

Supervisory Statement | SS31/15

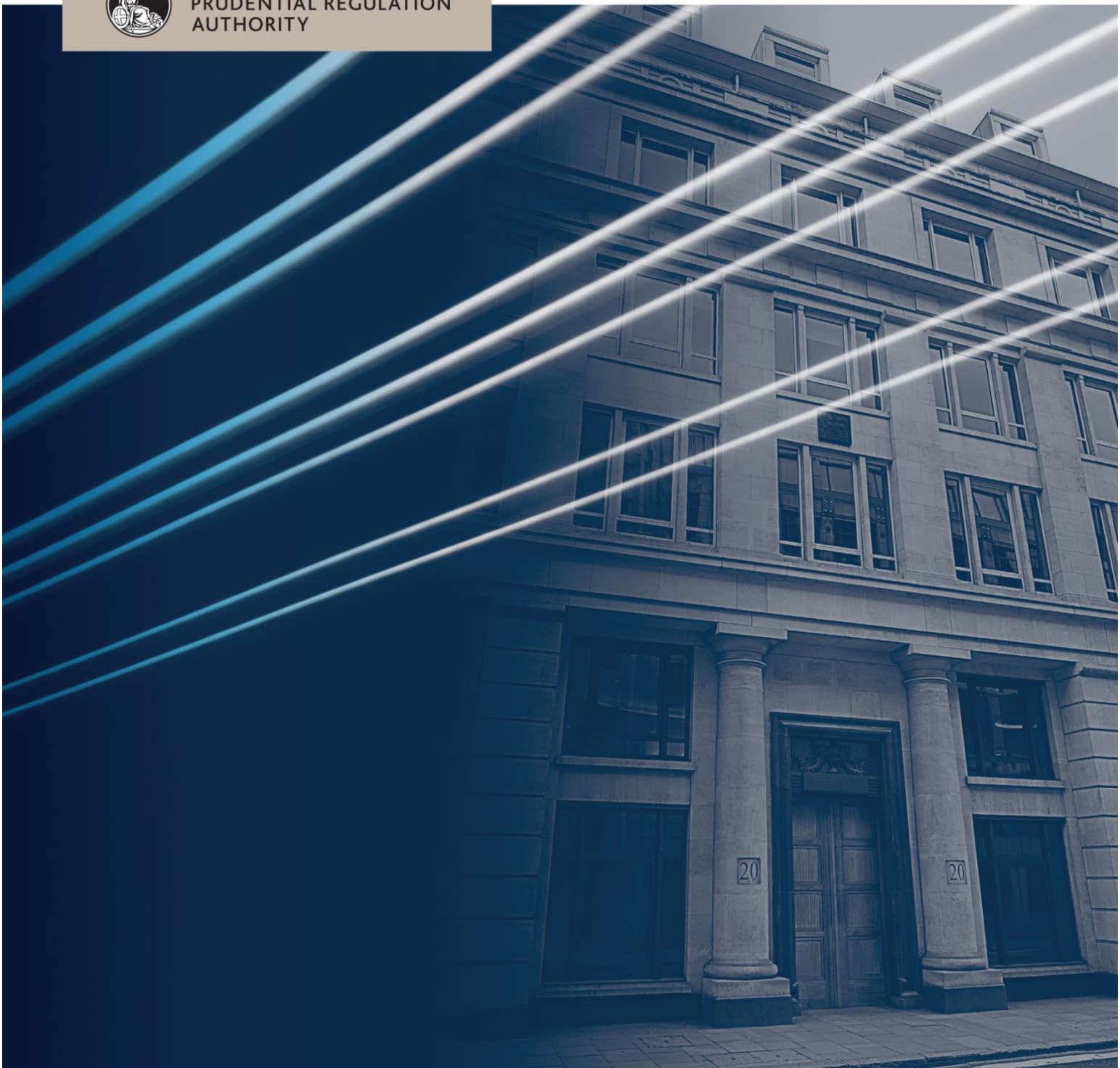
The Internal Capital Adequacy Assessment Process (ICAAP) and the Supervisory Review and Evaluation Process (SREP)

November 2018

(Updating December 2017)



BANK OF ENGLAND
PRUDENTIAL REGULATION
AUTHORITY





BANK OF ENGLAND
PRUDENTIAL REGULATION
AUTHORITY

Supervisory Statement | SS31/15

The Internal Capital Adequacy Assessment Process (ICAAP) and the Supervisory Review and Evaluation Process (SREP)

November 2018

(Updating December 2017)

Contents

1	Introduction	1
2	Expectations of firms undertaking an ICAAP	1
3	Stress testing, scenario analysis and capital planning	13
4	Reverse stress testing	19
5	The SREP	20
	Annex - SS31/15 updates	28

1 Introduction

1.1 This supervisory statement is aimed at firms to which CRD IV¹ applies and replaces PRA Supervisory Statement (SS) 5/13² and PRA SS6/13.^{3 4}

1.2 It provides further detail in relation to the high-level expectations outlined in ‘The Prudential Regulation Authority’s approach to banking supervision’.⁵

1.3 Chapter 2: *Expectations of firms undertaking an ICAAP* sets out the expectations the PRA has in relation to the ICAAP and the requirements set out in the Internal Capital Adequacy Assessment (ICAA) Part of the PRA Rulebook. It sets out the PRA’s expectations regarding firms’ coverage and treatment of interest rate risk in the non-trading book (more commonly referred to as interest rate risk in the banking book or IRRBB), market risk, group risk, operational risk, pension obligation risk and foreign currency lending to unhedged retail and SME borrowers. It also provides additional detail on data that firms are required or expected to submit with their ICAAP document or otherwise as applicable.

1.4 Chapter 3: *Stress testing, scenario analysis and capital planning* sets out the PRA’s expectations of firms in relation to stress testing, scenario analysis and capital planning, and the requirements set out in Chapter 12 of the Internal Capital Adequacy Assessment Part of the PRA Rulebook.

1.5 Chapter 4: *Reverse stress testing* sets out the PRA’s expectations of firms in relation to reverse stress testing, and the requirements set out in Chapter 15 of the Internal Capital Adequacy Assessment Part of the PRA Rulebook.

1.6 Chapter 5: *The SREP* sets out the factors that the PRA takes into consideration to assess a firm’s ICAAP. It explains the setting of firm specific capital requirements and the PRA buffer, the consequences in the event a firm fails to meet its Total Capital Requirement (TCR)⁶ or uses the PRA buffer, and disclosure. It also sets out the factors that the PRA takes into consideration to assess a firm’s reverse stress-testing approach including the PRA response to weaknesses in the process.

1.7 This supervisory statement should be read in conjunction with the Statement of Policy, ‘The PRA’s methodologies for setting Pillar 2 capital’.⁷ For ring-fenced bodies (RFBs), as defined in the Financial Services and Markets Act 2000 (FSMA), section 142A, and banking groups containing RFBs, this statement should be read alongside SS8/16, ‘Ring-fenced Bodies (RFBs)’.⁸

2 Expectations of firms undertaking an ICAAP

1 The Capital Requirements Directive (2013/36/EU) (CRD) and the Capital Requirements Regulation (575/2013) (CRR), jointly ‘CRD IV’.

2 PRA Supervisory Statement 5/13, ‘The Internal Capital Adequacy Assessment Process (ICAA) and the Supervisory Review and Evaluation Process (SREP)’, December 2013: www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/supervisory-statement/2013/ss513.

3 PRA Supervisory Statement 6/13, ‘Stress testing, scenario analysis and capital planning’, December 2013: www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/supervisory-statement/2013/ss613.

4 On 1 February 2017, this SS was updated – see annex for full details.

5 June 2014: www.bankofengland.co.uk/publications/Documents/prapproach/bankingappr1406.pdf.

6 Pillar 1 plus Pillar 2A capital requirements.

7 www.bankofengland.co.uk/pr/Pages/publications/sop/2017/p2methodologiesupdate.aspx.

8 February 2017: www.bankofengland.co.uk/prudential-regulation/publication/2016/ring-fenced-bodies-ss.

2.1 A firm must carry out an ICAAP in accordance with the PRA's ICAA rules. These include requirements on the firm to assess on an ongoing basis the amounts, types and distribution of capital that it considers adequate to cover the level and nature of the risks to which it is or might be exposed. This assessment should cover the major sources of risks to the firm's ability to meet its liabilities as they fall due, and should incorporate stress testing and scenario analysis. If a firm is merely attempting to replicate the PRA's own methodologies, it will not be carrying out its own assessment in accordance with the ICAA rules. The ICAAP should be documented and updated annually by the firm, or more frequently if changes in the business, strategy, nature or scale of its activities or operational environment suggest that the current level of financial resources is no longer adequate.

2.2 The PRA expects firms, in the first instance, to take responsibility for ensuring that the capital they have is adequate, with the ICAAP being an integral part of meeting this expectation. The PRA expects an ICAAP to be the responsibility of a firm's management body, that it is approved by the management body, and that it is used as an integral part of the firm's management process and decision making. The processes and systems used to produce the ICAAP should ensure that the assessment of the adequacy of a firm's financial resources is reported to its management body as often as is necessary.

2.3 The ICAAP, and internal processes and systems supporting it, should be proportionate to the nature, scale and complexity of the activities of a firm, as set out in Internal Capital Adequacy Assessment 3.3 in the PRA's Rulebook. Where a firm has identified risks as not being material, it should be able to provide evidence of the assessment process that determined this and discuss why that conclusion has been reached.

2.4 Liquidity risk should also be assessed, including in relation to potential losses arising from the liquidation of assets and increases in the cost of funding during periods of stress. The requirements in relation to liquidity risk may be found in PS11/15.⁹

2.5 As set out in further detail below, the PRA also expects firms to develop a framework for stress testing, scenario analysis and capital management that captures the full range of risks to which they are exposed and enables these risks to be assessed against a range of plausible yet severe scenarios. The ICAAP document should outline how stress testing supports capital planning for the firm.

2.6 Where a firm uses a model to aid its assessment of the level of capital adequacy, it should be appropriately conservative and should contribute to prudent risk management and measurement. The firm should expect the PRA to investigate the structure, parameterisation and governance of the model, and the PRA will seek reassurance that the firm understands the attributes, outputs and limitations of the model, and that it has the appropriate skills and expertise to operate, maintain and develop the model.

IRRBB

2.7 All firms must have appropriate systems and processes, proportionate to the nature, scale and complexity of their business, to evaluate and manage IRRBB.

2.8 The systems and processes should allow the firm to:

⁹ PRA Policy Statement PS11/15, 'CRD IV: Liquidity', June 2015: www.bankofengland.co.uk/prudential-regulation/publication/2014/crd-iv-liquidity.

- measure the exposure and sensitivity of its activities, if material, to re-pricing risk, yield curve risk, basis risk and risks arising from embedded optionality (eg pipeline risk and prepayment risk) as well as changes in assumptions (eg those relating to customer behaviour);
- consider whether a purely static analysis of the impact on its current portfolio of a given shock or shocks should be supplemented by a more dynamic simulation approach;
- model scenarios in which different interest rate paths are computed and in which some of the assumptions (eg about behaviour, contribution to risk and balance sheet size and composition) are themselves functions of interest rate levels; and
- measure the exposure and sensitivity of its available-for-sale and fair value exposures to changes in value resulting from yield curve and basis risk.

2.9 Under Internal Capital Adequacy Assessment 13.1, a firm is required to make a written record of its assessments made under those rules. A firm's record of its approach to evaluating and managing interest rate risk as it affects the firm's non-trading activities should cover the following issues as appropriate:

- the internal definition of the boundary between 'banking book' and 'trading activities';
- the definition of economic value and its consistency with the method used to value assets and liabilities (eg discounted cash flows);
- the size and the form of the different shocks to be used for internal calculations;
- the use of a dynamic and/or static approach in the application of interest rate shocks;
- the treatment of commonly called 'pipeline transactions' (including any related hedging);
- the aggregation of multi-currency interest rate exposures;
- the inclusion (or not) of non-interest bearing assets and liabilities (including capital and reserves);
- the treatment of current and savings accounts (ie the maturity attached to exposures without a contractual maturity);
- the treatment of fixed-rate assets or liabilities where customers still have a right to repay or withdraw early;
- the extent to which sensitivities to small shocks can be scaled up on a linear basis without material loss of accuracy (ie covering both convexity generally and the non-linearity of pay-offs associated with explicit option products);
- the degree of granularity employed (eg offsets within a time bucket); and
- whether all future cash flows or only principal balances are included.

2.10 For building societies, interest rate risk should be managed with reference to PRA Supervisory Statement SS20/15, 'Supervising building societies' treasury and lending

activities'.¹⁰ Only societies not on the administered or matched approach to financial risk management should incur any significant interest rate risk.

2.11 In accordance with Internal Capital Adequacy Assessment 9.2, a firm should apply a 200 basis point shock in both directions to each major currency exposure. The PRA will periodically review whether the level of the shock is appropriate in light of changing circumstances, in particular the general level of interest rates (for instance, during periods of very low interest rates) and their volatility. The level of shock required may also be changed in accordance with guidelines issued by the European Banking Authority (EBA).¹¹ A firm's internal systems should, therefore, be flexible enough to compute its sensitivity to any standardised shock that is prescribed.

2.12 Alongside the requirement to monitor and evaluate the potential impact of changes in interest rates on economic value, the PRA expects firms to monitor the potential impact on earnings volatility. This should be assessed on an appropriate timeframe of three to five years, and factor in the firm's forward-looking view of product volumes and pricing, based on its proposed business model during the scenario, and the projected path of interest rates. Careful consideration should be given to how any resulting volatility is managed.

Market risk

2.13 Firms should provide in their ICAAP document sufficient supplementary evidence, to an auditable standard, which shows how the firm's capital add-on for market risk is calculated. Specifically, firms need to provide evidence of sound approaches for assigning liquidity horizons in stressed situations, and demonstrate a conservative translation of liquidity horizons into appropriately severe stress scenarios.

2.14 The PRA expects firms to submit this supplementary internal methodology documentation, when pertinent, on a quarterly basis.

2.15 To this end, the PRA expects firms to:

- identify illiquid, one-way or concentrated positions;
- stress these positions (or risk factors) over an appropriate holding period (ie greater than ten days) and confidence level;
- identify any capital mitigants already in place that directly relate to the illiquid, one-way or concentrated positions (eg capital for Risks not in VaR (RNIVs), capital for the Incremental Risk Charge (IRC) and reserves (such as bid/ask and prudential valuation reserves)); and
- suggest a Pillar 2A capital amount based on the stressed losses and capital mitigants or reserves.

Group risk

2.16 Under the PRA Rulebook a firm is required to have adequate, sound and appropriate risk management processes and internal control mechanisms for the purpose of assessing and

10 PRA Supervisory Statement 20/15, 'Supervising building societies' treasury and lending activities', April 2015; www.bankofengland.co.uk/prudential-regulation/publication/2015/supervising-building-societies-treasury-and-lending-activities-ss.

11 EBA/GL/2015/08 Guidelines on the management of interest rate risk arising from non-trading activities; www.eba.europa.eu/documents/10180/1084098/EBA-GL-2015-08+GL+on+the+management+of+interest+rate+risk+.pdf.

managing its own exposure to group risk, including sound administrative and accounting procedures.¹²

2.16A Group risk, as defined in the PRA Rulebook,¹³ means the risk that the financial position of a firm may be adversely affected by its relationships (financial or non-financial) with other entities in the same group or by risk which may affect the financial position of the whole group, including reputational contagion.

2.16AA Where a firm is a member of a consolidation group, it should provide in its ICAAP document sufficient information to demonstrate how it is meeting the requirements under ICAA 14.8 and 14.9 to allocate the total amount of financial resources, own funds and internal capital between different parts of the consolidation group in a way that adequately reflects the nature, level, and distribution of the risks to which the consolidation group is subject. This assessment should cover all sources of risk within the group, including risks of financial sector entities that do not have an individual capital requirement but that nevertheless contribute to the consolidated risks of the group. Firms for which the PRA is not the global consolidating supervisor are not expected to conduct this assessment or provide the relevant analysis in their ICAAP document, unless the PRA requests otherwise.

2.16AB Specifically, where a financial sector entity's¹⁴ contribution to the consolidation group's risk weighted assets (RWAs) exceeds 5%, and its capital ratio (defined as own funds divided by total RWAs) is lower than the consolidation group's total capital requirement, the firm is expected to:

- identify in its ICAAP document any mitigating actions it is taking to manage this under-allocation;¹⁵ or
- demonstrate that there is no group risk from the under-allocation of capital to this entity (eg because there is no current or foreseen material, practical, or legal impediment to the prompt transfer of resources to that entity; the shortfall is temporary; or the safety and soundness of the entity is not material to the financial position of the firm or the consolidation group of which it is a member).

2.16AC Where a firm is a member of a consolidation group, and the group includes an entity established outside the United Kingdom, the PRA expects the firm, when it is assessing group risk, to consider any capital requirements or buffers applied to the entity¹⁶ established outside the United Kingdom. Specifically, the PRA expects a firm to consider the extent to which:

- for any given risk type, the minimum requirements applied to the entity exceed the entity's share of the consolidated group requirements for the same underlying risk; and
- any buffers applied to the entity exceed the entity's share of the consolidated group buffer applied for the same underlying risk.¹⁷

¹² Group Risk Systems 2.1.

¹³ Internal Capital Adequacy Assessment 1.2.

¹⁴ As defined in Article 4.1 of CRR.

¹⁵ Mitigating actions might include, for example, the reallocation of resources from other entities within the group or the raising of additional capital resources.

¹⁶ Whether on an individual, sub-consolidated, or country-level consolidated basis.

¹⁷ For example, the extent to which any domestic systemically important bank (D-SIB) buffer exceeds the D-SIB's share of any group-wide global systemically important bank (G-SIB) buffer, after accounting for the effect of risks that net off on consolidation.

2.16AD An entity's share of a particular consolidated group capital requirement or buffer can be determined by multiplying that consolidated group capital requirement or buffer by the proportion of the consolidated group's Pillar 1 RWAs that are attributable to that entity. The consolidated group's RWAs that are attributable to an entity is calculated as the entity's Pillar 1 RWAs minus the risk-weighted exposures of the entity to other group entities.

2.16AE Firms for which the PRA is not the global consolidating supervisor are not expected to conduct this assessment or provide the relevant analysis in their ICAAP documents, unless the PRA requests otherwise.

2.16AF The PRA does not expect firms to include in this assessment requirements imposed on entities established outside the United Kingdom that are attributable to risks that:

- are already mitigated through the risk-based capital framework (including requirements that are higher than the equivalent requirement applied on a consolidated basis because of a difference of approach between the PRA and the regulatory authority in the jurisdiction concerned)¹⁸ or by other means;¹⁹ or
- net off in consolidation (eg intragroup risks and offsetting positions).

2.16AG Under ICAA 13.1, a firm must make a written record of the assessments required under the ICAA part of the PRA Rulebook. A firm's record of its approach to making the assessment in paragraph 2.16AC should cover the following, as appropriate:

- for any given risk type, the minimum requirements or buffers applied to an entity established outside the United Kingdom that exceed the entity's share of the consolidated group requirements for the same risk or buffer;
- any such differences that the firm considers are already mitigated through the risk-based capital framework or by another means; and
- how any additional capital to cover group risk has been calculated.

2.16AH Under the Senior Managers Regime (SMR),²⁰ firms are required to allocate a Prescribed Responsibility (PR) for managing the allocation and maintenance of the firm's capital, funding and liquidity to an individual performing a Senior Management Function (SMF).²¹ The PRA expects:

- the SMF allocated this PR to ensure that the firm conducts the assessments specified in paragraphs 2.16AA to 2.16AG, and to document them in the firm's ICAAP submissions, and
- firms to ensure this expectation is explicitly reflected in the relevant SMF's Statement of Responsibilities.

18 For example, a PRA-authorized firm may have permission to use an IRB model to calculate consolidated capital requirements in respect of a portfolio of credit risk exposures. If its overseas subsidiary is required to use a standardised approach for the same portfolio of credit risk exposures (on an individual or sub-consolidated basis), and as a result it is subject to higher requirements in respect of that portfolio, the PRA would not expect the firm to take the difference into account in its assessment of group risk.

19 For example, the risk of a local entity might be mitigated at the group level through risk management processes or internal control mechanisms established at the group level.

20 See Rule 4.1(7) in the Allocation of Responsibilities part of the PRA Rulebook and Supervisory Statement 28/15 'Strengthening individual accountability in banking', May 2017: www.bankofengland.co.uk/prudential-regulation/publication/2015/strengthening-individual-accountability-in-banking-ss.

21 Typically the Chief Finance function (SMF2) or, depending on the organisational structure of a group, a Group Entity Senior Manager (SMF7).

Ring-fenced body (RFB) group risk

2.16B RFB group risk means, in relation to a consolidation group containing an RFB sub-group,^{22 23} the risk that the financial position of a firm on a consolidated basis may be adversely affected by the minimum capital and buffers applicable at the level of the RFB sub-group, such that there is insufficient capital within (or an inappropriate distribution of capital across) the consolidated group to cover the risks of the consolidated group.

2.16C The PRA therefore expects a firm that is a member of a consolidation group containing an RFB sub-group to ensure that the minimum capital and buffers applicable at the level of the RFB sub-group do not result in the consolidated group having insufficient capital within it, or an inappropriate distribution of capital across it, to cover the risks faced by the consolidation group; and in order to ensure that RFB group risk is adequately covered in consolidated group capital, firms are expected to take account of this risk when carrying out an ICAAP on a consolidated basis.

2.16D When a firm is assessing RFB group risk as part of its ICAAP on a consolidated basis, the PRA expects it to consider, to the extent not already covered by other elements of the capital framework, the following:

- the extent to which any systemic risk buffer (SRB) exceeds the RFB sub-group's share²⁴ of any group-wide global systemically important bank (G-SIB) buffer;
- the extent to which the amount of capital applicable at the level of the RFB sub-group to cover the credit concentration risk on a sub-consolidated basis exceeds the RFB sub-group's share²⁵ of the capital applicable at the level of the consolidated group to cover the credit concentration risk on a consolidated basis;
- any minimum capital and buffers applicable at the level of the RFB sub-group attributable to risk-weighted exposures of the RFB sub-group to group entities that are not members of the RFB sub-group (to the extent RFB group risk in relation to those exposures is not already captured by the assessment of other aspects of RFB group risk covered in this paragraph); and
- as appropriate, the amount by which the minimum capital or buffers applicable at the RFB sub-group level to cover any other risk exceed the RFB sub-group's minimum capital or buffers applicable at the consolidated group level to cover the same risk. (This could include, for example, interest rate risk in the banking book, operational risk or the risk of the consolidated group being undercapitalised following the application of PRA rules on deduction of significant investments in financial sector entities at the level of the RFB sub-group.)²⁶

22 An RFB sub-group is a sub-set of related group entities within a consolidation group, consisting of one or more RFBs and other legal entities, which is established when the PRA gives effect to Article 11(5) of the CRR. See SS8/16 'Ring fenced bodies (RFBs)', February 2017: www.bankofengland.co.uk/prudential-regulation/publication/2016/ring-fenced-bodies-ss for more detail.

23 In the event that an RFB is not part of an RFB sub-group, the PRA expects to apply an equivalent approach in the event that prudential requirements are applicable to the RFB on an individual basis.

24 This share can be determined by multiplying the global systemically important bank (G-SIB) buffer by the proportion of the consolidated group's Pillar 1 RWAs (ie the total risk exposure amount calculated in accordance with Article 92(3) of the CRR) that are attributable to the RFB sub-group.

25 This share can be determined by multiplying the capital applicable at the level of the consolidated group to cover the credit concentration risk on a consolidated basis by the proportion of the consolidated group's credit risk RWAs that are attributable to the RFB sub-group.

26 See paragraphs 2.1 and 2.2 in the Definition of Capital Part of the PRA's Rulebook.

2.16E Pension obligation risk: As set out in SS8/16, the PRA expects an RFB to ensure it has fully and appropriately considered group risk arising in respect of its pension arrangements when conducting its assessment of pension obligation risks at the level of the RFB sub-group. The PRA expects an RFB to consider all relevant factors when performing its assessment, including, but not limited to, its current share of consolidated group pension obligations, and its expected future share where it is making changes to its pension arrangements. An RFB's assessment should not be limited to a simple allocation of a share of the consolidated group's pension obligation risk. A full assessment may therefore result in a higher capital requirement than if the RFB were to apply a 'share-of-group' approach, particularly in the period prior to 1 January 2026. The PRA also expects to apply its existing policy, as set out in this supervisory statement, when assessing the pension obligation risk of a consolidated group containing an RFB. The PRA expects the assessment of RFB group risk at group level to be unaffected by the assessment of the pension obligation risk for the RFB sub-group given:

- the transitional nature of the risk; and
- assuming the sum of the amount of pension risks at the level of the RFB sub-group and group entities that are not members of the RFB sub-group is not expected to increase to a level above that of the consolidated group in the event that the RFB will have to assume the pension liabilities of group entities that are not members of the RFB sub-group.

2.16F This exception only applies to the assessment of pension risk and should not be taken to mean that other risks with proportionately higher requirements should not be included in the assessment of RFB group risk.

2.16G In respect of the obligation under Internal Capital Adequacy Assessment 13.1, the PRA expects that firms should provide in their ICAAP document sufficient supplementary evidence, to an auditable standard, to demonstrate clearly how the additional capital to cover RFB group risk is calculated. Specifically, firms should provide a breakdown of the total amount of the additional capital, identifying the amount of capital attributable to each part of the assessment referred to in paragraph 2.16D.

Operational risk

2.17 In meeting the general standard referred to in Internal Capital Adequacy Assessment 10.1, a firm that undertakes market-related activities should be able to demonstrate to the PRA:

- in the case of a firm calculating its capital requirements for operational risk using the Basic Indicator Approach or Standardised Approach, that it has considered; or
- in the case of a firm with an Advanced Measurement Approach (AMA) permission, that it has complied with, the Committee of European Banking Supervisor's Guidelines on the management of operational risk in market-related activities published in October 2010.²⁷

2.18 In meeting the general standard referred to in Internal Capital Adequacy Assessment 10.1, a firm with an AMA approval should be able to demonstrate to the appropriate regulator

27 www.eba.europa.eu/regulation-and-policy/operational-risk/guidelines-on-the-management-of-operational-risk-in-market-related-activities.

that it has considered and complies with Section III of the EBA's Guidelines on the AMA — Extensions and Changes, published in January 2012.²⁸

2.19 Business continuity plans are also a key component of operational risk management. Plans should include consideration of:

- resource requirements such as people, systems and other assets, and arrangements for obtaining these resources;
- the recovery priorities of the firm's operations;
- communication arrangements for internal and external concerned parties (including the PRA, clients and the media);
- escalation and invocation plans that outline the processes for implementing the business continuity plans, together with relevant contact information;
- processes to validate the integrity of information affected by the disruption; and
- regular stress testing of the business continuity plan in an appropriate and proportionate manner.

2.20 In addition, the PRA does not expect that smaller firms will complete the operational risk data items but expects such firms to provide in their ICAAP document at least the following information (historical losses at an aggregate level are regularly available to the PRA via COREP 17):

- (i) forecast operational risk losses, broken down between conduct and non-conduct losses and by future year; and
- (ii) information on the operational risk scenarios they have considered in their ICAAP, covering a description of such scenarios and an assessment of their impact and likelihood.

Pension obligation risk

2.21 The PRA's framework for Pillar 2A pension obligation risk capital consists of two elements:

- the firm's own assessment of the appropriate level of Pillar 2A pension obligation risk capital; and
- a set of stresses on the accounting basis which will be used by the PRA in assessing the adequacy of the firm's own assessment of the level of capital required.

2.22 The firm's own assessment and the stress tests on the accounting basis can be reduced by:

- offsets and management actions; and
- any pension scheme deficit deducted from Common Equity Tier 1 (CET1).

2.23 The PRA expects firms to carry out their own assessment of the appropriate level of Pillar 2A pension obligation risk capital in their ICAAP. Firms should use methodologies and assumptions that are consistent with their approach to risk management and are therefore not restricted to using the IAS 19 basis in carrying out this assessment.

2.24 In carrying out their assessment, firms should consider risks to the financial position of their pension schemes consistent with a stress event that has no more than a 1 in 200 probability of occurring in a one-year period.

2.25 For the purpose of firms' own assessment of Pillar 2A pension obligation risk capital, the PRA expects firms to use stress testing and scenario analysis where appropriate to quantify the gross impact on the existing scheme surplus or deficit. The PRA does not necessarily favour a stochastic approach over a deterministic one. Firms should decide which approach is most appropriate.

2.26 As part of their ICAAP submission, firms are required to calculate and (if they have a defined benefit pension scheme) report the stressed accounting value of their pension scheme's assets and liabilities using stress scenarios specified by the PRA in accordance with PRA Statement of Policy, 'The PRA's methodologies for setting Pillar 2 capital' and Reporting Pillar 2, 2.6 as set out in the PRA Rulebook. This requirement is in addition to the firm's own assessment referred to above, unless the data required in that data item have already been reported to the PRA by other means. In doing so firms are expected to:

- calculate the stressed value of assets and liabilities assuming all the elements of the stress apply instantaneously and simultaneously;
- decompose the IAS 19 discount rate into a risk-free element and a credit spread element. Firms should make use of their own methodology to do so but should provide a description of the approach taken in their ICAAP. The long-term interest rate stress should be applied to the risk-free element and the credit stress to the credit spread element in order to derive the stressed discount rate; and
- use their own methodology to decompose the yield on bonds into a risk-free element and a credit spread element and describe the approach taken in their ICAAP.

2.27 The PRA expects the valuation measure of liabilities to be the same as that used for International Financial Reporting Standards (IFRS) reporting. The PRA expects firms' approaches to setting the valuation assumptions to be stable over time and any changes to the approach should be justified in the ICAAP document.

2.28 More information on the scenarios is available in PRA Statement of Policy, 'The PRA's methodologies for setting Pillar 2 capital'. The PRA scenarios are highly simplified by design and firms should decide which stresses to apply to individual asset and liability classes. The broadest possible interpretation should be used (eg a single stress is specified for equity prices); and this should be applied to all categories of investments that exhibit properties similar to listed equities, such as UK equities, overseas equities, unlisted equities, private equity and limited partnerships.

2.29 Where firms believe that the scenarios produce inappropriate levels of capital for their pension schemes, they should provide evidence of this together with a detailed explanation in their ICAAP document.

2.30 When considering management actions and offsets, firms must clearly demonstrate that offsets are valid and that management actions are realistic. They must also demonstrate that both offsets and management actions do not result in double counting and would be effective under stressed conditions.

Pension obligation risk in firms and groups

2.31 Firms should ordinarily hold pension obligation risk capital against the total liability resulting from past or present employment:

- (i) with the firm (including any legacy or overseas entities); and
- (ii) outside the firm, pro-rated according to whether the pension fund principal beneficiaries' service was performed for the benefit of the firm.

2.32 Firms should also consider whether they may be exposed to pension obligation risk greater than that captured by these general criteria, given the potential for The Pensions Regulator to impose a contribution notice or a financial support direction on any company associated with an employer.

2.33 When Pillar 2A pension obligation risk capital is calculated at group level, these expectations apply to the group as a whole. Accordingly, firms must allocate Pillar 2A pension obligation risk capital to entities within the group in a way that adequately reflects the nature, level and distribution of the risks to which the group is subject.

Pension obligation risk: addressing the risk of increased pension losses near the point of resolution

2.34 There are situations where liabilities related to a defined benefit pension fund may, as the sponsor firm's financial condition deteriorates, increase substantially and unexpectedly above the stressed deficit which is covered under Pillar 2A.²⁹

2.35 Should such events materialise as a firm's financial condition deteriorates, unexpected losses well in excess of Pillar 2A capital already set aside might crystallise prior to the point of resolution.

2.36 In order to address the risk of increased pension losses near the point of resolution, the PRA expects firms to articulate in their ICAAP document how they intend to deal with the defined benefit pension scheme under relevant firm-specific extreme scenarios, bearing in mind the potential for additional loss and describing available management actions. The analysis should be sufficient to demonstrate the institution's awareness around this tail risk and the adequacy of its mitigating actions. The actions should be consistent with the firms' recovery and resolution plans. Additionally, under Reporting Pillar 2 2.6 firms with defined benefit pension schemes must calculate and report to the PRA their defined benefit pension scheme deficit if a debt became due under section 75 of the Pensions Act 1995, unless the data required in that data item have already been reported to the PRA by other means.

²⁹ The following events could trigger such losses: a request to the firm, by the pension trustee, to make additional payments to the pension fund when there is a concern that the firm may not be able to continue to make payments in the future (eg due to its deteriorating financial conditions); a different valuation of the firm's assets and liabilities under duress (eg under Article 36 of the Bank Recovery and Resolution Directive when recovery actions are initiated and/or prior to conversion/write-off of capital instruments); a loss on transfer of the scheme to another party (eg if required as part of a recovery action); and a trigger of an insolvency event.

Foreign currency lending to unhedged retail and SME borrowers

2.37 Foreign currency lending is defined in the EBA Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP).³⁰

2.38 As part of its obligation under Internal Capital Adequacy Assessment 3.1 a firm that lends in foreign currency to unhedged retail and SME borrowers should determine whether it meets the thresholds of materiality in Title 6, Section 1 paragraph 117 of the EBA's Guidelines on common procedures and methodologies for the SREP. Where a firm meets the threshold it should notify the PRA and reflect the risk in its ICAAP.

Exposures to securitisation

2.39 When a firm assesses risks associated with exposures to securitisation as part of its ICAAP, it should consider the following:

- (i) the risk characteristics and structural features of a securitisation, including those of the underlying exposures, which could materially impact the performance of any positions in that securitisation held by the firm;
- (ii) whether the application of another method, namely SEC-IRBA, SEC-ERBA or SEC-SA, insofar as that method may be used, would result in material differences in risk weights for a position relative to the method applied; and
- (iii) the extent to which differences in risk-weights identified in (ii) may be caused by the risk characteristics and structural features identified in (i) as well as the approach taken by an External Credit Assessment Institution (ECAI) in rating a particular asset class.

2.40 A firm's record under Internal Capital Adequacy Assessment 13.1 of its approach to evaluating and managing securitisation risk (or credit risk arising from securitisation exposures) should cover the following, as appropriate, taking into account SS9/13 'Securitisations: Significant Risk Transfer':

- (i) the appropriateness of the credit risk weight calculated for the asset classes to which the firm is exposed via securitisation;
- (ii) risk characteristics and structural features exhibited by securitisations to which the firm is exposed, that may materially impact the performance of the securitisation position, and are not explicitly taken into account by the method applied;
- (iii) a breakdown of the firm's aggregate securitisation exposure, split by asset class, risk characteristic or other feature as appropriate, with the following information:
 - (a) for the aggregate exposure risk-weighted under the SEC-IRBA, risk-weighted exposure amounts split by asset class, risk characteristic or other feature as appropriate, which would be arrived at under the SEC-IRBA, SEC-ERBA (for rated positions only) and the SEC-SA insofar as each method may be used; and
 - (b) for the aggregate exposure which is both risk-weighted under the SEC-SA and rated, risk-weighted exposure amounts which would be arrived at under the SEC-ERBA insofar as that method may be used.

³⁰ [www.eba.europa.eu/documents/10180/935249/EBA-GL-2014-13+\(Guidelines+on+SREP+methodologies+and+processes\).pdf](http://www.eba.europa.eu/documents/10180/935249/EBA-GL-2014-13+(Guidelines+on+SREP+methodologies+and+processes).pdf). Title 1 'Subject matter, definitions and level of application' of the EBA Guidelines, Section 2, pages 16 and 18, provide definitions of 'FX lending' and 'unhedged borrowers'.

- (iv) The firms' aggregate exposure and aggregate risk-weighted exposure amounts to unrated securitisation positions.

3 Stress testing, scenario analysis and capital planning

3.1 Both stress testing and scenario analysis are forward-looking analytical techniques, which seek to anticipate possible losses that might occur if an identified economic downturn or a risk event crystallises.

3.2 Stress testing typically refers to shifting the values of individual parameters that affect the financial position of a firm and determining the effect on the firm's financial position.

3.3 Scenario analysis typically refers to a wider range of parameters being varied at the same time. Scenario analyses often examine the impact of adverse events on the firm's financial position, for example, simultaneous movements in a number of risk drivers affecting all of a firm's business operations, such as business volumes and investment values.

3.4 There are three broad purposes of stress testing and scenario analysis:

- (i) as a means of quantifying how much capital might be absorbed if an adverse event(s) occurs;
- (ii) to provide a check on the outputs and accuracy of risk models, particularly in identifying non-linear effects when aggregating risks; and
- (iii) to explore the sensitivities in longer-term business plans and how capital needs might change over time.

3.5 The general stress test and scenario analysis rule in Internal Capital Adequacy Assessment 12.1 requires a firm to carry out stress tests and scenario analyses as part of its obligations under the overall Pillar 2 rule in Internal Capital Adequacy Assessment 3.1. Both stress tests and scenario analyses are undertaken by a firm to improve its understanding of the vulnerabilities that it faces under adverse conditions. They are based on the analysis of the impact of a range of events of varying nature, severity and duration. These events can be economic, financial, operational or legal, or relate to any other risk that might have an impact on the firm. Under Recovery and Resolution 2.4 in the PRA Rulebook, a recovery plan must contain a comprehensive range of options setting out actions that could be taken in a number of different scenarios and stresses.

Overall approach

3.6 As part of its obligation under the general stress and scenario testing rule in Internal Capital Adequacy Assessment 12.1, a firm should undertake a broad range of stress tests which reflect a variety of perspectives, including sensitivity analysis, scenario analysis and stress testing on individual portfolios as well as at a firm-wide level.

3.7 A firm should use the results of its stress testing and scenario analysis not only to assess capital needs, but also to decide if measures should be put in place to minimise the adverse effect on the firm if the risks covered by the stress test or scenario analysis actually materialise. Such measures might be a contingency plan or more concrete risk mitigation steps.

3.8 Stress tests and scenario analyses should be carried out at least annually. A firm should, however, consider whether the nature of the major sources of risks identified by it in accordance with the overall Pillar 2 rule in Internal Capital Adequacy Assessment 3.1 and their possible impact on its financial resources suggest that such tests and analyses should be carried out more frequently. For instance, a sudden change in the economic outlook may prompt a firm to revise the parameters of some of its stress tests and change its scenario analyses. Similarly, if a firm has recently become exposed to a particular sectoral concentration, it may wish to amend and/or add some stress tests and scenario analyses in order to reflect that concentration.

3.9 The PRA expects a firm to project its capital resources and capital requirements over a three to five year horizon, taking account of its business plan and the impact of relevant adverse scenarios. In making the estimate, the firm should consider both the capital resources required to meet its capital requirements under the CRR and the capital resources needed to meet the overall financial adequacy rule. The firm should make these projections in a manner consistent with its risk management processes and systems.

3.10 The firm should document its stress testing and scenario analysis policies and procedures, as well as the results of its tests in accordance with Internal Capital Adequacy Assessment 13.1. These results should be included within the firm's ICAAP document.

Governance

3.11 The PRA expects a firm's management body to be actively involved and engaged in all relevant stages of the firm's stress testing and scenario analysis programme. This would include establishing an appropriate stress testing programme, reviewing the programme's implementation (including the design of scenarios) and challenging, approving and taking action based on the results of the stress tests.

3.12 The PRA expects firms to assign adequate resources, including IT systems, to stress testing and scenario analysis, taking into account the stress testing techniques employed, so as to be able to accommodate different and changing stress tests at an appropriate level of granularity.

Scenarios

3.13 Firms should develop a range of firm-wide scenarios including some based on macroeconomic and financial market shocks for the purposes of their own stress testing. These scenarios should be developed so as to be relevant to the circumstances of the firm, including its business model, and the market(s) in which it operates.

3.14 In identifying an appropriate range of adverse circumstances and events in accordance with Internal Capital Adequacy Assessment 12.1, a firm will need to consider:

- the nature, scale and complexity of its business and of the risks that it bears;
- its risk appetite, including in light of the adverse conditions through which it expects to remain a going concern;
- the cycles it is most exposed to and whether these are general economic cycles or specific to particular markets, sectors or industries;
- the behaviour of counterparties, and of the firm itself, including the exercise of choices (for example, options embedded in financial instruments or contracts of insurance); and
- for the purposes of Internal Capital Adequacy Assessment 12.1, the amplitude and duration of the relevant cycle which should include a severe downturn scenario based on forward-looking hypothetical events, calibrated against the most adverse movements in individual risk drivers experienced over a long historical period.

3.15 The calibration of stress testing and scenario analyses should be reconciled to a clear statement setting out the premises upon which the firm's internal capital assessment under the overall Pillar 2 rule in Internal Capital Adequacy Assessment 3.1 is based.

Common stress scenarios

3.16 As part of its Concurrent Stress Testing framework,³¹ the Bank of England publishes a common stress scenarios aimed at assessing the UK banking system's capital adequacy. This scenario is run concurrently across a number of participating firms, on an annual basis.

3.17 Additionally, for firms not participating in the concurrent stress testing, the PRA publishes a macroeconomic scenario to serve as a guide and, where relevant, as a severity benchmark, for firms designing their own stress scenarios.

3.18 Firms should consider the relevance of the PRA's stress scenario in the context of their business and specific risk drivers, and use this scenario as a starting point to build and calibrate their own scenarios. The scenario reflects minimum adverse conditions, through which firms should assess their ability to maintain minimum specified capital levels. This is particularly important for specialised firms, or firms whose business models are less affected by the PRA scenario (eg firms with major exposures to countries other than the United Kingdom, mono-lines, and investment banks).

3.19 More generally, all firms should continue to develop their own scenarios and ensure that these are as severe in relation to their business model as the concurrent stress testing scenario (for firms participating in concurrent stress testing) or the scenario published by the PRA (for all other firms).

3.20 The PRA may ask some firms to run concurrent stress test scenarios or the PRA scenario as part of their range of stress scenarios for Pillar 2 capital planning. Asking firms to run common scenarios, or scenarios that are broadly comparable in terms of severity (eg for firms

31 A framework for stress testing the UK banking system, October 2013:
www.bankofengland.co.uk/financialstability/fsc/Documents/discussionpaper1013.pdf.

with different business models) will allow supervisors to more easily compare and benchmark individual results and firms' approaches to stress testing.

3.21 In identifying adverse circumstances and events in accordance with Internal Capital Adequacy Assessment 12.1, a firm should consider the results of any reverse stress testing conducted in accordance with Chapter 15 of the Internal Capital Adequacy Assessment Part of the PRA Rulebook. Reverse stress testing may be expected to provide useful information about the firm's vulnerabilities for the purpose of meeting the firm's obligations under Internal Capital Adequacy Assessment 12.1. In addition, such a comparison may help a firm to assess the sensitivity of its financial position to different stress calibrations.

Forward-looking, multi-year risk assessment

3.22 In carrying out the stress tests and scenario analyses required by the general stress and scenario testing rule in Internal Capital Adequacy Assessment 12.1, the PRA expects a firm to consider any impact of the adverse circumstances on its capital resources. In determining whether it would have adequate financial resources in the event of each identified severe adverse scenario, the firm should:

- only include financial resources that could reasonably be relied upon as being available in the circumstances of the identified scenario; and
- take account of any legal or other restriction on the use of financial resources.

3.23 In making the estimate required by Internal Capital Adequacy Assessment 12.3, a firm should project both its capital resources and its required capital resources over a time horizon of three to five years, taking account of its business plan and the impact of relevant adverse scenarios. The firm should consider both the capital resources required to meet its capital requirements under the CRR and the capital resources needed to meet the overall financial adequacy rule. The firm should make these projections in a manner consistent with its risk management processes and systems as set out in Internal Capital Adequacy Assessment 3.1.

3.24 When deciding the planning horizon over which to conduct their analysis, firms should consider how long it might take to recover from any loss. The time horizon over which stress tests and scenario analyses should be carried out will depend on, among other things, the maturity and liquidity of the positions stressed. For example, for the market risk arising from the holding of investments, this will depend upon the extent to which there is a regular, open and transparent market in those assets, which would allow fluctuations in the values of the investments to be more readily and quickly identified.

3.25 In projecting its financial position over the relevant time horizon, the firm should:

- reflect how its business plan would respond to the adverse events being considered, taking into account factors such as changing consumer demand and changes to new business assumptions;
- consider the potential impact on its stress testing of dynamic feedback effects and second-order effects of the major sources of risk identified in accordance with the overall Pillar 2 rule in Internal Capital Adequacy Assessment 3.1;
- estimate the effects on its financial position of the adverse event without adjusting for management actions;

- separately, identify any realistic management actions that the firm could, and would, take to mitigate the adverse effects of the stress scenario; and
- estimate the effects of the stress scenario on its financial position after taking account of realistic management actions.

3.26 The PRA expects firms to identify any realistic management actions intended to maintain or restore capital adequacy. A firm should reflect management actions in its projections only where it could, and would, take such actions, taking account of factors such as market conditions in the stress scenario and any effects upon the firm's reputation with its counterparties and investors. The combined effect on capital and retained earnings should be estimated.

3.27 To assess whether prospective management actions in a stress scenario would be realistic, and to determine which actions the firm could and would take, the PRA expects a firm to take into account any preconditions that might affect the value of management actions as risk mitigants. It should then analyse the difference between the estimates of its financial position over the time horizon, both gross and net of management actions, in sufficient detail to understand the implications of taking different management actions at different times, particularly where they represent a significant divergence from the firm's business plan.

3.28 A firm should use the results of its stress testing and scenario analysis not only to assess capital needs, but also to decide if measures should be put in place to minimise the adverse effect on the firm if the risks covered by the stress or scenario test materialise. Such measures might be a contingency plan or more concrete and immediate risk mitigation steps.

Double leverage

3.29 Where a firm is a member of a group in which a qualifying parent undertaking³² has a double leverage ratio above 100%, or is projecting one above 100%, the PRA expects the firm to assess and mitigate the risks of double leverage, including the cash-flow risks incurred by its qualifying parent undertaking as part of its stress testing and scenario analysis. For this purpose, 'double leverage ratio' is defined as a qualifying parent undertaking's common equity capital investment in its subsidiaries,³³ divided by its own common equity capital.

3.29A For purposes of calculating the double leverage ratio, 'qualifying parent undertaking's common equity capital investment in its subsidiaries' is defined as the holding company's investment in common equity of its subsidiaries. For the avoidance of doubt, investment in Additional Tier 1 instruments, calculated according to CRR Article 61, should not be included. For purposes of calculating the double leverage ratio, 'own common equity capital' is defined as shareholder's equity less intangible assets, less deferred tax assets (DTAs), less Additional Tier 1 Instruments.

- (i) 'DTAs' has the same meaning as under the applicable accounting framework.
- (ii) 'Intangible assets' has the same meaning as under the applicable accounting framework and includes goodwill.
- (iii) Additional Tier 1 instruments should be calculated according to CRR Article 61.

³² Section 192B FSMA.

³³ As defined in Article 4(1) of CRR.

(iv) 'Applicable accounting framework' refers to the accounting standards to which the institution is subject under Regulation (EC) No 1606/2002 or Directive 86/635/EEC.

3.30 These expectations also apply where the firm is a member of a group that uses a different definition of double leverage, or calculates double leverage in respect of a grouping of companies,³⁴ and its double leverage ratio is over 100%, or is projected to be over 100%. In these circumstances, information should be provided in respect of the qualifying parent undertaking's double leverage ratio as set out above, as well as in respect of the aggregate double leverage ratio in those circumstances where double leverage occurs at different levels in the group, as set out above. Should the firm's own methodology differ from the one described in this document, it should provide information in respect of its own internal approach, as well as the approach described in this document.

3.31 Specifically, in its ICAAP document the PRA expects the firm to:

- provide details of the qualifying parent undertaking's double leverage ratio and the projected double leverage ratio on a forward-looking basis over a three- to five-year time horizon;
- explain how the risks of double leverage are assessed and managed, including any mitigating factors in place (eg any unencumbered liquid assets held by the qualifying parent undertaking to cover the risk of a shortfall in income to meet its interest obligations);
- develop and analyse relevant stress or recovery scenarios, including where the qualifying parent undertaking's inflows from its subsidiaries are significantly reduced and/or market conditions make it difficult to rollover existing debt. Specifically, it should consider any constraints that have been, or might be, imposed on dividend payments from an entity established outside the United Kingdom to its qualifying parent undertaking;
- provide information on the qualifying parent undertaking's expected quarterly inflows and outflows under both normal and stressed conditions over a three- to five-year time horizon; and
- identify what management actions the firm would take in a stress to manage the risks of double leverage and the impact those management actions would have on the qualifying parent undertaking's inflows and outflows and on its double leverage ratio.

3.32 Firms for which the PRA is not the global consolidating supervisor are not expected to conduct this assessment or provide the relevant analysis in their ICAAP documents, unless the PRA requests otherwise.

3.33 Under the SMR,³⁵ firms are required to allocate a PR for managing the allocation and maintenance of the firm's capital, funding and liquidity to an individual performing an SMF.³⁶ The PRA expects:

³⁴ For example the ultimate qualifying parent undertaking and a number of intermediate parent undertakings.

³⁵ See Rule 4.1(7) in the Allocation of Responsibilities part of the PRA Rulebook and PRA Supervisory Statement 28/15 'Strengthening individual accountability in banking', May 2017: www.bankofengland.co.uk/prudential-regulation/publication/2015/strengthening-individual-accountability-in-banking-ss.

³⁶ Typically the Chief Finance function (SMF2) or, depending on the organisational structure of a group, a Group Entity Senior Manager (SMF7).

- the SMF allocated this PR to ensure that the firm conducts the assessments specified in paragraphs 3.29 to 3.31 and to document them in the firm's ICAAP submissions; and
- firms to ensure this expectation is explicitly reflected in the relevant SMF's Statement of Responsibilities.

4 Reverse stress testing

4.1 This chapter on reverse stress testing was added to this supervisory statement on 3 August 2015 following consultation on proposals in CP17/15.³⁷

4.2 Reverse stress testing is a risk management tool used to increase a firm's awareness of its business model vulnerabilities. Firms in scope of Chapter 15 of the Internal Capital Adequacy Assessment Part of the PRA Rulebook must carry out reverse stress testing in accordance with Chapter 15 of that Part. This includes requirements on the firm to reverse stress test its business plan; that is, to carry out stress tests and scenario analyses that test its business plan to failure.

4.3 Business plan failure in the context of reverse stress testing should be understood as the point at which the market loses confidence in a firm and, as a result, the firm is no longer able to carry out its business activities. Examples of this would be the point at which all or a substantial portion of the firm's counterparties are unwilling to continue transacting with it or seek to terminate their contracts, or the point at which the firm's existing shareholders are unwilling to provide new capital. Such a point may be reached well before the firm's financial resources are exhausted.

4.4 The PRA may request a firm to quantify the level of financial resources which, in the firm's view, would place it in a situation of business failure should the identified adverse circumstances crystallise.

4.5 In carrying out the stress tests and scenario analyses required by rule 15.2 of the Internal Capital Adequacy Assessment Part of the PRA Rulebook a firm should at least take into account each of the sources of risk identified in accordance with GENPRU 1.2.30R(2).

4.6 Reverse stress testing should be appropriate to the nature, size and complexity of the firm's business and of the risks it bears. Where reverse stress testing reveals that a firm's risk of business failure is unacceptably high, the firm should devise realistic measures to prevent or mitigate the risk of business failure, taking into account the time that the firm would have to react to these events and implement those measures. As part of these measures, a firm should consider if changes to its business plan are appropriate. These measures, including any changes to the firm's business plan, should be documented as part of the results referred to in rule 15.4 of the Internal Capital Adequacy Assessment Part of the PRA Rulebook.

4.7 In carrying out its reverse stress testing, a firm should consider scenarios in which the failure of one or more of its major counterparties or a significant market disruption arising from the failure of a major market participant, whether or not combined, would cause the firm's business to fail. For an RFB, this supervisory statement should be read in conjunction with SS8/16. SS8/16 sets out the PRA's expectation that an RFB sub-group should consider the

³⁷ PRA Consultation Paper CP17/15, 'The PRA Rulebook: Part 3', April 2015, www.bankofengland.co.uk/prudential-regulation/publication/2015/the-pra-rulebook-part-3.

failure of group entities that are not members of the RFB sub-group as part of reverse stress testing.

4.8 Firms may choose to use reverse stress testing as a starting point for their recovery plan scenarios.

5 The SREP

5.1 The SREP is a process by which the PRA, taking into account the nature, scale and complexity of a firm's activities, reviews and evaluates the:

- arrangements, strategies, processes and mechanisms implemented by a firm to comply with its regulatory requirements laid down in PRA rules and the CRR;
- risks to which the firm is or might be exposed;
- risks that the firm poses to the financial system; and
- further risks revealed by stress testing.

5.2 As part of the SREP, the PRA will review the firm's ICAAP and have regard to the risks outlined in the overall Pillar 2 rule in Internal Capital Adequacy Assessment 3.1, the firm's vulnerabilities under reverse stress testing, the governance arrangements of firms, its corporate culture and values, and the ability of members of the management body to perform their duties. The degree of involvement of the management body of the firm will be taken into account by the PRA when assessing the ICAAP, as will the appropriateness of the internal processes and systems for supporting and producing the ICAAP.

5.3 When the PRA reviews an ICAAP as part of the SREP, it does so as part of the process of determining whether all of the material risks have been identified and that the amount and quality of capital identified by the firm is sufficient to cover the nature and level of the risks to which it is or might be exposed.

5.4 The PRA may request a firm to submit the design and results of its reverse stress tests and any subsequent updates as part of its risk assessment.

5.5 The SREP will also consider:

- the results of stress tests carried out in accordance with the CRR by firms that use an internal ratings-based (IRB) approach or internal models for market risk capital requirements;
- the exposure to, and management of, concentration risk by firms, including their compliance with the requirements set out in Part Four of the CRR and Chapter 6 of the ICAA rules;
- the robustness, suitability and manner of application of policies and procedures implemented by firms for the management of the residual risk associated with the use of credit risk mitigation techniques;

- the extent to which the capital held by firms in respect of assets which it has securitised is adequate, having regard to the economic substance of the transaction, including the degree of risk transfer achieved;
- the exposure and management of liquidity risk by firms, including the development of alternative scenario analyses, the management of risk mitigants (including the level, composition and quality of liquidity buffers), and effective contingency plans;
- the impact of diversification effects and how such effects are factored into firms' risk measurement system;
- the geographical location of firms' exposures;
- risks to firms arising from excessive leverage;
- whether a firm has provided implicit support to a securitisation; and
- the exposure to and management of foreign currency lending risk to unhedged retail and SME borrowers by firms, in line with Title 6, section 2 paragraphs 158–59 of the EBA's Guidelines on common procedures and methodologies for the SREP;³⁸
- the extent to which the allocation of the total amount of financial resources, own funds and internal capital between different parts of the consolidation group reflects the nature, level, and distribution of the risks to which the consolidation group is subject;
- the extent to which any capital requirements or buffers set on an entity established outside the United Kingdom, on an individual or sub-consolidated basis, exceed the requirements or buffers applicable at the consolidated group level to cover the same risk; and
- where a firm is a member of a group in which a qualifying parent undertaking has a double leverage ratio above 100%, or is projecting one above 100%, the extent to which the firm is managing the risks of double leverage, and the credibility of its related stress testing and scenario analysis.

5.5A Where groups contain an RFB sub-group, the SREP will also consider RFB group risk.

5.6 The PRA also assesses as part of the SREP the risks that the firm poses to the financial system.

5.7 The PRA may need to request further information and meet with the management body and other representatives of a firm in order to evaluate fully the comprehensiveness of the ICAAP and the adequacy of the governance arrangements around it. The management body should be able to demonstrate an understanding of the ICAAP consistent with its taking responsibility for it. And the appropriate levels of the firm's management should be prepared to discuss and defend all aspects of the ICAAP, covering both quantitative and qualitative components.

5.8 The SREP will generally be the same across all types of firms, but will be proportionate to the nature, scale and complexity of a firm's activities. There may also be a different emphasis

38 See footnote (1) on page 14.

depending on the type of firm or its potential risk to the financial system. For example, banks and building societies may be more exposed to credit concentration risk and IRRBB, with investment firms being more likely to be exposed to market risk. These potentially different areas of emphasis will be reflected in the conduct of the SREP, where applicable, for relevant firms.

5.9 On the basis of the SREP, the PRA will determine whether the arrangements implemented by a firm and the capital held by it provide sound management and adequate coverage of its risks. If necessary, the PRA will require the firm to take appropriate actions or steps at an early stage to address any future potential failure to meet its prudential regulatory requirements, or to prevent or mitigate the risk of business failure revealed by reverse stress testing. The PRA recognises that not every business failure is driven by lack of financial resources and will take this into account when reviewing a firm's reverse stress-test design and results.

5.10 There are two main areas that the PRA considers when assessing a firm's capital adequacy under a SREP: (i) risks to the firm which are either not captured, or not fully captured, under the CRR (eg IRRBB and concentration risk); and (ii) risks to which the firm may become exposed over a forward-looking planning horizon (eg due to changes to the economic environment). The PRA refers to the first area as Pillar 2A and the second as Pillar 2B.

5.11 To assess the capital adequacy of a firm under Pillar 2A, the PRA has developed capital methodologies. The methodologies are published in PRA Statement of Policy, 'The PRA's methodologies for setting Pillar 2 capital'.

5.12 The PRA will set Pillar 2A capital requirements in light of both the calculations included in a firm's ICAAP and the results of the PRA's own Pillar 2A methodologies. Setting a Pillar 2A capital requirement is subject to peer group reviews to ensure consistency of decisions across firms.

5.12A For firms using the standardised approach (SA) for credit risk, the PRA will assess whether the capital held by them exceeds the amount necessary to ensure a sound management and coverage of their risks. To this end, the PRA will make an overall assessment of the adequacy of capital, taking into account the outcome of the application of the PRA's own Pillar 2A methodologies, the firm's ICAAP, business model, and whether the firm is considered relatively low-risk and well-managed. The PRA will also conduct a peer group review, including with those firms that use the IRB approach, by using the upper range of the credit risk IRB benchmarks which are set out in the Statement of Policy 'The PRA's methodologies for setting Pillar 2 capital'.³⁹

5.12B Following this, the PRA will calculate the level of capital that is necessary, in addition to the capital the firm must hold to comply with the CRR (Pillar 1), to capture risks to which the firm is or might be exposed. This may lead to the PRA adjusting the firm's Pillar 2A add-ons, as assessed in accordance with the PRA's own methodologies, downward, taking into consideration how firms' capital relates to the IRB benchmarks considered as part of the peer review. The comparison to the benchmarks is not mechanistic and will depend on the extent to which it reflects firm-specific risk profiles.

39 October 2017: www.bankofengland.co.uk/prudential-regulation/publication/2015/the-pras-methodologies-for-setting-pillar-2-capital.

5.12C For firms using IFRS 9, the PRA will also consider the extent to which expected credit losses, over a twelve month period, are covered by the Pillar 1 charge under the SA, to inform the setting of Pillar 2A capital requirements.

5.13 The PRA will review the firm's records referred to in Internal Adequacy Assessment 13.1 as part of its SREP to judge whether a firm will be able to continue to meet its CRR requirements and the overall financial adequacy rule in Internal Capital Adequacy Assessment 2.1 throughout the time horizon used for the capital planning exercise.

The setting of Pillar 2A capital requirements and the PRA buffer

Pillar 2A Capital Requirements

5.14 Following the SREP, including both a review of the ICAAP and any further interactions with the firm, the PRA will normally set the firm's Pillar 2A capital requirement on an individual basis, for the amount and quality of capital that the PRA considers the firm should hold, in addition to the capital it must hold to comply with the CRR (Pillar 1 capital) to meet the overall financial adequacy rule in Internal Capital Adequacy Assessment 2.1. The PRA will additionally set Pillar 2A capital requirements for firms which must comply with the overall financial adequacy rule in Internal Capital Adequacy Assessment 2.1 on a consolidated basis and, where groups contain an RFB sub-group, on a sub-consolidated basis.

5.15 In many cases the PRA may decide to set Pillar 2A capital requirements on an individual basis by undertaking a detailed individual assessment, calculating the relevant Pillar 2A add-ons according to the individual firm's risk profile. Alternatively, the PRA may decide to set Pillar 2A capital requirements on an individual basis calibrated so that its TCR represents a share of the UK consolidated group or sub-consolidated group (where relevant) TCR where the firm is able to demonstrate that capital has been adequately allocated among subsidiaries, the members of the group or RFB sub-group are strongly incentivised to support each other, and there are no impediments to the transfer of capital within the group or RFB sub-group. Where a firm is not considered to have significant systemic impact, or where it has a very similar risk profile to the UK consolidation group (or RFB sub-consolidation group), the PRA may decide to set Pillar 2A on an individual basis by applying the same Pillar 2A add-on rate as calculated for the UK consolidated (or RFB sub-consolidated) Pillar 2A capital requirement to the individual total RWAs of the firm.

5.16 Where the PRA sets a firm-specific Pillar 2A capital requirement it will generally specify an amount of capital (Pillar 2A) that the firm should hold at all times in addition to the capital it must hold to comply with the CRR (Pillar 1). It will usually do so by stating that the firm should hold capital of an amount equal to a specified percentage of the firm's Pillar 1 RWAs (the total risk exposure amount calculated in accordance with Article 92(3) of the CRR), plus one or more static add-on in relation to specific risks in accordance with the overall Pillar 2 rule in Internal Capital Adequacy Assessment 3.1. The PRA requires firms to meet Pillar 2A with at least 56% CET1 capital, no more than 44% additional Tier 1 (AT1) capital and no more than 25% Tier 2. For these purposes, firms should follow the provisions on the definition of capital set out in the Definition of Capital Part of the PRA Rulebook and Supervisory Statement 7/13.⁴⁰

5.17 It is for firms to ensure that they comply with the overall financial adequacy rule in Internal Capital Adequacy Assessment 2.1. If a firm holds the level of capital required under its TCR that does not necessarily mean that it is complying with the overall financial adequacy rule. Deviation by a firm from the terms of the Pillar 2A and TCR given to it by the PRA does not

⁴⁰ PRA Supervisory Statement 7/13, 'CRD IV and capital', December 2013: www.bankofengland.co.uk/prudential-regulation/publication/2013/crdiv-and-capital-ss.

automatically mean that the firm is in breach of the overall financial adequacy rule or that the PRA will consider the firm is failing, or likely to fail, to satisfy the Threshold Conditions (TCs). However, firms should expect the PRA to investigate whether any firm is failing, or likely to fail, to satisfy the TCs, with a view to taking further action as necessary.

5.18 The PRA expects a firm not to meet the CRD IV buffers with any CET1 capital maintained to meet its TCR. If a firm agrees with its TCR, the PRA will expect the firm to apply for a requirement under section 55M of the Financial Services and Markets Act 2000 (FSMA) to set the amount and quality of the Pillar 2A capital requirement and prevent the firm from meeting any of the CRD IV buffers that apply to it with any CET1 capital maintained to meet Pillar 2A. The firm will normally be invited to apply for such a requirement at the same time as it is advised of its Pillar 2A capital requirement. If a firm does not apply for such a requirement the PRA will consider using its powers under section 55M(3) to impose one of its own initiative.

5.19 Where a firm is subject to the Basel I floor, the PRA expects a firm not to meet the CRD IV buffers with any CET1 maintained by the firm to meet the Basel I floor and will use its powers under section 55M to prevent a firm from doing so. Where applicable to a firm, global and other systemically important institution buffers will also be set by the PRA using its powers under section 55M.

The PRA buffer

5.20 Following the SREP, the PRA may also notify the firm of an amount of capital that it should hold as a PRA buffer, over and above the level of capital required to meet its TCR and over and above the CRD IV buffers. The PRA buffer, based on a firm-specific supervisory assessment, should be of a sufficient amount to allow the firm to continue to meet the overall financial adequacy rule in Internal Capital Adequacy Assessment 2.1. This should be the case even in adverse circumstances, after allowing for realistic management actions that a firm could, and would, take in a stress scenario.

5.21 In setting a PRA buffer for a firm the PRA will not just consider whether the firm would meet its CET1 capital requirements under the CRR and its Pillar 2A capital requirement in the stress scenario. Other factors informing the size of the PRA buffer include but are not limited to: the maximum change in capital resources and requirements under the stress; the firm's leverage ratio; the extent to which the firm has used up its CRD IV buffers (eg the systemically important financial institution (SIFI) and capital conservation buffers); Tier 1 and total capital ratios; and the extent to which potentially significant risks are not captured fully as part of the stress.

5.22 Where the PRA assesses a firm's risk management and governance (RM&G) to be significantly weak, it may set the PRA buffer to include an amount of capital to cover the risks posed by those weaknesses until they are addressed. This will generally be calibrated in the form of a scalar applied to the amount of CET1 required to meet the firm's TCR. Depending on the severity of the weaknesses identified, the scalar could range from 10% to 40%. If the PRA sets the PRA buffer to cover the risk posed by significant weaknesses in risk management or governance it will identify those weaknesses to the firm and expect the firm to address those weaknesses within an appropriate timeframe.

5.23 Where the PRA sets a PRA buffer it will generally do so stating that the firm should hold capital of an amount equal to a specified percentage of the firm's Pillar 1 RWAs (the total risk exposure amount calculated in accordance with Article 92(3) of the CRR). The PRA expects firms to meet the PRA buffer with 100% CET1. The PRA expects firms to meet the PRA buffer with additional CET1 capital to the CET1 capital maintained to meet its CRD IV buffers.

5.24 The PRA may set a firm's PRA buffer either as an amount of capital which it should hold from the time of the PRA's notification following the firm's SREP or, in exceptional cases, as a forward-looking target that a firm should build up over time. Where the general stress and scenario testing rule, as part of the ICAAP rules, applies to a firm on a consolidated and/or sub-consolidated basis the PRA may notify the firm that it should hold a PRA buffer on a consolidated and/or sub-consolidated basis (as applicable). The PRA may in certain circumstances notify a firm that it should hold a PRA buffer on an individual basis.

5.25 If a firm considers that the proposed Pillar 2A capital requirement or the PRA buffer advised to it by the PRA is inappropriate to its circumstances it should notify the PRA of this, consistent with Fundamental Rule 7. If, after discussion, the PRA and the firm do not agree on an adequate level of capital, the PRA may consider using its own initiative powers under section 55M of FSMA to impose a requirement on the firm to hold capital in accordance with the PRA's view of the capital necessary to comply with the overall financial adequacy rule in Internal Capital Adequacy Assessment 2.1. In deciding whether it should use its powers under section 55M, the PRA will take into account the amount of capital that the firm should hold for its PRA buffer.

Transitional arrangements

5.26 All firms are expected to hold the PRA buffer entirely in CET1 capital from 1 January 2019.

5.27 Firms are expected to meet their PRA buffer in increasing proportions of CET1 from January 2016 to January 2019:

- at least 25% by January 2016;
- 50% by January 2017;
- 75% by January 2018; and
- 100% by January 2019.

5.28 During the transitional period, firms may meet the remaining portion of their PRA buffer with any form of CRR-compliant regulatory capital unless the PRA decides that in the particular circumstances of an individual firm it should hold higher quality capital to meet the PRA buffer.

5.29 Some firms have been set a Core Capital Planning Buffer in the form of CET1 capital. The PRA expects these firms to meet their PRA buffer entirely in CET1 capital from 1 January 2016.

5.30 The PRA will continue to apply a more flexible approach to new entrants and expanding banks when setting the PRA buffer, as set out for the CPB in the Bank of England and Financial Conduct Authority (FCA) publication 'A review of requirements for firms entering into or expanding in the banking sector: one year on'.⁴¹

Failure to meet TCR and use of the PRA buffer

5.31 The PRA expects every firm to hold at least the level of capital it is required to meet its TCR at all times. If a firm's capital has fallen or is expected to fall below that level it should inform the PRA as soon as practicable explaining why this has happened or is expected to

⁴¹ Bank of England and FCA, July 2014: www.fca.org.uk/news/news-stories/review-requirements-firms-entering-or-expanding-banking-sector-one-year.

happen. The firm will also be expected to discuss the actions that it intends to take to increase its capital and/or reduce its risks (and therefore capital requirement), and any potential modification that it considers should be made to the Pillar 2A capital requirement.

5.32 Where this has happened, the PRA may ask a firm for alternative and more detailed proposals or further assessments of capital adequacy and risks faced by the firm. The PRA will seek to agree with the firm the appropriate timescales and the scope for any such additional work.

5.33 Use of the PRA buffer is not itself a breach of capital requirements or TCs. However, where a firm has a PRA buffer in place, it should only use that buffer to absorb losses or meet increased capital requirements if certain adverse circumstances materialise. These should be circumstances beyond the firm's normal and direct control, whether relating to a deteriorating external environment or periods of stress such as macroeconomic downturns or financial/market shocks, or firm-specific circumstances.

5.34 Consistent with Fundamental Rule 7, a firm should notify the PRA as early as possible where it has identified that it would need to use its PRA buffer (even if the firm has not accepted the PRA's assessment of the amount of capital required for the PRA buffer). The firm's notification should state as a minimum:

- what adverse circumstances are likely to force the firm to draw down its PRA buffer;
- how the PRA buffer will be used up in line with the firm's capital planning projections; and
- what plan is in place for the eventual restoration of the PRA buffer.

5.35 A firm which does not meet its PRA buffer can expect enhanced supervisory action, and should prepare a capital restoration plan. If the PRA is not satisfied with the capital restoration plan or with the firm's reasons for using the buffer it may consider using its powers under section 55M of FSMA to require the firm to raise sufficient capital to meet the buffer within an appropriate timeframe.

5.36 The automatic distribution constraints associated with the CRD IV buffers do not apply to the PRA buffer.

Disclosure

5.37 Firms should disclose the PRA's SREP feedback letter setting Pillar 2A capital requirements and, where applicable, the PRA buffer to their auditors. The PRA expect firms to publicly disclose the amount and quality of TCR which apply to them at the highest level of consolidation in the UK. The PRA also expects RFBs to disclose their TCR on a sub-consolidated basis where an RFB sub-group is established. In those circumstances in which Pillar 2A has not been set as a requirement, the PRA expects firms to disclose their total Pillar 1 plus Pillar 2A capital guidance. Otherwise, the PRA expects firms to treat all other information relating to TCR, including details of its constituent parts, and all information relating to the PRA buffer, as confidential unless they are required to disclose it by law. If firms wish to disclose the PRA's SREP feedback letter or any part of it to any third parties (other than their auditors) they should, consistent with Fundamental Rule 7, provide appropriate prior notice to the PRA of the proposed form, timing, nature and purpose of the disclosure.

5.38 Where an immediate market disclosure obligation exists, prior notification to the PRA should not lead to any delay in disclosure. But any firm intending to disclose information relating to TCR (except the total figure) or the buffers should (consistent with Fundamental

Rule 7), where reasonably practicable, provide appropriate notice in advance of the proposed disclosure and the reasons for it.

5.39 The PRA does not advise firms on their market disclosure obligations and firms should seek their own advice on this matter. The FCA is responsible for oversight of issuers' compliance with their market disclosure obligations.

Annex - SS31/15 updates

This annex details the changes that have been made to this supervisory statement (SS) following its initial publication in July 2015 following Policy Statement 17/15 'Assessing capital adequacy under Pillar 2'.¹

2018

15 November 2018

Following publication of Policy Statement 29/18 'Securitisation: The new EU framework and Significant Risk Transfer',² this SS was updated to reflect the additional expectations of how firms fulfil their obligations under the ICAA part of the Rulebook with regards to risks associated with exposures to securitisation. These amendments can be found in paragraphs 2.39 and 2.40.

These updated expectations take effect from 1 January 2019.

30 April 2018

Following publication of Policy Statement 9/18 'Groups policy and double leverage',³ this SS was updated to reflect the additional expectations in relation to how firms fulfil their obligations under the ICAA part of the Rulebook with regards to group risk and double leverage. The additional sections outline PRA's expectations that firms will assess and report risks arising from:

- excessive double leverage (paragraphs 3.29 to 3.33);
- the inappropriate allocation of resources within a group (paragraph 2.16AA to 2.16AB); and
- higher local prudential requirements (paragraphs 2.16AC to 2.16AH).

Additional paragraphs outline the factors PRA will consider in assessing firms' assessments, included as bullet points in paragraph 5.5.

2017

12 December 2017

Following publication of Policy Statement 30/17 'Pillar 2A capital requirements and disclosure',⁴ this SS was updated to reflect the setting of Pillar 2A as a requirement rather than guidance. In doing so, the term 'Individual Capital Guidance (ICG)' was discontinued, and the term 'Total Capital Requirement (TCR)' introduced to refer to the sum of Pillar 1 plus Pillar 2A capital requirements.

3 October 2017

Following publication of Policy Statement 22/17 'Refining the PRA's Pillar 2A capital framework',⁵ this SS was updated to reflect amendments to the PRA's assessment of firms' capital requirements as part of the SREP. The amendments outline how the PRA will assess the necessary capital firms should hold to ensure a sound coverage of risks. These amendments can be found in the addition of paragraphs 5.12A, 5.12B and 5.12C.

1 <https://www.bankofengland.co.uk/prudential-regulation/publication/2015/assessing-capital-adequacy-under-pillar-2>.

2 <https://www.bankofengland.co.uk/prudential-regulation/publication/2018/securitisation-the-new-eu-framework-and-significant-risk-transfer>.

3 <https://www.bankofengland.co.uk/prudential-regulation/publication/2017/groups-policy-and-double-leverage>.

4 <https://www.bankofengland.co.uk/prudential-regulation/publication/2017/pillar-2a-capital-requirements-and-disclosure>

5 <https://www.bankofengland.co.uk/prudential-regulation/publication/2017/refining-the-pra-pillar-2a-capital-framework>

1 February 2017

Following publication of Policy Statement 3/17, 'The implementation of ring-fencing: reporting and residual matters – response to CP25/16 and Chapter 5 of CP36/16',⁶ this SS was updated to implement the expectation that a UK parent of a ring-fenced body (RFB) should not make use of double leverage to fund its investment in an RFB or other entities in an RFB sub-group, and to comply with the Financial Policy Committee's (FPC) recommendation of 13 May 2016 in relation to the systemic risk buffer (SRB) framework.⁷ Specifically, by:

- defining 'RFB group risk' (paragraph 2.16B);
- setting out the PRA's expectation that firms that are members of a consolidation group containing an RFB sub-group should take account of RFB group risk when carrying out an ICAAP on a consolidated basis (paragraph 2.16C);
- setting out the PRA's expectations on a firm when it is assessing RFB group risk as part of its ICAAP on a consolidated basis (paragraphs 2.16D to 2.16G); and
- adding paragraph 5.5A and updating paragraphs 1.7, 2.16, 4.7, 5.15 and 5.24 to make relevant references to RFBs.

These updated expectations take effect from 1 January 2019.

2015

3 August 2015

A new chapter, Chapter 4, on reverse stress testing was added to SS31/15 following publication of Policy Statement PS19/15, 'The PRA Rulebook Part 3'.⁸ This update supplemented the PRA's expectations set out in the original SS, published on 29 July 2015.

6 <https://www.bankofengland.co.uk/prudential-regulation/publication/2016/the-implementation-of-ring-fencing-reporting-and-residual-matters>.

7 <https://www.bankofengland.co.uk/publications/Documents/records/fpc/pdf/2016/record1605.pdf>.

8 <https://www.bankofengland.co.uk/prudential-regulation/publication/2015/the-pra-rulebook-part-3>.