Prometeia's comments to EBA Consultation (EBA/CP/2017/02) on draft RTS on the specification of the nature, severity and duration of an economic downturn

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Introduction and summary

Prometeia welcome the opportunity to comment on EBA Consultation Paper on RTS on the specification of the nature, severity and duration of an economic downturn and on the amendments to Section 6.7 of the Guidelines on PD estimation, LGD estimation and the treatment of defaulted exposures related to downturn

We acknowledge that enhancing harmonisation of modelling and supervisory practices plays an important role in reducing unjustified variability of RWA across the system, however, as EBA acknowledges in the CP, this objective is somehow conflicting with ensuring risk sensitivity. It is therefore required to seek an appropriate balance between different objectives. This, especially as the level of prescriptiveness of the proposed approach is significant and require significant investments from both institutions and supervisors and, for this reason, proportionality should also be taken into account enabling simplified approaches for less material portfolios.

Generally speaking we support the opinion that institution may adopt a target downturn solution leveraging on developed macroeconomic overlays. For instance, as far as LGD in-default is concerned, it is straightforward to see the downturn add-on, as required in the EBA/CP/2016/21, as the resulting of the macro/credit dependencies of LGD identified for ELbe calibration under stressed scenarios. Extending these rationales to LGD in-bonis would be a natural consequence.

Moreover, Banks are implementing IFRS9 requirements leveraging in most cases on AIRB risk metrics with appropriate adjustments in order to make such metrics point-in-time and forward looking; in some cases this is done leveraging on satellite models first developed for stress testing.

We believe that a more general multi-purpose understanding and modelling of macroeconomic overlays might be promoted for sake of consistency.

RTS do not exclude this possibility as, for instance, explanatory box to Article 5 states *"the severity of cure rate could be either determined according to the value of the cure rate during that year where institution has data or should be estimated according to the relations institution has found between cure rate and GDP growth"*.

RTS, or amended GLs, might be more explicit in highlighting that such approaches are deemed appropriate, as other explanatory boxes may suggest a more mechanical identification of observed downturn impact on individual model components and on overall LGDs and CFs and the identification of add-ons accordingly.

For these reasons we suggest allowing flexibility of practical application of model component approach principles, to be strengthened where found appropriate in order to promote greater homogeneity, but without pinning down operational steps.

We acknowledge the proposed model component approach gives a clearer regulatory view about what "estimates that are appropriate for an economic downturn" should be understood for. With regard to its feasibility, we highlight that the consistent application of the model component approach is particularly demanding in terms of data requirements. For this reason its application is expected to be exposed to higher model risks for low default portfolios in particular. As the overall modellability of such portfolios is under question at international level, we suggest that over-reliance on human judgement and on the MoC definition shouldn't be considered fully appropriate as it doesn't guarantee an effective reduction of unjustified RWA variability.

Instead, for these portfolios the adoption of simplified approaches leveraging on supervisory add-ons should be considered a valuable option. As the proposed approach is significantly burdensome, it would be found appropriate that such an option was made available for immaterial portfolios as well.

We however suggest that such a supervisory add-on approach should be better based on supervisory jurisdiction and portfolio specific calibration grounded around principles similar as those defined in the CP and not barely based on distributional approaches or stressed discount rates.

1. Summary of most relevant points addressed in the feedback

The most important points we will be commenting on in the following paragraph are related to the followings:

- Principles related to the expected granularity of the downturn analysis and thereof adjustments might be strengthen as the model component definition refer only to LGDs and CFs distribution shape while exposure clusters with similar shape may show different level of correlation to identified economic factors;
- As recovery processes, in spite of any appropriate model component factorisation, may last for long, it is not straightforward to relate realisation of model components to a specific point of the economic factors time series; further factorisation might be considered appropriate in such cases instead of considering overall recoveries referred to time where most recoveries were realised;
- As current economic conditions are still weak in some jurisdiction and the downturn impact on recoveries is still relevant due to time lags, then a full evaluation of the impact requires considering also the impact on incomplete recoveries. This opportunity is denied under Article 3(2)(f)(iii) and therefore we suggest a revision; similar consideration apply as far as Amended GLs provisions are concerned;
- RTS and GLs do not stress the need for differentiating the downturn adjustments for LGD and LGD in-default, and among the latter based on time-on-book; this is critical for unsecured recoveries as for higher duration downturn impact tends to zero along with LGD tending to 100%;
- More in general if might be made clearer that downturn adjustment to LGD in-default refers to the impact of economic downturn to "residual recoveries" and not to overall workout recoveries;
- The RTS sets what has to be intended for nature, duration and severity of downturn from the economic factors standpoint, however Article 6 and Amended GL would leave substantially unaddressed the way such conditions are reflected in downturnal parameters calibration, which is deemed to be a major source of unjustified variability; While explanatory box is clearer on this point, underlying principles are over conservative and a mitigation is proposed;
- Alternative approach are found not fully economically grounded, but however simpler approached are deemed as appropriate for CFs in general (considering directly the relation between economic factors and CFs instead of factorising CFs in model components), for immaterial portfolios based on proportionality and for low default portfolios.

2. Feedback to the Model Component Approach in the RTS

Article 1 sets the overall framework for establishing the nature, severity and duration of an economic downturn separately for own-LGD estimates and own CF-estimates.

Article 1(2) specify the assessment should be specialised by type of exposure and jurisdictions unless strong co-movements are expected. This requirement highlights that portfolio diversification is not taken into account as potential mitigant of downturn adjustments. As regulatory concerns refer to the definition of the appropriate definition of the capital charge for unexpected losses based on conditional expected losses at portfolio level, this is not considered fully appropriate: as portfolio diversification reduces systematic risk, than the implied diversification of operating in different jurisdictions might be taken into account. From a purely theoretical point of view, option 1 as described in paragraph 6.1 point D is found appropriate but would raise serious operational concerns and great room from unlevelled implementation, thus not promoting effective harmonisation.

Based on the BCBC (paragraph 468) Guideline requiring differentiation among regulatory asset class and due to the inherent granularity of available economic factors, we find a reasonable starting point the adopted option 2 with the further specification as of Article 1(2)(b).

However, regulatory guidance still leaves significant room for not harmonised application that might be found appropriate to be addressed by EBA strengthening further provisions. This might be done either within Article 1 or within the definition of model component, as indeed one major source of variability is the granularity of the analysis which is broadly unaddressed.

First, it is deemed appropriate that a link to LGD and CF model level should be established, as it is included in the explanatory box but not in the main text.

Second, as models may encompass different exposure types, it is not guaranteed that the analysis turns to be properly specialised by relevant clusters.

We would consider appropriate a specialisation where exposures experiencing (also based on expert judgement), a different level of correlation of either LGDs or CFs to economic factors should be subject to dedicated assessment and adjustments. This criteria doesn't fit exactly neither with the model component definition (referring to the shape) nor with "grade or pool" under option 3.

As downturn impact tend to be generally higher on those portfolios with lower LGDs and higher EADs, not necessarily segregated at model component level, further guidance is crucial to achieve effective harmonization.

Question 1	Do you have any concerns around the workability of the suggested approach (e.g. data availability issues)?

We acknowledge the proposed model component approach gives a clearer regulatory view about what "estimates that are appropriate for an economic downturn" should be understood for. The overall approach balances flexibility of application and prescriptivism in a way that is found appropriate, even though still exposed to unavoidable subjectivity.

With regard to its feasibility, we highlight that the consistent application of the model component approach is particularly demanding in terms of data requirements. For this reason its application is expected to be exposed to higher model risks for low default portfolios in particular. Instead of over-relying to (still subjective) expert-based choices, this may suggest making simplified approaches appropriate for those portfolios.

With regard to workability, we believe the reference to model components may enhance workability as it allows partition the overall problem and therefore specific data availability and representativeness issues might be better addressed.

Another significant source of unintended variability of results can be connected to the level of granularity, as, at the same time, from one hand some aggregation is deemed appropriate for having more robust results and from the other hand disaggregating clusters differently exposed to downturn economic conditions is required. We will be commenting further on this with reference to model component identification.
From a general point of view, a link to CF and LGD models is found appropriate and further disaggregation should be rather linked to outcomes variability over time instead and not necessarily to homogeneous pools delivering different levels of long-run average LGDs of CFs.

Question 2	Do you see any significant differences between LGD and CF estimates which should be reflected in the approach used for the economic downturn identification?

The general principles of the model components approach are applicable for both LGD and CF estimates.

However we also believe there are significant differences in what might be expected to be the impact of an economic downturn on the two parameters. In particular, we expect that CFs are likely to be less exposed to downturn impact as CFs depend also on the impact of tighter credit policies stemming from higher PD estimates within best practice credit monitoring policies.

For this reason we expect requirements for downturn CFs estimates to be to a certain extend unduly burdensome but yet applicable.

2.1 Identification of Model Components

Article 2 sets the framework for identifying relevant model components, defined as those that drive the shape of the realised LGDs and CFs. From a portfolio perspective, we would rather refer to those that drive the variability of observed LGDs and CFs.

We also believe that the shape of the distribution, and thereof the average feature of realised losses or drawings, may be effected by model components even though the shape of the distribution were not multimodal.

Indeed we agree that LGD should be linked to the recovery process, the time in default, the liquidation or alternative managerial scenarios (cure, restructuring, etc) and its likely occurrence over time and under specific economic scenarios. For this reason, we supported a series of customers in the estimation of multi-stage modelling where the LGD model architecture already identify model components at modelling level and risk factors considered are optimized at each model component level.

We believe that the use of "model component" for both modelling purposes, as in point 2(b) of Article 2, and as elements describing the features of realised LGDs and CFs is supportive of this approaches rather than introducing difficulty of interpretation. We would find positive if modelling opportunity was emphasised as appropriate in the GLs on risk parameters estimates as well. Indeed an LGD estimate resulting from a dedicated calibration of each model component as in the explanatory box doesn't find any acknowledgement of appropriateness in the GLs, as already commented in the dedicated consultation.

Finally, it should be considered that model components may trigger significantly different shapes on the realised LGDs and CFs distribution even though not necessarily explaining the multimodal shape in full. We think identifying such component is equally important and therefore point 2(c) of Article 2 should be interpreted in a wider sense than outlined in the explanatory box. The statement "*where the historical observations of a considered portfolio do not show such multimodal shape the institution shall consider the realised LGDs or drawings as the only model component as specified in point 2(c) of Article 2*" is found misleading in this sense.

On the other hand, as it is unlikely that it is possible to identify model components explaining a multimodal (normally bimodal) distribution shape in full, a defined listing of potential components to analyse as part of the regulatory GLs would promote greater homogeneity of application.

Finally we consider crucial the analysis to be differentiated, within the same model component of the same type of exposure, by any other clustering variables identifying different correlations with economic factors over time or, said otherwise, showing different variability over time that might explained by different economic factors or by a different correlation with the same economic factor. This feature is not necessarily captured by the shape of the distribution.

Question 3	Is the concept of model component sufficiently clear from the RTS? Do you have operational concerns around the proposed model components approach?

The concept of Model component is sufficiently clear and the reference to multi-stage modelling techniques as those simplified in the explanatory box inform of their appropriateness.

From the practical point of view, we suggest a list of expected model components to be disclosed as part of the GLs on risk parameters estimate amendment for better promoting harmonisation. This is particularly appropriate for CFs as, from one side, they do not find extensive treatment in the CP and, from the other side, it is less obvious to identify specific model components in spite of their bimodal distribution.

From the operational point of view, it would be found appropriate that only most relevant identified model components were individually estimated, as a better balance between estimation accuracy and implementation costs.
With reference to the way model components should be selected, we would deem appropriate that components most correlated with economic and credit cycle should equally be considered even though they do not necessarily explain a multimodal distribution shape, or even when a multimodal distribution cannot be observed at all.

We think that, from a portfolio perspective, rather than referring to components explaining the multimodal distribution, a more general reference that "drive the variability of observed LGDs and CFs across the economic cycle" would be both less demanding and more appropriate.

2.2 Nature, Duration and Severity of an Economic Downturn

As far as the **nature of downturn** is concerned, we deem appropriate the provision considering both credit and macroeconomic factors as relevant in the definition of economic downturn, implying the definition of conditional LGDs and CFs not limited to the cases where correlation with credit factors is observed.

We also acknowledge time lags effects might be relevant and thus must appropriately be taken into account.

For low default portfolios the recourse to expert judgement is expected to be crucial along with data enhancements techniques. However, such recourse should not be used as a mean of defining conditional parameters where it turns to be unfeasible the identification of economic factors influences. For this reasons, we deem appropriate making available benchmark values in the form of supervisory add-ons that can be used in such cases, as already discussed in the introduction.

From an operational point of view, we highlight that recovery processes in some jurisdictions last for very long periods especially as real estate or bankruptcy procedures are involved in the collection process. It is thereof not straightforward to relate observed model components to any specific (yearly) economic factor observation. Based on this, for what LGDs are

concerned, we supported along time many customers to identify potential downturn effects leveraging on observed recovery profiles (marginal recoveries) instead of considering overall recovery rates in spite of the analysis being already factorised into model components (namely cure rates vs. liquidation LGDs).

Such an approach had the further benefit of allowing to fully evaluate the observed part of incomplete recoveries. In some jurisdictions economic upturn is still weak and, depending on time lags, observed recovery profiles should still be considered as "downturnal". Indeed the downturn still affects more open workouts than closed (or treated as closed) ones. Such opportunity is denied under point 2(f)(iii) provisions that might be revised in the sense that also incomplete realisation of model components should be considered with appropriate adjustments as long as this is found appropriate to fully evaluate the impact of downturn on the final observation of the model component.

Question 4	Do you have any concerns about the complexity around the dependency proposed for the identification of the nature of an economic downturn? It is sufficiently operational?
The identification of dependency proposed is deemed to be appropriate. Some feasibility concerns depend on the inherently lifetime definition of LGDs and on the duration of recoveries in some jurisdictions, in spite of the factorization in model components. We deem appropriate that further factorization might be required to fully identify dependencies, for instance by analyzing recovery profiles instead of the overall realization of LGD liquidation, and highlight that to fully evaluate the impact of most recent downturn on realized model components also information stemming from open workouts are relevant.	
For this reason we suggest to take into account of such situations in the final draft of provisions under Point 2(f) of Article 3 especially as subpoint 2(f)(iii) is related (denying the opportunity to take into account the observable portion of incomplete model components)	

Question 5	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?
We agree with the proposed approach and indeed we suggest that further factorization might be allowed and deemed appropriate as model components duration makes difficult to relate its realization to a specific point of the economic factors time series.	

As far as the **duration of downturn** is considered, we acknowledge the provision are related to the economic factor level and connected with provisions related to severity. From this point of view we deem appropriate the provision as our joint understanding is that it should be taken into account the worst yearly scenario either observed in the last 20 years of observed.

Notwithstanding this, the consideration related to the realization and length of the workout period in the explanatory box is deemed relevant and not fully addressed in the RTS and GLs as commented later.

Question 6	Do you envisage any situation where a one year duration is not suitable of capturing the economic downturn at the economic factor level?
From an economic factor level, the provision is deemed appropriate as our joint interpretation of duration and severity is that downturn should be calibrated over the worst (severity) yearly (one-year duration) observation of economic factors relevant to each model component. What is however most relevant in the mechanics of downturn calibration is how the length of the workout process is taken into account as it is unreasonable both to assume than only one year of the overall process is affected by economic downturn and to assume that such conditions should affect the overall recovery process. This is widely unaddressed in the CP even though the overall mechanics made clearer in the explanatory boxes imply that the worst realization of economic factors describing different model components are to be taken jointly into account in spite of the fact that they do not take place at the same time. This is generally found overprudential from one side and not as clear within the CP text from the other. This concept should be made therefore clearer if confirmed, otherwise different interpretations of the provisions may trigger significant unjustified variability of RWAs.	

As far as the **severity of downturn** is considered, we deem appropriate the reference to the plausible variability of those factors for the future. At this regard, a regulatory benchmark is found most appropriate to promote greater homogeneity leveraging, for instance, on supervisory stress scenarios.

From this perspective, the identification of the worst historical scenario is not necessary as we will later support the hypothesis that downturn specification should be ideally the result of the explicit modelling of the relation between macro and credit variables and realized model components on appropriate exposures clusters.

The downturnal add-ons/adjustments can thus be seen as the calibration of long-run average estimates (or point-in-time ELbe estimates) to a forward looking stress scenario based on an econometric transfer model.

Were the reference to the worst historical scenario kept in the RTS, we suggest to mitigate provisions under Article 5(2)(a)(ii) as the use of a shorter than twenty-years long time series does not prejudice the possibility of the identification of the worst historical scenario in most jurisdictions. A margin of conservatism should be therefore limited to those cases, if any, where shortening the time series implies excluding most severe realization of economic factors.

Question 7	Do you have any concerns about the approach proposed for the identification of the severity of an economic downturn? Is it sufficiently operational?

As far as the **severity of downturn** is considered, we deem appropriate the reference to the plausible variability of those factors for the future. At this regard, a regulatory benchmark is found most appropriate to promote greater homogeneity leveraging, for instance, on supervisory stress scenarios.

We would privilege an approach where an explicit model-based link between model components and economic factors is estimated, so that downturn correction turn to be the resulting of the impact on LGDs and CFs of stressed economic factors. Under this perspective, we suggest recourse to regulatory benchmarks similarly to the way stress testing exercises are performed. Reference to worst historical observations are not necessary under this perspective. Should this reference kept in the RTS, we suggest that reference to MoC as of Article 5(2)(a)(ii) to be limited to those cases where a shortening of time series imply excluding worst observations from the time series. This is not expected to be the case in most jurisdictions as the most severe downturn from decades is generally acknowledged to have occurred in most recent years than the last 20 years. In such cases shorter time series are equally appropriate.

Question 8	Do you think that more details should be included in Article 2(3) for the purposes of evaluating whether sufficiently severe conditions are observed in the past?

Benchmarking values of most relevant economic factors, consistent with stress testing exercises, as suggested in Question 7 feedback, may be beneficial for this evaluation. The reference to sufficient severe condition is subject to great subjectivity. This strengthening either to be included in the RTS or, better, in the GLs amendment.

2.3 Definition of Downturn LGDs and CFs

Article 6 do not provide sufficiently detailed guideline on what downturn calibration is expected for based on the definition of nature, duration and severity of downturn.

This definition is deemed consistent with "estimates that are appropriate for an economic downturn" required by the CRR, but as such do not promote a significantly higher homogeneity of application.

The explanatory box make clearer that downturn calibration is expected to be the resulting of the worst joint observations of model components in downturnal economic scenarios for economic factors. This is found over-conservative, but strengthening RTS or amended GLs test would be found appropriate for sake of homogeneity.

Question 9	Do you think Article 6 should pin down the steps for the joint impact analysis described in this text box?

We think RTS should leave an adequate level of flexibility. However, guidance shall be strengthen in terms of principles as explanatory boxes is clearer on supervisory expectations.
We have however relevant concerned on the expected dynamics.

First, assigning the realisation of a model component to the period where the majority of realisation occurred is a simplification as it might be possible to further factorise the problem (f.i. considering marginal recoveries) in order to achieve the same objective without neglecting the information contained in incomplete workouts.

Second, it should be acknowledged that the fact that downturn effects model components with different time lags t is a physiological characteristics of the recovery process. Instead of combining the worst model components, it is found more appropriate that either the worst yearly combination of model components or the combination of average model components over downturn was considered.

Third, the expected impact of downturn differ significantly depending on whether downturn occurs at the beginning of the recovery process or at later stages. Under this perspective not a unique calibration of LGD and LGD in-default is advisable and GLs should make clear that a dedicated calibration by reference date is expected for downturn add-on within LGD in-default.

Fourth, it is unclear how the definition of one-year downturn duration is consistent with the principles outlined in the explanatory box as over such a short horizon either downturnal cure rates or downturnal recoveries are experienced but normally not both jointly. The fact that economic factors and model components are to be observed with yearly frequency is not connected with the concept of downturn duration, which is normally a multi-year condition.

We deem that leaving such points fully at discretion of institutions and supervisors is not consistent with the objective of limiting unjustified variability or RWAs.

Question 10	Do you have concern around the proposed approach about the identification of the final downturn scenario?

We deem appropriate that principles underlying the downturn approach should be incorporated in the RTS through a more detailed specification of Article 6 and that similarly should be done as far as Amended GLs are concerned.
However, we have some concerns both on the approach (deterministic approach vs. estimating relevant macroeconomic relations, as commented in the detailed feedback and also exposed briefly responding to Question 11) and on the underlying principles.
In short:
- the information included in incomplete workouts are neglected while they are deemed to be valuable;
- model components might be effected with different time lags, but notwithstanding this it is deemed overconservative to identify downturn as worst combination of downturnal model components, the latter defined as the worst yearly occurrence over the downturn period. Either considering the worst yearly combination or

averaging model components outcomes over the downturn scenario timespan would find a better balance among conservatism and management of time lags;

- there is no reference to dedicated calibration for LGD and LGD in-default and by time-on-book for the latter; this is deemed critical as downturn effect with significant difference the same model component over time;
- it is implied that downturn effects the entire recovery process and different model components at the same time; it is straightforward that LGD is a "lifetime" parameter and workout processes may last for a series of years and thus it is inherently subject only for a part of it to downturn impacts; in supporting our customers we have over time developed methodologies to take into account that downturn effects for an expected duration (much higher than 1-year) the recovery expectation, either at the beginning of the process, at the end or in the middle but not the entire process.

Question 11	Do you have 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 explanatory box implies a rather deterministic calibration on model components historical observations. From this point of view a series of model components are expected to be not available with 20 years historical depth. However, it is proposed for explanatory purposes and does not exclude using inferential techniques. We commented in the detailed feedback that we would assume that a macroeconomic overlay linking ELbe, stress testing, IFRS9 and downturn adjustment is found as most appropriate way to address the downturn calibration issue. In this context, as long as proper historical series are available to estimate such relations, the observation of model components for more limited time depth is not a critical issue and it would rather be considered appropriate to define the potential impact of hypothetical stress scenarios. Calibration around agreed supervisory scenario, like in the stress testing exercise, would indeed promote greater homogeneity.

Question 12	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?

We deem appropriate the approach for the identification of the final downturn scenario should be consistent among LGD and CF estimates. However, as commented earlier a simplified approach for downturn CFs calibration would be found appropriate.
Namely it is found reasonable that realized overall CFs would normally be found as appropriate unique model component.

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3. Feedback to the Amendment to the draft Guidelines on PD estimation, LGD estimation and the treatment of defaulted exposures

Question 13	Do you think the draft GLs should describe in more detail the downturn adjustment methodology?
As we commented with reference to RTS and especially to the intended principles underlying explanatory box to Article 6 (see Question 10 and paragraph 2.4 of the feedback document), they are found not clearly established in the regulatory text. We commented the fact that fully convincing and over-conservative earlies are not considered, but should nevertheless explicitly stated in the GLs if confirmed as appropriate. We have also earlier commented on the fact that considering complete workouts limit the use of valuable information stemming from partial recovery observations, especially being downturn relatively recent and potentially still influencing (due to time lags) recoveries in some jurisdictions.	

Question 14	Do you think simpler alternative approaches for downturn adjustment should be considered in the spirit of proportionality?
As we commented in the introductory part of the detailed feedback, reasons related to materiality and modellability (low default portfolios) suggest regulation should make available simpler approaches as supervisory calibrated add-ons.	

4. Feedback to alternative approaches section

Question 15	What is your view on the alternative approaches? Please provide your rationale.
We deem appropriate limiting the model component approach to LGDs as CFs dynamics is less complex and mostly related to credit processes rather then to the economic cycle. As credit processes tend to be more accurate and conservative in downturn conditions, it is expected from a portfolio point of view that barely adjustment for downturnal CFs are required. At a minimum, directly evaluating the relation of the realized CFs and economic factors at an appropriate granular level should be considered sufficient.
	Other simplification are required for immaterial portfolios (based on proportionality) and for low default portfolios (based on expected robustness of outcomes). In such conditions, supervisory guidance is deemed appropriate.
	We do not see a significant simplification in the proposed reference value approach as it rather allows reducing prescriptiveness but still requiring dedicated analysis in a "comply of explain" approach that would necessarily be calibrated around conservative supervisory expectations. When set at EU or jurisdiction level, it would act similarly to benchmark transfer models in the stress testing exercise promoting compliance to such a value but not reducing the complexity of the issue to address compared to the model component approach. It is indeed preferred that rather than acting as a challenging value or an hard floor, such a regulatory benchmark was provided as a "supervisory

add-on" allowed as shortcut within supervisory review and validation based on materiality and modellability reasoning. Our opinion is that such approach may actually be a simplification if it acts as an hard shortcut making any inherently complex analysis unrequired since agreed to be unduly burdensome from a portfolio perspective or even unfeasible from the modelling point of view.

Such an approach would be different from the identified options of the "supervisory add on approach" as, like in the stress testing, reference values are expected to be fully economically grounded (on pooled data, benchmarks, structural models, etc.) and calibrated –although conservatively – on expected impacts of downturn on LGDs and CFs.

This is not the case for both the distributional approach (based on observed recovery volatility without reference to downturn conditions) and the downturn discounting approach (based on a regulatory add-on on the spread).

The economic grounding of such approaches in weak and would neither allow an appropriate risk-based calibration nor achieve effective comparability of RWAs. They would mostly achieve only simplicity of estimation and validation in spite of the outcomes. A regulatory calibration of standard add-ons, similarly to what provided in the reference value approach, would certainly promote greater comparability and not necessarily lower risk-sensitivity if defined at appropriate level of granularity.

Question 16	Which approach are you currently using for estimating downturn LGDs?

We supported a series of customers, mostly in Italy, in identifying downturn impact on LGDs based either on the estimate of satellite transfer model of economic factors (mostly macroeconomic) and on the empirical calibration of average LGDs to observed downturn LGDs averages. The granularity of the problem was set at a "model component-like" level, even though more often the focus was on LGD liquidation as danger rates, along with PDs, tended to be already calibrated on most recent "downturnal" years.

In the adopted deterministic approach, differently from the model component approach depicted in the text boxes of the CP, we considered rather the average model component observation over downturnal scenarios (multi-year) compared to long run averages. Due to the length of recovery processes, this was done through a overall LGD decomposition into marginal (yearly) recoveries so that as long run average recovery rate can be expressed as the sum of long run average marginal recoveries, similarly downturnal recovery rates was based on compounding the impact of downturnal on such marginal recoveries. One point often discussed with our customers was whether all impacts had to be summed up (lifetime downturn) or they should have been limited to the expected downturn duration. Usually customers privileged the later with duration threshold set between 5 and 7 years as the most recent "double-downturn" turned to be appropriate. The length was strictly related to the time horizon identified as downturnal. In some cases the analysis was properly extended to the impact on survival rates as not all the unrecovered amount should be considered lost as long as workout time increase due to delay. Depending on the asset class the impact of this was negligible - unsecured positions whose recoveries concentrate on initial recovery stages, even limited to

liquidation and therefore not as result of cure rates dynamics – or particularly significant – especially on positions secured by collaterals.

Such an approach is specialized for defaulted assets, as for LGD it might be considered that the first 5-7 years were effected while for positions already in default it was rather assumed that "the following" 5-7 years were effected. In some circumstances our customers preferred a simplified solution where a unique add-on (basically a multiplier reflecting the differences of adjusted LGDs from long-run LGDs) was defined, but taken into consideration the portfolio perspective where downturn effects differently positions with different time-on-book and therefore it was grounded on averaging "5-7 year long" impacts set at different time-on-book based on the average downturnal time-on-book distribution of the portfolio of application.

Setting aside details, the major finding of such analysis was that as recovery is a multi year process and in spite of isolating cure rates effects then overall LGD liquidation either observed as referred to liquidation entry, end or considered referred to a calendar time equal entry+observed recovery duration, show weaker correlations to downturnal scenarios than it is possible to observe on marginal recoveries by time-on-book. This also for the possibility to include in the latter only incomplete workouts. This is critical as NPL-ratios well known supervisory attention is linked to the fact that too many defaults triggered by recent downturn are still under workout.