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June 21, 2018

Mr. Andrea Enria
European Banking Authority
One Canada Square (Floor 46)
Canary Wharf
London E14 5AA
United Kingdom

Re: Second Draft RTS on the specification of the nature, severity and duration of an economic downturn and Guidelines for the estimation of LGD appropriate for an economic downturn ('Downturn LGD estimation')

Dear Mr. Enria:

The Institute of International Finance (IIF) welcomes the opportunity to comment on the European Banking Authority (EBA) *Second Draft RTS on the Specification of the Nature, Severity and Duration of an Economic Downturn*, as well as the *Guidelines for the estimation of LGD appropriate for an economic downturn*.

The IIF continues to support efforts to improve and ensure the credibility of Risk Weighted Assets (RWA) calculations and reduce RWA variance. We share the EBA's view as presented in the Guidelines that "the strength of internal models lies in the ability of institutions to model on institution specific data, which ensures a high degree of risk sensitivity and constitutes an important characteristic of capital requirements to be maintained."

In applying the learning from our research and analysis, we acknowledge that Downturn LGD can be a challenging and contentious topic, with diverse applications, different interpretations of downturn periods, and varying techniques for calculating a downturn add-on, each of which can contribute to RWA variance¹.

The following pages contain our detailed responses to the two questions in the RTS, and each of the 10 questions posed in the Guidelines. We have identified technical items that we feel warrant further consideration. We briefly highlight key themes in the RTS, as follows:

- Firstly, our main concern with the workability and implementation of this RTS is the level of complexity of retrieving all the information of the list of indicators required by Article 2, in addition to the increased operational burden placed on banks.
- Secondly, where several downturn periods identified, it remains difficult to understand the choice of identifying the most severe downturn period given that in presence of more than one downturn period it is a relevant element to calibrate a downturn estimate.
- Thirdly, related to the requirement to look at a time series of 20 years for economic factors, we are concerned that data availability issues could increase the unjustified variability.

¹ Last year, the IRTF surveyed 23 banks on their current practices in regard to their estimation of downturn LGD (DLGD). Based on the findings of this survey, we analyzed several proposals for harmonization, supported with quantitative analysis by Global Credit Data (GCD).

- Lastly, we support the EBA's position of not creating specific guidelines for Downturn CF estimates. It would be helpful for the EBA to explicitly state that the Downturn LGD Guidelines do not apply to Downturn CF estimates in order to ensure a harmonized understanding by supervisors.

Regarding the Guidelines, we identified the key themes, as follows:

- Firstly, the GL does not provide sufficient details on how to recognize the observed impact of downturn while also considering the relevant interactions with other estimation purposes (ELBE, IFRS9, Stress Test) in which economic conditions should be recognized. A reconciliation among the different purposes is relevant.
- Secondly, in both Sections 5 and 6, there is ambiguity in the interaction between downturn, model component, and attribution of the downturn effect at overall LGD level. We deem relevant to disentangle the effect at model component level to focus on those that are more relevant.
- Thirdly, we consider that the total exposure amount or share which is treated with the policy proposed in Section 7 should remain immaterial. We view the 20% add-on as too conservative with a risk to over-estimate LGDs. It would be useful for the EBA to provide further rationale on the choice of the add-on level (20%).
- Fourthly, we propose to replace the 20% add-on with the Reference Value approach, and computed coherently with Sections 5 and 6. As it relies on internal loss data, it is more adequate than an arbitrary forfeit value. The Reference Value approach can then be disregarded as a benchmark option.
- Finally, regarding the Reference Value approach as a benchmark, institutions would have the burden of proof to demonstrate potential misalignments with internally obtained results. We deem this consequence not appropriate, given the new framework proposed by the EBA with the Impact Assessment.

We encourage the EBA to continue liaising with its international regulatory peers, and to escalate this RTS for consideration at Basel fora, in particular given the scope of the Basel III agreement. We note that having differing implementation timelines and overlapping requirements would prove counter-productive for the implementation of changes in internal models. As such, it is paramount in our view to align the EBA timelines, including the ones for the *Guidelines on PD & LGD Estimation and Treatment of Defaulted Assets*, with the implementation deadline of the Basel III final agreement (i.e. 2022 plus transition period).

The IIF hopes that our comments are helpful, and we welcome ongoing dialogue on this important matter. If you have any questions on the issues raised in this letter, require further input, or any necessary expansions or clarifications on our comments, please contact myself or my colleague Natalia Bailey (nbailey@iif.com).

Sincerely,



Responses to the two Questions posed in the Draft RTS on the specification of the nature, severity and duration of an economic downturn

Q1: Do you have any concerns around the workability of the new approach (e.g. data availability issues, burden on the analysis, split between the definition of the economic downturn and its impact on the internal loss data)?

The IIF continues to support harmonizing practices and reducing RWA variance as indicated in our response to the original draft RTS. We welcome the additional guidance for the specification of an economic downturn that is applicable for both LGD and CF estimates, and acknowledge the difficulty on reaching a consensus on this challenging and contentious topic. We agree with the EBA's decision to reduce the list of indicators in order to ease the analysis, however we have concerns with the workability and implementation, as detailed below. Given the mechanistic nature of the proposed structure, we believe there is a risk of not reaching the objective of reducing variability in banks RWAs.

Firstly, our main concern with the workability and implementation of this RTS is the level of complexity of retrieving all the information of the list of indicators required by Article 2, in addition to the increased operational burden placed on banks. As such, it will be very valuable if the EBA could provide sources where this information could be collected, thus allowing banks to adopt the same sources for geographies inside and outside the EU, as well as for the different industries (given that customization and analysis of co-movements are required in Par. 3). Alternatively, the EBA could mandate competent authorities to define appropriate economic factors for jurisdictions to drive consistency.

Another possible solution would be to further reduce the list of indicators or make optional the analysis of the entire list. In our view, this would ensure harmonization and reduce unnecessary differences in these objective measures. In terms of the language used in the RTS, the IIF would welcome clarification that “geography” means country, and not regions within a country to avoid misinterpretations.

Additionally, where there are several downturn periods identified, it remains difficult to understand the choice of identifying the most severe downturn period given that in presence of more than one downturn period it is a relevant element to calibrate a downturn estimate. Our understanding of the CRR requirement of Article 181(3) does not require to be fulfilled using the worst-case scenario, but rather an average of the different scenarios observed in the past.

Secondly, related to Article 3, we appreciate the possibility introduced in the RTS to have a longer than 12-month period of downturn, however we deemed necessary to have further details on Par. 2, as it is unclear if it intended to adopt quarterly data of annual realization of the economic factor or to have a different reference date (e.g. March, June, etc.) with a yearly frequency. This differentiation is relevant for the analysis of adjacent peaks/trough, and the possibility to have a period of downturn longer than 12 months.

Thirdly, regarding the scenario in which peaks/troughs of economic factors are not reached simultaneously but are correlated, the RTS assigns them to the “same downturn period”. This approach has the potential to create a vast range of subjectivity in the interpretation of the results. One proposed solution could be to better clarify in the RTS how to assign the factors to the same downturn cycle, as well as define a cap to the overall duration.

Fourthly, we would welcome more clarity on the graphical examples of the adoption of “absolute value” (level) of the economic factors, considering that these factors are typically integrated with trend components. We consider that its variation, and the need to assess the

significance of the economic downturn with respect to the loss rate is generally more appropriate. Ignoring any offsetting trends will lead to a situation where we create a synthetic downturn period – or downturn period effect – that is not supported by the data and might not be supported by logic. As an example, in the RTS/GLs the retail exposure class is used to illustrate how different economic downturn periods may impact different retail LGD models to a different extent (mortgages, consumer credits and overdrafts) and in this situation the models should use different economic downturn periods to estimate Downturn LGD (1990-1991 and 2008-2010 in the example). However, these periods may be characterised by conflicting macroeconomic conditions, such as high/low interest rates, meaning the LGD impacts couldn't occur at the same time. Therefore, it is important to point that portfolio and diversification effects, as a result of good risk management, are not accounted for and banks could be required to hold capital for unexpected losses that are higher than losses observed in any single previous economic downturn period.

Fifthly, we are also concerned on how banks would correlate the economic factor series with the internal loss data: (i) the internal realized LGD will not be available for 20 years of historical data, and (ii) the link between LGDs and economic factors may not be evidenced using statistical models.

Related to the requirement to look at a time series of 20 years for economic factors, we are concerned that data availability issues could increase the unjustified variability. In reality there are factors such as: reduced data availability for certain assets classes (e.g. commercial real estate asset classes), availability of different time series among jurisdictions, reduced data availability for period predating Basel II modeling, structural changes (technology, product evolution), as well as changes in government macroeconomic policy (interest rate targeting) that need to be considered. Additionally, it is unclear why the RTS refers to earlier periods, such as 1990/1991.

In the case the EBA chooses to retain the 20 years, the economic horizon should be cumulative as valuable information would be lost if a rolling approach is used. For example, the most recent global financial crisis of 2008/2009 would drop out of the assessment after 2028/2029. We would appreciate for the EBA to clarify this in the Guidelines to prevent differing interpretations to be taken by supervisors, which will result in divergences in practices.

Sixthly, the EBA does not advise how regularly institutions are expected to re-apply the RTS after initial adoption. One suggestion is to establish annual updates to identify whether new economic downturn periods have occurred in the last year. This update would apply to the RTS requirement only, and only if a new downturn period is identified should the institution undertake activity to analyze the impact of its LGD estimates.

Seventhly, the CRR does not permit institutions to model LGD or CF for Equities and so the identification of economic downturn periods is not required (RTS Article 2(1)(b)(vii)). We also deem useful for the EBA to explicitly state the Downturn LGD estimates and Guidelines do not apply to Stress Testing.

Finally, we deem important to consider the interconnectedness of regulatory requirements with:

- Determination of ECL using IFRS 9 models and its possible review with a new “downturn” approach.
- The consistent implementation of the IRB Repair Programme with its ambitious timeline and the related supervisory process (2-step approach when applicable, application for model changes, etc.).

- The challenge to keep a consistent framework with the use of internal models, in the context of the finalization of Basel III agreements and especially its European transposition.
- The possible application of prudential backstop in NPL and its indirect impact on ELBE / LGD-in-default.

Q2: Do you see any issues of applicability of this RTS for estimating conversion factors appropriate for an economic downturn identified in accordance with this RTS?

In our view, most of the considerations reported above are valid also for CFs. However, it is important to note that typically for LGD the downturn period starts at the default, and is through the workout process. Whereas for CF estimates typically the period in which the customer might get in trouble is the period prior to the default, because the economic condition worsens. Therefore, the link between CFs and economic factor may be more difficult to evidence using statistical models.

Additionally, no Guidelines are provided for CFs downturn estimation, for instance the EBA Guidelines on PD & LGD Estimation clearly stipulate that they do not apply to CFs. As such, and following this logic, it is our view that the EBA should explicitly state that the Downturn LGD Guidelines do not apply to Downturn CF estimates in order to ensure a harmonized understanding by supervisors. We support the EBA's position of not creating specific guidelines for Downturn CF estimates.

General Discussion on GL for the estimation of LGD appropriate for an economic downturn

In the following pages our detailed answers to the specific questions on the Guidelines are provided, however in this Section we share additional concerns that we wish to raise on the Guidelines outside of the specific questions.

Our overall view of Section 5 is that it does not provide sufficient details on how to recognize the observed impact of downturn while also considering the relevant interactions with other estimation purposes (ELBE, IFRS9, Stress Test) in which economic conditions (although different from historical downturn ones) should be recognized. In our view, a reconciliation among the different purposes is relevant.

We seek clarification on how to reach a conclusion on the effect the economic downturn has on realized LGD where one (or more) of the components assessed (i.e. elevate levels of realized LGDs, etc.) have positive outcomes during the downturn period, and they offset any negative outcomes from one (or more) other components – the net effect being no impact is observed.

The following are some general concerns we share regarding the proposed Guidelines:

Firstly, Section 5, Par. 22 of the GL requests that the realized LGDs should be calculated as averages related to all defaults that happened in a considered year, including the treatment of incomplete recovery processes where relevant and pursuant to Section 6.3.2.3 of the EBA GL on PD & LGD Estimation. We seek clarification if the impact assessment on realized LGDs should be based on all defaults where open cases' recoveries are projected as it is in the estimation framework of the EBA GL on PD & LGD? If this is the case, our view is that the framework should be modified, as it would be determining an estimation based on another estimation with substantial impact on the results.

Secondly, regarding the impact assessment on realized LGD, which we discuss briefly in Question 1 and 10 below (e.g. extraordinary credit sale, the issue about the vintage of default vs. vintage of closed recovery process). One solution would be to use the vintage of default moved ahead with the average time of recovery (year of cash flow) as presented by the IIF at the EBA Workshop in London last August².

In the IIF response to the 2017 Consultation Paper, we sought clarification on detailed criteria for setting the value of a component when a lag between the worst value of an economic factor and the resulting effect of this value in the component could exist. The recent CP recognizes that a lag can occur but no further guidance is given. Our concern is that having invested considerable time to identify and analyze the downturn periods for each model, we effectively then look for periods where losses are high within the vicinity of the downturn which to all intents and purposes makes the work to identify the downturn period redundant. Guidance on a time period for the lag would be useful (i.e. is it appropriate to use a 9-month lag but not 3 years?).

Thirdly, related to the impact assessment on annual recoveries. It would be useful for the EBA to clarify whether this is about total amounts, or ratio over initial exposure of that year / total recovery observed? In the case of total amount: is it an average or a sum? More clarifications are

² The timing component of the cash-flows has been empirically proven by GCD in its 2013 Downturn LGD Study, where LGD is given by the recovery cash flows over the full time to resolution. See Appendix for more details. Please also refer to the IRTF Downturn LGD paper of October 2017.

necessary on this issue to avoid confusions. In our view, a ratio would be more meaningful and the ratio should be expressed over the stock of exposure at the beginning of the year considered.

Fourthly, generally both for Sections 5 and 6, there is ambiguity in the interaction between downturn, model component, and attribution of the downturn effect at overall LGD level (i.e. with the inclusion of all model components). We deem relevant to disentangle the effect at model component level in order to focus on those that are more relevant. Generally, it is agreeable to assess cure rate, and time-in-default, but for realized LGD and annual recoveries it would be more meaningful to consider only the closed cases not cured, since the artificial cash flows flat these ones. In our view, the analysis on both Section 5 and 6 should leave room to consider only the closed cases since the inclusion of open cases with inference would determine an estimation based on another estimation.

Fifthly, we seek clarification on whether based on the observed impact, the institution can justify applying the long run average (LRA) as the downturn LGD. For instance, for LGD models developed according to a model component approach (i.e. normally cured vs not-cured) the GL is unclear on how to deal with a potential overall negligible downturn effect. For example, the RTS criteria identify a downturn period where the not-cured LGD is higher than the long run average but the cure rate is higher than the long run average. Also, there could be some specific type of portfolio for which intrinsically defaults will mostly appear during downturn period, therefore the average LGD which is estimated in the long-run basis already reflect the downturn conditions.

In addition, and this is valid also for the extrapolation approach, the realized LGD at overall level (i.e. cured plus not-cured cases) are characterized by strong bi/multimodality, thus making the adoption of a linear regression questionable in terms of significance of the results. A well-known characteristic of LGD is the bimodal left skewed distribution which generates large variations when calculating average LGD. In this case, one alternative solution could be to concentrate only on not-cured cases for realized LGD, operating only on cure rate for the downturn effect, as this would be a more correct treatment.

Sixthly, in order to ensure the proper downturn effect at overall LGD, i.e. in a comparable basis with the long run average overall LGD, the aggregation of the downturn effects on the single intermediated model components should consider that the downturn period identified by RTS criteria will affect positions in different stages of the NPL life cycle. A credit file in a phase of soft collection can be affected by a period of downturn in terms of reduced possibility to cure, however once migrated to liquidation the downturn might be finished. We are concerned that in meeting Par. 29, there is a risk of doubling the downturn estimate at model component levels in the phase of aggregation. In our view, the estimation of downturn effect at model component level should be a relevant instrument for the calculation of the downturn effect at overall level, when applicable.

Regarding Section 6, where data does exist to model TTC estimates, but insufficient data to model the downturn, further guidance is needed over how to apply Method 2 (haircut / extrapolate). The concern here is that erroneously high losses or spread of losses during the downturn could unjustly influence a downturn calibration.

Seventhly, related to the concept of Margin of Conservatism (MoC) laid down on the GL, i.e. the MoC for downturn LGD estimation should be assessed along the requirements set out in Section 4.4 of the GL on PD & LGD Estimation. It is the IIF view that this requirement would be burdensome for institutions, in particular where the downturn adjustment is estimated through observed internal losses according to Section 5. In this last case, the goal should be to avoid a proliferation of MoC, otherwise it will be very complicated to clearly define them. In general, we think that the MoC, in particular the one referred to Category C of general estimation error,

should be computed only at model level and should encompass all the potential estimation errors coming from the various components (such as the downturn adjustment) – the MoC C should measure the dispersion of the estimated LGD (inclusive of the downturn effect) with respect to the observed values and therefore a unique quantification of all the estimation errors should be sufficient. It shouldn't be a general "add-on". In our view, the MoC should be clearly isolated within final estimated parameter (the LGD grid).

Additionally, with regard to Section 6 we deem not appropriate to quantify the MoC based on the residual of the regression since the extrapolation is performed by means of the estimated coefficient. It would make more sense to consider the standard error of the beta.

Finally, regarding the Cost-Benefit Analysis presented in pages 47-59, we highlight that no guidance is provided for the discount rate (Par. 56) to be used in Downturn LGD. Given the purpose of the IRB Repair Programme of reducing variability and increasing comparability, we seek clarification on how the discount rate will be established across the EU. It is not clear whether competent authorities will set rates (for instance as done by the PRA in the UK), or whether institutions are supposed to provide a rationale for the discount rate that they choose based upon the experience of downturn used in deriving their downturn LGD estimate.

Responses to the 10 Questions posed in the GL for the estimation of LGD appropriate for an economic downturn

Q1: Do you think that additional guidance around the estimation of LGD in-default, which reflect downturn conditions, is needed? If yes, could you provide examples of sound methodologies for transposing downturn LGD estimates from performing to non-performing exposures?

The IIF considers useful to include the additional paragraph which observes that LGD in-default appropriate for an economic downturn could be estimated on the basis of the downturn estimation methodology performed for the LGD estimates of non-defaulted exposures. The only exception can be represented by different samples due to a peculiar exclusion for the defaulted asset model, in such a case the analysis should be performed again but neglect the reference dates (i.e. “vintage”) which could increase the complexity of the downturn quantification.

Q2: Do you share the concern that the proposed policy in paragraph 15 could create an undue burden if applied to every downturn period identified? If yes, in order to better balance the accuracy of the estimations and its operational complexity what evidence should be provided by institutions in order to justify the exemption of identified downturn periods from the proposed policy in paragraph 15?

Yes, we share the concern that the proposed policy in Par. 15 could create undue burden if applied to every downturn period identified. The analysis should be performed coherently with the available historical series for the LGD estimation and take into account potential structural breaks, such as the introduction of the Euro within the Eurozone. These could be documented and approved by the supervisor. An exemption of identification of downturn periods should apply:

- When a major macroeconomic crisis is considered in the observed or estimated impact (and the level of final LGDs is not understated); and
- When the link between LGDs and economic factors may not be evidenced using statistical models, especially where these links are not justified on an economic reasoning or where data is heterogeneous (e.g. the definition of default may not be homogenous during the historical period).

Regarding the rule of the 20 years, it could be adapted according to these intuitive matters in order to avoid an undue burden on institutions, for example by removing very old cases of downturn potentially not representative anymore.

Finally, we think that, if different downturn periods result from the economic factors analysis, the rule should not be “the worst of the worst” but instead an average of the different downturn periods.

Q3: Do you agree with the proposed level of downturn LGD estimation set out in paragraph 14? In particular, do you support the concept that the downturn LGD estimates of different calibration segments could be based on different downturn periods? Is the policy on the level of downturn LGD estimation as well as the relation between the level of downturn LGD estimation and the relevant downturn periods sufficiently clear?

The IIF considers that the proposed level of the downturn LGD estimation and the relationship with the downturn periods (i.e. the economic factors) could be better explained. A critical aspect is the relationship between “type of exposure” introduced in the RTS and referred to the CRR IV and “calibration segment” introduced by the GL for downturn LGD estimation. In our view, the two definitions should be better defined and harmonized and the link should be clearly indicated.

As indicated in Question 1 of our RTS response, there are unintended consequences of using different downturn periods for the same exposure class. An alternative solution would be to allow banks flexibility, keeping the analysis at type of exposure as reported within the Article 2 of RTS on downturn period identification, but allowing banks to consider the downturn at model level where appropriate. There are observed situations where customers rated on a model will be categorized into different exposure classes (by the CRR), for example banks are classified as institutions except when they are incorporated or/and regulated in the European Economic Area when they are classified as corporates.

It would be useful if the EBA provided an example to clarify the case of economic factors related to real estate exposures vs. unsecured exposures within the same regulatory segment (i.e. Corporate class of exposure). Three main questions arise:

- (i) How to consider peaks and troughs deriving from different downturn periods (in the same class of exposure);
- (ii) How to compute the downturn impact; and
- (iii) How to apply the downturn impact to the long run average LGDs estimated by grades / pools where the latter are even more granular than the simple secured vs. unsecured differentiation (due to the other risk drivers).

In this vein, we highlight the issue of granularity. The proposed policy in the GL allows to quantify downturn LGD estimates at a more granular level than long-run average LGD estimates where this provides more appropriate final downturn LGD estimates. How should this aspect be combined with the above issue on type of exposure vs. calibration segment?

Generally, both for Sections 5 and 6, there is ambiguity in the interaction between downturn, model component, and attribution of the downturn effect at overall LGD level (i.e. with the inclusion of all model components). We deem relevant to disentangle the effect at model component level in order to focus on those that are more relevant. Generally, it is agreeable to assess cure rate, and time-in-default, but for realized LGD and annual recoveries it would be more meaningful to consider only the closed cases not cured, since the artificial cash flows flat these ones. In our view, the analysis on both Section 5 and 6 should leave room to consider only the closed cases since the inclusion of open cases with inference would determine an estimation based on another estimation.

This is valid also for the extrapolation approach, the realized LGD at overall level (i.e. cured plus not-cured cases) are characterized by strong bi/multimodality, thus making the adoption of a linear regression questionable in terms of significance of the results. In this case, one alternative solution could be to concentrate only on not-cured cases for realized LGD, operating only on cure rate for the downturn effect, as this would be a more correct treatment.

Finally, in order to ensure the proper downturn effect at overall LGD, i.e. in a comparable basis with the long run average overall LGD, the aggregation of the downturn effects on the single intermediated model components should take into account that the downturn period identified by RTS criteria will affect positions in different stages of the NPL life cycle. A credit file in a phase of soft collection can be affected by a period of downturn in terms of reduced possibility to cure, however once migrated to liquidation the downturn might be finished. We are concerned that in meeting Par. 29, there is a risk of doubling the downturn estimate at model component

levels in the phase of aggregation. In our view, the estimation of downturn effect at model component level should be a relevant instrument for the calculation of the downturn effect at overall level, when applicable, e.g. by worsening only those model components of the overall estimation affected by downturn in a certain period of the NPL cycle, and then looking at the different level of increase of the estimates compared to the long run ones. Below is an illustrative example that explains the mechanics.

Let us assume a long run average overall LGD risk quantification sample where for each defaulted facility “i” within the time series covering from the “Oldest default date” available and the “sample cut-off date” at the moment of Downturn LGD estimation, the overall long run LGD estimates is represented by the combination of the following two model components:

- Cure ratio;
- LGD for Liquidation and Cure Scenarios

$$LGD_{i,overall} = (P_{i,cure} * LGD_{i,cure}) + (P_{i,Liq} * LGD_{i,Liq})$$

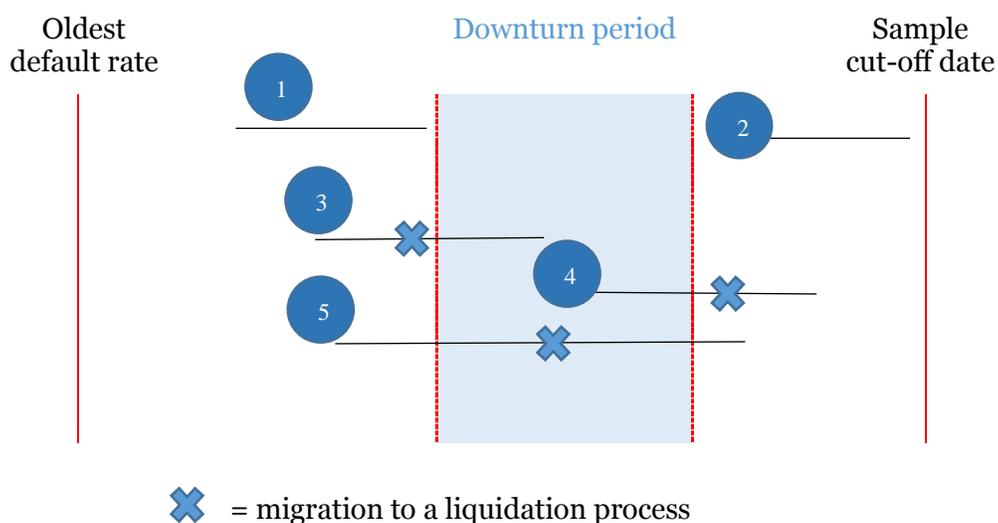
where

- $P_{i,cure}$ is the cure ratio estimate resulting from the LGD model given the risk factors of i-th defaulted facilities;
- $LGD_{i,cure}$ is the LGD estimate for cure scenario resulting from the LGD model given the risk factors of i-th defaulted facilities;
- $LGD_{i,Liq}$ is the LGD estimate for liquidation scenario resulting from the LGD model given the risk factors of i-th defaulted facilities;
- $P_{i,Liq} = 1 - P_{i,cure}$

A downturn impact, following Section 5 or Section 6, is estimated both for the cure ratio and LGD for Liquidation scenario, thus a downturn estimate for both model components is applied ($P_{i,cure_Dwt}$ and LGD_{i,Liq_Dwt} respectively). When it comes to the long run average overall LGD quantification sample the following situations reported in the chart below can occur.

Figure 1

Long Run Average Overall LGD risk quantification sample



We can have observed defaulted facilities whose default windows (i.e. time interval between starting and end date of default, including also probation period and independence period treatment as for Par. 101 of EBA/GL/2017/16) fall completely outside the downturn period (Cases 1 and 2). Whereas we can have cases crossing the downturn period (Cases 3, 4 and 5):

- in case 3 the downturn period affects the defaulted facilities just for their Liquidation phase (i.e. after the red cross);
- in case 4 the downturn period affects the defaulted facilities just for their pre-Liquidation phase;
- in case 5 both phases are impacted.

In this context only for case 5 the Downturn LGD should be equal to:

$$LGD_{i,overall_Dwt} = (P_{i,cure_Dwt} * LGD_{i,cure}) + (P_{i,Liq_Dwt} * LGD_{i,Liq_Dwt})$$

whereas in case 3 and 4 the downturn period should not affect both model components because in the former (the latter) the $P_{i,cure_Dwt}$ (LGD_{i,Liq_Dwt}) should not be impacted thus:

$$LGD_{i,overall_Dwt} = (P_{i,cure} * LGD_{i,cure}) + (P_{i,Liq} * LGD_{i,Liq_Dwt}) \text{ for case 3}$$

$$LGD_{i,overall_Dwt} = (P_{i,cure_Dwt} * LGD_{i,cure}) + (P_{i,Liq_Dwt} * LGD_{i,Liq}) \text{ for case 4}$$

In a context of representative overall LGD quantification sample, required by the Regulation, the overall Downturn LGD estimates can be defined by getting a downturn adjustment based on the ratio between:

$$Dwt_adjustment = \frac{\frac{1}{N} \sum_{i=1}^N LGD_{i,overall_Dwt}}{\frac{1}{N} \sum_{i=1}^N LGD_{i,overall}}$$

considering all the defaulted facilities crossing the downturn period (i.e. all the cases 3, 4 and 5). This approach would consider the NPL cycle phase as well as the multiyear nature of the LGD parameter since cases that are already in a Liquidation phase will be affected only in the effectiveness of its workout process, whereas cases in a pre-Liquidation phase might risk, more likely, to migrate to a Liquidation scenario. Given the composition of cases 3, 4 and 5 in a representative overall LGD quantification sample, the downturn effect of the single model components (based either on observed impact or estimated impact) are reverted at overall level, avoiding biased effects. Furthermore, this will be a relevant element to be considered for the inclusion of the downturn effect on LGD in-default estimation since in this case a different stage of the NPL life cycle is a relevant information of the estimation itself.

Finally, in our view, the analysis on both Section 5 and 6 should leave room to consider only the closed cases since the inclusion of open cases with inference would determine an estimation based on another estimation.

Q4: Do you consider the description of the approaches to be sufficiently clear?

Yes, the IIF view is that the description of the approaches provided for the haircut and extrapolation approaches are sufficiently clear. It would be beneficial for the EBA to provide

practical examples for a clear comprehension. Our understanding is that institutions could have the most fitted methodologies in accordance with their modeling assumptions.

Q5: Do you agree to the limitation of approaches for quantification of downturn LGD estimates? If not, which other approaches should be considered? Would you prefer the alternative policy considered – if yes how should a minimum MoC be established in this case?

The IIF is supportive to harmonizing practices, therefore limiting the approaches for quantification of downturn LGD estimates. We do not have specific opinions on further alternative policies.

Regarding Section 6 we deem not appropriate to quantify the MoC based on the residual of the regression since the extrapolation is performed by means of the estimated coefficient. It would make more sense to consider the standard error of the beta.

More detail however is needed on the alternative approaches provided in Section 6.

Q6: Do you expect that the total exposure amount or share which is treated with the policy proposed in Section 7 is material?

The IIF considers that the total exposure amount or share which is treated with the policy proposed in Section 7 should remain immaterial. This would prevent misinterpretations by competent authorities which may consider it as a “case-by-default” and apply Section 7 more systematically.

Generally, we view the 20% add-on as too conservative with a risk to over-estimate LGDs, and not justified. Although we understand the intention is to provide a strong incentive for an internal estimation of the downturn adjustment, we think that in cases such as low default portfolios (LDPs) the lack of data availability is a crucial issue. It would be useful for the EBA to provide further rationale on the choice of the add-on level (20%).

As presented in Global Credit Data (GCD)’s recent study on LGD Large Corporates³, Figure 2 shows the variance over time by plotting LGDs by year of default, with the numbers displayed in Table 1. These results show the long run average to be 25/24%, the shape of the curve shows variance over time with higher LGDs in the early 2000s (e.g. one-year high of 35%), as well as 2007/2008 (e.g. 2008 is 32/31%). Over the last 15 years LGDs were never higher than 10% add-on on the long-run average, this includes part of variation over time which is not downturn related, but should be reflected in MoC. Therefore, special consideration needs to be taken on the manner the add-on is calculated, as it can lead to very high LGDs.

³ For more details see complete Global Credit Data: LGD Report 2018 Large Corporate Borrowers, April 2018. The report can be downloaded at: https://www.globalcreditdata.org/system/files/documents/gcd_lgd_report_large_corporates_2018.pdf

Figure 2

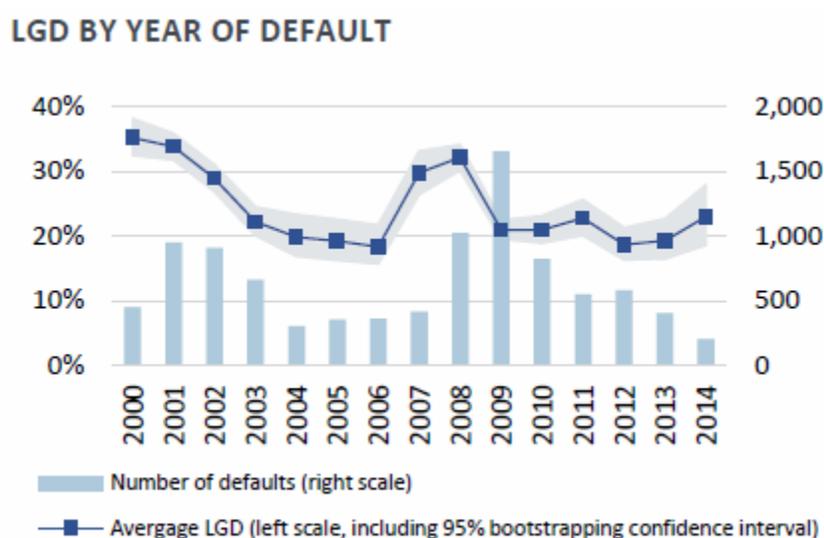


Table 1

LGD BY YEAR OF DEFAULT

Year of Default	Obligor level		Obligation level	
	Number of defaults	LGD	Number of facilities	LGD
2000	449	35%	749	35%
2001	949	34%	1,638	32%
2002	908	29%	1,477	27%
2003	660	22%	1,099	21%
2004	301	20%	517	18%
2005	353	19%	580	19%
2006	361	18%	556	19%
2007	414	30%	736	31%
2008	1,024	32%	1,768	31%
2009	1,653	21%	2,992	20%
2010	822	21%	1,446	20%
2011	549	23%	1,021	22%
2012	583	19%	1,075	21%
2013	403	19%	662	20%
2014	202	23%	349	25%
Total	9,631	25%	16,665	24%

Furthermore, as indicated in GCD’s recent study on LGD Large Corporates⁴ the calculated average LGD value typically “falls into an LGD bucket which exhibits a lower frequency of loans such as: 20% to 30% or 30% to 40%.”

⁴ For more details see complete Global Credit Data: LGD Report 2018 Large Corporate Borrowers, April 2018.

Table 2: Reference: GCD LGD Large Corporates Study

TABLE 2
SENIORITY AND COLLATERAL

	Number of defaults	Obligor level			Obligation level			
		LGD	Time to Resolution [years]	Time to Recovery [years]	Number of facilities	LGD	Time to Resolution [years]	Time to Recovery [years]
Total Secured	5,621	23%	1.9	1.3	8,907	23%	2.0	1.2
Total Unsecured	4,010	28%	2.1	1.3	7,758	26%	2.2	1.2
thereof Senior	3,641	27%	2.1	1.3	7,247	26%	2.2	1.2
thereof Subordinated	112	40%	2.3	1.4	223	37%	2.5	1.3
thereof Other/Unknown*	257	34%	2.2	1.5	288	34%	2.2	1.5
Total	9,631	25%	2.0	1.3	16,665	24%	2.1	1.2

* Borrowers are not always borrowing uniquely senior or subordinated. Occasionally a bank will provide facilities of differing seniority to the same borrower. We also include the small number of bond and equity defaults as well as unknowns here.

Our proposal is to replace the 20% add-on with the Reference Value approach, and computed coherently with Sections 5 and 6. As it relies on internal loss data, the reference value is more adequate than an arbitrary forfeit value. The Reference Value approach can then be disregarded as a benchmark option.

Q7: Do you have specific examples of types of exposures which will fall under the policy proposed in Section 7?

The IIF considers that LDPs are an example of types of exposures which will fall under the policy proposed in Section 7.

Additionally, related to the interaction of LDPs approaches for LGD estimation, we seek further guidance that an additional downturn adjustment is not required where FIRB LGDs are used due to the paucity of data to model LGD. For example, where the PRA SS11/13 requirements apply to floor LGDs for LDPs where <20 observations are available.

Q8: Do you agree to require a minimum MoC quantified via a fixed add-on to the long-run average LGD? If not, which of the alternatives should be considered? Do you see reasons for differentiating the fixed add-on according to exposure classes?

Although we understand that the idea is to provide a strong incentive to institutions for an internal estimation of the downturn adjustment, we believe that in some cases such as LDPs, the lack of data availability is a crucial aspect. As indicated in Question 6, we believe that the fixed 20% add-on is too penalizing and not justified.

An alternative proposal would be replacing this 20% add-on with the Reference Value approach. The Reference Value approach would be then disregarded as a benchmark option, and computed coherently with Sections 5 and 6. Utilizing the Reference Value approach in this manner, would allow to differentiate the floor among exposure classes.

Q9: Do you agree to the minimum MoC as the $\max(0, \min(20\%, 105\% - \text{LRAVLGD}))$?

We do not agree with the minimum MoC as the $\max(0, \min(20\%, 105\% - \text{LRAVLGD}))$ as indicated in Questions 6 and 8.

Q10: Is the policy regarding the reference value sufficiently clear? Alongside with the potentially limited applicability of the reference value to the downturn LGD estimation according to paragraphs 18-19, for what reasons could the reference value feasibly be omitted? Do you agree to the proposed clarification of the role of the reference value?

The IIF considers that the Reference Value approach is sufficiently clear in explaining the concepts, however we have many issues in need for clarification in the text that may lead to some confusion. In the IRTF Downturn LGD Study of 2017, we found our analysis shows that this method measures volatility over time rather than macroeconomic dependency of LGD.

Firstly, the layer of computation of the reference value should be reconsidered to adequately consider the scenario in which the average LGD from the two worst years by facility grade/pool can be subject to the low number of facilities. This scenario is particularly critical for certain segments, and the results can be more determined by the low number of facilities rather than by the effective peaks for loss rates.

Secondly, it is unclear how to deal with correlation structure among the intermediate parameters.

Thirdly, in case of model component, should the two worst years over 20 years be computed according to each axe of analysis (i.e. cured losses, not-cured losses, probability of cure), or should it be one for all determined by the analysis of not-cured losses? Furthermore, in this case how should the different components be considered altogether taking into account the correlation structure introduced above?

Fourthly, how should extraordinary events, such as a massive credit disposal incentivized by microprudential and macroprudential actions related to NPLs, which can strongly influence the reference value but are not a result of a downturn, and are potentially mitigated within the LGD calibration be dealt with?

Finally, the IIF agrees with the EBA that the reference value should be considered as a “soft floor”. We are however concerned that institutions have the burden of proof to demonstrate potential misalignments with internally obtained results. We deem this consequence not appropriate, given the new framework proposed by the EBA with the Impact Assessment. Combining both analyses is too burdensome and repetitive, in particular for downturn estimation based on observed losses (Section 5 of the GL).

In our view, the Impact Assessment has a clear independent framework strictly related to the definition of the economic factors. This same framework does not hold for the reference value, which are referred as peaks of the losses and represent a floor difficult to compare with the model results given that the peak of the losses cannot be linked to the macroeconomic distress (downturn). For example, the peak of the losses can be determined by an extraordinary event such as a massive credit sale which is the results of a managerial policy to reduce NPL unlikely to have been performed in a downturn situation, and more likely a result of previous downturn situations or regulatory constraints (e.g. reduction of NPL ration).

Reference values approach could be disregarded with the new framework based on the impact assessment since it not necessary to have two backtesting of the internal downturn model. As introduced in answers to Questions 6 and 8, the Reference Value approach can instead substitute the approach proposed in Section 7 of the fixed add-on for the cases with no internal data for downturn adjustment estimation.

Appendix

The data analytics referenced in this paper were provided by Global Credit Data (GCD) at the IIF request, these were presented previously by the EBA in our original Consultation Response as well as our IRTF Downturn LGD study of October 2017.

We also wish to refer the EBA to the updated study Downturn Study produced by GCD in 2017. This study is published on the GCD Website.

Additionally, in 2018, GCD produced a LGD report Large Corporates⁵. This report is the first time GCD publishes such extensive analytics on its broad data set. Their aim was to present the numerical evidence of recoveries and losses experienced by banks when providing credit facilities to large corporate counterparties. The data set in the report covers Large Corporate (>€50m turnover) borrowers who are recorded as defaulted in bank loan books, using the Basel default definition. Some of their data points were used in our response.

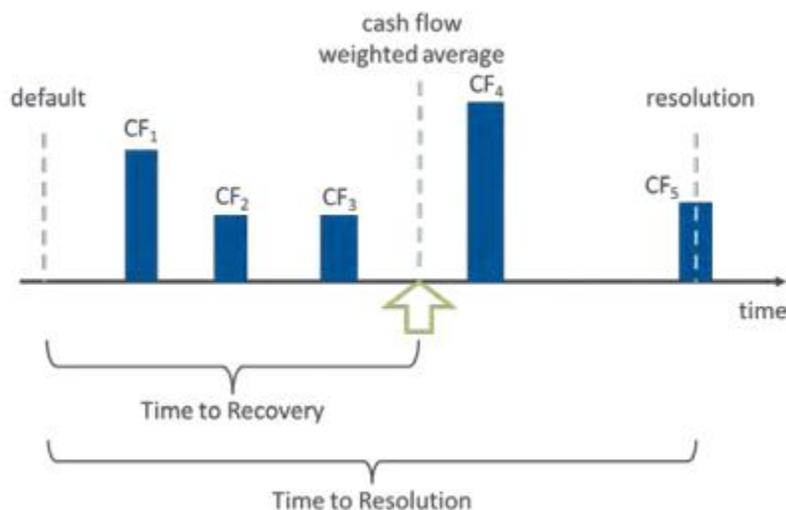
Conditional LGD (CF weighted method)

The average year of cash flow refers to a concept similar to the Macaulay duration of bonds.

The cash flow weighted time or average year of cash flow represents the weighted average of all relevant points in time between default and resolution where cash flows took place. See Figure 3 below.

Figure 3

CONCEPT OF TIME TO RECOVERY AND TIME TO RESOLUTION



⁵ For more details see complete Global Credit Data: LGD Report 2018 Large Corporate Borrowers, April 2018. The report can be downloaded at:

https://www.globalcreditdata.org/system/files/documents/gcd_lgd_report_large_corporates_2018.pdf