



BANK OF ENGLAND
PRUDENTIAL REGULATION
AUTHORITY

Consultation Paper | CP16/20

Credit Risk: The approach to overseas Internal Ratings Based (IRB) models

October 2020



BANK OF ENGLAND
PRUDENTIAL REGULATION
AUTHORITY

Consultation Paper | CP16/20

Credit Risk: The approach to overseas Internal Ratings Based (IRB) models

October 2020

By responding to this consultation, you provide personal data to the Bank of England. This may include your name, contact details (including, if provided, details of the organisation you work for), and opinions or details offered in the response itself.

The response will be assessed to inform our work as a regulator and central bank, both in the public interest and in the exercise of our official authority. We may use your details to contact you to clarify any aspects of your response.

The consultation paper will explain if responses will be shared with other organisations (for example, the Financial Conduct Authority). If this is the case, the other organisation will also review the responses and may also contact you to clarify aspects of your response. We will retain all responses for the period that is relevant to supporting ongoing regulatory policy developments and reviews. However, all personal data will be redacted from the responses within five years of receipt. To find out more about how we deal with your personal data, your rights or to get in touch please visit bankofengland.co.uk/legal/privacy.

Information provided in response to this consultation, including personal information, may be subject to publication or disclosure to other parties in accordance with access to information regimes including under the Freedom of Information Act 2000 or data protection legislation, or as otherwise required by law or in discharge of the Bank's functions.

Please indicate if you regard all, or some of, the information you provide as confidential. If the Bank of England receives a request for disclosure of this information, we will take your indication(s) into account, but cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system on emails will not, of itself, be regarded as binding on the Bank of England.

Responses are requested by Tuesday 12 January 2021.

In light of current measures to help prevent the spread of COVID-19, please address any comments or enquiries by email to: CP16_20@bankofengland.co.uk.

Alternatively, please address any comments or enquiries to:

Credit and Operational Risk Team (TS03-CD)

Bank of England

Threadneedle Street

London

EC2R 8AH

Contents

1	Overview	1
2	Proposals	2
3	The PRA's duty to consult	5
Appendix: Draft amendments to Supervisory Statement 11/13 'Internal Ratings Based (IRB) approaches'		9

1 Overview

1.1 This Consultation Paper (CP) sets out the Prudential Regulation Authority's (PRA) proposed approach in respect of firms' use of overseas Internal Ratings Based (IRB) credit risk models, built to non-UK regulatory requirements, in the calculation of UK group consolidated capital requirements.

1.2 The proposals in this CP would result in changes to Supervisory Statement (SS) 11/13 'Internal Ratings Based (IRB) approaches' (Appendix) to include the PRA's approach to overseas IRB models.

1.3 The proposals are relevant to UK banks, building societies and PRA-designated UK investment firms.

Background

1.4 The PRA currently permits the solo capital requirements generated by non-European Economic Area (EEA) IRB models (developed to meet non-EEA IRB requirements) to be included in firms' UK group consolidated capital requirements.

1.5 These overseas models may not be fully compliant with all relevant UK IRB requirements as they are designed to comply with non-UK IRB requirements, although the PRA's criteria seek to ensure a prudent approach.

1.6 This CP follows Policy Statement (PS) 11/20 'Credit risk: Probability of Default and Loss Given Default estimation'¹ in which the PRA stated it would clarify its approach on the treatment of overseas models following the end of the transition period on Thursday 31 December 2020.² It is worth highlighting that until this date, the joint decision process under Article 20 of the Capital Requirements Regulation (CRR) still applies for EEA models where relevant.³

1.7 The PRA is clarifying its approach to overseas models built to non-UK requirements as:

- the UK is departing the European Union;
- the PRA has observed challenges and concerns with allowing the use of overseas models in some instances, including how these are effectively supervised;
- the PRA is aware that there may be further growth in use of overseas IRB models built to non-UK requirements in the future, as more firms are granted IRB permissions and expand overseas; and
- without a clear approach, firms may need to develop two sets of models to different requirements for the same exposures in situations where this may not be appropriate. The PRA considers that this could be an inefficient use of firm resources if there is only a minor difference in requirements that does not result in a materially different prudential outcome.

Implementation

1.8 For overseas IRB models built to non-UK requirements that are not currently used for UK consolidated capital requirements, the proposed implementation date for the changes resulting from this CP would be Thursday 1 July 2021. For existing overseas IRB models built to non-UK

¹ May 2020 (page 1 of 2): <https://www.bankofengland.co.uk/prudential-regulation/publication/2019/credit-risk-probability-of-default-and-loss-given-default-estimation>.

² <https://www.gov.uk/transition>.

³ <https://eba.europa.eu/regulation-and-policy/single-rulebook/interactive-single-rulebook/811>.

requirements used for UK consolidated capital requirements that meet the proposed criteria, those models can continue to be used for UK consolidated capital requirements. There may be existing overseas models that do not meet the criteria for use of the revised approach from Thursday 1 July 2021, and firms may therefore need to remediate these models in order to meet UK IRB requirements. The PRA expects those models that do not meet the proposed criteria to be remediated by Sunday 1 January 2023 in line with the planned implementation of Basel 3.1.

1.9 For EEA subsidiaries, it is anticipated that the existing CRR joint decision framework will no longer apply from Friday 1 January 2021 following the end of the transition period. On Friday 1 January 2021, it is expected that all existing models approved by the joint decision framework can continue to be used for UK consolidated capital requirements. When taking decisions on applications to use the proposed approach between this date and the proposed changes resulting from this CP coming into force, the PRA will have regard to any requirements of the relevant EEA regulator where these differ from those of the PRA.

Responses and next steps

1.10 This consultation closes on Tuesday 12 January 2021. The PRA invites feedback on the proposals set out in this consultation. Please address any comments or enquiries to CP16_20@bankofengland.co.uk.

1.11 The proposals set out in this CP have been designed in the context of the UK's withdrawal from the European Union and entry into the transition period, during which time the UK remains subject to European law. The PRA will keep the policy under review to assess whether any changes would be required due to changes in the UK regulatory framework at the end of the transition period, including those arising once any new arrangements with the European Union take effect.

1.12 The PRA has assessed that the proposals would not need to be amended under the EU (Withdrawal) Act 2018 (EUWA). Please see PS5/19 'The Bank of England's amendments to financial services legislation under the European Union (Withdrawal) Act 2018' for further details.⁴

1.13 The draft SS attached to this CP should be read in conjunction with SS1/19 'Non-binding PRA materials: The PRA's approach after the UK's withdrawal from the EU'.⁵

2 Proposals

2.1 This chapter sets out the PRA's proposed approach in the following areas:

- (i) Approach to overseas IRB models.
- (ii) Criteria for use of the approach.

Approach to overseas IRB models

2.2 The PRA considers that it may allow UK headquartered groups to use non-UK IRB models developed to meet non-UK IRB requirements for group consolidated capital requirements, provided certain criteria are met (see paragraph 2.5).⁶ This includes the proposed reflection of any regulatory

⁴ April 2019: <https://www.bankofengland.co.uk/paper/2019/the-boes-amendments-to-financial-services-legislation-under-the-eu-withdrawal-act-2018>.

⁵ April 2019: <https://www.bankofengland.co.uk/prudential-regulation/publication/2019/non-binding-pra-materials-the-pra-approach-after-the-uks-withdrawal-from-the-eu-ss>.

⁶ These are models that been developed for local regulatory purposes which may be able to be used for both local and group requirements.

floors or add-ons mandated by the relevant overseas regulator into the calculation of group consolidated requirements. If an overseas model does not meet the proposed criteria, then the overseas model cannot be used for group consolidated requirements and a model built to UK requirements would need to be used instead, unless the PRA has granted permission to use the Standardised Approach. This proposed approach would apply to all IRB models built to non-UK requirements.

Rationale

2.3 The PRA recognises the potential burden of IRB modelling across multiple jurisdictions. There can be minor differences in IRB requirements between jurisdictions. These minor differences between jurisdictions can be due to non-UK market and institutional specificities and, in such cases, running two sets of models can provide minimal prudential benefit. The proposed reflection of regulatory floors or add-ons mandated by the relevant overseas regulator is to ensure that the group capital requirements reflect the prudential risks at the local level. The PRA considers this proposed approach to overseas models to be a proportionate response to this issue, allowing the use of overseas models in the calculation of group consolidated capital requirements.

2.4 However, there is the possibility that overseas models built to non-UK requirements may not result in prudential outcomes that are consistent with those built to UK requirements. The PRA considers that this creates prudential risk, which may undermine the PRA's safety and soundness objective. As a result, the PRA is proposing to set criteria to avoid this.

Criteria for use of approach

2.5 The proposed criteria that would all need to be met in order to use a model built to non-UK IRB requirements are:

- (a) aggregate overseas models risk-weighted assets (RWAs) calculated using overseas models built to non-UK requirements make up no more than 5% of total group credit risk RWAs and aggregate overseas models exposure value makes up no more than 5% of total group exposure value;
- (b) the model's scope only encompasses exposures that are located within a subsidiary in an equivalent jurisdiction (as determined under CRR Article 142(2)), the model has been reviewed and approved by the overseas regulator, and the model is used to calculate local capital requirements in that jurisdiction. Models in subsidiaries in non-equivalent jurisdictions would not be able to use the approach;⁷
- (c) the model scope only encompasses exposures that are in the retail exposure class, including retail SME exposures;⁸
- (d) modelled outputs (such as Probability of Default (PD), Loss Given Default (LGD) and credit conversion factors (CCFs)) are derived using both historical experience and empirical evidence (and not based purely on judgemental considerations), the estimates are plausible and intuitive and based on the material risk drivers;
- (e) the population of exposures represented in the data used for estimation, the lending standards used when the data were generated and other relevant characteristics are comparable with those of the firm's exposures and standards. The number of exposures in the sample and the

⁷ https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/overview-table-equivalence-decisions_en.pdf.

⁸ SME as defined in CRR Article 147(5)(ii).

data period used for quantification are sufficient to provide confidence in the accuracy and robustness of its estimates;

- (f) the model provides a meaningful differentiation of risk and produces accurate and consistent quantitative estimates of risk. Material model weaknesses would be adequately compensated by an adjustment to parameter estimates;
- (g) the model is subject to appropriate internal governance processes, with senior management in the overseas subsidiary possessing a general understanding of the rating systems of the institution and detailed comprehension of its associated management reports;
- (h) the model is subject to an appropriate validation of internal estimates process, with the process being objective, consistent and accurate; and
- (i) the model is used to inform credit risk decisions.

2.6 Firms would submit to the PRA evidence that the criteria are met via an application form that will be made available as part of the PS resulting from this consultation. The PRA would review each application on a case-by-case basis and make a judgement as to whether the criteria are met. If the criteria are met, the overseas model can then be used for group capital requirements.

Rationale

2.7 For criterion (a), the PRA considers that allowing overseas models that potentially do not fully meet all UK IRB standards to make up more than 5% of group RWAs would not be prudent. These models could diverge significantly from UK IRB standards and pose a threat to firms' safety and soundness. The PRA acknowledges that using a RWA limit for RWA exposures could be subject to regulatory arbitrage, so the PRA proposes a complementary 5% total exposure value limit. Together, these measures limit the use of the approach to ensure most credit risk RWAs are calculated in accordance with UK IRB requirements but with some proportionality built in.

2.8 For criterion (b), equivalent jurisdictions are those jurisdictions with prudential requirements and a supervisory approach that have been deemed equivalent to the PRA's, as assessed for the purposes of CRR Article 142(2). These jurisdictions are more likely to have similar standards for IRB modelling, resulting in a similar prudential outcome. Models held to standards that are not judged equivalent could deliver weaker prudential outcomes and threaten a firm's safety and soundness. Review by a regulator in an equivalent jurisdiction should mean that the overseas models are of broadly equivalent quality, and any material modelling shortcomings should have been addressed.

2.9 The PRA recognises that the CRR Article 142(2) equivalence assessment is a holistic assessment, so the equivalence assessment may not capture every element of the IRB framework or IRB supervision. This is why the PRA is proposing other additional criteria to support safety and soundness.

2.10 For criterion (c), this reflects that retail and SME markets can be very country-specific, so in some instances overseas IRB requirements for retail and SME exposures may be more appropriate than UK IRB requirements. This is also likely to align with instances when an overseas regulators' requirements differ most from the PRA's. The overseas regulator is more likely to prefer the use of models developed to meet local requirements rather than PRA requirements. In such circumstances, the PRA considers the use of local models based on local IRB requirements for local retail and SME exposures, that have been reviewed and approved by a regulator in an equivalent jurisdiction, to generally be appropriate for use in group consolidated capital requirements.

2.11 By comparison, mid-sized and large corporates and other exposures types are typically more globally homogenous. In this case, there is limited prudential rationale to allow non-UK standards for RWA calculation.

2.12 For criterion (d), this would reflect the need for IRB modelled outputs to be meaningful and reflective of the risks of the exposures. This can only occur if the overseas model uses appropriate modelling methodologies that are empirically justified and not mainly based on judgement. If the modelled estimates are neither plausible nor intuitive, then the estimates of the overseas model may not reflect the true risk of the exposure, and the firm and supervisors will have a lack of confidence in model outputs.

2.13 For criterion (e), this would ensure that the data used are representative of the population and the exposure class. This results in more representative and accurate model outputs from the underlying data. This would also ensure that the overseas model's data are comparable to the other models for the same exposure class of a firm. A sufficient number of exposures in the sample to provide confidence in the accuracy of the model makes the model more reliable and results in a strong and prudent outcome.

2.14 For criterion (f), this would ensure that the model's performance is strong and robust. If a model cannot meaningfully differentiate risk or provide reliable estimates, this could adversely affect the safety and soundness of a firm. If this is the case, an adjustment to parameter estimates may need to be used to address performance weaknesses. This will provide more confidence in the model as well as promote stronger risk management.

2.15 For criterion (g), this would ensure that there is appropriate governance oversight of the functions of the model. Without appropriate governance, the overseas model may not be managed appropriately, leading to a reduction in model performance. This could jeopardise a firm's safety and soundness.

2.16 For criterion (h), it is important to have an appropriate process for validating internal estimates. This would ensure that rating systems are accurate and consistent. Firms will be able to assess the performance of their overseas models' internal rating and risk estimation systems consistently and meaningfully.

2.17 For criterion (i), this would ensure that the overseas model informs credit risk decisions. Otherwise there would be little reason for the model coming into the approach, and being used for group consolidated capital requirements, if it does not influence group credit risk decisions.

3 The PRA's duty to consult

3.1 The PRA has a statutory duty to consult when introducing new rules and, when not making rules, has a public law duty to consult widely where it would be fair to do so. When doing so, the PRA provides the following in relation to the proposed policy:

- a cost benefit analysis;
- an explanation of the PRA's reasons for believing that making the proposed policy is compatible with the PRA's duty to act in a way that advances its general objective, insurance objective (if applicable), and secondary competition objective;
- an explanation of the PRA's reasons for believing that making the proposed policy is compatible with its duty to have regard to the regulatory principles; and
- a statement as to whether the impact of the proposed policy will be significantly different to mutuals than to other persons.

3.2 The Prudential Regulation Committee (PRC) should have regard to aspects of the Government's economic policy as recommended by HM Treasury.⁹

3.3 The PRA is also required by the Equality Act 2010 to have due regard to the need to eliminate discrimination and to promote equality of opportunity in carrying out its policies, services and functions.¹⁰

Cost benefit analysis

3.4 This CP sets out proposals for the PRA's expectations for the use of overseas models built to non-UK requirements in the calculation of group capital requirements. The PRA is required to perform a cost benefit analysis of the impact of its policy proposals. The PRA considers the proposals in this CP to achieve net benefits by providing a proportionate approach for the use of overseas models.

3.5 The key benefit of the proposals in this CP are to help ensure that the PRA maintains its prudential regime for managing risk. Overseas models that do not meet the UK IRB requirements increase the risk that prudential standards are undermined and the benefits of the UK regime are not realised. Where overseas models meet PRA requirements, the proposals will reduce the burden to firms of potentially running multiple models where it is not appropriate. Specifically, the PRA considers it not appropriate to run two models when the PRA and the overseas jurisdictions have similar IRB requirements and supervisory approaches, and that there would be little prudential benefit. The PRA also considers that the criteria would ensure confidence in overseas model outputs, RWAs and capital metrics among UK firms with international subsidiaries.

3.6 The proposed restrictions on the proportion of overseas models allowed to be used for group capital requirements and the specified asset classes would ensure that the proposed approach is only used where it will not undermine prudential soundness. The equivalence criteria would limit the chance of regulatory arbitrage where firms may increase their exposures in subsidiaries in non-equivalent jurisdictions to lower their capital requirements. And the remaining criteria would ensure greater supervisory confidence in the model outputs, the representativeness of the data, the performance of the model and that models are appropriately managed and used.

3.7 The PRA considers that some firms currently allowed to use overseas models based on local IRB requirement at group level may not meet the criteria proposed. However, from the information the PRA has, this seems few in number or materiality.

⁹ Section 30B of the Bank of England Act 1998.

¹⁰ Section 149.

3.8 For those firms, the models will need to meet UK IRB requirements in future. If the overseas regulator does not permit the use of models based on UK IRB requirements for the calculation of solo capital requirements, firms may need to run two models for the same exposures (a UK IRB requirements compliant model and a local IRB requirements compliant model).

3.9 The PRA acknowledges there will be a small cost to doing so. However this is unlikely to be material, because currently affected firms have limited exposures calculated using overseas models and are already equipped to model both UK and local requirements. The PRA considers that this is justified to promote safety and soundness and increase confidence in overseas model outputs.

3.10 The PRA also acknowledges that this may also apply to firms that use overseas models for group capital requirements for the first time. This could potentially increase the cost for firms but the PRA considers this unlikely to be material. This is because it is unlikely that there will be a sudden increase in the need to use two sets of models. It will depend on how different overseas requirements are to UK requirements. It will also depend on whether the overseas regulator accepts models built to UK IRB requirements for local regulatory capital requirement purposes.

Compatibility with the PRA's objectives

3.11 The PRA has assessed whether the proposals in this CP promote the safety and soundness of firms. As set out in the cost benefit analysis section, the proposals in this CP would contribute to promoting the safety and soundness of firms by ensuring greater confidence in the use of overseas models built to non-UK requirements in the calculation of group consolidated capital requirements. Firms would only use overseas models in the calculation of group consolidated capital requirements in cases where the PRA considers it prudentially justified to do so, with key criteria set to ensure safety and soundness are not undermined.

3.12 The PRA has assessed whether the proposals set out in this CP facilitate effective competition as a secondary objective to the PRA's general objective of promoting the safety and soundness of regulated firms. The PRA assesses that the proposals will facilitate effective competition of existing IRB firms and prospective IRB applicants by providing consistent criteria for the use of overseas IRB models. Firms not satisfying the proposed criteria (eg subsidiaries in jurisdictions that are not deemed equivalent) will incur additional costs in operating two IRB models for the same overseas exposures. Nevertheless, these costs to firms are not expected to be material considering their model operating capability and would reflect differences in prudential risk between the UK and overseas jurisdictions. Consequently, the PRA expects that the proposals in this CP will not have a material impact on competition and are consistent with the PRA's secondary competition objective.

Regulatory principles

3.13 In developing the proposals in this CP, the PRA has had regard to the regulatory principles. Three of the principles are of particular relevance.

3.14 The principle that a burden or restriction which is imposed on a person should be proportionate to the benefits which are expected to result from the imposition of that burden. The PRA considers that the proposals achieve an appropriate balance between the burden of the proposals and the prudential benefits, as set out in the cost benefit analysis.

3.15 The need to use the resources of each regulator in the most efficient and economic way. The proposals limit the circumstances in which firms would be required to run two models for the same exposures. This should relieve the resource burden for the PRA when assessing and reviewing

models. The proposals would also allow firms to redeploy resources elsewhere instead of redeveloping models to meet PRA standards.

3.16 The principle that the PRA should exercise its functions transparently. These proposals provide clarity for firms regarding the PRA's proposed approach to overseas models. This would improve firms' ability to plan future model development, promoting safety and soundness.

Impact on mutuals

3.17 The PRA considers that the impact of the proposed changes on mutuals is expected to be no different from the impact on other firms.

HM Treasury recommendation letter

3.18 HM Treasury has made recommendations to the Prudential Regulation Committee (PRC) about aspects of the Government's economic policy to which the PRC should have regard when considering how to advance the PRA's objectives and apply the regulatory principles.¹¹

3.19 The aspects of the Government's economic policy most relevant to the proposals in this CP are: (i) competition; (ii) competitiveness; and (iii) PRA transparency.

3.20 Aspects (i) and (iii) have been considered in the 'compatibility with the PRA's objectives' and 'regulatory principles' sections above. Consideration of aspect (ii) on competitiveness is set out below.

Competitiveness

3.21 This CP's proposals are intended to reduce the likelihood of firms being required to develop and maintain two sets of models for the same set of exposures. This approach is likely to relieve the modelling burden for firms and will be applied consistently across all UK firms. Therefore, the PRA does not consider that the proposals will inhibit or disadvantage the competitiveness of the UK banking industry. In some instances, it may improve the international competitiveness of the UK banking industry, as some jurisdictions may take a more restrictive and less proportionate approach (eg requiring two sets of models for the same set of exposures).

Equality and diversity

3.22 The PRA considers that the proposals do not give rise to equality and diversity implications.

11 Information about the PRC and the recommendations from HM Treasury are available on the Bank's website at <https://www.bankofengland.co.uk/about/people/prudential-regulation-committee>.

Appendix: Draft amendments to Supervisory Statement 11/13 'Internal Ratings Based (IRB) approaches'

In this appendix, underlining indicates new text.

...

20 Approach to Overseas Models

12.1 The PRA expects that it will permit the use of an overseas model built to non-UK IRB requirements in the calculation of group consolidated capital requirements if all of the following criteria are met:

- (a) the aggregate amount of RWAs calculated using overseas models is no more than 5% of the group's total credit risk RWAs and the aggregate overseas models exposure value is no more than 5% of the group's total exposure value;
- (b) the model scope only encompasses exposures that are located within a subsidiary in an equivalent jurisdiction (as determined under CRR Article 142(2)), the model has been reviewed and approved by the overseas regulator, and the model is used to calculate local capital requirements in that jurisdiction;
- (c) the model only encompasses exposures in the retail exposure class, including retail SME exposures;
- (d) modelled outputs (such as PD, LGD and CF) are derived using both historical experience and empirical evidence (and not based purely on judgemental considerations), and the estimates are plausible and intuitive and based on the material drivers of the respective risk parameters;
- (e) the population of exposures represented in the data used for estimation, the lending standards used when the data were generated and other relevant characteristics is comparable with those of the firm's exposures and standards. The number of exposures in the sample and the data period used for quantification shall be sufficient to provide confidence in the accuracy and robustness of its estimates;
- (f) the model provides a meaningful differentiation of risk and is able to produce accurate and consistent quantitative estimates of risk. Material model weaknesses shall be adequately compensated by an adjustment to parameter estimates;
- (g) the model is subject to appropriate internal governance processes, with senior management in the overseas subsidiary possessing a general understanding of the rating systems of the institution and detailed comprehension of its associated management reports;
- (h) the model is subject to an appropriate validation of internal estimates process, with the process being objective, consistent and accurate; and
- (i) the model is used to inform credit risk decisions.

12.2 The PRA expects firms using models built to non-UK requirements to ensure that their group consolidated capital requirements reflect any regulatory floors or add-ons mandated by the relevant overseas regulator.