

IRB Benchmarking Survey

Nearing the end of the road?

February 2023



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New IRB mortgage models – Nearing the end of the road?

Introduction

The Internal Ratings Based (IRB) approach provides firms with a more risk sensitive approach to determining regulatory capital for credit risk. Following its initial implementation as part of the Basel II package of reforms, a number of studies called into question whether differences in implementation of the IRB framework – both within and across jurisdictions – may have resulted in divergences in risk-weighted assets (RWAs) not justified by differences in underlying risk.

As a result, regulators internationally have embarked on extensive programmes of reforms aimed at restoring credibility in internal models and reducing unwarranted RWA variability. From a Prudential Regulation Authority (PRA) and European Banking Authority (EBA) perspective, the key components of these reforms relate to the definition of default (DoD) and probability of default (PD) and loss given default (LGD) estimation, including a 'hybrid' PD calibration, with an initial focus on residential mortgage portfolios.

Following recent PRA IRB Roundtables and firm-specific model reviews over the course of 2022, many firms are concluding significant programmes of work on their residential mortgage IRB models to align with revised regulatory expectations. Against this backdrop, we invited a range of UK mortgage lenders – including both firms with existing IRB permissions and those in the application process – to participate in a targeted survey focussed on understanding how industry practices are evolving in relation to some of the remaining areas of uncertainty within the wave of recent regulatory changes for residential mortgage IRB models, and how these changes are ultimately impacting risk-weight outcomes.

About the survey

As we reach a critical period in many firms' IRB programmes, with final residential mortgages model regulatory submissions having been made or in their final stages, PwC UK launched its 2022 IRB benchmarking survey. The survey aimed to understand how firms are implementing key aspects of the revised IRB requirements for UK residential mortgage portfolios and, in particular, how industry practices have evolved over the past year in key areas of divergence relating to hybrid PD and Margins of Conservatism (MoCs) following on from our [2021 IRB benchmarking survey](#).

The survey consisted of 16 questions split into four sections. The focus of each section was as follows:

- **Section 1** looked at modelling and policy choices adopted by firms in implementing the regulatory changes relating to PD estimation, with a focus on scorecards, hybrid calibration and rating scales;
- **Section 2** focussed on the modelling and policy choices adopted by firms in implementing the regulatory changes relating to LGD estimation, with a focus on regulatory reference values for the probability of possession given default (PPGD) component and LGD values by loan-to-value (LTV) ratio;
- **Section 3** examined firms' experiences in implementing frameworks for MoCs, with a focus on the prominence, type and reasons for MoCs and the impact of MoCs on risk-weight outcomes; and
- **Section 4** considered how UK residential mortgage IRB risk weights are expected to be impacted by model changes currently being implemented, by product segment and LTV.

Given many participants' ongoing work in relation to their revised IRB residential mortgages model, the results of our survey represent a point-in-time snapshot reflecting varying levels of advancement in participants' programmes.

This paper provides a summary of the key highlights from the survey performed. We would like to thank all of the firms that took part in the survey for sharing their insights and for their time.



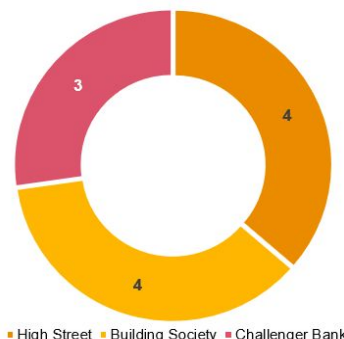
New IRB mortgage models – Nearing the end of the road? *(continued)*

Participant overview

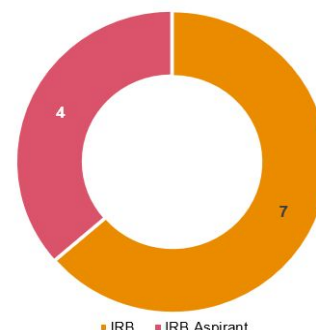
Asset Size (YE 2021)



Firm type



IRB status



A total of 11 firms participated in the survey, across a broad range of segments and asset sizes. Participants' total assets ranged from c. £11 billion to £435 billion as at 2021 year end. Of the 11 participants, 4 (or 36%) are IRB aspirants with active IRB programmes and the remaining 7 (or 64%) have existing IRB permissions for one or more portfolios. 10 participant firms have owner-occupied mortgage portfolios, whilst all 11 have buy-to-let mortgage portfolios.

Key takeaways

Overall, our survey found that recent feedback has provided further clarity over PRA expectations and driven greater convergence in both modelling and policy choices, and risk-weight outcomes. However, a range of risk weights continued to be observed, particularly for segments with higher risk and fewer observations.

Participants are removing bureau scores from scorecards

All participants have removed or are intending to remove bureau scores from their residential mortgage behavioural scorecards. For application scorecards, however, nearly half of participants signalled no immediate plans to remove bureau scores, though we understand that none of these participants has reached a final conclusion on this matter.

There is consensus on the through the cycle PD calibration period, but differences remain on point in time

In light of recent feedback on the through the cycle PD calibration period, we observe significant convergence in market practices, with almost all participants using a 'trough to trough' single economic cycle which includes the early 90s recession. On the other hand, practices are mixed in relation to the point in time PD component, with participants with longer representative data series using longer periods, and those with data limitations favouring shorter, more recent periods.

Participants are typically measuring and monitoring cyclicality on a peak-to-trough basis

Whilst participants have used a range of periods to measure and monitor cyclicality, peak-to-trough is by far the most common. In terms of the estimated level of cyclicality of participants' final long-run PD estimates, c. 90% of participants reported having levels ranging from 30% to 70%. This range is also being seen as an informal benchmark for regulatory expectations.

In light of recent feedback, participants are increasing the number of risk grades

We note that participants have increased the number of risk grades in their rating systems due to recent PRA feedback. Two-thirds of participants have been 12 and 15 risk grades, with almost all using a common rating scale across both owner-occupied and buy-to-let. Participants with fewer grades are increasing granularity.

MoCs have a greater impact on RWAs for buy-to-let than on owner-occupied portfolios

MoCs result in a more-than 20% increase in RWAs for a quarter and nearly half of participants for owner-occupied and buy-to-let, respectively. LGD models have the greatest number of MoCs applied, shortly followed by the PD and then EAD, likely driven by model complexity.

Average LGDs and risk weights are trending upwards across the board

Analysing participants' latest risk weight estimates by portfolio and LTV bands reveals that residential mortgage risk weights are generally increasing and converging. Lower LTV bands in particular exhibit less variation between participants, and buy-to-let risk weights are typically c.10-15% higher than owner-occupied.

Probability of default

The most significant area of regulatory change – and feedback – in relation to residential mortgage IRB models in recent years concerns PD estimation. Our survey was interested in understanding participants' use of bureau scores within PD scorecards given ongoing regulatory discussions on this matter. We also asked participants about the time periods used to estimate the point in time (PiT) and through the cycle (TtC) components of PD, the approaches to measuring and monitoring cyclicity, and the level of cyclicity ultimately observed. Our final area of focus related to the granularity of the rating scale.

Over recent years, a number of participants have been challenged on the dominance of bureau scores in their residential mortgage PD scorecards. We understand the PRA is primarily concerned about the lack of transparency over bureau scores and expects that, where they are included within scorecards, they are 'non-dominant' variables. Within this context, our survey looked to understand industry plans for the ongoing use of bureau scores within application and behavioural scorecards.

Application scorecards

Participants fell into three broad categories in relation to plans for ongoing use of bureau scores in application scorecards: (i) almost half of participants have removed or are removing bureau scores from application scorecards, with c. 60% of these replacing these scores with additional bureau variables; (ii) a further c. 40% of participants are not planning to remove bureau scores from their application scorecards or have not yet performed the relevant analysis; and (iii) the remaining c. 20% of participants do not use bureau scores in their application scorecards.

Of participants not currently intending to remove bureau scores from their application scorecards, however, we understand that none have reached a final resolution. Therefore, it is expected that participants' stances on this matter will evolve over coming periods.

Behavioural scorecards

As shown in Figure 1, c. 80% of participants have removed or are planning to remove bureau scores from their behavioural scorecards, whilst the remaining participants do not use bureau scores.

In comparing participants' responses in relation to application and behavioural scorecards, we note that bureau scores are more widely used in application scorecards. Unsurprisingly, the removal of bureau scores from application scorecards lags behind behavioural scorecards.

Our discussions with participants centred on two main drivers for this: first, firms have greater ability to maintain performance using internal data on customer performance within behavioural scorecards and, second, replacing application scorecards has significant downstream impacts, often necessitating the deployment of new scorecards in front-end systems, re-calibration of decisioning cut-offs and rethinking of sometimes decades-old decision-making tools. Given these challenges, we understand some participants have adopted a phased approach whereby bureau scores are first being removed from behavioural scorecards, before further plans for application scorecards are formalised.

The longer-term evolution of this matter remains an area to watch. There are currently no formal requirements in relation to the use of bureau scores within IRB scorecards. However, PRA Consultation Paper [CP6/22 – Model risk management principles for banks](#) provides an indication of the regulatory direction of travel in highlighting enhanced expectations over the use of third-party vendor models, including in relation to model validation, data and assumptions, and use and ongoing monitoring (Principle 2.6). Moreover, we note that the PRA's concerns over the use of bureau scores have to date been raised in the context of residential mortgage models specifically; however, in principle they apply equally to other portfolios.

Firms are removing bureau scores and indices from scorecards, with greater progress to date on behavioural scorecards

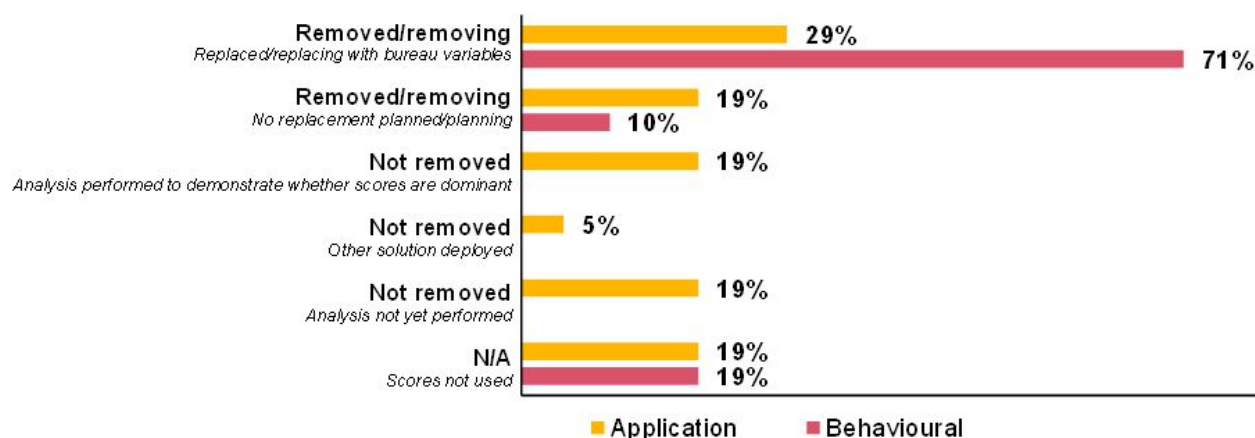


Figure 1: Removal of bureau scores and indices from application and behavioural scorecards

Percentages shown above represent an average across owner-occupied and buy-to-let portfolios, given that results were very similar. The total for application scorecards exceeds 100% as one participant selected more than one option due to taking different approaches for different scorecards.

Probability of default (*continued*)

Time periods used for calibration of the through the cycle PD have largely converged, but large differences remain on point in time, driven by data quality and representativeness

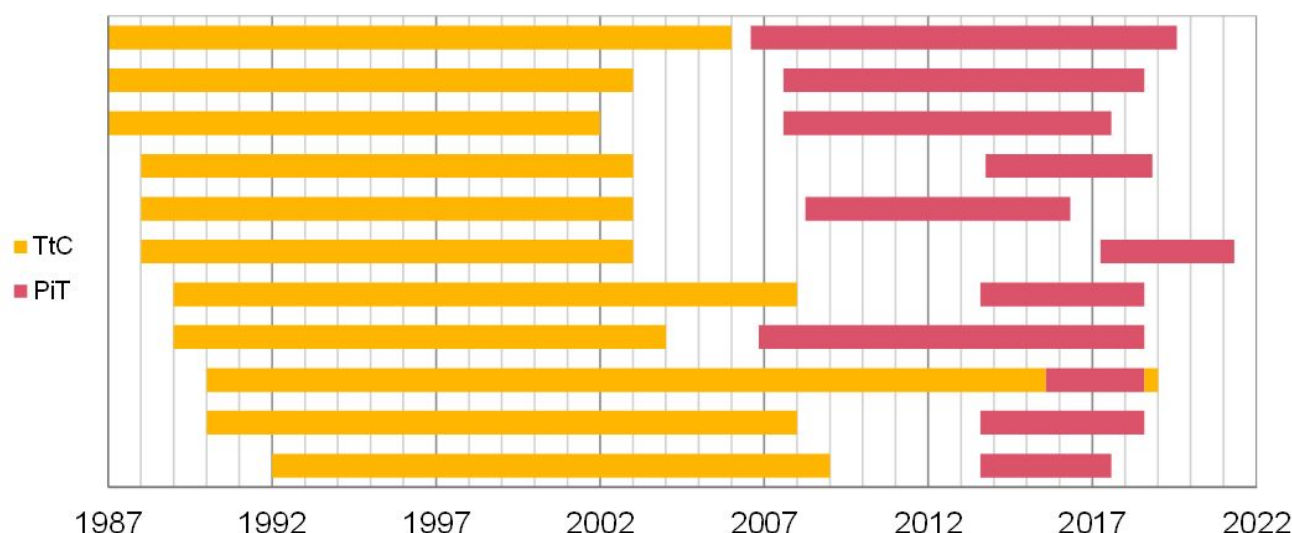


Figure 2: Time periods used to estimate point in time and through the cycle components of PD

The results shown above relate to only the buy-to-let portfolio as all participants have this portfolio. Otherwise, data across both portfolios are nearly identical.

Through the cycle

Figure 2 illustrates that there is a general consensus among participants regarding the time period used for the purposes of the TtC component of PD, with a trough-to-trough period representing a single economic cycle and including the early 1990s downturn, the dominant approach.

The most common time period, chosen by three participants, is the single economic cycle identified by a trough-to-trough approach typically spanning 15 years (1988 to 2003). This period encompasses a representative mix of good and bad economic periods. By including the '90s downturn, this potentially results in higher hybrid PDs dependent on firm's level of risk and backcast.

All but one participant used the same time period for both owner-occupied and buy-to-let portfolios, with one participant having used a period commencing one year later for buy-to-let.

Only one participant utilised a period covering two economic cycles for its TtC PD and, as a result, is the only participant for whom the TtC and PiT time periods overlap. We understand this participant intends to change its approach to align to the market norm.

Anecdotally, we understand that the convergence in the periods used for the purposes of the TtC PD is largely due to prescriptive regulatory feedback, based on the requirements to use a representative mix of good and bad years. We expect further convergence around a more similar TtC period over time, given that some participants are less advanced in the PRA process.

Point in time

A very different story is apparent in relation to the PiT PD, with participants adopting a wide range of time periods for calibration.

We note that 45% of (or five) participants used a PiT period commencing in 2007-2008 for their buy-to-let portfolios. The most common start date was 2014, where firms are maximising the use of their internal data. The average duration of the period used was approximately 7 years, with a minimum of c. 3 years and a maximum of c.13 years. Essentially, the selection of the PiT period involves a trade off between the availability of data and the representativeness of data included.

In its October 2020 *IRB Mortgages Round Table*, the PRA suggested that firms should consider using more recent PiT calibration periods to minimise the inconsistency between portfolio-level PDs and the 30% cyclicity assumption. However, in practice, we understand that firm-specific feedback has been mixed, with several participants that used longer calibration periods indicating they had been guided to do so by the regulator (these were typically larger firms with more extensive data histories).

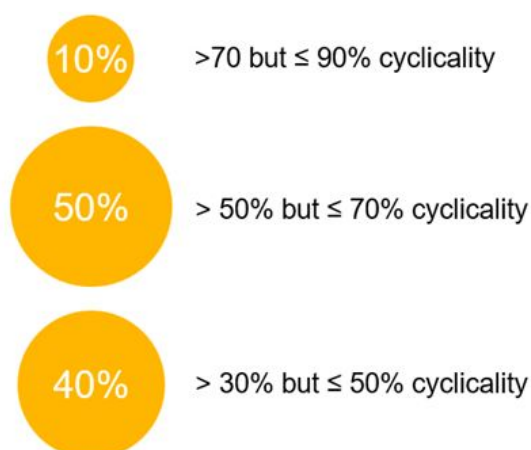
It is expected that the divergence in approaches observed with respect to PiT PD has, to some extent, been driven by this PRA feedback, which has been tailored based on the quality and representativeness of firms' internal data histories and the extent of drift away from a theoretical 30% cyclical PD.

We also noted that only one participant used a PiT period including Covid-19, due to data availability limitations. The use of Covid-19-impacted data is expected to become a more relevant industry consideration over coming years. This is particularly the case for IRB aspirant firms, as the accreditation process may take several years, potentially diminishing the relevance and representativeness of more historical PiT PD time periods.

Probability of default *(continued)*

Approaches to measuring cyclicalities have generally converged, with cyclicalities levels ranging between 30% and 70%

Owner-occupied



Buy-to-let

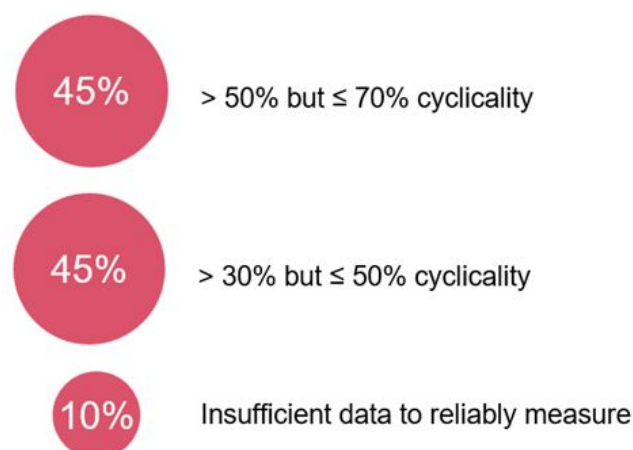


Figure 3: Level of cyclicalities of the owner-occupied (left) and buy-to-let (right) IRB rating systems

Measuring and monitoring cyclicalities

Given the PRA's prescription of the cyclicalities formula, the principal modelling choice for firms relates to the period over which cyclicalities is measured, with the key requirement being that measurement takes place over a period including a significant change in default rates.

Our 2021 IRB Benchmarking Survey found that yearly and multi-year periods were most commonly used for calculating/monitoring cyclicalities amongst participants in that survey.

By contrast, in our latest survey, peak-to-trough was the most common approach to measuring the cyclicalities of the final PD estimates, with c. 75% of participants using this approach. Some participants have also adopted more bespoke measurement approaches, including 'peak-to-current observation month' and 'peak-to-period where macroeconomic variables show signs of recovery'.

Unsurprisingly, peak-to trough is also the most popular time period for monitoring cyclicalities, followed by multi-year. Three participants are monitoring cyclicalities using multiple approaches, with one participant opting to use four different time horizons to monitor cyclicalities. By contrast, our 2021 survey found that 40% of participants were using more than one time horizon to provide multiple comparison points.

In general, monitoring cyclicalities over a range of different periods is a potential tool to facilitate greater understanding of the level of cyclicalities over time. The slight reduction in the portion of firms using multiple monitoring approaches may be seen as an early indication that approaches are stabilising and maturing.

Estimated level of cyclicalities

The PRA's hybrid PD requirements were introduced due to concerns over residential mortgage models leaning heavily towards either fully PiT or fully TtC approaches, therefore causing, variability in risk weights.

The hybrid PD is seen to represent a compromise between PiT and TtC, with 30% presented as an optimal level of cyclicalities.

Across both portfolios, an almost-equal proportion of participants have an estimated cyclicalities of between 30% and up to 50% and between 50% and up to 70%. Larger firms with existing IRB permissions more commonly fall into the 50% to 70% range. This could potentially result in lower variability in risk weights across the market due to the use of the maximum cyclicalities assumption (30%) for the purposes of backcasting.

Overall, 90% of participants had cyclicalities levels of 30% to 70%. There was only one participant that exceeded this, with an estimated level of cyclicalities falling within the 70% to 90% range for the owner-occupied portfolio (left). General market expectations are that a cyclicalities level of greater than 70% would not be deemed acceptable.

On the buy-to-let side (right), one participant was unable to reliably measure cyclicalities due to a paucity of data. Further guidance over regulatory expectations for the measurement of cyclicalities in such circumstances would be welcomed by the industry.

Probability of default *(continued)*

Firms have increased the number of risk grades in their residential mortgage IRB rating systems in response to regulatory feedback, with convergence towards an implied floor of 12 grades

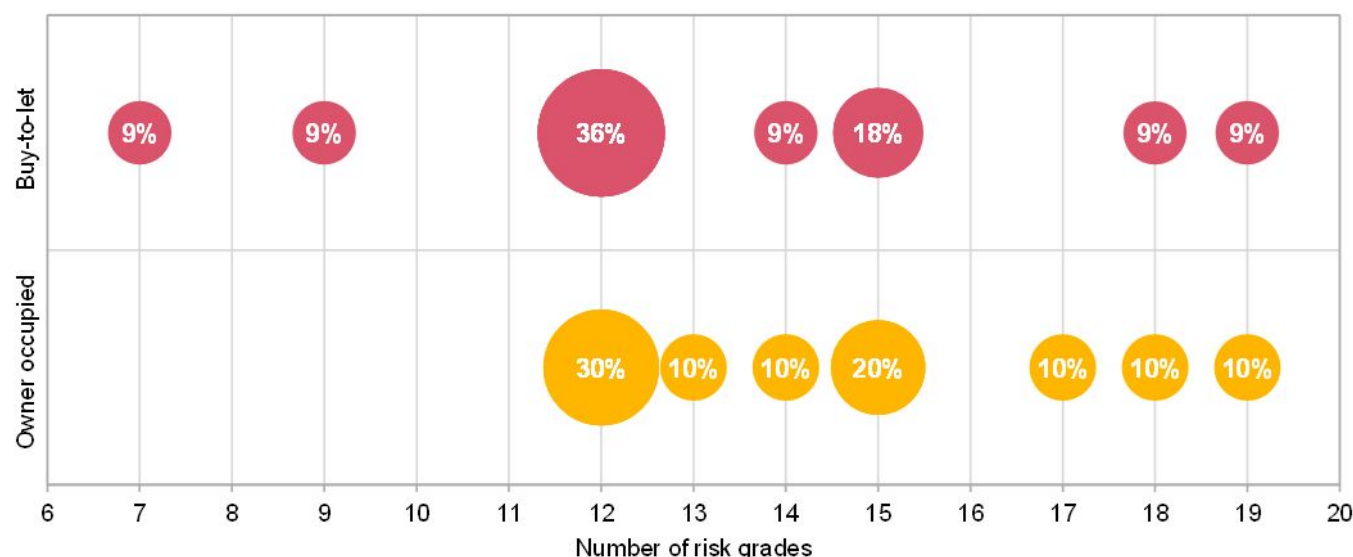


Figure 4: Number of risk grades in residential mortgage IRB rating systems

Risk grades

Risk grades should represent homogenous pools of accounts, as well as being monotonic, providing meaningful differentiation of risk across time, and minimising concentrations.

Regulatory feedback over recent years has suggested that residential mortgage rating systems should have at least 10+ grades, driving many firms to increase the number of risk grades in their rating systems. We understand this feedback is at least in part intended to minimise firms' ability to artificially suppress cyclical risk through the use of rating scales with fewer grades.

As shown in Figure 4, the most common number of risk grades at the time of our survey was 12 across both portfolios, with 63% and 70% of participants having between 12 and 15 risk grades for owner-occupied and buy-to-let, respectively.

The majority of participants utilise a consistent rating scale across both portfolios; however, there are two firms who use fewer grades for buy-to-let, reflecting the smaller population for this portfolio. As a result, we notice a wider spread of results for the buy-to-let portfolio.

Based on our discussions, we understand that participants with fewer than 12 risk grades are actively seeking to increase the granularity of their rating scales, in some cases in response to explicit regulatory feedback. As a result, we anticipate that market practice will eventually stabilise at an effective 'floor' of 12 risk grades, given lower-end outliers are less advanced in the PRA process.

The drive to increase the number of risk grades has, for some participants, created challenges in terms of balancing competing factors including monotonicity, risk differentiation, concentrations and cyclical risk. Striking an appropriate balance between these factors is expected to be an ongoing challenge and area of close monitoring.



Loss given default

Our 2021 survey found that firms' practices in terms of implementation of the revised requirements for LGD estimation were largely aligned. Therefore, in the context of LGD, our 2022 survey was specifically interested in understanding market use of the PRA's PPGD reference values within LGD models, and LGD outcomes by LTV ratio.

Regulatory reference points for PPGD are seldom utilised given their conservatism

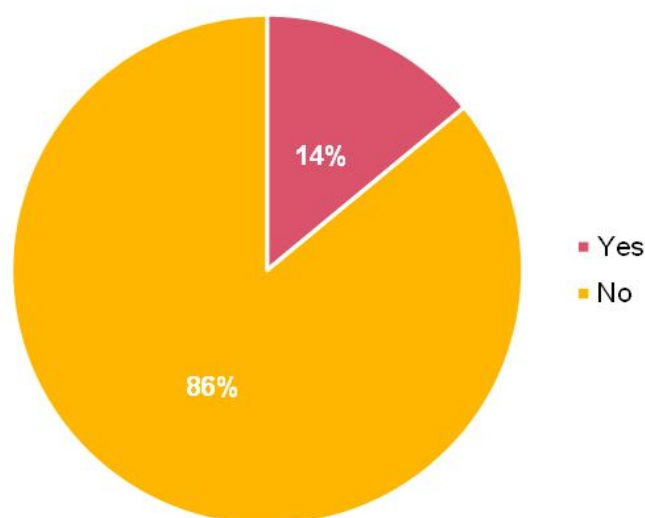


Figure 5: Use of PPGD reference values

The results presented reflect an average across both owner-occupied and buy-to-let portfolios.



PPGD reference values

A primary component of LGD for residential mortgages is PPGD. In relation to the estimation of PPGD, *PRA Supervisory Statement SS11/13 Internal Ratings Based (IRB) approaches* (SS11/13) provides 'reference points' of 100% and 70% PPGD to be used by firms with 'very low' and 'greater, but still not considerable' default volumes and data history, respectively. Firms with sufficient data may estimate their own values for PPGD.

Following on from our 2021 IRB benchmarking survey, we again asked firms whether they utilise the PRA's PPGD reference values. Similarly to in the previous year, our 2022 survey observed that the PPGD regulatory reference points were not used by the majority of participants (75% in 2021 compared to an average of 86% across both owner-occupied and buy-to-let in 2022).

As expected, we note that the reference values are more commonly applied for buy-to-let than owner-occupied portfolios, given the more severe data limitations experienced for this portfolio. We noted varying approaches in terms of application of the reference values, with some participants applying a single reference point to all exposures, and others applying the 70% or 100% reference points to different segments depending on the extent of data constraints. In all cases, however, we noted that participants that have applied the regulatory reference points have done so in response to regulatory feedback, though other participants have considered the reference points within internal independent validation processes.

Whilst the reference points were originally intended to address concerns raised that perceived data inadequacies pose a barrier to entry for IRB aspirants, several participants expressed concerns they may have unintended consequences. Participants specifically raised challenges in relation to the reference points' conservative calibration, and therefore their impact on LGDs and risk weights. As context, recent anecdotal evidence suggests that downturn residential mortgage PPGD values typically fall within the range of 30% to 50%, depending on factors such as LTV and firm-specific collections policies and experience. The reference points, however, are largely insensitive to LTV and their calibration is based on data from a sample of firms including some using a definition of default based on a 180 days past due arrears criterion. A further concern relates to the potential for 'double counting' of conservatism given the extensive MoCs typically applied in the case of data limitations, the mandatory forced sale discount (FSD) and property price fall assumptions.

Basel 3.1 implementation may potentially provide a timely opportunity for the PRA to revisit this element of the requirements, particularly given the proposed implementation of the input and output floors as backstops against unduly low modelled RWAs.

Margins of conservatism

MoCs form an integral part of the parameter estimation process and are required to address uncertainties related to deficiencies in the historical data used in model development or in the methodologies used. Our survey was interested in understanding the volumes of MoCs applied, the reasons for applying MoCs and the impact of MoCs on RWAs.

MoCs are universally applied for data deficiencies, and most firms also applying Category B MoCs for changes to underwriting, risk appetite or collections policies or sources of additional uncertainty

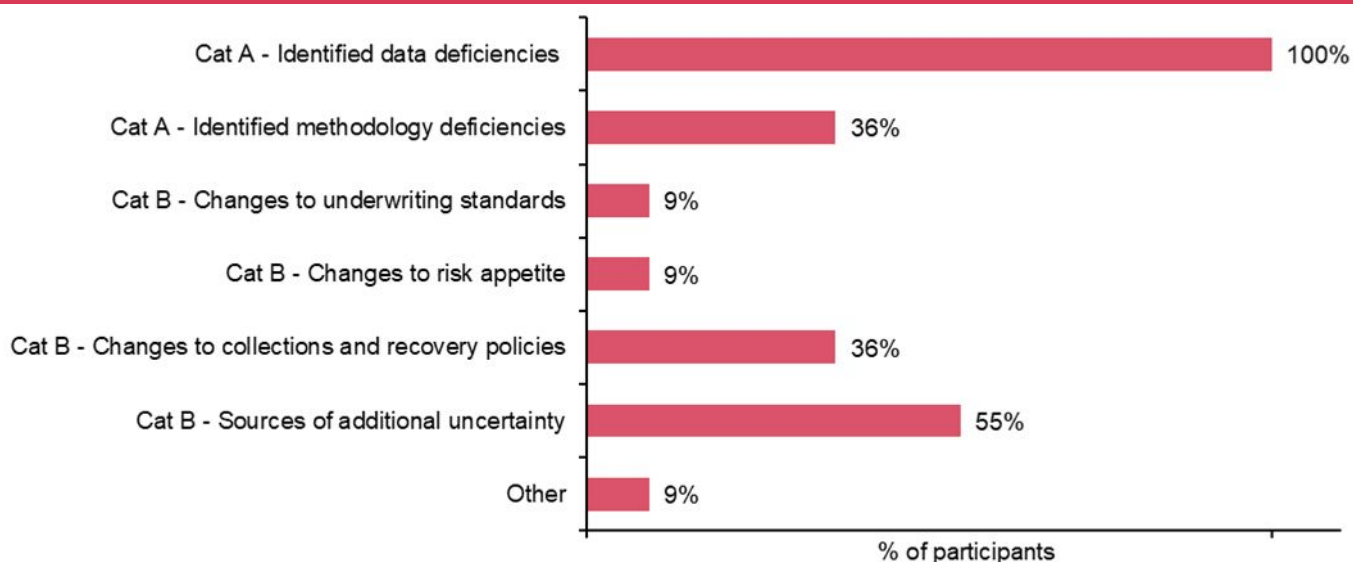


Figure 6: Percentage of participants applying Category A or Category B MoCs for given reasons

The results summarise the buy-to-let portfolio. The results for the owner-occupied portfolio are very similar.

Reasons for applying MoCs

EBA/GL/2017/16 requires firms to assign each MoC to one of the following three categories:

- Category A: Methodology and data deficiencies and uncertainties
- Category B: Uncertainties related to changes to underwriting, risk appetite or collections policies or sources of additional uncertainty
- Category C: General estimation error

For the purpose of our survey, we further subdivided each category into specific groups of reasons for applying MoCs. Category C MoCs were not included in the survey given the prevailing requirement that all firms apply these.

The results illustrate that Category A MoCs are ubiquitous across the market, with all participants specifically having a Category A MoC for identified data deficiencies across both portfolios.

Nearly two-thirds of participants also applied at least one Category B MoC (64% or 7 of 11 participants), with the most common reason being 'sources of additional uncertainty'. Of these, 4 participants applied multiple Category B MoC types. Anecdotally, we understand that divergent practices in relation to the application of 'appropriate adjustments' may have resulted in differences in the use of Category B MoCs.

The 'Other' option was selected by one participant and represented a Category B MoC type which was not listed.



Margins of conservatism *(continued)*

Volume and impact of MoCs

Despite the detailed categorisation framework, there are no guidelines over how model deficiencies, and therefore MoCs, should be grouped. Our survey looked to understand the extent of model deficiencies and how firms are applying conservatism through examining the volume of MoCs applied by model type.

Across both portfolios, we noted that the largest number of MoCs were applied in respect of LGD models, followed by PD and then EAD, with 30% of participants having no EAD-specific MoCs across both portfolios. Several factors are likely to explain this trend, including model complexity, the number of model components, and the extent of data challenges. Similarly, and unsurprisingly, slightly higher volumes of MoCs were observed on buy-to-let portfolios.

On average, the most common number of MoCs was one to three per model. Two participants had 15+ MoCs for LGD, with one also having 15+ MoCs for PD. Higher volumes of MoCs were often explained by the constitution of the framework – with, for example, MoCs applied at the risk grade or segment level – and did not necessarily result in greater relative RWA uplifts.

Regarding the impact of MoCs, the average relative percentage increase from pre-MoC RWAs observed was 12% and 27% for owner-occupied and buy-to-let, respectively. The major difference between portfolios is that 22% of participants (or two) experience a very material more-than-50% increase in RWAs due to MoCs for buy-to-let.

The range of impacts is widely distributed, which is indicative of the challenges encountered in quantifying MoCs. This is corroborated by our previously survey, in which 69% of participants indicated 'quantification of actual MoCs' was a key challenge in relation to the MoC framework. Divergences in practices in delineating 'appropriate adjustments' from MoCs may also be a factor.

There is a level of correlation between the magnitude of risk-weight increase due to MoCs and risk weight levels, with some of the larger relative risk-weight increases due to low starting risk weights. There is also a less significant correlation between the number of MoCs applied and the RWA impact.

In our 2021 survey, 42% of participants indicated that MoCs resulted in only a 5% to 10% relative increase in RWAs. The key difference, however, is that last year 17% of participants had not yet developed their MoC frameworks. By contrast, this year only one participant could not perform the analysis, indicating that there has been industry progress in MoC implementation.

The impact of MoCs on final RWAs varies considerably between participants

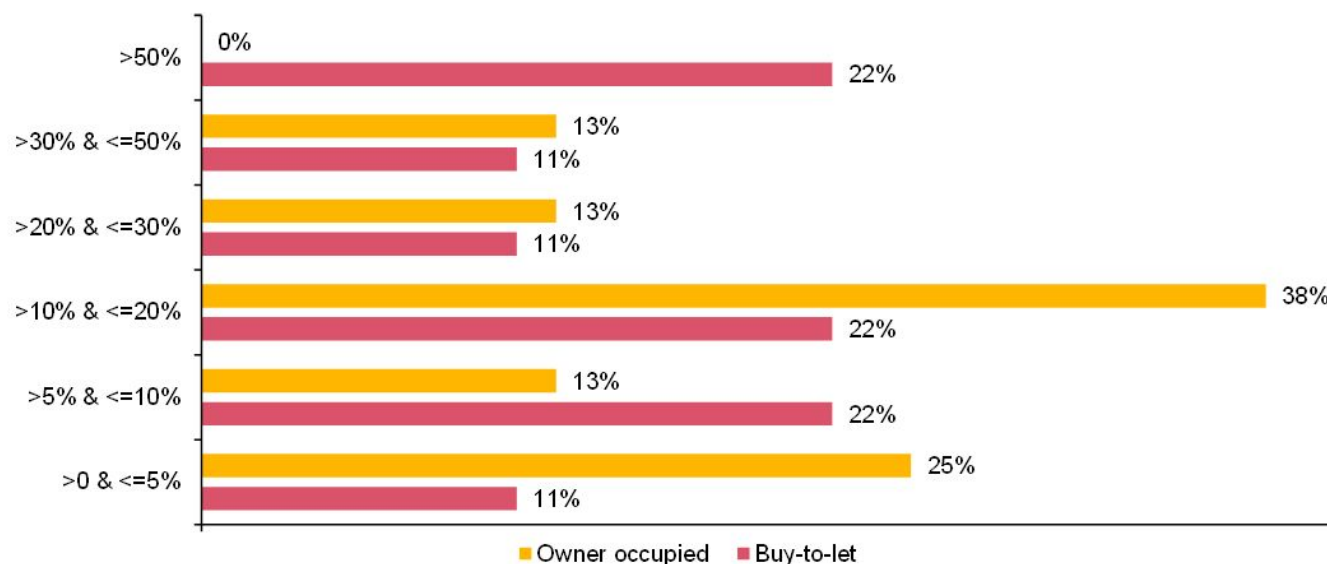


Figure 7: Relative impact of MoCs on final RWAs

Due to rounding, the percentages may not sum to exactly 100%.

Risk weights

A wide range of residential mortgage risk weights has historically been observed amongst UK IRB firms. This is also evidenced by the benchmarks set out in the PRA's Statement of Policy on Pillar 2. Our survey was focussed on understanding the extent to which UK residential mortgage risk weights have converged, and increased, due to implementation of the wave of recent regulatory changes. Expected risk weights from participants' hybrid mortgage rating systems were considered at a granular level, based on product and LTV band.

Risk weights are trending upwards across the board, with average levels between 14% and 20%

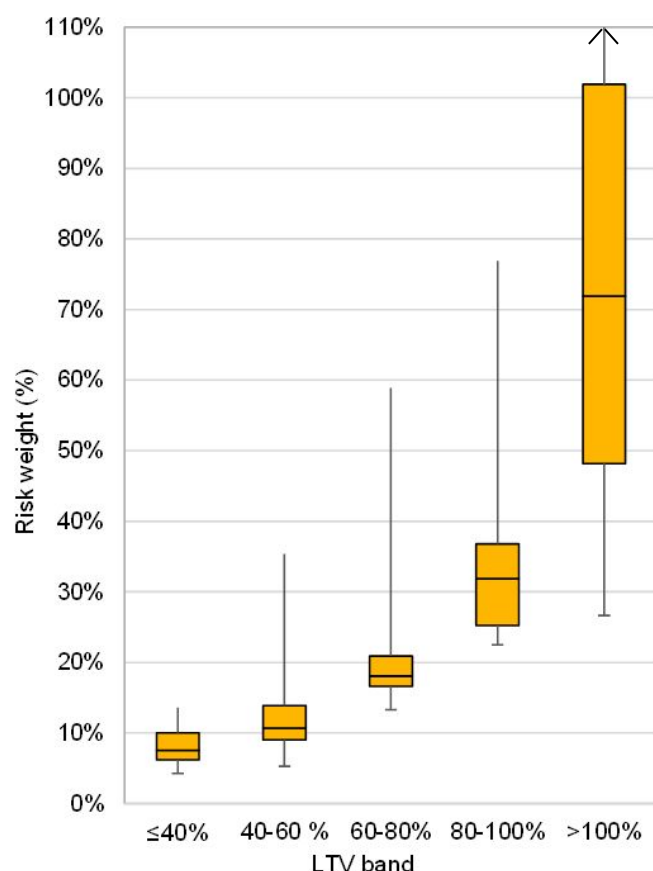


Figure 8. Owner-occupied risk weights by LTV band

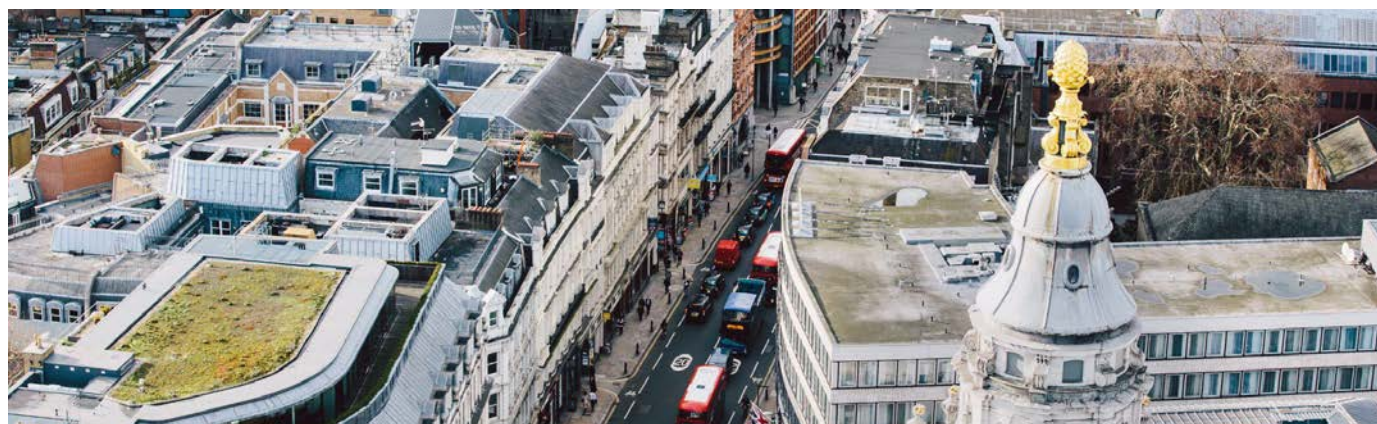
The box plot shows the range and lower, middle and upper quartiles of owner-occupied risk weights by LTV band. Note that for the >100% LTV band, the highest risk weight recorded was 300%, which is not displayed due to the graph being capped at 110%.

Concerns over unwarranted variability in risk weights were a key motivator behind the suite of changes to IRB requirements for residential mortgages. Given the extent of model changes made by firms over recent years, our survey was focussed on understanding an up-to-date view of risk-weight outcomes, broken down by LTV as a proxy for risk of the underlying portfolio.

Overall, we found that average risk weights are increasing across the board, with residential mortgage portfolio weighted-average levels reported by participants typically ranging from c. 14% to 20%. However, outliers remain. Higher risk weights are typically attributable to participants with higher volumes of buy-to-let lending (which typically attracts risk weights c. 10% points higher than owner-occupied lending), and use of reference points for PPGD.

For example, for owner-occupied lending in the 40% to 60% LTV band, the box plot alongside shows that there is one participant that is an outlier of the trend as shown by the top quartile is almost double the upper quartile and triple the median. For the 60% to 80% LTV band, we note a similar story as the largest risk weight for this band is over triple the median value; however, all but two firms fall in the range of 13% to 18%. Significantly greater dispersion in results is observed within higher LTV bands. This is unsurprising given lower volumes in these bands.

Whilst the risk weights reported in response to our survey in late 2022 reflect the point-in-time results from participants at varying stages of the PRA model approval process and are therefore expected to move slightly, they do demonstrate that residential mortgage risk weights are both increasing and converging across the industry, especially at the portfolio level. Remaining variance in risk weights generally appears to be explained by differences in the nature and risk of participants' underlying portfolios and data availability rather than by methodological choices. Risk weights also appear to be aligning to PRA expected ranges for owner-occupied and buy-to-let, signalling that the end of the road in relation to new IRB mortgage models may be nearing.



How we can help you with your IRB submission

A number of firms have already redeveloped their IRB models to address the new regulatory requirements and have submitted them for PRA approval. The PRA has responded with significant feedback on key areas.

We have supported firms in addressing the PRA's feedback and therefore have real-time insight into the key challenges that firms are facing with the evolving regulatory expectations for IRB models.

With our insights and deep understanding of PRA expectations, we are able to provide independent review and assurance over upcoming IRB model submissions.

Benefits of our review of your upcoming IRB submission

We have strong practical experience in supporting UK banks and building societies in their ongoing IRB submissions in response to the latest PRA requirements. Our short, focussed review approach reflects a balance between leveraging our significant existing knowledge and experience, and committing time from our leading SME panel to ensure PRA readiness.

We will be able to support a successful submission by:

- ❖ Providing **Senior Management comfort** over the **plausibility** of the **submission** by assessing compliance against regulatory requirements
- ❖ Gaining **further insights** into the **latest PRA thinking** and stance to **better prepare** for any **potential regulatory challenge**, especially on contentious matters that may materially drive RWAs
- ❖ **Mitigating the risk** to your **application timelines** by ensuring documentation is up to **standard** thereby **reducing the risk of additional questions and scrutiny**
- ❖ Having **early visibility** of your **potential market position** through **pre-submission** comparisons with peers

Within three to six weeks, we can deliver a range of insights and provide comfort to Board and Senior Management by pre-empting PRA feedback utilising a tailored review approach.

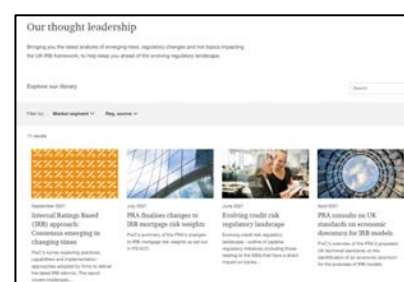
Access our thought leadership and Hot Topic library

PwC publishes a series of thought leadership papers providing insight into the key implications of credit risk regulatory changes for firms to consider. The full range of these papers can be found at the below link:

<https://www.pwc.co.uk/services/risk/risk-modelling/services/making-irb-work-for-you.html>

Examples of thought leadership:

- Basel 3.1 – Redefining the credit risk landscape
- IRB benchmarking survey 2021
- UK Consultation: PRA aligns closely with global standards
- EBA publishes principles for credit risk modelling data impacted by COVID-19
- PRA proposes principles to manage model risk
- EBA Consultation Paper on IRB Validation - Focus Paper

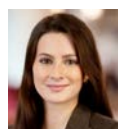


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Thank you

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