UK FINANCE

A response to the

The PRA's consultation paper CP 21/19 on

*Credit risk: Probability of Default and Loss Given Default estimation*

*December 2019*

## *Introduction*

UK Finance is the collective voice for the banking and finance industry in the UK. Representing more than 250 firms, we act to enhance competitiveness, support customers and facilitate innovation. Our members are large and small, national and regional, domestic and international, corporate and mutual, retail and wholesale, physical and virtual, banks and non-banks. For many of our EEA and third country headquartered members their London operations are an important hub providing access for them and their clients to the international financial markets. Our members' customers are individuals, corporates, charities, clubs, associations and government bodies, served domestically and cross-border. These customers access a wide range of financial and advisory products and services, essential to their day-to-day activities.

We are pleased to respond to the PRAs consultation paper 21/19 *on The Probability of Default and Loss Given Default estimation.* It is relevant to our bank and building society members that have been granted a waiver to use an IRB approach for credit modelling purposes, regardless of exposure type.

## *Scope*

We note that the focus of the CP is very much on mortgage portfolios. From this we infer that for non-mortgage portfolios that are not specifically addressed in the CP, firms are able to determine their own approaches, and would appreciate the PRA's confirmation that this is the case.

## *Challenging implementation dates*

Our members are fully committed to the objectives of the EBA's IRB repair programme which support enhanced consistency and comparability. Nonetheless the work programme is intensive. There are likely to be a significant number of changes to IRB models, some of them material and overlapping with multiple other upcoming IRB policy changes, including the introduction of the mortgage PD hybrid approach and the final Basel III framework by 2022. This will require the PRA to review a

significant number of model amendment requests and notifications over a short period of time. So, our members welcome the PRA's clarification that the deadlines for implementing the EBA roadmap will be aligned with the deadline for the hybrid modelling approach and that for other non-mortgage portfolios the implementation deadline has been extended to 1st January 2022.

There are three additional issues which cause us concern in relation to implementation dates, which are:

*The Implementation date for Residential Mortgages should be 2021/1/1*

The PRA have prioritised the implementation of residential mortgages portfolios ahead of all other asset classes and proposed that the live date is aligned for all changes to definition of default for SA and IRB and changes to the IRB models including the hybrid PD approach.

The implementation deadline for modelling changes to residential mortgage portfolios and the application of the revised definition of default remains at 31st December 2020 which we understand is to align with the current implementation date for EBA RTS 2016/06 on materiality threshold for credit obligation past due.

We strongly recommend that the live date should be extended by one day 1st January 2021 instead of 31st December 2020, and note that:

- In PS 7/19 the PRA have stipulated £0 and 0% materiality threshold for Retail exposures and allowed firm to continue using 'month in arrears' approach which is commonly used by our members. Therefore, the RTS on materiality threshold has little or no bearing for Residential Mortgages portfolios.
- EBA Progress report on IRB roadmap paragraph 17 confirms that whilst the deadline for implementation of the GL on default definition and the RTS on materiality threshold remains unchanged, i.e. the end of 2020, the application date is from 1st January 2021.
- Due to interaction between definition of default in CRR, IFRS9 and FINREP, the live date of 31st December 2020 will introduce significant implementation and reporting burden arising from the need to restate the previous year's figures that could be alleviate by aligning the live date to 1st January 2021 for all elements of change for Residential mortgages portfolios.

*Challenges arising from different implementation dates for SA and IRB where a common credit system is used*

We request that the PRA clarifies whether the deadline of 31st December 2020 (CP21/19 paragraph 1.18) for the implementation of RTS on materiality threshold for all portfolios is applicable only to SA firms or also to IRB firms who treat certain exposures under SA (e.g. per CRR Article 150).

Where an IRB firm has Standardised portfolios of that share the same credit system, the credit processes for identification of default are, generally, not differentiated by type of approach either SA or IRB exposures. Creating separate processes increase risk in these portfolios through the difficulty of introducing the new materiality thresholds at different times based on the approach used, which is not in itself a material factor in the risk on those exposures. Such an approach may also lead to the different elements of the revised definition of default being introduced at different times, which

significantly adds to the complexity of implementation. On the other hand, bringing the implementation date for IRB portfolios forward to be aligned with Standardised is not practical due to the magnitude of the change required to the IRB models, which is not an issue for Standardised firms.

This issue that has also been recognised by the EBA in paragraph (11) of their final draft of RTS on Materiality threshold on credit obligation past due stipulate that:

> *"In the case institutions that use the IRB approach apply the Standardised Approach to a part of their exposures on the basis of Article 148 or 150 of Regulation (EU) No 575/2013 it would be desirable to align the time of application of the new materiality threshold for all exposures of the institution. As a result, it would be desirable for competent authorities to provide, in their respective jurisdictions, longer periods for the application of the threshold to certain categories of firms, based on the principle of proportionality."*

*De prioritisation of the F-IRB approach*

In respect of implementation of definition of default, we would seek confirmation that the PRA expect to see models moving onto F-IRB de-prioritised, for example, where own estimates for LGD will no longer be permitted under the finalised Basel 3.1 approach. We also understand that CRR Article 146 can be used for remediation if materially non-compliant, and temporary waivers can also be applied for direct with the PRA.

## ***Cyclicality***

## *Para 2.7 Limited data and Margin of Conservatism*

We believe that the PRA's approach to the Margin of Conservatism does not expect firms to apply extra conservatism or necessarily increase RWAs as result of the EBA GLs but rather to better document Margins of Conservatism and evidence their assessment and justification of the conservatism currently embedded in the models and how it maps across to different conservatism category types.

However, proposals are not clear around how the PRA expect Margins of Conservatism to be reflected in parameter estimates which is a modelling decision with the potential to result in volatility across firms' Pillar One outputs. Do the PRA propose to include any more detailed guidance around application?

## ***Discount Rate***

## *Para 2.19 (i)- discount rate when estimating LGD*

Section 2.22 describes the PRA's view that SONIA + 5% is not an appropriate discount rate for downturn LGD, and that firms should use a 9% discount rate.

The PRA proposes the use of the Sterling Overnight Index Average (SONIA) at the moment of default plus 5% when estimating long-run average LGD. An alternative approach, which we would prefer, is to take the rate at the point of observation. In particular when calculating the Best Estimate Expected loss (BEEL), the discount rate should reflect the uncertainty in remaining recovery.

The PRA will continue to apply a 9% floor for discount rates used to estimate downturn LGD. We would like to clarify if this is intended for use for all currency pairs and note that the EBA requires banks to use local interbank rates plus 5%. Given differences in preferred approach by members, we would prefer to have the flexibility to either (1) set one discount rate across all portfolios or (2) use the local interbank or risk-free rates. See also our comment on page 9 in relation to mutual recognition.

## *Para 2.19 (ii) - Treatment of Cures*

Whilst Section 6.3.1 of the EBA's GL on PD & LGD provides a prescriptive treatment in regard to the timing and value of cash flows associated with cured exposures, the PRA's suggested approach leaves room for interpretation and inconsistency.

To ensure a harmonised application of the calculation of economic loss for cured exposures, clarity is required in the following areas:

1. Artificial cash flow – timing and value of **principal** and **fees** components (the accrued interest component has already been specified in CP21/19)
2. Timing and value of **additional observed recoveries** from moment of default
3. Timing and value of **additional drawings** from moment of default
4. Timing and value of **costs** incurred from moment of default

It is our view that all components of the artificial cash flow should be captured at the moment of cure (principal, interest and fees). Additional cash flows related to observed recoveries, additional drawings and costs should also be recognised up to the moment of cure only. In this context, historical data associated with cash flows observed during the end probation and independence periods would not be taken into consideration for the calculation of economic loss. The rationale for this is:

- Paragraph 2.19 ii) of CP21/19 already specifies that accrued interest should be taken from the moment of cure when calculating the artificial cash flow. If a different timing is specified for the capture of other components or cash flows, this would lead to a counter-intuitive disconnect with the treatment for accrued interest.
- In line with Paragraph 2.24 of CP21/19, the proposed treatment would reflect the economic reality of exposures and the timing of cash flows.

In addition, Paragraph 2.19 ii) of CP21/19 clarifies that the "artificial cash flow should only be discounted over the actual period the exposure was in default and, therefore, not including the probation period or the independence period". In the context of 'multiple defaults' (as defined in Paragraph 101 of the EBA's GL on PD & LGD) which eventually cure, it is unclear whether the discounting period should include the time between each moment of 'temporary cure' and return to default status.

As an illustrative example: Consider a defaulted exposure which temporarily cures on 1/1/2017, re-defaults on 1/6/2017 (within the independence period), and eventually resolves with a final cured outcome on 1/12/2018. It is unclear whether the artificial cash flow (and all other relevant cash flows associated with a cured exposure) should be discounted over the period between 1/1/2017 and 1/6/2017 since the exposure was not in default during this period. Note that for a given defaulted exposure, this behaviour may occur several times before final cure.

In the specific case of mortgage portfolios, which are collateralised, calculation of loss given cure (LGC) based on the discounting of artificial cashflows is not consistent with the calculation of loss given default for defaults that do not cure. We note that EBA GL2017/16 (Paragraph 135) states that the loss realised on exposures that return to a non-default status should be calculated in the same manner as for all other defaulted observations, with the difference being that an artificial cash flow is added to the calculation of the economic loss, equal to the outstanding obligation at moment of cure, discounted to the moment of default. As mortgages, the LGD is sensitive to LTV (loan to indexed value) and considers PPGD, as well as uncertainty around valuation of the collateral at the time of realisation through FSD, we believe that calculation of LGC should not be based on approach that is purely sensitive to discount rate and time in default and ignores the existence of collateral.

Furthermore:

- For lower LTV, where the likelihood of litigation is relatively small and realisation of collateral is unlikely to lead to material loss even after consideration of FSD haircut and downturn assumptions, the proposed approach in combination with 9% discount rate will result in higher LGC compared to LGP (loss given possession), which is counter intuitive.
- The sensitivity to time in default as oppose to risk drivers combined with more stringent regulation on condition for exit from default may potentially result in more aggressive behaviour towards litigation and remove incentive to rehabilitate customers in financial difficulty- an unfair customer outcome.
- The higher expected loss for low LTV mortgages may result in indifference to low LTV lending which could re-balance portfolios inappropriately.
- Current LGD models include discounting of (actual and expected but not artificial) recoveries at minimum 9%. This discount rate incorporates a risk premium that reflects the uncertainty of the recoveries that existed at the moment of default.
- The 5% LGD floor at individual level already addresses the concerns regarding prudence of zero loss assumption for cures.
- Introducing such overly penal/inconsistent approach to estimating LGC is likely to act as a barrier to the Use Test, as it does not align to management practice or actual experience of loss.

Therefore, for the residential mortgages only, we propose that the LGC should be calculated based on discounting the cashflows expected during default (principal, interest and fees) but not the total remaining principal at the time of cure as this is already covered by existence of collateral. Furthermore, any uncertainty around its valuation and realisation already captured in the current LGD models.

## *Para 2.19 (iii) – Capping the expected cashflows to contractual entitlement*

In paragraph 2.19 (iii) and paragraph 2.25 the PRA introduce *an expectation that firms only recognise the recoveries they are contractually entitled to retain as this reflects the economic reality of the expected cash flows*. Whilst we agree that calculation of LGD should not be biased by over estimation of realisable recoveries, this cap in combination with minimum 9% discount rate will, we believe, diverge from the reality of expected cashflows and observed realised LGD.

Furthermore, it is not clear whether this expectation is in relation to artificial cashflows for the purpose of calculating Loss Given Cure or if it is in relation to capping the realisable collateral value for the purpose of Loss Given Possession or both.

- If the expectation laid out in paragraph 2.19 (iii) only refers to inclusion for artificial cashflows and the intension is to exclude the outstanding principal in a way that artificial cashflows are limited to the contractual cashflows that the bank expected to have received during the period that exposure was in default we agree and believe it alleviate the concerns outlined in previous section. It is noted that whilst a 9% discount rate is not necessarily aligned with the reality of expected cashflows, it could be argued it is required to capture the uncertainty that existed at the time of default. However, we ask the PRA to clarify the intention in this paragraph.

- If the intention is that the cap introduced in paragraph 2.19 (iii) should also apply to realisable collateral value (RCV) for the purpose of Loss given Possession (LGP), we note the mismatch between the interest rate used to estimate exposure at sale (for the purpose of calculating a bank's contractual entitlement) which is based on the product interest rate, whilst the rate at which the cash-flow from the repossession is discounted is at a minimum 9%. Given the uncertainty is already captured through HPI peak to trough adjustment and FSD haircut, this mismatch is considered excessive.

  In particular in periods of prevailing low interest rate, this requirement would disincentive firms to offer fixed rate products, as shown in the example below.

| | | |
|---|---|---|
| **Exposure at Default** | 130,000 | |
| **Valuation** | 300,000 | |
| **DTV** | 43.3% | |
| **Trough Valuation** | 225,000 | (25% PTT) |
| **Post FSD** | 157,500 | (30% FSD) |
| **Exposure at Sale** | 136,955 | (2.64% 5 Year Fix; 2 years unpaid interest) |
| **Realisable Collateral Value** | 136,955 | |
| **NPV Discounted Cashflow** | 115,272 | (RCV Discounted @ 9%) |
| **LGP** | 14,728 | |
| **LGP %** | 11% | |

For illustration the example above is repeated where product interest rate is the same as discount rate (both at 9% for simplicity )

| | | |
|---|---|---|
| **Exposure at Default** | 130,000 | |
| **Valuation** | 300,000 | |
| **DTV** | 43.3% | |
| **Trough Valuation** | 225,000 | (25% PTT) |
| **Post FSD** | 157,500 | (30% FSD) |
| **Exposure at Sale** | 154,453 | (Same 9% Interest Rate as Discount Rate, 2 years unpaid) |
| **Realisable Collateral Value** | 154,453 | |
| **NPV Discounted Cashflow** | 130,000 | (RCV Discounted @ 9%) |
| **LGP** | - | |
| **LGP %** | 0% | |

## ***Use of type 3 models***

## *Para 2.26 & 2.28 – Use of component-based modelling approach for downturn LGD*

The PRA has taken a significantly tougher stance regarding the use of type 3 approach compared to the EBA when it states in para 2.28 of PRA CP21/19 "*that it is unlikely that a firm can justify using an approach in line with Section 7 of the GL on downturn LGD*".

Whilst the PRA has proposed adopting a hierarchy of approaches for the purposes of estimation of downturn LGD estimates as set out by the EBA in section 4.3 of the EBA GLs on Downturn LGD estimation[1], para 2.28 of PRA CP21/19 of the PRA proposal restricts the use of type (3) approach.

However, there are examples in member portfolios, where there is insufficient data to design the downturn LGD either using a type (1) empirical model based on loss data, or type (2) model extrapolating from macroeconomic data. Some member footprints in wholesale cover many small and developing countries where they may have smaller portfolios, in particular considering the EBA requirements regarding calibration segments per section 4 of EBA GLs on Downturn LGD estimation. We would note that this is also disproportionately complex analysis for the small data sets and portfolios.

Members, who envisage needing to use type 3 models for certain portfolios, have concerns that firms will be required to attempt to develop a type 2 model. In such cases, use of type 2 models is not likely to produce a credible or robust output that is fit for purpose or usable for the purposes of sound risk management. We would like to raise and address this issue early to find a cost and resource efficient solution for both firms and the supervisor resource to avoid duplication of work.
It is worth highlighting that the EBA GLs on Downturn LGD estimation requires strictly positive type A MoC specifically to account for the missing data (i.e. inability to use type 1 or type 2 approach) when type 3 approach is used. In addition, the downturn LGD estimates estimated through type 3 approach are floored to long-run average LGDs plus an add-on of 15 percentage points.

With the amount of conservativism and requirement for firms to provide justification already incorporated in EBA GLs on Downturn LGD estimation, we believe it is excessive to introduce additional burden of proof by the PRA for firms regarding the use of type 3 approach.

We urge the PRA to re-consider its position on the use of type 3 approach. We emphasise that the EBA GLs on Downturn LGD estimation already allow the use of type 3 approach only in scenarios where firms are able to provide justification to the satisfaction of the competent authority that they cannot calibrate downturn LGD appropriate for the considered downturn periods by applying type 1 and type 2 approach.

## *Para 2.29 – use of time lags in component-based modelling*

[1] observed impact (type 1), estimated impact (type 2), other approaches (type 3)

Section 2.29 describes the approach to be taken to identify the downturn element for LGD model components. Can the PRA clarify expectations with regard to the approach to be taken for peak values of components that may occur outside of the identified downturn period particularly with respect to residential mortgages?

***Treatment of defaulted exposures***

## *Para 2.42*

The PRA has proposed that, based on the EBA guidelines, banks should have a separate LGD model for defaulted portfolios. The CRR is unclear on the calculation of unexpected loss and the PRA previously allowed for an independent calculation approach as well as subtraction of best estimate of expected loss (BEEL) from post default LGD.

The EBA GL2017/16 paragraph 186 clarifies that where the model used for credit risk adjustments satisfies or can be adjusted to satisfy the requirements for own-LGD estimates set out in CRR for LGD, then the institutions may use specific credit risk adjustments as BEEL estimates. There are two questions in relation to this about which we would ask the PRA to clarify their expectations:

- *Use of CRA when the provisions are not based on models* Members using the Individual Impairment (IIP) as the LGD in default believe it is more accurate than modelled output and thus request that the PRA continue to allow to use the IIP as LGD in default.

- *PRA approval* We seek clarification regarding the level of documentation and approval the PRA expects on IFRS9 models and processes. UK Finance members believe that firms are required to provide evidence that their IFRS9 models satisfy the conditions set out in in EBA GL 2017/16 paragraph 186 but are not required to bring their IFRS9 models and accompanying documentation in its entirety into the PRA notification framework. In particular, the underlying changes to the IFRS9 models should not be subject to pre-notification and ex-ante, as timely implementation of changes to these models is essential for reflecting the true and accurate expected loss for accounting.

## *Mutual recognition for local models*

We request that the PRA adopts the mutual recognition approach for local models. Where local regulation deviates from the PRA requirements, we urge the PRA to accept these deviations for local (non-UK) models where these are approved by an equivalent competent authority (CA).

In particular, it is requested that PRA recognises the discounting rates used for downturn LGD estimates for local models that are approved by a CA (i.e. mutual recognition). An example would be mutual recognition by the PRA for a discounting rate for the purposes of estimating downturn LGD for a French LGD model that is approved by the ECB.

This will not only ensure consistency but will also avoid unduly burdensome requirements for firms to report local models on dual basis.

## *Other issues*

### Direct & indirect costs of recovery

For EBA/GL/2017/16 section 6.1.2 (articles 108, 113, 13) and section 6.3.1.4 (articles 144, 145, 146), we would welcome further clarity on the definition of indirect costs as these are considered operational costs and do not fall under the credit capital calculations. If such costs have to be included in the credit risk part, this may lead to double counting.

### Additional guidance requested on treatment of post-default drawings

The EBA explicitly indicated that any additional drawings post default should be recognised in EAD. We would request further consideration of this guidance as seems more appropriate to include this in the LGD model for the following reasons:

- By definition, EAD refers to the exposure at the point of default. Were additional drawing post default be included in the EAD, the definition of EAD would have been altered, which might introduce confusion.

- The scope of EAD model has been significantly reduced in Basel 3.1 to revolving products. This means that the scope of the EAD would only cover some of members' revolving products. Should additional drawings take place in other products, it would not be factored in.

- An additional drawing post default may not reflect the true drawdown behaviour of the underlying product as the product carrying the additional drawdown feature is usually a vanilla loan extended to the borrower that that they can continue to service.

- From a modelling perspective, it would be challenging to factor the post-default drawing into the conversion factor (CF) as the post-default drawing is usually not linked to any limit structure. Without the limit, it is not possible to estimate the conversion under the momentum approach, which some members are adopting.

- We consider it more logical to include additional drawings as negative cashflows to the bank which is akin to additional loss. This can be discounted to the default date in the same manner as recovery or cost associated with the workout process.

### Incoming finalised Basel 3 interactions

The EBA progress report of 9 July 2019 on the IRB repair roadmap is considered in the PRA consultation in terms of proposed changes to the implementation timeline for the EBA IRB repair roadmap. However, this report also raises the potential for interactions of the final pieces of the EBA IRB repair roadmap with the incoming finalised Basel 3.1 being implemented in the EU via the Capital Requirements Regulation 3 (CRR3). This also concerns members, since the IRB repair roadmap

was designed to address deficiencies and variations in IRB estimates and implementation expected to achieve this.

### IRB modelling scope

The scope of EAD and LGD models has been significantly narrowed under the finalised Basel 3:

- Under LGD models to corporates with group consolidated revenue of less than EUR500 million, sovereigns and financial institutions treated as corporates, i.e. exposures characterised by a low number of defaults; and

- Under EAD only revolving commitments would be allowed to adopt model estimates.

Essentially, this means LGD-modelling in the future would only cater to a sub-set of corporates with group consolidate revenue less than EUR500 million, which significantly changes the wholesale model landscape for many firms.

However, UK firms already have PRA-imposed supervisory floors in place and are effectively under a quasi F-IRB approach. Given the repairs under the IRB repair roadmap and the changes being introduced under the finalised Basel 3 with specified LGD inputs, the PRA's remedial measures should no longer be necessary. We seek clarification that the current LGD supervisory floors of 35% and 45% on low default portfolios will be removed.

UK Finance and its members would be pleased to discuss issues raised in the response to CP24/19 in more detail. But we are similarly keen to receive the finalised amendment to the Supervisory Statement as soon as possible, in order that the wide-ranging changes to the IRB approach to credit risk can be completed so they can comply with the implementation deadlines.

*Responsible Executive*

✉ simon.hills@ukfinance.org.uk
☎ +44 (0) 203 934 1105