

Chapter 4

The IRB approach

4.2 The IRB approach: High level material

Application

4.2.1 **R** This section applies to all *exposures* treated under the *IRB approach*.

General approach to granting an IRB permission

4.2.2 **R** A *firm's* systems for the management and rating of credit risk *exposures* must be sound and implemented with integrity and, in particular, they must meet the following standards in accordance with the *minimum IRB standards*:

- (1) the *firm's rating systems* provide for a meaningful assessment of obligor and transaction characteristics, a meaningful differentiation of risk and accurate and consistent quantitative estimates of risk;
- (2) internal ratings and *default* and *loss* estimates used in the calculation of capital requirements and associated systems and processes play an essential role in the risk management and decision-making process, and in the credit approval, internal capital allocation and corporate governance functions of the *firm*;
- (3) the *firm* has a credit risk control unit responsible for its *rating systems* that is appropriately independent and free from undue influence;
- (4) the *firm* collects and stores all relevant data to provide effective support to its credit risk measurement and management process; and
- (5) the *firm* documents its *rating systems*, the rationale for their design and validates its rating systems.

[Note: BCD Article 84(2) (part)]

4.2.3 **R** Where a *parent institution in the UK* and its *subsidiary undertakings* or a *parent financial holding company in the UK* and its *subsidiary undertakings* or a *parent mixed financial holding company in the UK* and its *subsidiary undertakings* use the *IRB approach* on a unified basis, the question whether the *minimum IRB standards* are met is answered by considering the *parent undertaking* and its *subsidiary undertakings* together, unless the *firm's IRB permission* specifies otherwise.

[Note: BCD Article 84(2) (part)]

Outsourcing

4.2.4

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- (1) This *guidance* sets out the basis on which a *firm* may rely upon a *rating system* or data provided by another member of its *group*.
- (2) A *firm* may rely upon a *rating system* or data provided by another member of its *group* if the following conditions are satisfied:
 - (a) the *firm* only does so to the extent that it is appropriate, given the nature and scale of the *firm's* business and portfolios and the *firm's* position within the *group*;
 - (b) the *group* is an *banking and investment group*;
 - (c) the integrity of the *firm's* systems and controls is not adversely affected;
 - (d) the outsourcing of these functions meets the requirements of SYSC; and
 - (e) (if the provision of the *rating system* or data is not carried out in the *United Kingdom*) the *firm* can demonstrate to the *appropriate regulator* that the ability of the *appropriate regulator* to carry out their responsibilities under the *Handbook* is not adversely affected.
- (3) If a *firm* does use a *rating system* or data provided by another member of its *group*, the requirements in ■ BIPRU 4 continue to apply to that *firm* in respect of that *rating system* and data. A *firm* cannot absolve itself of the responsibility for complying with those requirements by claiming that any breach is caused by the actions of a third party to which the *firm* has delegated tasks. The *rating system* and data provision are still those of the *firm*, even though personnel elsewhere in the *firm's* group are carrying out these functions on its behalf. So any references in *BIPRU* to what a *firm*, its personnel and its management should and should not do still apply.
- (4) If a *firm* does use a *rating system* or data provided by another *group* member, the *firm's governing body* should formally delegate those functions to the *persons* or bodies that are to carry them out.
- (5) Before delegating the provision of a *rating system* or data to another *group* member, the *firm's governing body* should have explicitly considered the arrangement and decided that it is appropriate and that it enables the *firm* to meet the conditions in (2).

Assessment and estimation

4.2.5

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- (1) This paragraph provides *guidance* on ■ BIPRU 4.2.2 R and in particular ■ BIPRU 4.2.2 R (1).
- (2) The information that a *firm* produces or uses for the purpose of the *IRB approach* should be reliable and take proper account of the different users of the information produced (customers, shareholders, regulators and other market participants).
- (3) A *firm* should establish quantified and documented targets and standards, against which it should test the accuracy of data used in its *rating systems*.

- (4) Tests under (3) might include:
- (a) report and accounts reconciliation, including completeness in relation to (b);
 - (b) whether every *exposure* has a *PD*, *LGD* and, if applicable, *conversion factor* for reporting purposes;
 - (c) whether the *firm's* risk control environment has key risk indicators for the purpose of monitoring and ensuring data accuracy;
 - (d) whether the *firm* has an adequate business and information technology infrastructure with fully documented processes;
 - (e) whether the *firm* has clear and documented standards on ownership of data (including inputs and manipulation) and timeliness of current data (daily, monthly, real time); and
 - (f) whether the *firm* has a comprehensive quantitative audit programme.
- (5) The reconciliation referred to in 4(a) should be reasonably fit for purpose. In particular it should meet the standards in (6) and (7).
- (6) For data inputs, testing for accuracy of data, including the reconciliation referred to in 4(a), should be sufficiently detailed so that, together with other available evidence, it gives reasonable assurance that data input into the *rating system* is accurate, complete and appropriate. Input data fails the required standard if it gives rise to a serious risk of material misstatement in the capital requirement either immediately or subsequently.
- (7) For data outputs, the *firm*, as part of the reconciliation referred to in 4(a), should be able to identify and explain material differences between the outputs produced under accounting standards and those produced under the requirements of the *IRB approach*, including in relation to areas that address similar concepts in different ways (for example *expected loss* on the one hand and accounting provisions on the other).
- (8) A *firm* should have clear and documented standards and policies about the use of data in practice (including information technology standards) which should in particular cover the *firm's* approach to the following:
- (a) data access and security;
 - (b) data integrity, including the accuracy, completeness, appropriateness and testing of data; and
 - (c) data availability.

Further requirements concerning the use test

4.2.6

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If a *firm* uses separate models for the purpose of the *IRB approach* and for its internal purposes as referred to in ■ BIPRU 4.2.2 R (2) it must be able to demonstrate the reasonableness of any differences between those models.

4.2.7

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- (1) This paragraph provides *guidance* on ■ BIPRU 4.2.2 R and in particular ■ BIPRU 4.2.2 R (2).

- (2) The *IRB approach* as applicable to a *firm* should be an integral part of its business and risk management processes and procedures to the extent that credit risk is relevant to them. It should also have a substantial influence on its decision-making and actions.
- (a) particular regard should be had to the use of the *IRB approach* in:
- (i) credit approval;
 - (ii) individual and portfolio limit setting;
 - (iii) reporting of credit risk information; and
 - (iv) provisioning;
- (b) other relevant aspects include:
- (i) assessment of economic capital;
 - (ii) internal capital allocation so far as related to credit risk;
 - (iii) risk appetite;
 - (iv) strategy and acquisitions;
 - (v) profitability and performance; and
 - (vi) performance-related remuneration;
- (c) the carrying out of the *firm's* obligations under the *overall Pillar 2 rule*; and
- (d) matters relating to the *firm's* infrastructure, including information technology, skills and resources and organisational culture.

- 4.2.8** **G** This paragraph provides further *guidance* on ■ BIPRU 4.2.2 R and in particular ■ BIPRU 4.2.2 R (2). In the *appropriate regulator's* view risk management has an essential role in informing risk decisions. However, an essential role does not necessarily mean an exclusive role or even always a primary role. There may be justifiable differences between the *IRB approach* and the *firm's* use of *rating systems* for its internal purposes as referred to in ■ BIPRU 4.2.2 R (2). For example, internal standards and policies may refer to estimates of *PD* and *LGD* for the length of the asset rather than to estimates based on a one-year period (in the case of *PD* estimates) or on an economic downturn (in the case of *LGD* estimates) required by the *IRB approach*.
- 4.2.9** **G** If a *firm* uses scorecards for its internal credit approval process and the models it uses for the purpose of the *IRB approach* are fundamentally different from those scorecards, a *firm's* demonstration of how this is compatible with ■ BIPRU 4.2.2 R (2) might include demonstrating that estimates calculated under the *IRB approach* are used to change sanctioning decisions at an individual or portfolio level. Examples of this might include amending cut-offs, the application of policy rules, the revision of an existing scorecard or the introduction of a new one or taking strategic decisions on which segments of the market to target.
- 4.2.10** **G** To the extent that a *firm* uses *LGD* estimates in its internal risk management processes that differ from the downturn *LGDs* used in the calculation of *risk weighted* assets (see ■ BIPRU 4.3.103 R), the reasons for the difference should be documented in accordance with ■ BIPRU 4.3.109 R.

Requirements concerning the experience requirement

- 4.2.11 **R** A *firm* must be able to demonstrate that it has been using for the *IRB exposure classes* in question *rating systems* that were broadly in line with the *minimum IRB standards* for internal risk measurement and management purposes for at least three years prior to the date of its *IRB permission*.
[Note: BCD Article 84(3)]
- 4.2.12 **G** In meeting the experience requirement under **■ BIPRU 4.2.11 R**, the *appropriate regulator* would expect a *firm* to be able to demonstrate that it has been:
- (1) operating an internal *rating system* with estimates of *PD*;
 - (2) meeting the standards in **■ BIPRU 4** for senior management knowledge and reporting; and
 - (3) meeting the standards in **■ BIPRU 4** relating to the use of *rating systems* in its business;
- for the required minimum 3 year period.
- 4.2.13 **R** A *firm* that has applied for the use of own estimates of *LGDs* and/or *conversion factors* must be able to demonstrate to the *appropriate regulator* that it has been estimating and employing own estimates of *LGDs* and/or *conversion factors* in a manner that was broadly consistent with the *minimum IRB standards* for use of own estimates of those parameters for at least three years prior to the date of its *IRB permission* or of a variation of its *IRB permission* that, in either case, entitled the *firm* to use own estimates of *LGDs* and/or *conversion factors*.
[Note: BCD Article 84(4)]
- 4.2.14 **G** In meeting the experience requirement under **■ BIPRU 4.2.13 R**, the *appropriate regulator* would expect a *firm* to be able to demonstrate that it has been:
- (1) operating an internal *rating system* with estimates of *LGD* and with *conversion factors*; and
 - (2) compliant with **■ BIPRU 4.2.11 R** as applied to the *advanced IRB approach*.
- for the required minimum 3 year period.
- 4.2.15 **G** In the *appropriate regulator's* view the standard required by **■ BIPRU 4.2.11 R** and **■ BIPRU 4.2.13 R** is for a *rating system* to be improved in the light of experience during the three year period so that it meets the minimum requirements more fully for the last year than for the two prior years, provided that the *rating system* has not changed so profoundly that experience from the first or second years becomes of marginal relevance in assessing the reliability of the changed *rating system*.

Implementation of the internal ratings based approach

- 4.2.16** **R** A firm must comply with any requirements in its *IRB permission* relating to the matters described in ■ BIPRU 4.2.17 R - ■ BIPRU 4.2.35 G.
- 4.2.17** **R** Without prejudice to ■ BIPRU 4.2.26 R, a firm and any parent undertaking and its subsidiary undertakings must implement the *IRB approach* for all exposures.
- [Note: BCD Article 85(1) (part)]
- 4.2.18** **R** To the extent that a firm's *IRB permission* permits this, implementation may be carried out sequentially across the different *IRB exposure classes* within the same business unit, across different business units in the same group or for the use of own estimates of *LGDs* or *conversion factors* for the calculation of *risk weights* for the *sovereign, institution and corporate IRB exposure class*.
- [Note: BCD Article 85(1) (part)]
- 4.2.19** **R** In the case of the *retail exposures*, implementation may (but only to the extent provided for in the firm's *IRB permission*) be carried out sequentially across the categories of *exposures* to which the different correlations in ■ BIPRU 4.6.41 R-■ BIPRU 4.6.44 R correspond.
- [Note: BCD Article 85(1) (part)]
- 4.2.20** **R**
- (1) Implementation of the *IRB approach* as referred to in ■ BIPRU 4.2.18 R must be carried out within a reasonable period of time as set out in the *IRB permission*.
 - (2) The implementation must be carried out subject to strict conditions determined by the *appropriate regulator* and set out in the *IRB permission*.
 - (3) A firm must not use the flexibility under ■ BIPRU 4.2.18 R selectively with the purpose of achieving reduced minimum capital requirements in respect of those *IRB exposure classes* or business units that are yet to be included in the *IRB approach* or in the use of own estimates of *LGDs* and *conversion factors*.
- [Note: BCD Article 85(2)]
- 4.2.21** **G**
- (1) A firm should achieve full roll-out of the *IRB approach* to all its exposures, subject to the exemptions outlined in ■ BIPRU 4.2.26 R, within the period specified in its *IRB permission*. A firm should not retain a permanent mix of portfolios on the *standardised approach* and the *IRB approach*, on the *foundation IRB approach* and the *advanced IRB approach* or on a mixture of all approaches with the exception of portfolios covered by those exemptions.
 - (2) This applies to a move:
 - (a) from the *standardised approach* to the *IRB approach*;

- (b) from the *foundation IRB approach* to the *advanced IRB approach*; and
- (c) from the *transitional rules and guidance for BIPRU* to the *IRB approach*.
- (3) The period referred to in ■ BIPRU 4.2.20 R (1) will generally be not more than three years of starting use of the *IRB approach* or the *advanced IRB approach* as applicable.
- 4.2.22** **R** A firm using the *IRB approach* for any *IRB exposure class* must at the same time use the *IRB approach* for the *equity exposure class*.
[Note: BCD Article 85(3)]
- 4.2.23** **R** Subject to ■ BIPRU 4.2.17 R - ■ BIPRU 4.2.20 R, ■ BIPRU 4.2.22 R and ■ BIPRU 4.2.26 R, a firm that has an *IRB permission* must not use the *standardised approach* for the calculation of *risk weighted exposure amounts* for the exposures to which the *IRB approach* applies under the *IRB permission*.
[Note: BCD Article 85(4)]
- 4.2.24** **R** Subject to ■ BIPRU 4.2.17 R - ■ BIPRU 4.2.22 R and ■ BIPRU 4.2.26 R, a firm whose *IRB permission* provides for the use of the *advanced IRB approach* for the calculation of *LGDs* and *conversion factors* for the *sovereign, institution and corporate IRB exposure class* must not use the *LGD values* and *conversion factors* applicable to the *foundation IRB approach* for the exposures to which the *advanced IRB approach* applies under the *IRB permission*.
[Note: BCD Article 85(5)]
- 4.2.25** **G** The *appropriate regulator* will not agree to a firm's request to revoke or vary its *IRB permission* so as to permit the firm to revert to the *standardised approach* except for demonstrated good cause. Likewise, the *appropriate regulator* will not agree to a firm's request to revoke or vary its *IRB permission* so as to permit the firm to revert to the *foundation IRB approach* if the *IRB permission* provides for it to use the *advanced IRB approach*, except for demonstrated good cause.
- 4.2.26** **R** **Combined use of methodologies: Basic provisions**
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- (1) To the extent that its *IRB permission* permits this, a firm permitted to use the *IRB approach* in the calculation of *risk weighted exposure amounts* and *expected loss amounts* for one or more *IRB exposure classes* may apply the *standardised approach* in accordance with this rule.
- (2) A firm may apply the *standardised approach* to the *IRB exposure class* referred to in ■ BIPRU 4.3.2 R (1) (Sovereigns) where the number of material counterparties is limited and it would be unduly burdensome for the firm to implement a *rating system* for these counterparties. A firm may include in this treatment an *exposure* of the type described in ■ BIPRU 3.4.18 R (Exposures to churches or religious communities) that would fall within ■ BIPRU 3.4.15 R (Exposure to a regional

government or local authority) if that provision had not been excluded by ■ BIPRU 3.4.18 R.

- (3) A *firm* may apply the *standardised approach* to the *IRB exposure class* referred to in ■ BIPRU 4.3.2 R (2) (Institutions), where the number of material counterparties is limited and it would be unduly burdensome for the *firm* to implement a *rating system* for these counterparties.
- (4) A *firm* may apply the *standardised approach* to *exposures* in non-significant business units as well as *IRB exposure classes* that are immaterial in terms of size and perceived risk profile.
- (5) A *firm* may apply the *standardised approach* to *exposures* to the UK's central and regional governments, local authorities and administrative bodies, provided that:
 - (a) there is no difference in risk between the *exposures* to the central government and those other *exposures* because of specific public arrangements; and
 - (b) *exposures* to the central government are assigned a 0% *risk weight* under the *standardised approach*.
- (6) A *firm* may apply the *standardised approach* to *exposures* of a *firm* to a counterparty which is its *parent undertaking*, its *subsidiary undertaking* or a *subsidiary undertaking* of its *parent undertaking* provided that the counterparty is an *institution*, a *financial holding company*, a *mixed financial holding company*, a *financial institution*, an *asset management company* or an *ancillary services undertaking* subject to appropriate prudential requirements.
- (7) A *firm* may apply the *standardised approach* to *equity exposures* to entities whose credit obligations qualify for a 0% *risk weight* under the *standardised approach* (including those publicly sponsored entities where a zero *risk weight* can be applied).
- (8) A *firm* may apply the *standardised approach* to *equity exposures* incurred under legislative programmes to promote specified sectors of the economy that provide significant subsidies for the investment to the *firm* and involve some form of government oversight and restrictions on the *equity* investments. This exclusion is limited to an aggregate of 10% of *capital resources*.
- (9) [deleted]
- (10) A *firm* may apply the *standardised approach* to state and state-reinsured guarantees pursuant to ■ BIPRU 5.7.12 R (Conditions for state and state-reinsured guarantees).

[Note: BCD Article 89(1)]

Combined use of methodologies: Documentation

4.2.27

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As part of the application for an *IRB permission*, a *firm* should have a well documented policy explaining the basis on which *exposures* are to be selected for permanent exemption from the *IRB approach* and for treatment under the *standardised approach*. The *firm's* roll out plan should also contain

provisions for the continuing application of that policy on a consistent basis over time.

Combined use of methodologies: Sovereign and institutional, exposures

- 4.2.28 **G** A *firm* intending to make use of ■ BIPRU 4.2.26 R (2) or ■ BIPRU 4.2.26 R (3) should demonstrate to the *appropriate regulator* when applying for an *IRB permission* that it meets the requirements of those provisions with respect to its sovereign or, as the case may be, institutional, *exposures*.

Combined use of methodologies: Meaning of non-significance and immateriality

- 4.2.29 **R** For the purposes of ■ BIPRU 4.2.26 R (4), the *equity exposure IRB exposure class* of a *firm* must be considered material if its aggregate value, excluding *equity exposures* incurred under legislative programmes as referred to in ■ BIPRU 4.2.26 R (8) but including *exposures* in a *CIU* treated as *equity exposures* in accordance with ■ BIPRU 4.9.11 R to ■ BIPRU 4.9.15 R, exceeds, on average over the preceding year, 10% of the *firm's capital resources*. If the number of those *equity exposures* is less than 10 individual holdings, that threshold is 5% of the *firm's capital resources*.

[Note: BCD Article 89(2)]

- 4.2.30 **R**
- (1) This *rule* sets out what must be treated as being non-significant business or immaterial for the purposes of ■ BIPRU 4.2.26 R (4), for *exposures* that do not fall within the *equity exposure IRB exposure class*.
 - (2) A *firm* may elect permanently to exclude *exposures* from the *IRB approach* and apply the *standardised approach*. However a *firm* may only make use of this exemption to the extent that:
 - (a) the *consolidated credit risk requirement* (adjusted under (6)) so far as it is attributable to the excluded *exposures*;

would be no more than 15% of:
 - (b) the *consolidated credit risk requirement* (adjusted under (6)) with respect to all *exposures* (including the ones dealt with under (a)).
 - (3) *Exposures* excluded under ■ BIPRU 4.2.29 R or ■ BIPRU 4.2.26 R (2), ■ BIPRU 4.2.26 R (3) and ■ BIPRU 4.2.26 R (5)-■ BIPRU 4.2.26 R (7) must not be included in (a) or (b).
 - (4) The calculation in (2)(a) is based on the *standardised approach*.
 - (5) The calculation in (2)(b) is based on whichever of the *standardised approach* and the *IRB approach* would apply to the *exposures* referred to in (2)(b) at the time when the calculation is being made.
 - (6) The *consolidated credit risk requirement* is adjusted for the purposes of this *rule* as follows:
 - (a) only the elements based on the *credit risk capital component* and the *counterparty risk capital component* are being taken into account; and

(b) the calculation is carried out with respect to the group of *undertakings* referred to in ■ BIPRU 4.2.17 R.

(7) If a group with respect to which the calculation in this *rule* is being carried out is not required to calculate the *consolidated credit risk requirement*, the calculations in this *rule* must be carried out as if it were.

4.2.31 **R** If a *firm* applies to use the *advanced IRB approach* for the *sovereign, institution and corporate IRB exposure class*, ■ BIPRU 4.2.26 R (4) also applies with respect to *exposures* in that class. For these purposes, to the extent permitted in the *firm's IRB permission*, a *firm* may:

- (1) exclude some *exposures* from the *IRB approach* and apply the *standardised approach* to those *exposures*; and
- (2) exclude other *exposures* from the *advanced IRB approach* and apply the *foundation IRB approach* to those *exposures*.

4.2.32 **G** Where ■ BIPRU 4.2.31 R applies:

- (1) the 15% limit in ■ BIPRU 4.2.30 R (2) is a combined limit for excluded *exposures* remaining on the *standardised approach* and excluded *exposures* remaining on the *foundation IRB approach*; and
- (2) the calculation in ■ BIPRU 4.2.30 R (2)(a) is carried out under whichever method of calculation would be applicable to the *exposure* in question.

Combined use of methodologies: Territorial aspects

4.2.33 **G**

- (1) [deleted]
- (2) [deleted]
- (3) [deleted]
- (4) [deleted]
- (5) [deleted]
- (6) [deleted]

Combined use of methodologies: Intra-group exposures

4.2.34 **G**

- (1) Generally, the *appropriate regulator* will consider excluding, through a *firm's IRB permission*, *exposures* falling into ■ BIPRU 4.2.26 R (6) from the *IRB approach*. The degree to which this exclusion applies will be set out in the *firm's IRB permission*.
- (2) *Exposures* excluded under (1) will be eligible for a 0% *risk weight* under the *standardised approach* if they satisfy the conditions in ■ BIPRU 3.2.25 R to ■ BIPRU 3.2.27A R (Zero risk weight for certain intra-group exposures).

- (3) *Exposures* to or holdings in any non-financial *undertakings* in a *firm's group* are not eligible for permanent exemption from the *IRB approach* under ■ BIPRU 4.2.26 R (6), as they are not subject to consolidated supervision. It is also the *appropriate regulator's* policy that *exposures* to or holdings in any *insurance undertaking* are ineligible. Such *exposures* should remain on the *IRB approach* unless excluded under another part of ■ BIPRU 4.2.26 R.
- (4) If a *firm* uses the exemption in (1) it should have a policy that:
 - (a) provides for the identification of connected counterparties excluded under (1);
 - (b) identifies *exposures* that would be permanently exempted from the *IRB approach* under (1); and
 - (c) identifies the connected counterparty *exposures* that are not permitted to be permanently exempted from the *IRB approach* under (1).
- (5) The policy in (4) should be applied consistently to all *exposures* excluded under (1).

Combined use of methodologies: Purchase of a new businesses

4.2.35

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- (1) This *guidance* deals with some possible effects of acquiring a major new business after the grant of an *IRB permission*.
- (2) A *firm* should if possible ensure that the *exposures* arising through the acquisition are dealt with in accordance with the *firm's IRB permission*.
- (3) If the acquisition is made during the currency of a roll out plan under ■ BIPRU 4.2.18 R, a *firm* should ensure that the *exposures* arising through the acquisition are dealt with in accordance with that plan. For these purposes the existing and the acquired business should be considered together. The whole of the *firm's* business, including the newly acquired business, should be included in both the denominator and numerator of the fraction in ■ BIPRU 4.2.30 R.
- (4) If a *firm* cannot comply with (2) the *appropriate regulator* will consider an application to vary the *firm's IRB permission* in order to deal with the acquisition. For example the *appropriate regulator* may agree to extend the time by which the roll out should be completed (see ■ BIPRU 4.2.20 R). However any such variation should be consistent with the provisions of ■ BIPRU 4.2 that would have applied if the acquisition had been included in the *firm's* original application for an *IRB permission*.
- (5) If the acquisition is made after a *firm* has completed its roll out under ■ BIPRU 4.2.18 R the *appropriate regulator* will not in general agree to an application to treat an *exposure*:
 - (a) under the *standardised approach* if it would otherwise be treated under the *IRB approach* under the *firm's IRB permission*; or
 - (b) under the *foundation IRB approach* if it would otherwise be treated under the *advanced IRB approach* under the *firm's IRB permission*.

- (6) Any application to disapply the policy in (5) will be treated in accordance with the approach set out in ■ BIPRU 4.2.25 G.
- (7) The *appropriate regulator* will also adopt the approach in (5) while a roll out plan is in progress if, in relation to an *exposure* of a particular type, the period for completion of the roll out for those *exposures* under that plan has ended.