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May 26, 2017

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

Re: Consultation Paper on Draft RTS on the Specification of the Nature, Severity and Duration of an Economic Downturn

Dear Mr. Enria:

The Institute of International Finance (IIF) welcomes the opportunity to comment on the European Banking Authority (EBA) Consultation Paper *on Draft RTS on the Specification of the Nature, Severity and Duration of an Economic Downturn*.

As previously affirmed, the IIF strongly supports efforts to improve and ensure the credibility of Risk Weighted Assets (RWA) calculations and reduce RWA variance. We greatly commend the EBA's leadership in championing the process of harmonization, and ultimately in improving modeling capabilities and outcomes. This is critical to preserving risk-sensitivity at the center of the capital framework.

In the November 2014 IIF RWA Task Force (IRTF)'s Final Report, 28 of our 78 recommendations for harmonizing modeling practices related to Loss Given Default (LGD). In applying the learning from our research and analysis inherent in that report, we fully agree with the EBA's mandate, but we have identified some specific technical items that we feel warrant some further consideration.

In welcoming this opportunity to provide some alternative proposals, we stress that our comments in this letter are of an interim nature, and will be enriched and expanded after the submission date. The IRTF has embarked on a study of banks' current practices in relation to downturn LGD, as well as working with Global Credit Data (GCD)¹ to run alternative measures. The findings of this questionnaire as well as the results from our own alternative measures will be shared with the EBA at the end of June.

Our detailed responses to each of the 16 questions posed in the Consultation Paper are set out in the following pages, but we briefly highlight 5 themes, as follows:

- Firstly, the model component approach has the potential to create a substantial range of subjectivity around it. Depending on which macroeconomic factors are used, banks will arrive at vastly different outcomes, potentially increasing RWA variance.

¹ More detail about our collaboration with Global Credit Data can be found on Appendix A.

IIF Response to EBA CP Draft RTS on Economic Downturn

- Secondly, the suggested approach is unclear on how it will apply to CFs. A list of possible model components for CFs is welcomed.
- Thirdly, the data requirements for banks are very high in the suggested approach; this poses operational issues as banks are likely to have a shorter default data period.
- Fourthly, in its current draft form it is unclear what the 'panel of experts' role entails, and examples on how it will work in practice will prove most helpful.
- Lastly, our initial view is that it will be more appropriate to calculate the downturn add-on on overall LGD level.

As indicated in our previous consultation responses, we encourage greater alignment of prudential and accounting standards, or at least acknowledgement of the specific items where there are such differences.

Finally, we note that the current debate at the Basel Committee on Banking Supervision (BCBS) may have implication on this RTS. As such, we encourage the EBA to continue liaising with its international regulatory peers, and to escalate this RTS for consideration at Basel fora.

The IIF hopes that our comments are helpful as the EBA finalizes this RTS, 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 colleagues Brad Carr (bcarr@iif.com) and Natalia Bailey (nbailey@iif.com).

Sincerely,

A handwritten signature in black ink, appearing to read "A. Carr". The signature is written in a cursive style with a large initial "A" and "C".

Responses to the 16 Questions posed in the Consultation Paper

Q1: Do you have any concerns around the workability of the suggested approach (e.g. data availability issues)?

The IIF is supportive of harmonizing practices and reducing RWA variance, as such we agree with the EBA on the need to develop additional guidance for the specification of an economic downturn that is applicable for both LGD and CF estimates. In principle, the IIF agrees with the requirements of Article 1, but have concerns with the workability of the suggested approach as detailed below.

Our main concern is in its potential to increase RWA variance, although we also note that the current proposal is also extremely resource intensive both for supervisors and for banks.

Firstly, the suggested approach has the potential to create a huge range of subjectivity around it. Depending on which macroeconomic factors are used, banks will arrive at vastly different outcomes. We are concerned that having such a comparatively complex approach will not be able to reduce RWA variance, but potentially increase it. The proposal relies heavily on expert based choices (e.g. identification of economic factors and economic scenarios, addressing of margin of conservatism, etc.).

Secondly, the model component definition is not clear. The current approach assumes that certain model components drive bi-(multi-)modal distributions, however it is unclear how the add-on should be defined if the model component is not in the model as a risk driver (e.g. cure rate). In practice, this could effectively mean that estimation of downturn can require the same efforts as development of an alternative LGD model (e.g. where cure rate is explicitly present).

Thirdly, there are certain types of exposures where historical data could not be available in the systems in order to estimate some of the model components. Downturn quantification would be more subjective in the case of low default portfolios or whenever historical data is not available (and consequently model components have to be estimated). Most importantly, 20 years of data history for all model components is overly complex leading to data availability issues. For example, liquidation of collateral is very rare. Furthermore, to achieve a meaningful connection with macroeconomic factors might be challenging.

Fourthly, the suggested approach is unclear on how it will apply to CFs. It will be helpful if the EBA could provide a list of possible model components for CFs.

Fifthly, it is possible to have different models for e.g. household, corporate segments, and for niche segments (i.e. shipping etc.). It may be the case that there are different downturns for different segments, in which case estimation of economic downturn separately for exposures in different jurisdictions but treated under the same model might be hampered due to limited number of observations per each jurisdiction. Therefore, we propose for Article 1 (2) b to allow considering exposures in different jurisdictions jointly or under simplified approaches even if it cannot be proven empirically that economic factors are characterized by strong co-movements.

Finally, we seek clarification on how the proposed approach will apply on simulation based models. Methodology described seems to apply more for statistical models on LGD/CCF.

Q2: Do you see any significant differences between LGD and CF estimates which should be reflected in the approach used for the economic downturn identification?

Yes, 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.

As such, if the model component approach is chosen, implementation details should be included in the final guidelines separately for LGD than for CF estimates. It is currently unclear what the model components should be that “drive the multi-modal shape” for CFs.

Q3: Is the concept of model components sufficiently clear from the RTS? Do you have operational concerns around the proposed model components approach?

The IIF considers that the explanatory box under Article 2 of the CP is sufficiently clear in explaining the concepts, however the text in Article 2 of the RTS does not provide sufficient explanation on the terminology (see Question 1 for more examples) and may lead to confusion.

Having too many model components defined involves high implementation and maintenance costs because economic downturn has to be defined for each model component. In this context, we seek further clarification to the requirements of Article 2 (2) (b). We propose for Article 2 (2) (b) to be rephrased with a focus that only components as major drivers of loss distribution shape have to be considered to avoid misinterpretation by banks and Regulators.

Furthermore, in some cases the difference between risk factors and model components (e.g. restructuring) is unclear. Additional guidance on how to combine some of the proposed model component with the other components (e.g. how to combine time in default with final scenarios considering both as a component) is needed.

In the case of CF estimates, it will be beneficial for a minimum list of model components to be specified.

Q4: Do you have any concerns about the complexity around the dependency approach proposed for the identification of the nature of an economic downturn? Is it sufficiently operational?

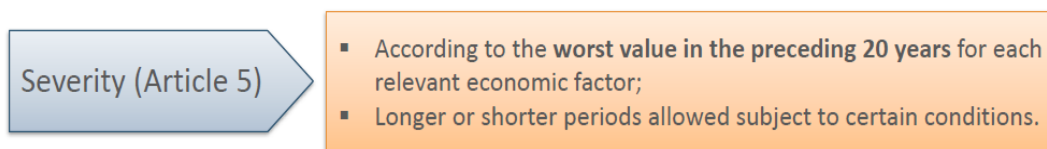
The IIF’s view is that the suggested approach as currently written in the CP is unclear, and the range of interpretations may lead to an increase in RWA variance. Our main concern is that the current complexity of the suggested approach may not be justifiable in terms of the lack of comparability it could potentially create.

Downturn LGD is a contentious topic, and many experts believe that it is impossible to model robustly. With the proposed approach, banks are given the task of proving that there is a downturn, concurrently with supervisors requiring that there is an add-on even in cases where LGDs are lower.

Firstly, as indicated in our response to Question 1, the definition of the model component is unclear. For instance, there is no guidance on how the add-on should be defined if the model component is not in the model as a risk driver (e.g. cure rate).

Secondly, as a matter of interpretation, the IIF seeks confirmation that firstly if a bank shows that there is no statistical impact (i.e. none of the proposed macro factors correlate to the identified components), the bank must ask the panel of experts. Then, if the panel of experts agrees that there is no impact, a 0 add-on would be allowed. On the basis that this is in fact the escalation process, we suggest providing more clarity on the role of the expert panel in assessing the link between economic factors and input variables. In its current draft form, the Guidelines are unclear on what the 'panel of experts' role entails, and examples on how it will work in practice will prove most helpful.

Thirdly, as the data requirements for banks are very high in the suggested approach, this poses operational issues as banks are likely to have a shorter default data period. It is our understanding that Article 5 (Severity) requires banks to have history for all the defaults on all the model components for 20 years.

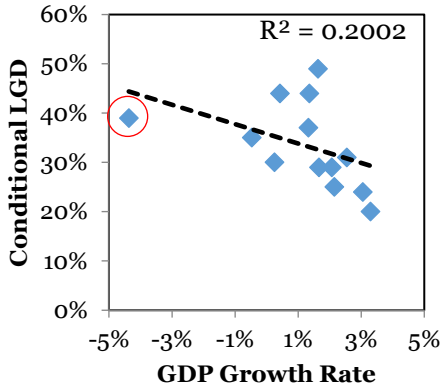


At the EBA public hearing on April 4, 2017 the EBA suggested that banks could extrapolate in case they have a shorter default data period. We appreciate that this will avoid punishing banks for having a longer time period of default data history available. But we see complexities with extrapolating, as extrapolating² assumes a linear (or more complex) type of relationship. As seen in Figure 1 below, the analytics results depend very much on the 2009 value. Excluding 2009 (graph on the right) leads to overestimation of LGD (at 55%) based on the extrapolation result (versus roughly 40% as seen on the left graph).

² Brumma, Nina and Urlichs, Konrad and Schmidt, Wolfgang M., Modeling Downturn LGD in a Basel Framework (January 10, 2014). Available at SSRN: <https://ssrn.com/abstract=2393351> or <http://dx.doi.org/10.2139/ssrn.2393351>.

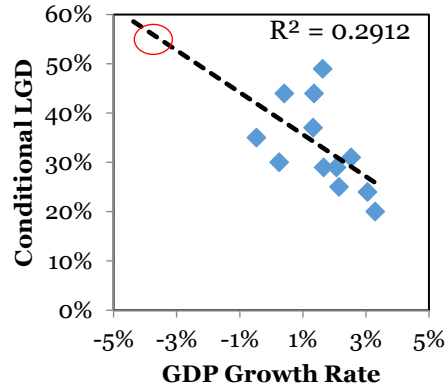
Figure 1

Variation of Conditional LGD with GDP Growth Rate



Asset Class: Large Corporate unsecured, Europe

Variation of Conditional LGD with GDP Growth Rate excluding 2009



Asset Class: Large Corporate unsecured, Europe

Finally, we seek 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.

Q5: Do you agree with the proposed approach for computing the time series of the realised model component referring to the realisation of the model component rather than to the year of default?

The IIF is broadly supportive of the proposed approach for computing the time series of the realized model component. 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. Figure 2 below shows that LGD is highest for year 2007 indicating that the analysis by year of default does not show a correlation with the macro-factor GCD growth rate. However, if the timing of recovery cash flows is considered, then a co-movement of conditional LGD and GDP growth rate is observed.

Figure 2

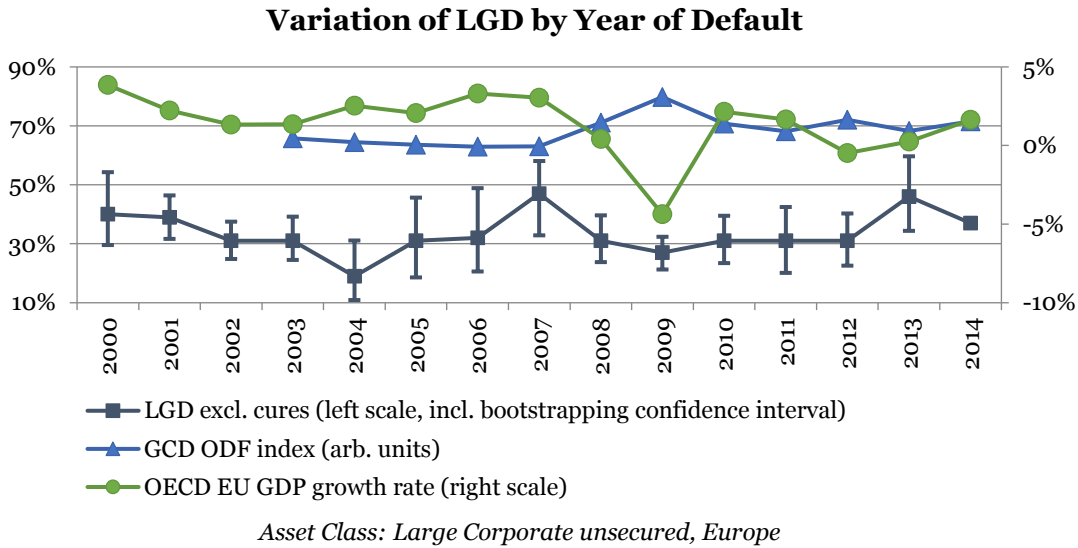


Figure 3 and 4 illustrate this effect of economic downturn on LGD when the timing of recovery cash flows is taken into account. The heatmap on Figure 3 provides a graphical overview of the distribution of cash flows after default and severity of losses. As seen, the recovery cash flows are dispersed over significant periods of time during which economic conditions are likely to change. Additionally, workout processes may last several years while recovery cash flows are collected, e.g. by selling off the assets of a defaulted company. The time of the average cash flow shown here also provides an indication about the variation in time to resolution which seems to be dependent on the economic cycle. It shows that defaults occurred during crisis years tend to have longer workout periods. Longer recovery periods are observed for the years 2001 to 2003 and 2008 to 2010 with high realized losses in 2012/2013.

Figure 3

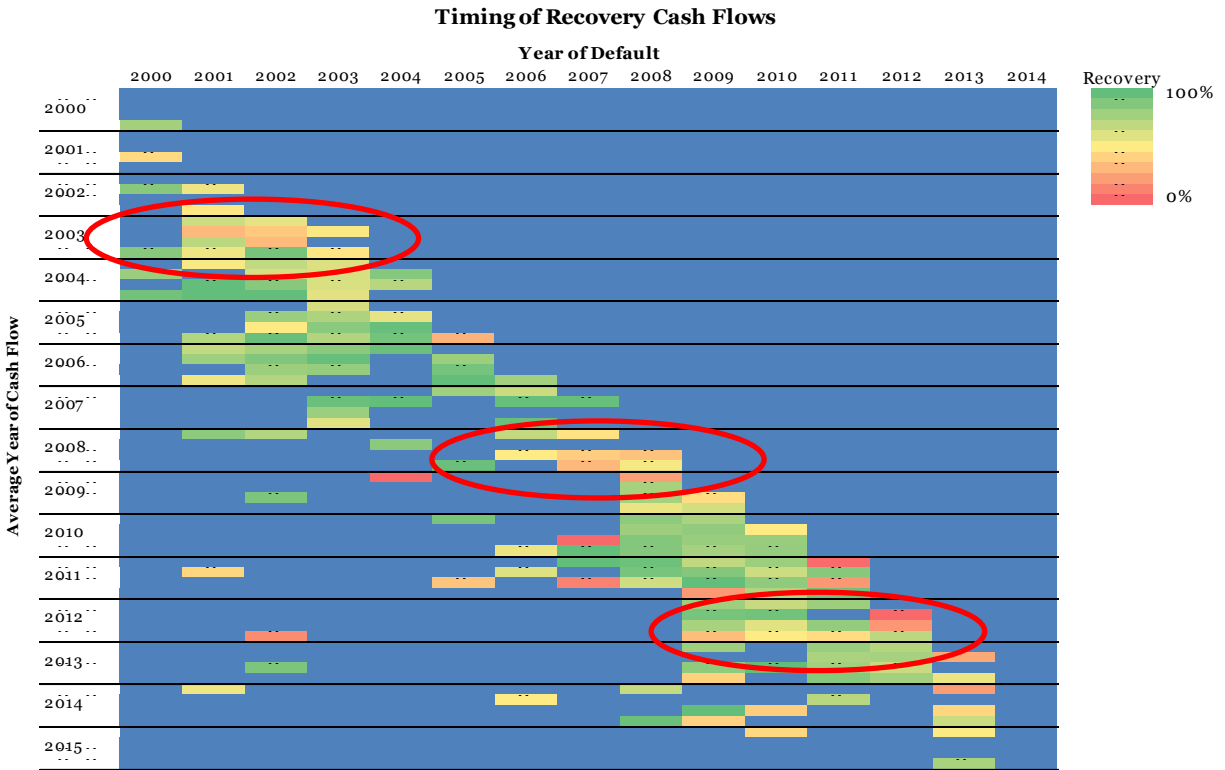
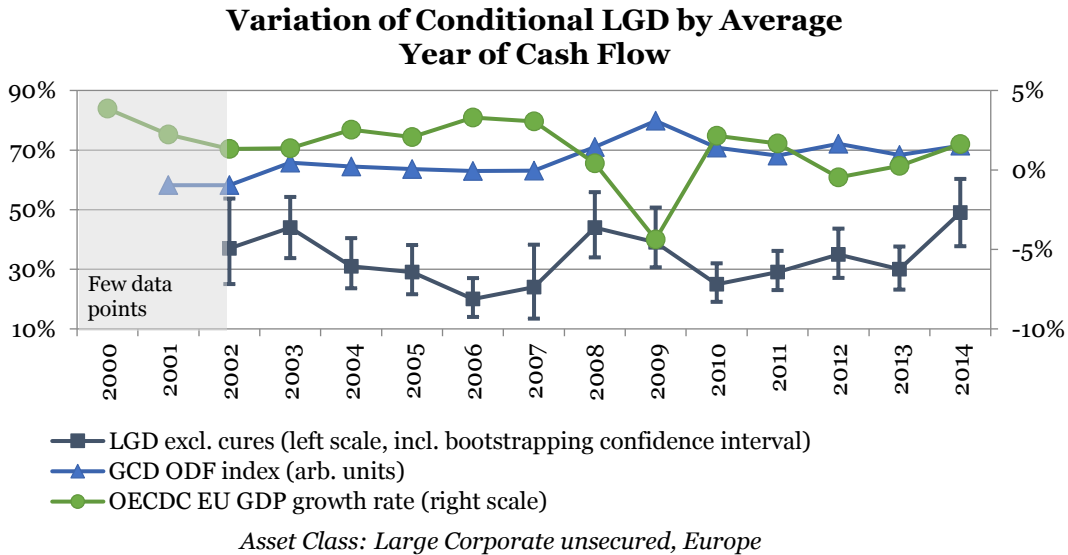


Figure 4 below measures any correlation with year of default, thus combining the time and severity effect. Each conditional LGD value is assigned to that point in time at which the average of the cash flow took place.³ An analysis of downturn LGD for banks is provided in Appendix A, which follows the same argument we presented for large corporates.

³ For more detail on the Conditional LGD (CF weighted method) see Appendix A.

Figure 4



We note however that the level of operational burden and complexity of this proposal is linked with how banks organize their internal data (i.e. banks will have to collect the data on cash-flow level). Generally, we expect relevant points in time should be available in data, but many cases due to the way databases are organized, it may not be recorded.

Also, for some components constructing the time series using the year of default would be easier than considering the year of realized losses. In some cases, using the year of realized losses would mix defaults from different years potentially confusing the results - for example, if you analyze the realization of the model components, such as loss. If you analyze the loss by year or model of realization, then you introduce idiosyncratic factors which are not related to the economic cycle. A year may be representative of your LGD but not of the economic cycle.

Q6: Do you envisage any situation where a one year duration is not suitable of capturing the economic downturn at the economic factor level?

The IIF is supportive of the notion of having a fixed horizon for one year for the purpose of dependency analysis (described in Article 3). However, we disagree with the proposal of a one year duration of economic downturn.

Firstly, an economic crisis typically doesn't last only one year. Secondly, given that there are mitigating effects because LGD is realized over time, a longer period than one year influences it. Our view is that a downturn period of 1 year is very restrictive, and may not be appropriate. Therefore, we propose to set a one year duration as a minimum backstop.

Q7: Do you have any concerns about the approach proposed for the identification of the severity of an economic downturn? Is it sufficiently operational?

The answers to this question should be read together with our answers to Question 4, where we previously raised our concerns regarding extrapolation.

The IIF considers that the data requirements for banks are very high in the suggested approach, posing an operational issue as banks are likely to have a shorter default data period. As a matter of interpretation, we understand the CP requires banks to have history for all the defaults on all the model components for 20 years. On that basis, the IIF would welcome clarification on what should be done in cases of shorter default data periods. We note that most banks participating in our questionnaire do not have a complete twenty years' history of realized model components.

In this vein, we note potential issues arising from extrapolating, given that extrapolating assumes a linear (or more complex) type of relationship. This can be operationally burdensome if you have 10 data points (for 10 years of default data history), and one clear outlier for downturn (e.g. GDP growth in 2009). See Figure 1 in Question 4.

Lastly, we seek clarification on how this approach will work in the context of the Pillar 2 framework, in terms of supervisory expectations. We raise this concern given the potential for further divergences in terms of implementations in different jurisdictions (i.e. with differing downturn periods). The overall estimates will likely be dragged down given that the approach proposed is assessing the worst point in each parameter.

Q8: Do you think that more details should be included in Article 2(3) for the purposes of the evaluating whether sufficiently severe conditions are observed in the past?

We would welcome a definition of “sufficiently severe economic conditions” in this context to avoid subjectivity. It would be especially useful if the EBA were to give guidance on how banks and supervisors are expected to deal with the question of whether the severity and duration of a downturn is a function of exogenous shocks or has been amplified by endogenous financial and economic imbalances. In practice, banks may not have a recurring cycle that always looks the same, in reality each downturn will not always look the same, as each crisis looks different. The more severe downturns and or financial crises tend to be episodes in which endogenous factors have made the financial system more fragile or prone to correction. The results of this potential bias would be better controlled by supervisory guidance on the issues noted above.

Additional guidance is needed on whether the analysis should be performed on the low level of country, industry, etc. Our concern is that data might not be sufficient, and propose for a more global approach if data is not available. It may yield more meaningful results to aggregate data than to ignore it and have expert opinions.

Q9: Do you think Article 6 should pin down the steps for the joint impact analysis described in this text box?

The IIF welcomes further details on Article 6, and suggests for examples to be included for LGD and for CFs.

We note that LGD is not automatic, as there are idiosyncratic factors involved, as such it would be useful to have a theoretical example. Additionally, it is unclear the rationale for why the highest LGD should be specific to product and segment. An alternative may be to base it on economic analysis behind the product or type of country or sector. There are cases where highest LGD may be due to non-macroeconomic reasons, such as fraud, senior vs. subordinated, letter of credit, etc.

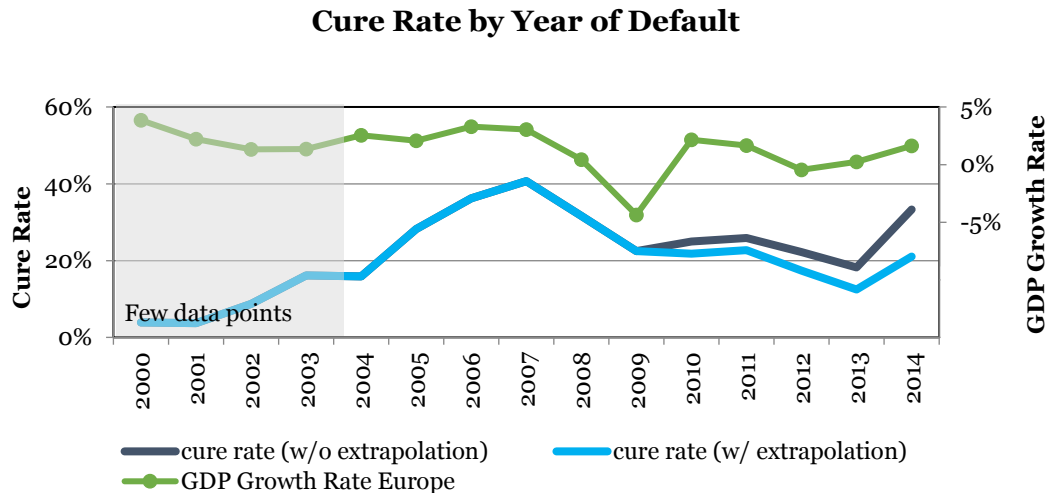
Q10: Do you have any concern around the proposed approach about the identification of the final downturn scenario?

The IIF’s initial view is that it will be more appropriate to calculate the downturn add-on on overall LGD level. It is unclear the rationale behind combining worst case events that occurred at different moments in time in the past into one worst-worst case scenario in the future.

For example, cure rates were very high in the beginning of the shipping crisis because of the restructuring efforts by the banks willing to accept later repayments rather than trying to sell a vessel in a completely oversaturated market. What this example illustrates is that it is possible that for a certain year that is identified as the worst economic year the model component is not the worst.

Figure 5 below shows cure rates by year of default, showing higher cure rates for years 2006 and 2007, going down in 2008 and 2009.

Figure 5



Asset Class: Large Corporate unsecured, Europe

Additionally, we seek clarification on the following two items:

- What is the criteria to group different downturn periods in downturn scenarios?
- Would it be possible to have in the same portfolio different downturn scenarios for each segment?

Q11: Do you see any issue with the estimation of the model components for downturn periods which are not in the data base of the institution (e.g. in step 3 the case where the estimation of cure rate for 2001 is performed on the basis of the dependency assessment described in Article 3(2)(e) and (f))?

The answers to this question should be read together with our answers to Question 4 and 7, where we previously raised our concerns regarding extrapolation.

Firstly, the issues related to extrapolation of data, which are applicable to this question, are provided in Questions 4 and 7.

Additionally, the IIF would welcome clarification on how to manage the issue of estimation of the model components for downturn periods which are not in the database of the institution.

Q12: Do you think the same approach for the identification of the final downturn scenario proposed in this text box for LGD could be adopted also for the purpose of downturn CF estimation?

The IIF is supportive of harmonizing practices but it is not clear how the proposed model component approach will work for CF. More detail is needed on the methodology in order to provide a concrete view. We would welcome different examples for CF than LGD in the RTS.

Q13: Do you think the draft GLs should describe in more detail the downturn adjustment methodology?

The IIF is supportive of harmonizing practices and reducing RWA variance, and believe that the chosen approach should allow to remove subjectivity without adding too much complexity.

Yes, our view is that the draft Guidelines should describe in more detail the downturn adjustment methodology. It is firstly of paramount importance for the EBA to determine what downturn is supposed to represent, as the wide difference in the approaches seem to be tackling different issues.

Q14: Do you think simpler alternative approaches for downturn adjustment should be considered in the spirit of proportionality?

Yes, we welcome additional guidance on how to calculate this adjustment, and how to implement it. As previously indicated, our comments are of an interim nature, and will be enriched and expanded with the submission of our analysis on downturn LGD. We have embarked on a study of banks' current practices in relation to downturn LGD. We are working with GCD to examine alternative measures in their database. The findings of the questionnaire as well as the results from our own alternative measures will be shared with the EBA at the end of June.

Further to our alternative proposals, we believe that simpler less sophisticated approaches should be considered for low default and low data portfolios, simulation based models, and for portfolios with short time series of realized recoveries, such as specialized lending, bank and sovereign exposures portfolios.

Our preliminary view is that it will be more appropriate to calculate the downturn add-on on overall LGD level. Decomposing LGD into components, then identifying a worst-case scenario for each component and then adding them up is resource intensive and raises several operational and implementation issues as discussed previously. Calculating an add-on on a total LGD level may be more appropriate given that the effect does not occur at the same time, and therefore may be mitigating effect on overall LGD.

Q15: What is your view on the alternative approaches? Please provide your rationale.

We appreciate that the EBA offered three alternative approaches (i.e. reference value approach, distributional supervisory add-on approach and downturn discounting rate with fixed add-on), in addition to the model components approach.

The wide difference in the approaches brings up the important question on what downturn is supposed to represent. It is important for banks to understand the underlying concept and methodology.

Reference value approach

The requirements under the reference value approach appears to be less cumbersome for institutions to fulfill than the model component approach. The approach also has the benefit of providing more flexibility, while (in effect) setting a floor that limits how low the downturn add-on can be. This approach could aid in harmonization, but its design is key. If the approach is too conservative, it has the potential to limit the risk diversification, and may not be able to reflect a link with downturn conditions in an accurate manner. Therefore, it for its design to strike the correct balance.

We note that using the year of entrance in default (and not the exit) may cause problems as banks may risk introducing elements that do not have a relationship with the economic cycle, which may bring subjectivity to the reference date value. Moreover, we welcome further analysis on the relation with economic factors at least for ELbe estimation⁴, skipping this step for downturn determination might lead to counterintuitive outcomes when comparing LGD in-default and ELbe. This would have to be addressed if the reference value approach is chosen.

We also note that with the proposal in the TRIM Guidelines⁵ to use two years with the highest realized LGDs may not be sufficiently grounded and requires more explanation.

Supervisory add-on approaches

It seems that the supervisory add-on approach to be linked to the decision the EBA will take on the Guidelines for LGD. The IIF notes that there is a +5% in the discount rate approach that already adds conservatism to the LGD model. Clarification is needed if this add-on was taken into consideration.

Distributional Approach

Under the Distributional Approach, an add-on is assessed at grade or pool level and captures the tail of the distribution of observed losses across generation of default. LGD shows the typical bimodal, asymmetrical distribution with high levels at 0 and 100. Figure 6 below shows that the average is not a symmetrical distribution, instead the average is much lower.

It is important to get clarification on the underlying concept and methodology to compute the add-on value. As seen in Figure 7 below, which illustrates the average recovery +1 standard deviation, the results are extremely high. This results show that special consideration needs to

⁴ EBA/CP/2016/21 says that "... the analysis of the relevant economic and credit factors and their dependence with loss rates should follow the general guidance that will be provided by EBA in the context of the RTS specifying the nature, severity and duration of an economic downturn under the mandate set out in Articles 181(3)(a) and 182(4)(a) of the CRR"

⁵ European Central Bank's Guide for the Targeted Review of Internal Models, February 2017.

be taken on the manner the add-on is calculated, as it can lead to very high LGDs. Furthermore, a clear distinction with margin of conservatism is needed.

Figure 6

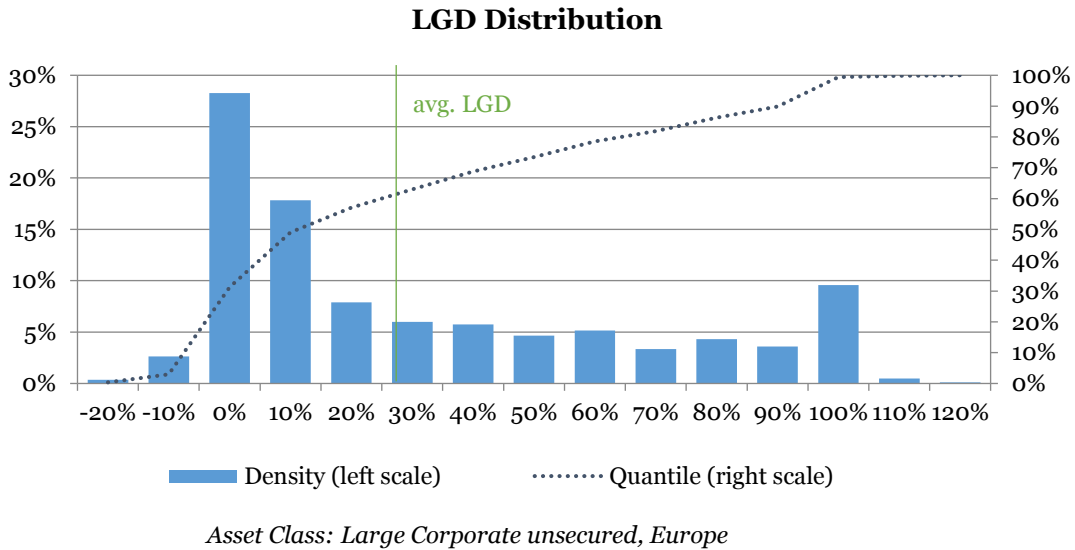
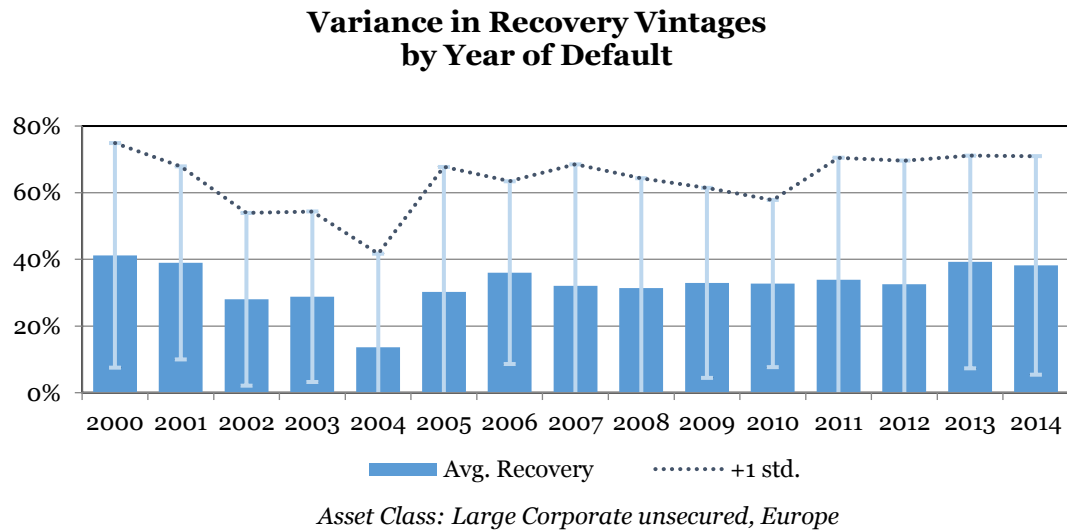


Figure 7



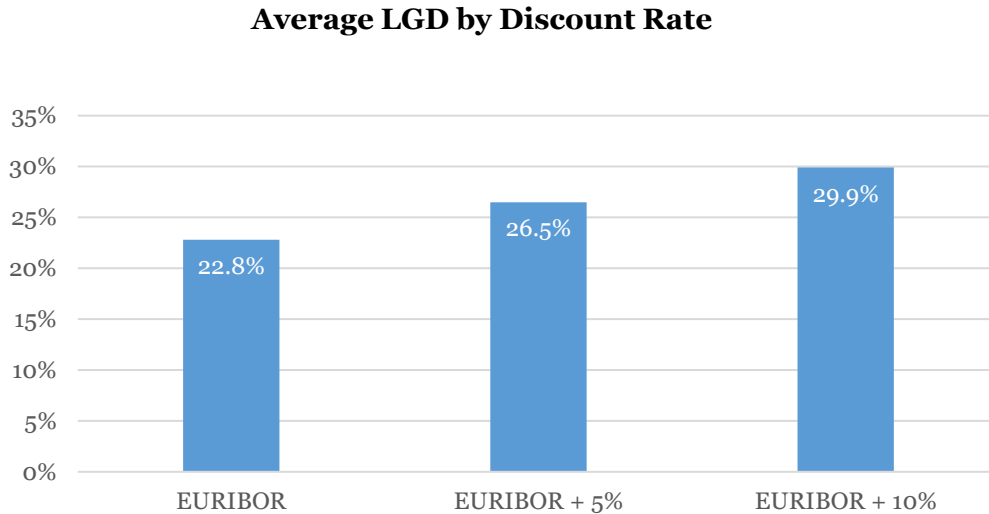
Downturn Discounting Rate With Fixed Add-On

The downturn discounting rate (DR = Base rate + 10%) considers time-in-default component, and the fixed add-on is said to be calibrated at collateral type level to address interactions with Basel LGD floors.

Figure 8 below shows the effect of calculating observed historical LGD on actual cash flow and timings using different discount rates was analysed on Large Corp data Europe, including Cures and Secured Defaults. Risk-free+ different add-ons were analysed. Risk-free rates were based on

the date of default and used a 90-day rate applicable to the borrowing currency. The usage of a downturn component through the discounting process is a simplified approach - it introduces subjectivity⁶ and raises confusion on what downturn discounting rate is supposed to represent. The results presented below appear to be reasonable, but it is unclear how the add-on will look like. Therefore, we seek clarification on how to define a downturn discounting rate.

Figure 8



Additionally, we seek clarification on the manner in which “collateral level” should be taken into account.

Q16: Which approach are you currently using for estimating downturn LGDs?

The IIF is currently analyzing banks’ current practices in relation to downturn LGD. The findings will look in detail at banks current practices for estimating downturn LGDs. Both the detailed practices and our set alternative measures will be shared with the EBA at the end of June.

⁶ Subjectivity is introduced as LGD should be the maximum between the LGD long-run average with the discounting rate plus 5% plus an add-on, and the LGD long-run average with the discounting rate plus 10%.

APPENDIX A

The data analytics in this paper were provided by Global Credit Data (GCD) at the IIF request. We approached GCD to assist us with our industry response to the Consultation Paper on the draft RTS on the specification of the nature, severity and duration of an economic downturn (EBA-CP-2017-02). GCD provided an update to their 2013 Downturn LGD Study, and special analytics to answer some of the questions raised by the EBA in the Consultation Paper.

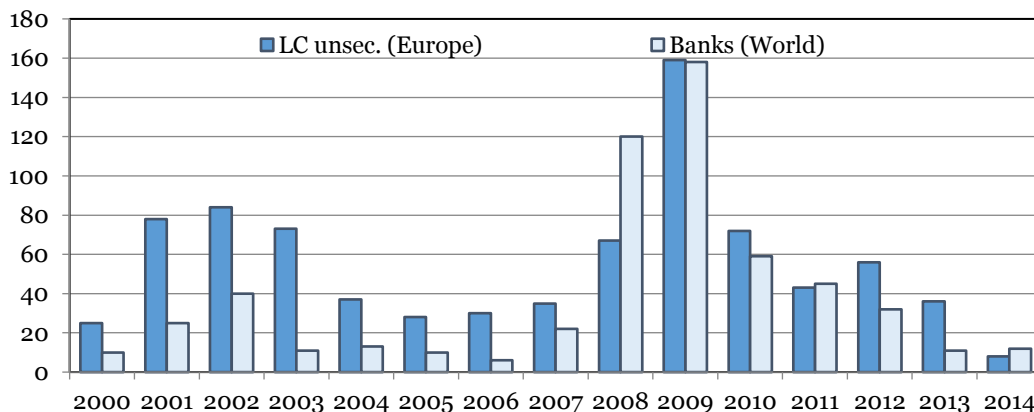
In 2013, GCD produced a Downturn LGD Study documenting the results of a working group of member banks. This study is published on the GCD Website. The analytics provided herein are still preliminary, the final analytics on that Downturn LGD Study will be published by GCD later this year.

Reference Data Set

The analysis is based on GCD data for Large Corporates Unsecured in Europe, Banks, and covers default years 2000 to 2014. See Figure 9 below.

Figure 9

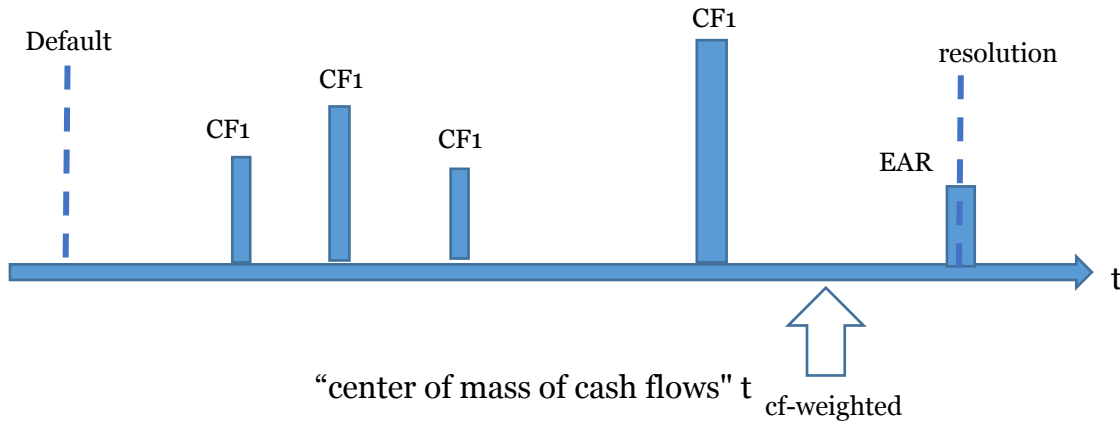
Number of Defaults in the Reference Data Set*



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 Exhibit 10 below.

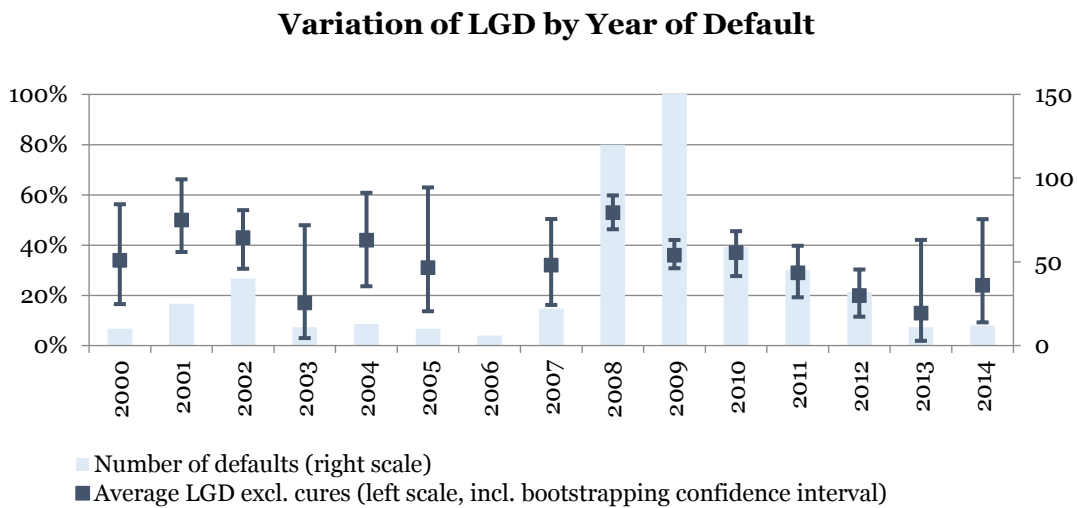
Figure 10



Banks

Figure 11 below shows that the highest LGD is observed in 2008 and declining values in the following years. Additionally, in Figure 12 below the observation from 2013 confirmed that a combined bank and sovereign crisis is correlated with much higher LGDs. In this last graph, year of default and year of cash flow is not necessary the important element.

Figure 11



Asset Class: Banks (World)

Figure 12

