



**EUROPEAN CENTRAL BANK**

**BANKING SUPERVISION**

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1 June 2018

**Subject: Considerations on the LGD waivers under the IRB framework**

Dear Mr Guersent, Mr Gualtieri and Mr Tranholm-Mikkelsen,

Since the inception of both institutions, the EBA as standard setter and the ECB as supervisor have devoted significant resources to ensure that the unwarranted variability stemming from the use of internal model approaches can be addressed. The efforts of the EBA focused, in particular, on the development of detailed regulatory guidance according to a comprehensive road map, with the final deliverables due this year. The ECB has in addition launched its Targeted Review of Internal Models (TRIM), which has already resulted in several supervisory actions. Both institutions are convinced that internal models are an essential element to ensure adequate risk-sensitivity of the regulatory and supervisory framework and believe that their efforts, combined with the recently agreed changes to the international standards developed by the Basel Committee on Banking Supervision, will effectively address the issue of undue variability in risk weighted assets.

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At the same time, both institutions have been very involved in and supportive of efforts to reduce the high levels of non-performing loans (NPLs) in the European banking sector, and in particular in some Member States. Given our strong focus on internal models and NPLs, we have noted with interest that some stakeholders believe that the disposal of NPLs and the corresponding capital release is being hampered by the design of the regulatory framework for internal models, in particular by the requirements for Loss Given Default (LGD) estimation. As a solution, it is proposed that the losses due to the sale of NPLs would be fully and permanently eliminated from the dataset used for LGD estimation (the so called ‘data waiver’) for the selling institution. This would deviate from the underlying principle used today, namely that all losses should be taken into account, and is, therefore, in contradiction with the current regulatory framework.

We would like to express our concerns about the introduction of such data waivers. One of the arguments used to support the proposal for the data waiver is that the current situation is extraordinary and it is unlikely that it will occur again in the future. As shown in the Annex, while the recent experience indeed represents a high-loss scenario, the situation is not exceptional and has taken place in other cyclical downturns. Hence, such losses should be appropriately reflected in the assessment of risk. This has precisely been the underlying rationale to require full recourse to the entire set of data in order to avoid myopia caused by crisis and cycle peaks. Furthermore, the current requirements incentivise prudent and effective risk management practices, while at the same time ensure sufficient flexibility to appropriately address the NPL issue in a fair manner and within a reasonable timeframe.

In the Annex we analyse the potential consequences of the data waiver on the LGD estimates and the resulting capital requirements. In the opinion of the EBA and the ECB the introduction of the proposed data waiver would result in underestimation of LGD and inadequate capital requirements. As such preferential treatment would be applied to those banks which accumulated high stocks of NPLs, it would not only undermine the banks’ discipline in their risk management practices, but could also create the risk of regulatory arbitrage by hoarding of defaulted assets. This could have a particularly severe impact in order to get rid of them through massive disposals without any impact on LGDs. Furthermore, this proposal would reward banks that kept non-performing assets on their balance sheet, but not those who already wrote off heavily impaired assets. Thus, it would give rise to level playing field concerns. Finally allowing banks to exclude relevant loss data from LGD estimation would damage market confidence in the reliability of internal model approaches.

In line with our mission to ensure the safety and stability of the banking sector and to ensure fair competition within the single market via the single rule book, the EBA and the ECB feel obliged to provide an in-depth analysis of the potential consequences of the data waiver, if it were adopted. We note that the current regulatory framework already allows for adjustments, which can reflect actual risk appetite and risk management changes, thus mirroring the firms’ business evolution. In particular, it is possible to disregard underlying and historical data to the extent an entire business or customer segment is sold. Furthermore, the differences in risk of portfolios stemming from previous mergers or acquisitions can be effectively reflected through appropriate model design and specification of the scope of application of the model. Data waivers are therefore not



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required as the current regulatory framework is already flexible enough to permit “reasonable waivers” where justifiable.

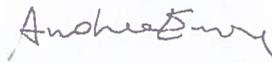
It has to be stressed that while the LGD issue appears particularly relevant for some jurisdictions, where the banking sector in general has a high share of outstanding NPLs, it is certainly a more general problem which affects many other Member States. As the data waiver, if introduced, could be used by banks across the whole EU and may affect competition in the single market, the proposal would in our view be detrimental to the efforts to harmonise internal models and would likely have unintended consequences. We are therefore of the clear view that the introduction of such waivers should be avoided.

We hope our view can be considered in the upcoming political discussions and we stand ready to discuss the matter further.

Yours sincerely



Daniele Nouy



Andrea Enria

CC: Martin Merlin, Director, Directorate D,  
Klaus Wiedner, Head of Unit, Unit D1



## Annex:

The financial crisis and subsequent unfavourable economic conditions in combination with inadequate, in some cases overly optimistic loan origination practices, have led to elevated ratios of non-performing loans (NPLs) in the European banking sector, and in particular in some Member States. As this situation has negative effects on the banks' ability to effectively support the economy, impacts the profitability of the banks and may also have negative implications on the whole European banking sector, it is clear that appropriate measures are necessary to decrease the existing stock of NPLs and prevent the future accumulation of NPLs. Both the ECB and the EBA are fully supportive of the action plan set out by the Council<sup>1</sup> and have already taken efforts to provide adequate regulatory and supervisory guidance in order to address the issue in a timely and orderly manner. In these efforts it is of vital importance that the proposed measures will not only address the existing stock of NPLs but that they will also prevent building up the NPLs in the future by providing adequate incentives for the banks in their ongoing business and risk management decisions.

It has been argued by some stakeholders that the disposal of NPLs and according capital release is being hampered by the design of the regulatory framework for internal models, in particular by the requirements for Loss Given Default (LGD) estimation, as clarified in the EBA Guidelines on PD estimation, LGD estimation and the treatment of defaulted exposures<sup>2</sup> (further referred to as Guidelines on PD and LGD estimation). In particular, a recent paper by the Bank of Italy<sup>3</sup> outlines the consequences of the sale of NPL portfolios on Italian banks based on specific assumptions and a data-driven theoretical framework. It is argued that the accelerated sale of NPLs at this juncture would be operated at distressed market prices and would lead to increased LGD estimates, hence higher capital requirements. That paper argues that under the current framework, banks which use internal models for their capital requirement estimates, face stronger disincentives to sell their NPL portfolios.

### A historical perspective on NPL ratios

The losses stemming from the sale of NPL portfolios as well as the share of NPLs are of comparable magnitude as has been historically observed in the EU, in particular in other crises episodes. In an international context, Laeven and Levine (2008) show for database on systemic banking crisis that the peak of the NPL ratio across countries is 25%<sup>4</sup> on average. Among them are many European countries which experienced high levels of losses in the early '90s; the NPL ratios that have been observed at the peak of these crises are of similar magnitude than what can currently be observed in European countries, see Chart 1 below. In the '90 crisis, the highest NPL

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<sup>1</sup> <http://www.consilium.europa.eu/en/press/press-releases/2017/07/11/conclusions-non-performing-loans/>

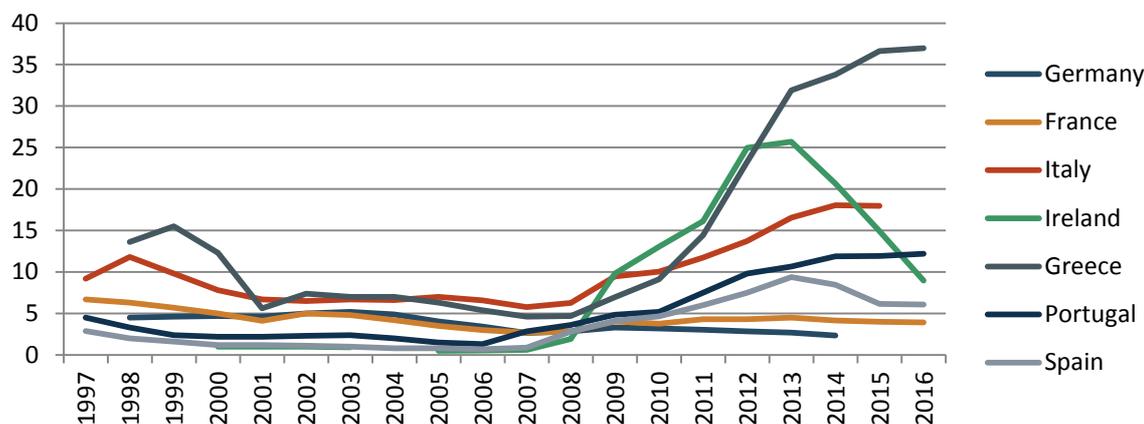
<sup>2</sup> <http://www.eba.europa.eu/regulation-and-policy/model-validation/guidelines-on-pd-lgd-estimation-and-treatment-of-defaulted-assets>

<sup>3</sup> See "Why exceptional NPLs sales should not affect the stunted LGDs of A-IRB banks" at <https://www.bancaditalia.it/pubblicazioni/note-stabilita/2017-0006/index.html?com.dotmarketing.htmlpage.language=1>

<sup>4</sup> Systemic Banking Crises: A New Database (2008), <http://www.imf.org/en/Publications/WP/Issues/2016/12/31/Systemic-Banking-Crises-A-New-Database-22345>

ratio observed was 13% in Sweden and in Finland, 18% in Czech Republic, 23% in Hungary, 24% in Poland and 30% in Romania<sup>5</sup>.

**Figure 1: Bank nonperforming loans to total gross loans (%)**<sup>6</sup>



The current piling up of NPLs in Europe is therefore a recurrent episode to which the prudential regulation should respond enhancing prevention and ensuring sufficient capital buffers. As such, the present NPL levels and their corresponding exit policy do not represent an exceptional scenario but are part of an economic cycle. It is therefore not justified to exclude defaults and losses stemming from NPL sales from historical databases used for LGD estimation as it cannot be argued with reasonable certainty that current levels of NPL ratios will never occur of the balance sheets of the banks in the future.

Furthermore, the sale of the NPL portfolios is one of the potential solutions, but not the only possible approach to address the issue. It would therefore not be justified to allow data exclusions for those banks which decide to sell their NPL portfolios while other banks, which decide to adopt other, potentially more effective strategies, would still have to reflect the losses in their estimates.

### Principles for LGD estimation

This part of the letter explains how NPL sales affect LGD estimates through various features of the regulatory framework for internal models. In a nutshell, the followings mechanisms are at play:

- (a) The CRR requirement for LGD estimates to be based on “all observed defaults” that fall within “the scope of the LGD model” ensures that institutions are required to fully reflect their defaults and losses experience, and thus prevents regulatory arbitrage.

<sup>5</sup> Note, however, that we need to be cautious in comparing these statistics because these ratios are based on the country’s definition of non-performing loans, i.e. the Laeven and Levine (2008) database does not use a global definition of NPLs.

<sup>6</sup> Source: World Development Indicators, code FB.AST.NPER.ZS, Bank nonperforming loans to total gross loans are the value of nonperforming loans divided by the total value of the loan portfolio (including nonperforming loans before the deduction of specific loan-loss provisions). The loan amount recorded as nonperforming should be the gross value of the loan as recorded on the balance sheet, not just the amount that is overdue.



- (b) The requirement to use “all observed defaults” implies also that incomplete recovery processes should be considered in the LGD estimation. As currently these are not always reflected, leading to a downward bias in the current LGD estimates, this may have significant impact not only on the current LGD estimates but also on the potential incentives for the NPL disposals.
- (c) The CRR requirement for LGD estimates to reflect an economic downturn situation implies that the additional effect of NPL sales will naturally be limited, being similar in this regard to current LGD estimates already reflecting such downturn scenario.
- (d) The current regulatory framework leaves flexibility in the model design so that it can provide for adequate risk sensitivity and ensure that the models are consistent with the risk management and recovery policies of the institutions. The model designs should be based on appropriate risk drivers and, where adequate, they can take into account elements such as different recovery scenarios, cure rates or other intermediate parameters.
- (e) The IRB framework includes requirements for appropriate capital holdings for defaulted exposures and therefore already provides the incentives for institutions to reduce their stock of NPLs.

We will elaborate on all of the above aspects of the LGD modelling demonstrating how they may impact the incentives for the institutions to dispose of their NPL portfolios.

#### (a) Reasons for the use of all observed defaults in risk quantification

The natural starting point for the analysis is the existing CRR requirements, which govern the overall requirements of LGD estimation. In Article 181(1)(a) of the CRR, it is specified that LGD estimation should be based on “all observed defaults”. It is hence required that full experience of the institution is taken into account in the predictions for the future. In the dynamic environment of constant changes in the market and economic conditions, legal frameworks as well as internal credit and recovery policies of the institutions, this requirement ensures a sound basis for the LGD estimation while at the same time preventing excessive subjectivity of the estimates and potential regulatory arbitrage.

Historical observations used in the LGD estimation typically span over extended periods of time, reflecting the length of the recovery processes, which may in particular include periods of different economic and market conditions. Allowing exclusions of some of the observations would lead to a loss of valuable information. Taking into account that the quality of estimates depends largely on the amount of available data, the exclusions would not be beneficial from the perspective of the accuracy of the capital requirements.

The CRR requirements have been further explained in the EBA Guidelines on PD and LGD estimation, which clarify in particular the requirements applicable to the phase of model development, which is understood as the part of the process of estimation of risk parameters that leads to appropriate risk differentiation, and requirements for the phase of calibration, i.e. for the



appropriate quantification of risk parameters. The datasets used for the purpose of model development and calibration may be at least partly overlapping, but they are constructed for different purposes under different requirements regarding data representativeness, and hence they may differ.

Of those two phases, the Guidelines put more focus on calibration, leaving significantly greater flexibility for institutions in model development. This approach is related to the objective of the Guidelines to contribute to increased comparability of the risk estimates and the resulting own funds requirements which are mostly dependent on an appropriate calibration. In order to ensure objective and comparable risk quantification, the Guidelines provide detailed definitions of the main concepts underlying risk quantification, such as default rate and long-run average default rate for PD and realised LGD and long-run average LGD for LGD quantification. At the same time, the risk sensitivity of the IRB models is preserved through greater flexibility in the phase of model development, where the model design should be reflective of the institution's specific risk profile.

One of the aspects which was clarified is that the requirement for the use of "all observed defaults" is related to the phase of LGD calibration, and not necessarily to model development, where the use of specific observations is dependent on the assessment of their representativeness to the current portfolio. This means that the long-run average LGD which is the basis for the LGD calibration should be based on the complete experience of the institution. Allowing data exclusions at this stage would create an area of subjectivity in the risk quantification and as a result non-comparable capital requirements. As institutions would be incentivised to exclude observations of high losses it would also create the risk of regulatory arbitrage, where institutions may argue the uniqueness or non-representativeness of observations with particularly high losses. This would however not be appropriate as cases of high losses are part of the distribution of losses and should be taken into account, otherwise the LGD will be biased and underestimated.

This argument is also valid for the situation where exposures subject to the sale were excluded from the dataset used for risk quantification. The banks' NPL portfolios are composed of the relatively worse observations than the average; they do not include cases which previously cured or which were resolved earlier but they do include the most difficult observations where recovery was not possible or where it was not possible to realise collateral. Hence if the most difficult NPL exposures were sold and this loss experience was excluded from the calculation of long-run average LGD, the LGD estimates would be based only on the better observations which cured or which were easily resolved. This would result in a significant underestimation of risk and insufficient capital requirements posing potential threat to the stability of the European banking sector.

It should be added that the requirement for the use of "all observed defaults" should be understood within the context of the scope of application of the LGD model. Where as a result of strategic decision the entire particular type of exposures<sup>7</sup> is being discontinued, there will not be

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<sup>7</sup> Type of exposures is defined in point (2) of Article 142(1) CRR as "a group of homogeneously managed exposures which are formed by a certain type of facilities (...)"



the need for LGD models to cover this type of exposures anymore. Only in this case it is possible to exclude observations, i.e. represent a business line that are no longer present on the balance sheet of the institution. Where the scope of application of the model changes because of the sale of the entire business line, the terms of the sale will not affect LGD estimates as these observations will not be included in the LGD estimation. It has to be stressed, however, that this interpretation should not be stretched to the situation where the credit or recovery policies change within a given business line. Such changes of internal policies are part of the assessment of representativeness of data but cannot be the reason for excluding data for the purpose of risk quantification.

#### (b) The treatment of incomplete recovery processes

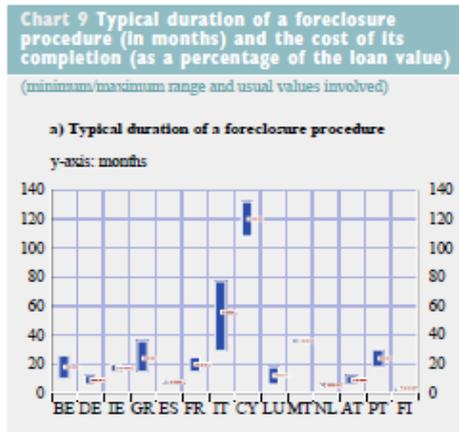
Another important aspect related to the requirement to use “all observed defaults” is that it implies that also incomplete recovery processes, where default has been identified but the collection process is still ongoing, have to be taken into account in the LGD estimation. Although the information regarding open cases may not be complete it is important that experience on those cases is also reflected in the LGD estimates for the following main reasons:

- The portfolios of open recovery processes are typically composed of relatively more difficult cases with higher on average losses compared to closed default observations. This is because closed default observations include those exposures which cured and returned to non-defaulted status, as well as those where recovery processes were efficient and it was possible to recover full amount. On the other hand, the incomplete cases include those exposures which are particularly difficult to recover and hence the collection process is longer than usual, leading most likely to higher losses in the end. These higher losses may be stem either from lower nominal recoveries or may result from discounting effect over a longer than average recovery period. For this reason, where the incomplete recovery processes are not reflected in the risk quantification the LGD is underestimated and does not reflect the full range of the loss distribution.
- The incomplete recovery processes include information on the most recent experience. In the case of significant new trends in the recovery processes these will not be captured by the LGD models in a timely manner if the incomplete recovery processes are not included in the LGD estimation. This may lead to inaccurate assessment of risk and, as a result, to inadequate capital requirements.
- Where incomplete recovery processes are not reflected in the LGD estimation institutions are incentivised to keep the most difficult cases in an open status as long as possible. This may not only lead to less efficient recovery processes but also creates risk of regulatory arbitrage where institutions may artificially extend recovery processes in order to avoid increase in LGD estimates and capital requirements.

The EBA Guidelines on PD and LGD estimation provide further clarification on how to reflect incomplete recovery processes in the LGD estimation in a prudent manner and introduce the

concept of the maximum length of the recovery processes beyond which institutions should treat the observations as closed and they should not estimate any further recoveries.

Figure 2: Typical duration of a foreclosure procedure in months and the cost of its completion (as a percentage of the loan value)



However, the EBA survey on internal models conducted at the end of 2016 among European banks revealed that in around 30% of models the incomplete recovery processes are not included. In particular, it has been until now interpreted by some supervisors that the requirement to use all observed defaults refers only to closed recovery processes. In connection with particularly lengthy recovery processes in some countries, as presented in Figure 2<sup>8</sup>, this interpretation may have significant impact on the current LGD estimates and on the potential impact of NPL sale that may be observed under these circumstances.

Comparison of statistics on the typical duration of foreclosure procedures for mortgages in Member States (see Figure 2) confirms the lengthy duration of foreclosures procedures in some EU countries. This aspect is confirmed based on responses received in the EBA survey on internal models<sup>9</sup>. The average time of the recovery process is 2 years and 8 months across all LGD models in the sample, but this average hides considerable heterogeneity, with a maximum of 20 years and 5 months observed in one institution. In the sample of the IRB survey, the average time of the recovery process is the highest in Italy with an average duration of 3 years and a half. The average duration of a recovery process is also relatively long in France, where it lasts around 3 years and 2 months to recover the assets on average. In contrast, the average recovery period is only 1 year and 10 months in Sweden. The average length of the recovery period however is impacted not only by the limitations of the legal systems across countries, but reflect also the institution's efficiency in recovery processes, their collection strategies, business models and especially their policies on when they treat exposures as closed in case the recovery processed are not successful. In addition, the expected length of legal recovery procedures may induce banks to sell NPLs quicker, thereby reducing the average length of the recovery processes of loans held on the balance sheet.

These aspects and current modelling approaches are closely related to the potential impacts of the NPL sales. For those institutions which currently do not reflect incomplete recovery processes in the LGD models, and which keep these exposures open for a relatively long period of time despite the recovery efforts not bringing any results, the impact of the NPL sales at a discounted price will be the highest.

<sup>8</sup> Source: ECB, 2009, Housing finance in the euro area, page 37 (<https://www.ecb.europa.eu/pub/pdf/other/housingfinanceeuroarea0309en.pdf?f2aff929716c20859ea899c00d8f2ccf>).

<sup>9</sup> <https://www.eba.europa.eu/documents/10180/1720738/EBA+Report+on+IRB+modelling+practices.pdf/0212ecde-426d-4e18-84f8-04b036dcce00>



However, it has to be stressed that when implementing the Guidelines on PD and LGD estimation institutions will have to reflect the incomplete recovery processes in their estimates regardless of the decision of whether they sell the NPL portfolios or not. For the institutions meeting the conditions as described above the implementation of the Guidelines prior to a sale would lead to much lower impact of the sale of NPLs. In fact, the necessity to implement this aspect of the Guidelines may incentivise institutions to proceed with the sale; this may happen in the situations where taking into account the discounting effects over a long recovery periods and the application of the maximum length of the recovery process in the LGD models the strategy to sell NPLs at a discounted price but receiving the cash flow immediately may lead to lower realised LGDs in comparison to when these exposures would be kept on the balance sheet of the institution.

### (c) LGD estimates appropriate for economic downturn

Another aspect in the regulatory framework which naturally limits the effect of NPL sales, is the requirement for LGD estimates to reflect an economic downturn situation<sup>10</sup>. If implemented correctly, this requirement should lead to relatively stable estimates of LGD even in the periods of higher losses. The objective of this requirement is twofold:

- (i) to ensure that institutions hold sufficient capital buffers to absorb higher than average losses and allow their functioning even under severe economic conditions; and
- (ii) to avoid potential pro-cyclical effect of significant increases of capital requirements under unfavorable economic conditions; hence the necessary buffer should be built up already in the periods of economic boom.

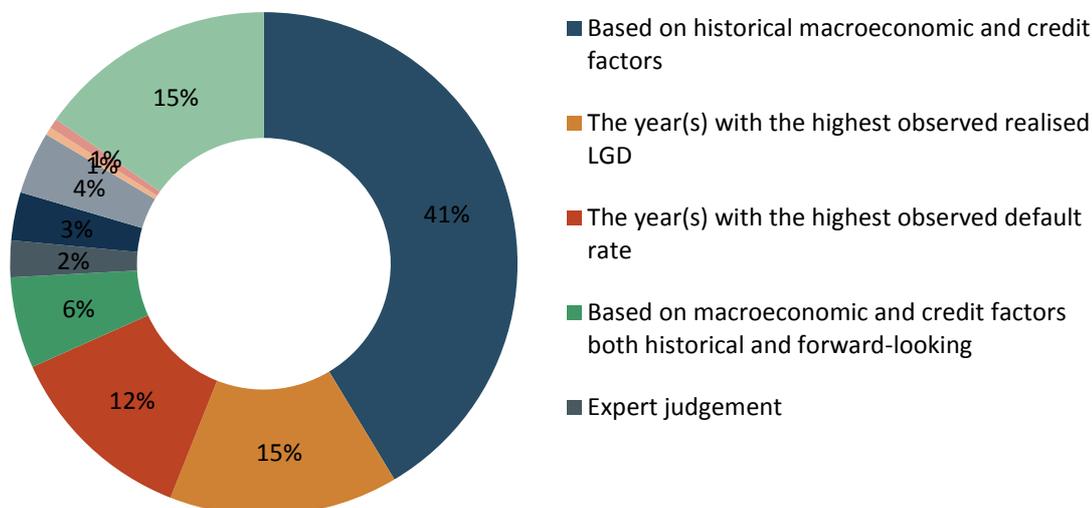
Where institutions currently already estimate LGDs which are appropriate for an economic downturn, the additional effect of NPL sales will naturally be limited. Only in the case where this aspect has not been sufficiently taken into account in the past, this will exacerbate the impact on LGDs from such NPL sales. The current situation only makes it even more important to ensure that the downturn LGD component is appropriately reflected in the models and the case of NPL sales should not prevent proper enforcement of this matter, as otherwise banks would not be sufficiently immune against potential similar situations in the future.

According to the results of the EBA survey on IRB models, as presented in the figures below, there is a wide range of practices regarding the identification of economic downturn and approaches on how to reflect it in the LGD estimates.

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<sup>10</sup> Article 181(1)(b) of the CRR

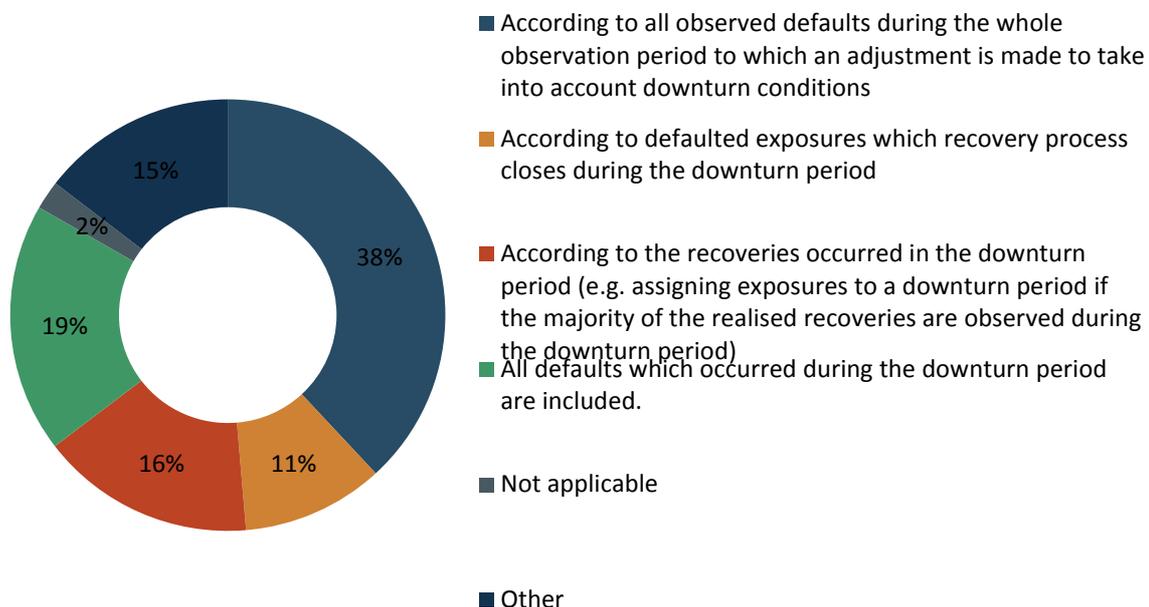
Figure 2: How is a downturn period defined?



As presented in Figure 2, the identification of economic downturn is typically based either on some economic or credit factors, or on the internal experience related to default or loss rates. These are two fundamentally different approaches which may lead to very different results. In particular, where downturn estimates are based on the previously observed losses, and the available data series do not include any severe peaks in the levels of losses, the impact of the NPL sales on downturn LGD estimates may be significant. Where, however, such a potential situation has already been envisaged in the model either through an analysis of economic indicators or even by expert judgement, the impact of including the new observations after the sale will be much lower.

A similar conclusion can be obtained from Figure 3, which shows the dispersion in practices regarding the selection of data used in downturn estimation. The choice of data for the estimation of downturn LGD, whether it is based on all observations or some form of selection of observations, has a significant impact on the final results.

Figure 3: How are data selected used in downturn estimation?

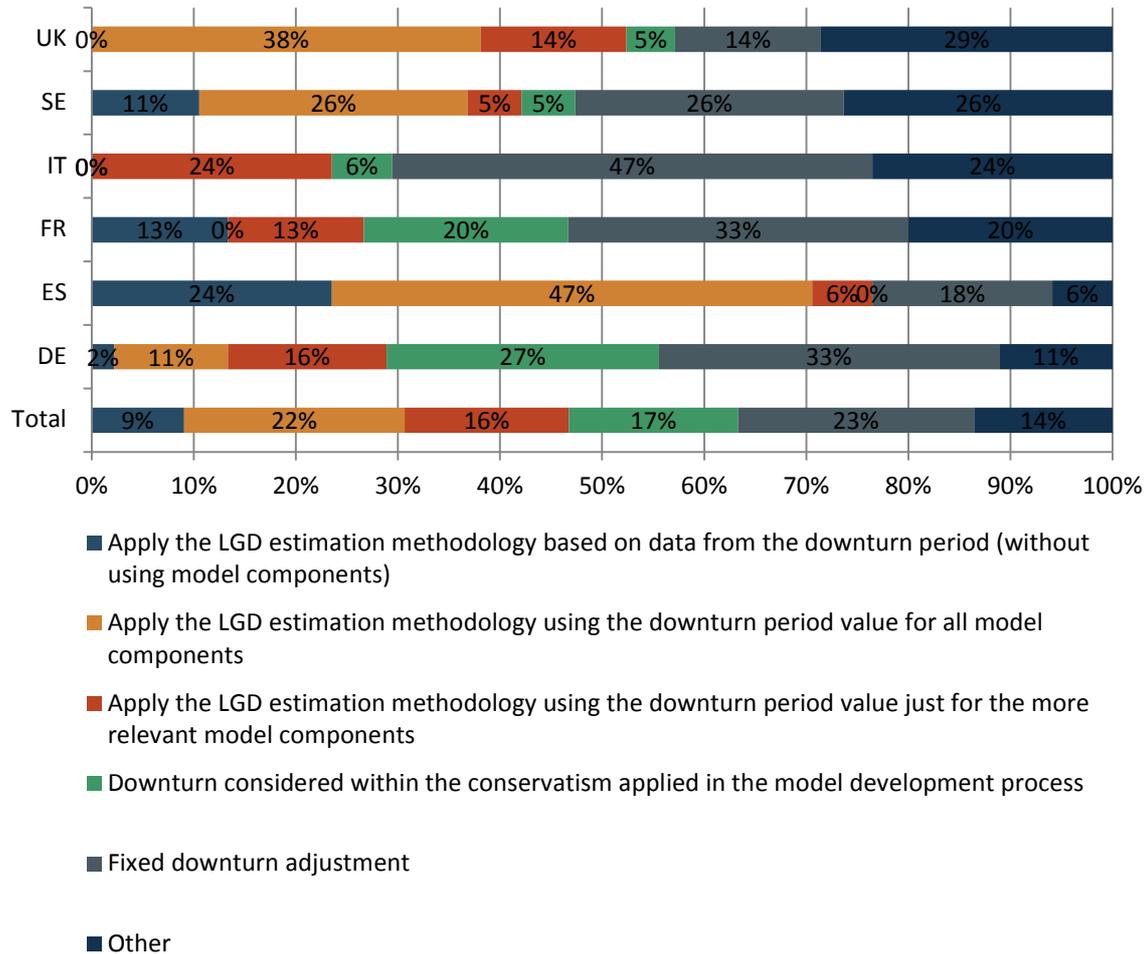


Finally, also the methodology to determine LGD estimates that are appropriate for an economic downturn differs substantially across institutions and countries, as presented in Figure 4. Although in some cases the information may be based on a limited data, (the graph shows the results for those Member States where information about at least 15 LGD models was available), already this data presents wide dispersion of practices regarding the methodology to reflect the conditions of economic downturn in LGD estimates. The approaches range from the use of the value of losses in the downturn period, through stressing certain model components (16%) to fixed downturn adjustment. In the case of some models downturn is considered to be reflected through the margin of conservatism and hence no downturn adjustment as such is used. On a country-by-country basis, sizeable differences can however be observed. For instance, the approach of a fixed downturn adjustment seems to be particularly popular among Italian banks participating in the survey, while in Spain and in the UK the approach based on model components is more often in use.

Again, the methodology for the estimation of downturn LGD has significant impact not only on the current values of LGD estimates but also on how will the potential NPL sales affect these estimates. In particular, in the case of fixed downturn adjustment the new observations related to the sold exposures will be included in the long-run average LGD, to which the adjustment will be applied. The fixed downturn adjustment itself is not sensitive to the current economic circumstances.



Figure 4: What is the main methodology to determine LGD estimates that are appropriate for an economic downturn? – by country



These differences in practices naturally imply that the starting point for institutions across the EU is different: for some the level of conservatism has been higher than for others, which ensures that the effect of NPL sales on LGD estimates will be smaller or could even be zero in case downturn estimation already fully assumed such NPL sale scenario. However, in principle, all LGD estimates should currently already be reflective of this downturn scenario.

The EBA and ECB have already taken efforts to increase harmonisation in practices and to ensure appropriate estimation of downturn LGD. In particular, the EBA is currently finalising the RTS on the nature, severity and duration of economic downturn and the Guidelines on the estimation of downturn LGD. Once this work is completed and necessary changes are implemented in the institutions’ rating systems, it is expected that the LGD models will reflect more appropriately the conditions of economic downturn, minimising the effect of potential NPL sales. It has to stressed however, that the appropriate estimation of downturn LGD has to be incorporated in the rating systems regardless of whether the NPL sale actually takes place or not.

Implementation of data waivers would put in questions this important aspect of the IRB framework and would undermine the current regulatory work, as data representing losses

appropriate for economic downturn would be excluded from the LGD estimation. This would as a result lead to underestimated levels of this risk parameter without providing sufficient capital buffer for the times of unfavourable economic conditions.

#### (d) Model design

While the calibration of risk parameters has to be based on harmonised definitions and techniques in order to ensure comparability of the capital requirements, the model development, understood as differentiation of risk related to individual obligors or exposures, should be adequate to the individual risk profile and relevant policies in the institutions. The flexibility in the choice of risk drivers and in the design of the model ensures the risk sensitivity of the capital requirements calculated in accordance with the IRB Approach. Where appropriate, the design of the model may in particular reflect different recovery scenarios, cure rates or other intermediate parameters. These elements, if incorporated in an adequate manner, may help reflect the impact of the NPL sales in the LGD models in a reasonable manner.

One of the potential ways of reflecting the NPL sales in the LGD model is by estimating the recoveries under certain possible recovery scenario together with the probability realising such a scenario. The probability of a given scenario would depend on certain risk drivers which could include macroeconomic or credit indicators (such as for instance the NPL levels). Where the level of LGD estimates would increase with the increase of the levels of NPL in the portfolio, this would incentivise the banks to keep dispose of their NPL portfolios and keep NPLs at a low level.

The above example is just one of many possible ways of designing the LGD model and reflecting the impact of the NPL sales. Depending on the chosen approach, the impact may differ and may produce different incentives for the institution. However, regardless of the final choice regarding the design of the model, both the institutions and their supervisors should make sure that the estimates reflect appropriately the conditions of economic downturn.

#### (e) Capital requirements for defaulted exposures

Finally, the IRB framework already includes an ultimate incentive to maintain low levels of NPLs in the form of capital charges for defaulted exposures. These, taking into account the combined effect of the expected loss (reflected through the level of capital) and unexpected loss (reflected through minimum capital requirements), are typically more punitive than in the case of non-defaulted exposures.

As currently various practices are observed with regard to the treatment of defaulted exposures, especially when it comes to the estimation of risk parameters for defaulted exposures such as LGD in-default and best estimate of expected loss (ELBE), institutions may expect different impact of the NPL sales on those parameters and on the resulting capital charges. However, the EBA Guidelines on PD and LGD estimation clarify also these aspects which will create a more uniform basis for estimating potential impacts of the NPL sales. After the implementation of the Guidelines the capital charges for defaulted exposures will have to reflect elements such as the time during which the exposure has been in default and discounting effects over the recovery



period. As defaulted exposures kept on the balance sheet for a longer period of time will carry higher capital charges, this will create an additional incentive for timely resolving the NPL issues.

## Conclusions

The EBA and the ECB recognise that current high levels of NPLs on the banks' balance sheets pose a threat to the European banking sector and that adequate measures are necessary to resolve this situation. These measures should provide sustainable solutions which will help avoid building up of NPLs in the future. Keeping these objectives in mind, the ECB and the EBA have already undertaken necessary supervisory and regulatory steps towards this direction.

While efforts have to be taken to prevent, to the extent possible, excessive build-up of the NPL portfolios, the variability of the levels of NPLs is part of an economic cycle and it cannot be argued that the current situation is so extraordinary that it should be treated as a one-off event. In order to protect the stability of the banking sector, prudential regulation has to ensure that institutions are prepared for a potential similar situation in the future.

Short-term measures undertaken to resolve the current situation should not undermine the long-term objectives of the safety and stability of the financial sector. In the view of the EBA and the ECB introduction of the proposed data waivers in the LGD estimation would not only lead to underestimation of risk and insufficient capital requirements but it may also undermine the fair competition between institutions on the single market. Moreover, such data waivers would provide wrong incentives, providing preferential treatment for banks with elevated levels of NPLs and hence punishing those institutions which have implemented more effective risk management policies.

As described in detail above, the current regulatory framework already allows for adequate treatment of NPLs, without posing significant obstacles to the NPL sales. The biggest concerns about potential impact of NPL sales exist in the context of IRB models, where the LGD estimates currently do not reflect appropriately the incomplete recovery processes and the conditions of economic downturn. These aspects are addressed as part of the broader repair of IRB models, as highlighted in the EBA Report on the regulatory review of the IRB Approach<sup>11</sup>.

Because of all the counterbalancing mechanisms mentioned above, it would not be appropriate to perceive internal models as an impediment to NPL resolution. The current work on internal models is indeed not inconsistent with NPL resolution. It is in fact clear that tools exist already within the current framework, where rating systems may include risk drivers incentivising the reduction of NPL assets due to the positive impact on LGD estimates.

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<sup>11</sup> <https://www.eba.europa.eu/-/eba-sets-out-roadmap-for-the-implementation-of-the-regulatory-review-of-internal-models>