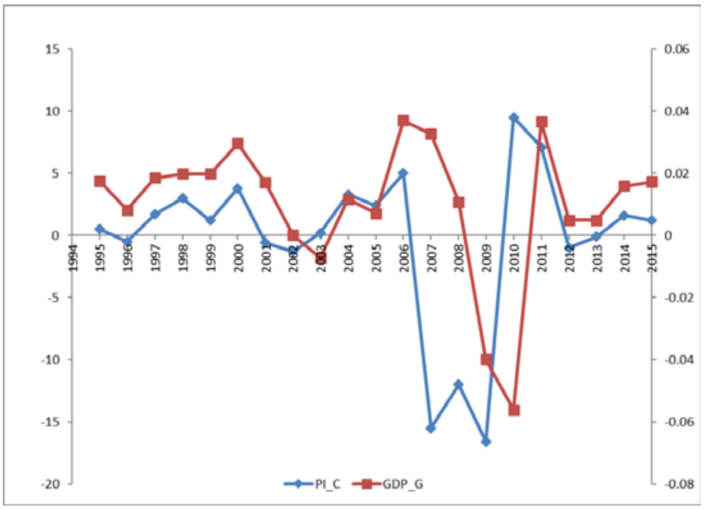
22.A downturn period comprises different economic factors and, therefore, the peaks or troughs related to the severity of each relevant economic factor, as specified in Article 3, may not be reached simultaneously. However, if this is the effect of one overall economic condition, the duration of the downturn period related to these economic factors should be long enough to reflect the extended downturn situation. As an example, consider the time series for GDP growth and productivity index displayed in Figure 4 below. In accordance with Article 4(2)(b), the set of economic factors pointing to the same overall economic condition should be assigned to the same downturn duration, even if the respective severities are not reached simultaneously. In this example, an institution should analyse whether or not the trough in 2010 for GDP growth and the trough in 2009 for the productivity index relate to the same overall economic condition and, if so, reflect this by identifying the downturn period as starting in 2009 and lasting until 2010.

Figure 4: Duration longer than 12-months due to correlated severities of different economic factors — Article 4(2)(b)



23.It should be noted that there could be cases in which both points (b) and (c) of Article 4(2) apply. Figure 5 below shows an example where GDP growth and production index have correlated severities, as in Figure 4 above. Moreover, the production index shows a trough in 2007 adjacent to the trough defining its severity in 2009, which is the result of the same overall economic condition. In this case, institutions shall consider the downturn period comprising both economic factors to last from 2007 to 2010 (where we observe the troughs for GDP growth defining its severity).

Figure 5: Duration longer than 12 months due to both correlated severity of different economic factors and adjacent peaks/troughs of one economic factor — Article 4(2)(b) and (c)

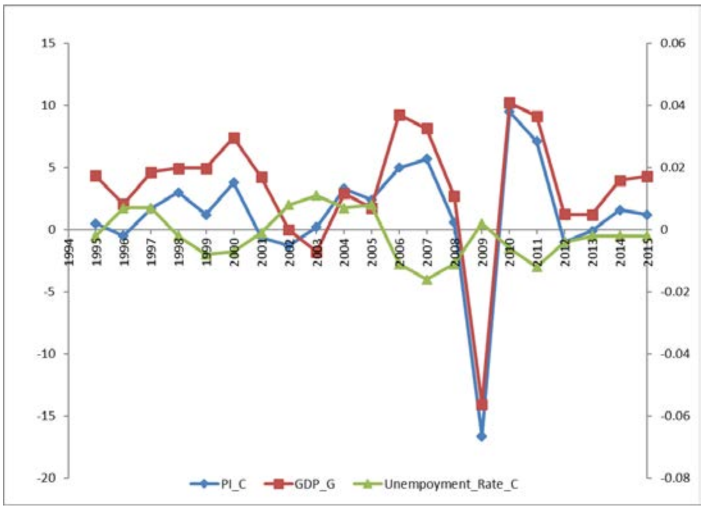


24. Generally, no durations shorter than 12 months should be considered for the purpose of a more stable and harmonised notion of downturn (as economic factors that are available on only a yearly basis need to be comparable to economic factors available at a higher frequency). The option to deviate from 12-month durations for downturn periods, as laid down in points (a), (b) and (c) of Article 4(2), should not lead to unreasonably long downturn periods, which would probably rather reflect structural changes than adverse conditions in cyclical behaviours of the economic factors considered. There should be no concern that longer downturn periods could lead to the inclusion of numerous non-downturn observations in the LGD downturn estimate and thus lower it, as, under the proposed approach in the GL on downturn LGD estimation the duration of an economic downturn defines only the period in relation to which the impact of a downturn period has to be analysed.

Identification of an economic downturn: examples

25. To better clarify the general concept, the economic downturn is illustrated in a couple of examples. To determine the economic downturn for an individual portfolio in accordance with the specification in these draft RTS, an institution would first need to select the relevant economic factors. As an example, consider a portfolio of corporate exposures mainly covering production-related businesses located in jurisdiction A. According to Article 2, an institution would consider at least the GDP and the unemployment rate of jurisdiction A as relevant economic factors, as well as the productivity index for the production industry (assuming that externally provided default rates and credit losses are not available), for the purpose of specifying the nature of an economic downturn. In this example, the economic factors are considered in terms of changes, i.e. the GDP growth, the changes in unemployment rate and the changes in the productivity index considered.

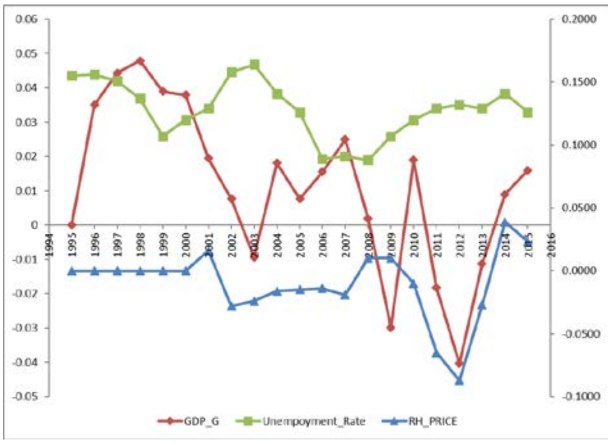
Figure 6: Economic factors for a portfolio of corporate exposures mainly covering production-related businesses



26.In a second step, the institution would need to select the most severe observed value (relating to a 12 month period) in at least 20 years for each economic factor, which occurs in 2009 for the productivity index and the GDP and in 2003 for the unemployment rate. Therefore, the final economic downturn to be considered for the purpose of LGD estimation would consist of two downturn periods: the first one, in 2009 is characterised by the productivity index and the GDP – each carrying as severity its levels of 2009 and the second one in 2003, where the highest level in the unemployment rate has been observed. The rationale for specifying that an economic downturn as potentially comprising two or more downturn periods is that a portfolio can be affected to a different extent by different economic factors. Even for two portfolios relating to the same type of exposuress (e.g. retail real estate financing), the impact of a downturn period on an institution's loss data may be different depending among other things on the contract design, collateralisation and the institution's work-out procedures.

27.This difference is best illustrated by considering an example of retail mortgage portfolios of two different banks: bank A and bank B. Bank A has a very high rate of credits that revert to non-defaulted status because of low LTVs and high penalty fees or interest rates for exposures in default. At the same time, bank B has a low rate of credits that revert to non-defaulted status because of early contract termination and collection procedures. In this example, it is reasonable to assume that bank A may observe an impact from a high unemployment rate on its rate of return to non-defaulted status, as those obligors that defaulted because of unemployment may remain in default longer than those that defaulted under average economic conditions. For bank B, such an impact is less probable because of the early termination policy. To further explore this example, in accordance with these draft RTS, the banks would identify two downturn periods for the types of exposure considered, namely 2003 (where the unemployment rate peaks) and 2012 (where GDP and house price indices show troughs):

Figure 7: Example of economic factors for mortgage portfolios in one jurisdiction

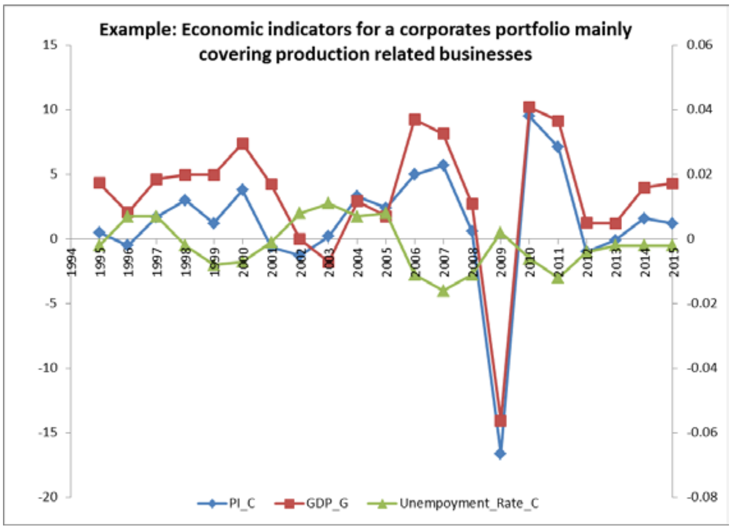


28.As illustrated in the example above, it is likely that the economic downturn to be considered in LGD downturn estimation will comprise more than one downturn period. Furthermore, for comparable portfolios relating to the same underlying business, an impact from one downturn period may be visible for one bank or even sub-portfolio but not for another bank or sub-portfolio. The proposed draft RTS harmonise the economic factors that institutions need to consider for a given type of exposures as well as the duration and severity related to these economic factors. Therefore, the RTS will ensure that the same economic downturn is identified, while the GL on LGD downturn estimation will ensure that different impacts of the same economic downturn are recognised.

29.The analysis of how the downturn periods of the economic downturn identified impact the loss data of an individual portfolio will, as previously noted, be treated separately in the GL for downturn LGD estimation. However, it is useful to understand the interaction with the envisaged process of downturn LGD estimation and to show which part of this process is covered by these draft RTS and which part is covered by the GL on LGD downturn estimation. The following illustration provides this overview:

Covered by the **draft RTS on economic downturn**

Step 1: Identification of relevant **economic factors** and their **severities**



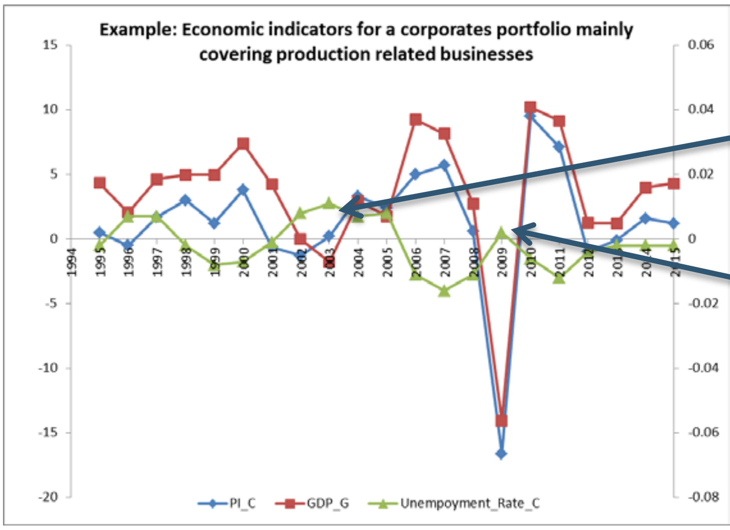
According to Article 2, for all types of exposure:

GDP — trough 2009; unemployment rate — peak 2003.

For a portfolio of corporate exposures: productivity index trough 2009.

Covered by the **draft RTS on economic downturn**

Step 2: Identification of **downturn periods** and their **duration**



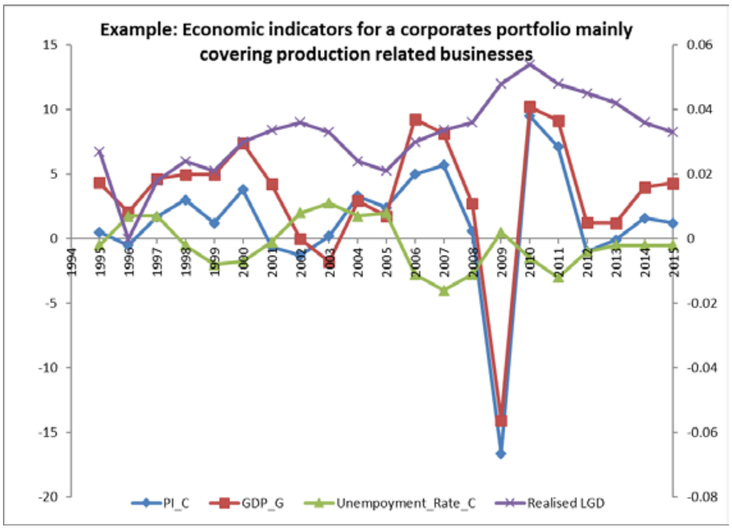
According to Articles 1 and 4:

downturn period A (unemployment rate) — peak 2003;

downturn period B (GDP, productivity index) — trough 2009.

Covered by the **GL on LGD downturn estimation**

Step 3: **Analysis of the impact** of all identified downturn periods on an institution’s relevant loss data



GL on LGD downturn estimation:

impact analysis — no impact on realised LGDs for the downturn period in 2003;

significant impact on realised LGD with 1-year lag for downturn period in 2009.

Step 4: Estimation of **LGD appropriate for an economic downturn**

Example: The final LGD downturn estimates relate to the downturn period identified in 2009 and are based on the observed impact.

30.The rationale for disentangling the specification of an economic downturn from the requirements on LGD DT or CF DT estimation is that in this way the RTS provide a common specification of the nature, duration and severity of an economic downturn for portfolios relating to comparable types of exposure. The impact of the harmonised identification of the economic downturn on an institution's relevant loss data may, however, be very specific. It may in particular depend on the following non-exhaustive elements: (1) the institution-specific contract design; (2) collateralisation policies and work-out procedures; and (3) the general measures taken by an institution to limit the impact of an economic downturn on its business. Whereas these differences do not influence the identification of an economic downturn, they are expected to influence the realised LGD or relevant drivers of the realised LGD and, in turn, the factors institutions are expected to account for when assessing the appropriateness of their LGD estimates with respect to the economic downturn identified.

31.This approach deviates from the proposed draft RTS presented in the Consultation Paper (CP/EBA/2017/02), which tackled to some extent both the specification of an economic downturn and some aspects of LGD estimation methodologies appropriate for an economic downturn. The approach presented in the draft RTS of the CP reflected an economic factors approach in which the downturn is driven by macroeconomic and credit-related factors (economic factors). The approach required specific analysis to identify the economic factors appropriate for the considered portfolio and LGD estimation method (e.g. analysis of the dependency of economic factors with specific features of realised LGDs and CFs, i.e. 'model components'). The proposed approach in the CP aimed to retain risk sensitivity while ruling out variability stemming from different approaches to identifying the relevant economic downturn conditions, but at the cost of high complexity. The approach presented in these draft RTS avoids this complexity and provides a clear and common specification of an economic downturn in terms of its nature, duration and severity.

32.The last article of the draft legal text clarifies that institutions have to review their identified economic downturn for a considered rating system annually and update it in case a new downturn period is identified.

3. Draft regulatory technical standards on the specification of the nature, severity and duration of an economic downturn in accordance with Articles 181(3)(a) and 182(4)(a) of Regulation (EU) No 575/2013

EUROPEAN COMMISSION

Brussels, XXX
[…](2012) XXX draft

COMMISSION DELEGATED REGULATION (EU) No …/..

of XXX

[…]

Supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 with regard to regulatory technical standards on the specification of the nature, severity and duration of an economic downturn in accordance with Articles 181(3)(a) and 182(4)(a) of Regulation (EU) No 575/2013

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to 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[4], and in particular the third subparagraph of Article 181(3) in relation to point (a) and the third subparagraph of Article 182(4) in relation to point (a) thereof,

Whereas:

(1) The formulae for risk weights in Articles 153 and 154 of Regulation (EU) No 575/2013 are designed to reflect losses in 99.9% of the realisations of a systemic variability factor. In order to reach a 99.9% quantile of the loss distribution for the case where LGD is a random variable sensitive to economic conditions, the LGDs used as inputs in the regulatory risk weight formulae are required to be own-LGDs estimates that are appropriate for an economic downturn if those are more

[4] OJ L 176, 27.06.2013, p. 1.

conservative than the long-run average own-LGD estimate, as stated in Article 181(1)(b) of Regulation (EU) No 575/2013. The specification of an economic downturn, for use in own-LGD or own-conversion factor ("CF") estimates, should be based on economic factors, including both macroeconomic and credit-related factors.

(2) Even though the level of realised LGDs and realised CFs may be substantially above its long-run average as a result of an economic downturn, an economic downturn should not be considered as the equivalent of stress-testing conditions, which may be more severe and potentially use extreme scenarios, which are not necessarily based on historical observations. Regulation (EU) No 575/2013 and the delegated acts that complete it, adequately provide for the carrying out of stress testing where this is required, and does not include any indication for stresstesting in the provisions relating to own-LGD and own-CF estimates.

(3) Given the specificities of different portfolios, the economic downturn should be examined separately for each type of exposures. Only where an institution can demonstrate that different jurisdictions exhibit strong co-movements in realised economic factors, the institution should be allowed to group those jurisdictions for the purpose of defining the economic downturn.

(4) Given that the type of exposures under consideration may comprise exposures related to different businesses, sectors and jurisdictions/geographical areas, an economic downturn may comprise one or several disjunctive downturn periods. A downturn period is characterised by a period of time where one or more economic factors show their worst twelve month manifestation. More than one economic factor can be attributed to the same downturn period if the peaks and troughs related to these economic factors are reached simultaneously or, where they are not reached simultaneously, they are nonetheless significantly correlated.

(5) For the purpose of specifying the nature of an economic downturn in a manner that allows for an accurate but also simple implementation it is necessary to establish a list of economic factors which should be considered at all times and which should be complemented by institutions with additional relevant economic factors for each given type of exposures. These economic factors should be considered in levels or in changes of these levels, where more appropriate taking into account the common use of the considered economic factor as well as the ability to reveal cyclicality.

(6) For the purpose of specifying the severity of the economic downturn as a set of the most severe values associated to each relevant economic factor, and for the sake of simplicity and comparability, it is appropriate to establish a minimum length of 20 years of observations for each economic factor to be used by institutions. This should also ensure that the length of the backward looking period covers at least two economic cycles. Where this period of data does not contain sufficiently severe values for a considered economic factor, institutions should look further back into the data history. An exception should however be made for cases where the considered economic factor has been subject to structural change due to a country's

process of entry into the European Union, in which case institutions should be allowed to use a shorter period.

(7) The duration of a downturn period is driven by the realisation of economic factors. For reasons of simplicity and comparability at least a 12-months duration for each downturn period should be considered. For reasons of flexibility that is necessary to ensure accuracy in the results, this period of time should be treated as a minimum. Institutions should however apply a longer duration where the most severe values related to the economic factors belonging to the downturn period under consideration imply a continued downturn condition. The duration of a downturn period should, however, reflect adverse conditions in cyclical behaviours of the considered economic factors and should not be confused with structural changes.

(8) The requirements for estimation in Regulation (EU) No 575/2013 envisage that instititutions shall review their estimates when new information comes to light but at least on an annual basis. As a result, institutions should review at least annually the specification of an economic downturn used, where relevant, for their own-LGD and own-CF estimates.

(9) The provisions in this Regulation all deal with the nature, severity and duration of an economic downturn that affects two parameters of the IRB approach, namely own-LGD and own-CF estimates. To ensure coherence between those provisions, which should enter into force at the same time, and to facilitate a comprehensive view and compact access to them by persons subject to those obligations, it is desirable to include both of the regulatory technical standards required by Regulation (EU) No 575/2013 in a single Regulation.

(10) Given the interplay with other regulatory products relevant for own-LGD and own-CF estimation that are being developed, the date of application should be delayed until 1 January 2021.

(11) This regulation is based on the draft regulatory technical standards submitted by the European Banking Authority to the Commission.

(12) The European Banking Authority has conducted open public consultations on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits, in accordance with Article 10 of Regulation (EU) No 1093/2010 of the European Parliament and of the Council[5], and requested the opinion of the Banking Stakeholder Group established in accordance with Article 37 of Regulation No 1093/2010,

HAS ADOPTED THIS REGULATION:

[5] Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC (OJ L 331, 15.12.2010, p. 12).

Article 1

General requirements

1. For the purposes of using own-LGD estimates that are appropriate for an economic downturn, in accordance with point (b) of Article 181(1) of Regulation (EU) No 575/2013, and for the purposes of using own-CF estimates that are appropriate for an economic downturn, in accordance with point (b) of Article 182(1) of that Regulation, institutions shall apply each of the following:

   (a) they shall identify the nature of the economic downturn as the set of all relevant economic factors, including both macroeconomic and credit-related factors, in accordance with Article 2;

   (b) they shall identify the severity of the economic downturn by considering the most severe values relating to a 12-months period for each of the relevant economic factors referred to in point (a), in accordance with Article 3;

   (c) they shall identify the duration of the economic downturn as a set of durations, consisting of one duration for each downturn period in accordance with Article 4.

2. For the purpose of paragraph 1, institutions shall identify an economic downturn that comprises one or several distinct downturn periods, taking into account each of the following:

   i. a downturn period shall be the period in which a relevant economic factor, as referred to in point (a) of paragraph 1, reaches its most severe value, as referred to in point (b) of paragraph 1;

   ii. for different economic factors which are significantly correlated so that their peaks or troughs relating to the most severe values identified in accordance with Article 3 are reached simultaneously or shortly after each other, the downturn period relating to these economic factors shall be the period covering these most severe values identified.

3. Institutions shall specify an economic downturn for each type of exposures as referred in point 2 of Article 142(1) of Regulation (EU) No 575/2013.

Article 2

Nature of an economic downturn

1. The following economic factors shall be relevant for the specification of the nature of an economic downturn:

   (a) for all exposures:

   i. gross domestic product (“GDP”);

   ii. unemployment rate;

iii. externally provided aggregate default rates, where available;

iv. externally provided aggregate credit losses, where available;

(b) in addition to the factors referred to in point (a):

i. for exposures to corporates and retail SMEs: sector or industry-specific indices;

ii. for residential real estate exposures to corporates and retail obligors: house prices or house price indices;

iii. for commercial real estate exposures to corporates and SME retail obligors: commercial real estate prices or indices and rental indices;

iv. for retail exposures other than those falling under i., ii. or iii.: total household debt where available and disposable personal income where available;

v. for specialised lending exposures:

- if real estate: real estate prices or indices, rental prices or indices, residential, relevant commercial or industrial indices;

- if project finance: prices of the underlying products supplied;

- if object finance: indices for different collaterals;

- if commodity finance: commodity prices or indices.

vi. for exposures to institutions: financial credit indices.

2. The economic factors referred to in paragraph 1 shall reflect the geographical and, where relevant, the sectorial distribution of the type of exposures under consideration. For this purpose, institutions should ensure that an economic factor is included in the set of factors constituting the nature of an economic downturn once for each jurisdiction, and where relevant once for each sector, which is covered by a material share of the type of exposures under consideration. Where there is strong co-movement of relevant economic factors across different geographical areas or across different sectors, a common economic factor may be considered.

3. In addition to the factors referred to in paragraph 1, institutions shall consider other economic factors as relevant, where these are explanatory variables for, or indicators of, the economic cycle specific to the type of exposures under consideration.

Article 3

Severity of an economic downturn

1. In order to identify the most severe value relating to a 12-months period of an economic factor institutions shall consider the historical values of this economic factor for a minimum period that shall be either of the following:

(a) the preceding twenty years to the point in time at which the institution identifies an economic downturn in accordance with this Regulation;

(b) a period shorter than the one referred to in point (a), where the considered relevant economic factor has changed significantly due to the accession of the concerned country to the European Union; or

(c) a period longer than the one referred to in point (a), where the values observed for a considered economic factor in the minimum period referred to in point (a) are not sufficiently severe.

2. For the purposes of paragraph 1, where the historical data for the considered economic factor is available at a higher frequency than annually, the 12-months period may start at any point in time available within the minimum period defined in paragraph 1.

3. For the purposes of point (c) of paragraph 1, the most severe values of economic factors observed in historical data shall be considered not sufficiently severe where the historical variability of the economic factors over the time period analysed is not representative of the likely range of variability of those factors in the future.

Article 4

Duration of a downturn period

1. Institutions shall apply a 12-month minimum duration for each downturn period specified in accordance with Article 1(2). This 12-month period shall be the period where the most severe values in accordance with Article 3 are observed on the relevant economic factors selected in accordance with Article 2 and associated to the downturn period under consideration.

2. By way of derogation from paragraph 1, institutions shall apply a duration longer than 12-months for the downturn period under consideration in each of the following:

   (a) where the historical data shows that the economic factors associated to the downturn period under consideration do not significantly deviate from their most severe values as specified in Article 3 in a period longer than 12-month;

   (b) where the downturn period under consideration relates to different economic factors in accordance with point (ii) of Article 1 (2), the duration of this downturn period shall be long enough to cover all the peaks and troughs related to the most severe values in accordance with Article 3 of each of the economic factors belonging to the downturn period under consideration;

   (c) the peaks or troughs related to the most severe value specified in accordance with Article 3 of one economic factor shows adjacent peaks or troughs related to the same overall economic condition.

Article 5

Review of the specification of an economic downturn

1. Institutions shall review their specification of an economic downturn at least annually and update it if a new downturn period, as defined in Article 1(2), has been identified.

Article 6

Entry into force

1. This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.
2. This Regulation shall apply from 1 January 2021.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Commission
The President

On behalf of the President

4. Accompanying documents

4.1 Draft cost-benefit analysis/impact assessment

The impact assessment analyses the potential related costs and benefits of the policy provided in the draft RTS. This analysis shall provide the reader with an overview of the findings as regards identifying the problem, the options identified to remove the problem and their potential impacts.

A. Problem identification

The primary problem that the current RTS aim to address is the lack of common institutions and supervisory practices regarding the definition of downturn economic conditions for the purpose of the estimation of downturn LGD and CF. All issues that have been considered while developing these RTS and the GL on LGD downturn estimation refer to the identification and/or limitation of drivers of unjustified RWA variability.

B. Policy objectives

The RTS aim to define common criteria in the major policy fields including:

- general approach to identify economic downturn conditions (Article 1);
- nature of an economic downturn (Article 2);
- severity of an economic downturn (Article 3);
- duration of an economic downturn (Article 4).

C. Baseline scenario

The work on harmonising the estimation of the risk parameters was completed in 2017 through GL[6] that were based on a survey on the main practices of modelling. In this context, the report on the IRB practices[7] published in 2017 also highlights the wide variety of practices in terms of identifying the downturn period.

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

[7] https://www.eba.europa.eu/documents/10180/1720738/EBA+Report+on+IRB+modelling+practices.pdf/0212ecde-426d-4e18-84f8-04b036dcce00

Findings from the IRB survey on the variety of methodologies

Table 57: How is a downturn period defined?

	No	%	% EAD
Based on historical macroeconomic and credit factors	95	47	41
The year(s) with the highest observed realised LGD	34	17	15
The year(s) with the highest observed DR	17	8	12
Based on macroeconomic and credit factors, both historical and forward-looking	16	8	6
Expert judgement	6	3	2
Not applicable (downturn adjustment is not necessary because downturn is already reflected in the data)	6	3	3
Based on supervisory guidance	5	2	4
Based on a correlation analysis between PD and LGD	4	2	1
Not applicable (downturn is not reflected in the estimates)	3	1	1
Other	16	8	15
Total	202	100	100

Table 57 shows how institutions define downturn periods across all LGD models. In 47% of all LGD models, the downturn period is defined on the basis of historical macroeconomic and credit factors, and in an additional 8% of LGD models the downturn is defined based on a combination of historical and forward-looking macroeconomic and credit factors. Several respondents specified which credit factors are used: based on the years/months with the highest litigation rates, based on the years/months with the highest loss rates (some banks mention that they calculate these as the multiplication of observed default rates (DR) and observed LGDs) or based on insolvency rates. Some of the macroeconomic factors are time series of real estate prices, interest rates, GDP and unemployment rates.

In 8.5% of LGD models, the downturn period is defined based on the year(s) with the highest DR. This approach is somewhat similar to that based on macroeconomic and credit factors, where the period is defined based on loss rates.

Several other respondents (16.83%) indicated that the downturn period is defined on the basis of the year(s) with the highest observed realised LGD. A few institutions also mentioned that they then selected defaults to obtain an annual average realised LGD: by vintage of a 3-year window, or in accordance with the complete recovery processes.

In almost 3% of models, the downturn adjustment is reflected based on supervisory guidance given by the Competent Authority (in one case, it was mentioned that a stressed scenario is applied to the loan-to-value risk driver and the discount factor).

The answer 'not applicable (downturn adjustment is not necessary because downturn is already reflected in the data)' was chosen in a few cases, for instance for sovereign exposures, where it was argued that loss data always stem from downturn periods, for municipalities, where it was mentioned that a downturn adjustment is not applicable, and for a shipping portfolio and a portfolio of insurance products, where it was mentioned that this segment has no risk of experiencing a lower recovery rate during downturn periods.

Around 8% of responses could not be grouped in a specific category and are therefore represented in the category 'other'. While not all comments were entirely clear, the following methods were mentioned: selecting the most conservative periods for each model component over time; using the distance from each annual LGD from the long-run average; using the volatility of loss rates over a 7-year period; and selecting the worst month-on-month recoveries observed during the 2009 recession. In several cases, the approach is a combination of several aspects. In one model, for instance, it was mentioned that the downturn period was defined as the period with the maximum LGD selected from a point-in-time LGD with buffer, long-run LGD (default-weighted average across 5 years) and stressed default LGD (highest LGD at time when default peaked, ± 9 months).

In four models, the downturn period is defined based on a correlation analysis between PD and LGD estimates. The principle of downturn is seen as the correlation between PD and LGD, which is lacking in the regulatory formula, as the unexpected aspect is only taken through the PD. Therefore, a stressed LGD was computed based on the correlation notion between PD and LGD (the Tasche approach).

D. Options considered

This section presents the assessment of the technical options considered in the development of the draft RTS. Under each option, the potential advantages and disadvantages of the options, together with the potential costs and benefits, are discussed. Many options were already presented in the previous CP; this section therefore also refers to relevant passages in the CP and focuses on changes in the analysis. Most of the time, these changes are a direct consequence of the better split between the identification of the economic downturn (in the RTS) and the estimation of downturn LGD (in the GL) introduced in the new package.

General approach and nature of an economic downturn (Article 2)

The conclusion of cost-benefit analysis on the general approach presented in the CP[8] remains broadly the same on the need to refer an economic factor: notwithstanding the simplicity and the high level of harmonisation implicit in a direct estimation of downturn LGD and CFs using internal realised credit losses/drawings (option 1), the economic factor approach is deemed necessary under data availability and consistency with CRR considerations.

However, the notion of the relevance of an economic factor has changed, since the proposed definition of the nature of the economic downturn has been adjusted[9]: the list of economic factors

[8] See 'General approach to identify economic downturn conditions' in the CP.

[9] See 'Identification of the nature of an economic downturn (Article 3)' in the CP.

to be considered has been reduced (Article 2), but the possibility of dismissing one factor has been deleted. This change was a direct consequence of the split between the definition of the economic downturn and the estimation of the downturn LGD. Hence, the possibility of adding other relevant economic factors is now connected with the impact on the economic cycle of the type of exposures.

Scope of application of the RTS (Article 2)

The conclusion of the cost-benefit analysis presented in the CP[10] remains valid, and option 2, i.e. the definition of the downturn at the level of the type of exposures, was retained. Indeed, although it can be argued that the impact of a downturn can be computed and accounted for in different manners, it was deemed not possible to have two different downturns for the same type of exposures.

Furthermore, it has to be noted that the level of definition of the downturn (type of exposures) is now different from the level of estimation of the downturn LGD (reference to the estimation of the long-run average). Therefore, the diversification effects are no longer problematic, since this is directly taken into account in the GL on LGD downturn estimation.

Severity of an economic downturn (Article 3)

The cost-benefit analysis presented in the CP[11] remains valid; hence, only technical changes were proposed in this new version of the RTS. In particular, it has to be noted that the severity no longer depends on the duration, since it is defined as the realisation of the economic factor over a fixed 12-month period.

Duration of the economic downturn (Article 4)

The conclusions of the cost-benefit analysis presented in the CP have to be adjusted, as the concept of a downturn period has changed. Indeed, the duration of an economic downturn now refers to the duration of 'downturn scenario' introduced in the previous CP, and does not impact the severity of the economic downturn or the severity on the loss data (both time series are defined using yearly data). Therefore, under the previous option 2, '1 year as a minimum backstop', the dilution effect is no longer problematic, as the severity of the downturn does not depend any more on the duration. However, this option was still not retained because of the non-comparability concerns, which remain valid.

Instead, a new compromise solution builds on the previous option 3, in which the 1-year period as a minimum backstop and additional criteria for having longer duration would be retained, but with additional criteria now referring to an economic analysis based on the realisation of the economic factors rather than on the impact on loss data[12]. This balances the need for harmonisation and the

[10] See 'Scope of application of the RTS (Article 1)' in the CP.

[11] See 'Duration of an economic downturn (Article 4)' in the CP.

[12]

complexity of the approach, which is kept at a reasonable level (compared with the previous option 3) with no reference to the specificities of the LGD of the CF parameters.

E. Cost-benefit analysis

The guidance given in these RTS regarding the identification of economic downturn conditions will affect LGD and CF modelling. Therefore, it is expected that these RTS will prompt additional model steps, involving the identification and inclusion of economic downturn conditions.

However, detailed assessment of the costs to institutions of model changes and their impact on capital requirements is not possible, as the current flexibility of the IRB approach does not allow a definition of a common baseline scenario regarding current modelling choices from an institution's perspective.

Furthermore, it has to be noted that these RTS only refer to the identification of the economic downturn; the costs of this regulatory product, therefore, are mainly operational (training of staff and adaptation of IT systems). It is generally expected that these costs will be reduced with the current methodology compared with the proposed one in the CP, mainly because the economic downturn is defined in an independent manner from the impact on loss data (for instance, these RTS no longer introduce the concept of model components). The analysis is also streamlined thanks to a reduced list of economic factors, and more flexibility is left to the expert judgement when adding new economic factors: it is therefore expected that institutions will be able to build on their current knowledge and analysis performed on their portfolios.

In terms of the regulatory environment, the baseline scenario for downturn LGD estimates is set out by the currently applicable GL on the implementation, validation and assessment of advanced measurement approaches (AMAs) and IRB approaches (GL 10) published by CEBS in April 2006. These previous GL define appropriate downturn conditions as those in which relevant drivers of default rates are consistent with conditions in which credit losses for the supervisory exposure class are expected to be substantially higher than average. This framework puts emphasis on the correlation between default rates and recovery rates. In fact, if no material dependencies between default rates and recovery rates are identified, the LGD downturn estimates may be based on the long-run average LGD.

4.2 Feedback on the public consultation

It should be noted that the feedback table provided below tackles only aspects related to the specification of an economic downturn as laid down in the draft RTS. Issues related to actual downturn LGD estimation will be covered by GL on downturn LGD estimation.
Summary of responses to the consultation and the EBA's analysis

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
General comments			
General support	Overall, the respondents welcomed the revised draft RTS. In particular, they expressed their support for the separation of the specifications of the characteristics of the economic downturn from the methods to be used when estimating the LGD Respondents agreed that the revised concept provides for substantially reduced costs of implementation with respect to the initial consultation paper Lastly, respondents pointed out that the new proposal is more easily understandable		
Implementation	Respondents pointed out that the final Basel III framework will influence the scope of application of these draft RTS as well as of the GL on PD and LGD estimation published in November 2017. Therefore, alignment of the dates of application of these draft RTS as well as of the GL on PD and LGD to the envisaged date of application of the revised Basel III standard was requested	As the final date and requirements of the implementation of the final Basel III standard into the EU Regulation are not known as of today, it is proposed to align the date of application in the draft RTS to the date of application of the GL on PD and LGD. A potential need for a review of the dates of application of the relevant products covered by the EBA review of the IRB approach will be assessed at a later point in time when more information is available regarding the implementation of the Basel III finalisation in the EU	Date of application changed to 1 January 2021

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Review of the identified economic downturn	At least two respondents asked for clarity on how often the identification of a downturn period should be performed	The EBA agreed that more clarity should be provided regarding the review of the identification of an economic downturn. Respondents suggested an annual review, which should only trigger an update of the economic downturn to be considered in LGD and CCF estimation where a new downturn period has been identified	Article 5 has been newly introduced into the draft RTS
General approach	Regarding the general approach of considering historical time series of economic factors for the purpose of specifying an economic downturn as well as basing the estimation on the impact that is observed or that probably would have been observed, one respondent commented that he believes that the estimation of downturn LGD would be better served using a forward-looking approach, in which the severity of the downturn would be calibrated to severity levels used in the EBA's regulatory stress tests, which are currently used to determine capital requirements for banks under the SREP	The EBA considered that the specification of an economic downturn should be consistent with the general philosophy of the IRB approach, which leverages on historical experience. As pointed out in recital (2), an economic downturn should not be considered the equivalent of stress-testing conditions, which may be more severe and potentially use extreme scenarios, which are not necessarily based on historical observations	No change
Short consultation period	Two respondents commented on the short consultation period. It was pointed out that the short consultation period limited the respondent's ability to provide complete and constructive feedback	The EBA acknowledges that the consultation period was rather short. However, this should be seen in the light of the first consultation, which lasted 3 months in 2016 and which conveyed an approach that contained many comparable elements. Moreover, the EBA gave the respondents to the consultation the option to elaborate on their feedback in more detail	

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Responses to questions in Consultation Paper EBA/CP/2018/08 — question 1			
Nature of an economic downturn	Respondents requested the EBA to come up with an example on the interaction between the CRR exposure classes and the type of the exposure in the RTS. The issue relates to the fact that the scope of a rating system may or may not match with a single CRR exposure class or with a single type of exposures as per the RTS	The final draft policy targets an identification of the economic downturn relevant for LGD and CCF estimation at the level of the scope of application of the rating system. Moreover, it is important to understand that the notion of an economic downturn for the purpose of these RTS has a multi-dimensional character, i.e. the economic downturn will cover all economic factors that are relevant for the considered type of exposures. Therefore, in a case in which a rating system covers exposure secured by immovable property as well as unsecured exposure, at least the GDP and unemployment rate, as well as the according price indices for immovable property relevant for the jurisdictions covered, have to be considered. The identified economic downturn may indeed contain economic factors that are relevant for only a sub-portfolio of the type of exposures considered	Changes in background and rationale and in Article 2

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Nature of an economic downturn		Among others things considered below, respondents proposed the deletion of the stock indices as relevant economic factors for equities, which has been taken into account in the final draft RTS. However, it should be noted that stock indices could still be considered under Article 2(4) of the RTS as additional relevant economic factors where these are explanatory variables for the economic cycle specific for the type of exposures considered	
	A majority of respondents pointed out that the list of economic factors is too extensive and has to be either severely reduced or made optional	Moreover, respondents claimed that taking into account external historical time series of aggregate default rates and credit losses is virtually impossible in many cases. This is acknowledged by the policy, as these economic factors are required only where available. Moreover, it is clarified in the background and rationale that the externally provided aggregate default rates and credit losses may refer to a different definition of default from the one specified in Article 178 of the CRR and to a different notion of loss, which is fine as these factors are considered for the purpose of revealing cyclical behaviour and not for the purpose of estimating long-run average loss rates as defined in Article 181 of the CRR. Moreover, it should be emphasised that these economic factors are relevant only where publicly available or where the costs of acquiring such data are not disproportionate with respect to the materiality of the type of exposures under consideration. In particular, aggregate credit losses may not be available for all jurisdictions	Changes in background and rationale and in Article 2

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Nature of an economic downturn	Two responses referred to specific situations in certain jurisdictions where an economic factor may show a peak or trough because of changes in legislation	In these specific situations, institutions should consider whether or not time series corrected for the appropriate issue are available. Even if these are not available, it is not expected that using the time series would distort downturn LGD estimation as the impact assessment anticipated in the GL on PD and LGD will reveal the character of the peak or trough considered.	No change
Nature of an economic downturn	A few respondents asked for more clarity on eligible providers of the economic factors	The EBA considers that there is no need to specify eligible data sources for economic factors in the RTS text. Moreover, the diversity and potential individual character of portfolios would not allow for a complete list of such providers	No change
Nature of an economic downturn	Several respondents asked for clarity regarding the 'customisation of economic factors' to the type of exposures considered (i.e. scope of the rating system) One respondent asked whether or not customisation meant that economic factors should be weighted with the share of exposure covered by a certain instance of an economic factor such that if, for example, a portfolio covers exposures from Germany, the UK and the US then the GDP to be considered should be a 'hypothetical GDP' based on the regional GDP weighted by the share of exposure in each jurisdiction	It was already clarified at the public hearing that the draft RTS did not allow for weighted economic factors. Instead, it is expected that the set of economic factors constituting the nature of an economic downturn should in the case of the example contain three GDPs: 1. GDP customised to Germany: GDP_Germany; 2. GDP customised to the UK: GDP_UK; and 3. GDP customised to the US: GDP_US	Changes in background and rationale as well as in Article 2

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Severity of an economic downturn	Several respondents suggested that — instead of considering the worst realisation of each given economic factor — more flexibility should be allowed (e.g. worst 3-month average GDP growth). They claim that usually the downturn does not start with a given peak/trough, but with realisations of periods of adverse values	The EBA agrees that the notion of an economic downturn brought forward in the draft RTS does not provide for a comprehensive academic definition of economic downturn. However, for the purposes of taking an economic downturn into account in LGD estimation, the specification is deemed sufficient as, for example, the impact assessment anticipated in the GL on PD and LGD requires the consideration of appropriate time lags	No change
Severity of an economic downturn	Virtually all respondents complained about the 20-year period. They propose to make it clear that it is not a rolling time window (e.g. in 2020, from 2000 to 2020; in 2021, from 2001 to 2021) but instead a cumulative period (in 2030, taking into consideration all years from 2000 given the application date of the RTS). The industry fears that, once the 2008 crisis is out of the window, there would be a cliff effect (unless another crisis happened before 2028)	It should be emphasised that Article 3(1)(c) allows Competent Authorities and institutions to go back further than 20 years if any downturn experienced in the last 20 years is not sufficiently severe	No change
Severity of an economic downturn	There were several respondents that questioned whether or not this specification of severity, and in particular the 20-year horizon, would be in line with the CRR, which requires 5 years (for retail) and 7 years (for non-retail) of historical data for quantification of LGD	The RTS do not specify the data to be used in downturn LGD estimation	No change
Duration of a downturn period	The flexible duration concept was welcomed, with one commentator asking for a floor of 2 years. Another respondent asked for clarity on when two downturn periods might be considered a single period	The EBA considers, as it is explained in recital (7), that the duration of a downturn period should reflect the adverse conditions in cyclical behaviours of the economic factors considered and should not be confused with structural changes	No change

Responses to questions in Consultation Paper EBA/CP/2018/08 — question 2

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	Virtually all respondents agreed that the notion of an economic downturn conveyed in these draft RTS is applicable for downturn CCF estimation as well. A majority of those that responded to this question pointed out, however, that the impact (of the same downturn identified in accordance with the RTS) has to be assessed very differently for LGD and CCF downturn estimation	The EBA agrees with the industry's considerations	No change