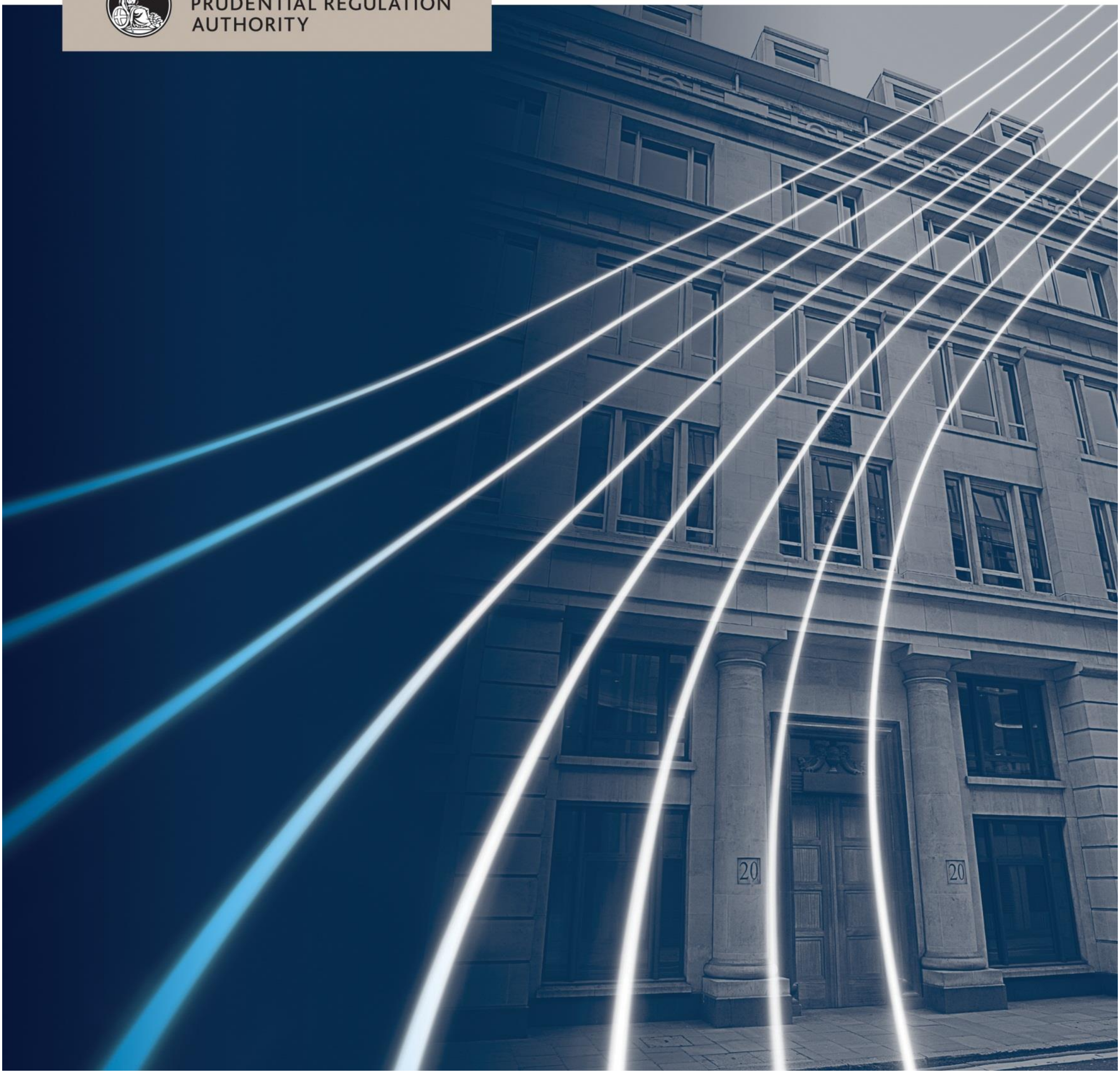
Policy Statement | PS14/17

Solvency II: matching adjustment - illiquid unrated assets and equity release mortgages

July 2017

BANK OF ENGLAND
PRUDENTIAL REGULATION
AUTHORITY



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Contents

1 Overview

1.1 This Prudential Regulation Authority (PRA) Policy Statement (PS) provides feedback to responses to Consultation Paper (CP) 48/16, 'Solvency II: matching adjustment – illiquid unrated assets and equity release mortgages'[1] (the CP) and provides the final Supervisory Statement (SS) 3/17 'Solvency II: matching adjustment – illiquid unrated assets and equity release mortgages' (see Appendix), which sets out the PRA's expectations in respect of firms investing in illiquid, unrated assets within their Solvency II matching adjustment (MA) portfolios.

1.2 This PS is relevant to life insurance and reinsurance companies holding or intending to hold unrated assets (including restructured equity release mortgages (ERMs)) in an MA portfolio.

1.3 In CP48/16 the PRA proposed:

- an approach and standards for assigning a rating to any eligible unrated asset for the purpose of determining the credit quality step (CQS) that should apply in the MA calculation; and
- the principles to which the PRA expects firms to adhere in valuing their holdings of ERMs.

1.4 The PRA has made changes to the draft SS after considering responses to the consultation and further analysis. Details of the changes are included in Chapter 2. The PRA does not consider the impact of the changes to firms to be significant nor for that impact to be any different in respect of mutuals.

1 December 2016: www.bankofengland.co.uk/pra/Pages/publications/cp/2016/cp4816.aspx.

2 Feedback to responses

2.1 The PRA is required by the Financial Services and Markets Act 2000 (FSMA) to have regard to any representations made to the proposals in a consultation, and to publish an account, in general terms, of those representations and its response to them.

2.2 The PRA received twelve responses to the CP. Responses focused on the impact on ERMs. Two respondents stated that they disagreed with the PRA's view, first expressed in an Executive Director's letter of 15 October 2014,[1] that assets with the combination of features common to most un-restructured ERMs are very unlikely to be compatible with the MA eligibility criteria. This issue was not subject to consultation as part of CP48/16, and the PRA's view remains as was set out in the 2014 letter.

2.3 The rest of this statement is structured in the same order as the SS, dealing with the Senior Insurance Management Functions, the approach to internal credit ratings (including consistency with external ratings and the use of thresholds) and the approach to assessing the appropriateness of the FS applied to restructured ERM notes including the four principles consulted on in the CP.

Scope of the SS

2.4 The PRA has amended paragraph 1.1 of the SS to make clearer that its scope extends to all unrated assets in MA portfolios, rather than being limited to restructured ERMs.

Responsibilities of Senior Insurance Management Functions

2.5 Several respondents commented on paragraph 1.5, where the PRA reminded firms of the responsibilities resting with Senior Insurance Management Functions under the Senior Insurance Managers Regime (SIMR). Respondents noted that the responsibilities of the Internal Audit Function would not be expected to extend to opining on the appropriateness of the Fundamental Spread (FS). The wording of that paragraph has been amended to make the relevant responsibilities clearer.

Principle of broad consistency between internal credit assessments and External Credit Assessment Institution (ECAI) issue ratings

2.6 Responses to paragraphs 2.4 to 2.5 were mixed. Some respondents supported the principle that there should be broad consistency between ECAI ratings and internal credit assessments. Others challenged whether this was appropriate.

2.7 One respondent considered the principle of broad consistency to be meaningless for restructured ERMs, since to the respondent's knowledge there were no ECAI ratings for assets backed by ERM cash flows. The PRA does not share this view and is aware of at least one ECAI-rated ERM securitisation.

2.8 Three further challenges made to the principle of broad consistency were that:

(i) this principle conflicted with the ongoing initiatives of the European Commission and the European Supervisory Authorities to reduce sole and mechanistic reliance on external credit ratings;

1 www.bankofengland.co.uk/pra/Documents/solvency2/matchingadjustmentletteroct2014.pdf.

(ii) the application of this principle could effectively require all affected firms to obtain an ECAI rating, with the burden of this falling disproportionately on small and medium-sized insurers and so reducing their competitiveness; and

(iii) ECAIs are less experienced than insurers in assessing certain asset classes such as restructured ERMs, and may have less access to relevant data, such as data on longevity experience.

2.9 Taking these challenges in turn, firstly, the PRA does not consider that the principle of broad consistency conflicts with the aim of reducing sole and mechanistic reliance on ECAI ratings. In establishing this principle, the PRA is seeking to ensure that firms' internal credit assessments are sufficiently robust and that they consider the full range of sources of credit risk in a manner no less rigorous than a regulated credit rating agency.

2.10 Secondly, an expectation of broad consistency does not amount to an effective requirement for firms to obtain an ECAI rating. The PRA intends to use quantitative thresholds as one tool to identify those cases where it would be proportionate and justified to seek additional assurance around a firm's internal credit assessment and CQS mapping. This assurance may take one of several forms, and the degree of assurance sought will be commensurate with the materiality of the MA benefit being derived. Rather than reducing the competitiveness of small and medium-sized insurers, the proposals are expected to facilitate effective competition by addressing potential biases in the calculation of the MA.

2.11 Thirdly, the PRA agrees that compared to insurers, ECAIs may have less experience or data relating to demographic aspects of assets such as restructured ERMs, and may need to rely on firms to share their data as part of a rating process. However, demographic data is only one of several elements that feed into a credit assessment. For example, ECAIs' issue ratings for retail mortgage securitisations would typically also consider house price data, the quality of the monitoring and recovery processes, the legal protections and the liability structure of the loan and securitisation. Similar qualitative factors are also likely to be relevant for restructured ERMs. As part of meeting the PRA's expectation of broad consistency with ECAI issue ratings, in the SS the PRA expects firms to ensure that their internal credit assessments have taken all such relevant quantitative and qualitative considerations into account.

2.12 The PRA's view remains that the principle of broad consistency will help to mitigate the risk of undue bias in the FSs that result from internal credit assessments and their CQS mappings. As such, the only changes made to this section of the draft SS are to clarify that the principle of consistency extends to the CQS that is assigned to the asset, which should fall within the plausible range of CQSs that could have been assigned had the asset received an ECAI issue rating.

Assessing the strength of security and borrower health for ERMs

2.13 Some respondents commented on paragraph 2.11 of the draft SS, suggesting that testing the strength of security and borrower health on individual ERMs would be costly and could put off new entrants. The PRA recognises the need to act proportionately and that a distinction can be drawn between retail and wholesale lending. For high-volume retail portfolios such as ERMs, proportionate statistical methods could be adopted for this assessment. The draft SS has been amended to clarify this point.

2.14 However, for wholesale (eg corporate or specialised) lending, firms would be expected to test the strength of the security and the status of the borrower directly. This has also been clarified in the SS. In recognition of this change the section heading has been changed to reflect that it applies to all restructured assets including ERMs.

Allowance for the expected recovery rate

2.15 Many respondents stated that the assumptions and data used by the European Insurance and Occupational Pensions Authority (EIOPA) when calculating the FS did not reflect the risk profiles of illiquid assets. The main reason given was that EIOPA is required to assume a recovery rate of 30% for all assets, whereas respondents typically expected illiquid assets – and particularly ERMs – to have much higher recoveries.

2.16 One of the views expressed was that, to 'correct' for this, firms should be allowed to assign a better CQS than an asset would otherwise merit, in order to obtain a lower FS that was more in line with the firm's own view of the likely recovery from that asset.

2.17 However, the PRA's view is that the CQS mapping process should not be influenced by a firm's view of the appropriateness of the FS that will apply to that asset as a result. The draft SS has been amended to clarify that the CQS mapping should be independent of the firm's views about the resulting FS, and that a firm must use the FS that corresponds to that CQS, as set down in any relevant Implementing Technical Standard.

2.18 The PRA considers that the recovery rate will be a relevant factor to allow for within an internal credit assessment, to the extent that this assessment and the resulting CQS would be broadly equivalent to those that would be produced by an ECAI.

2.19 The SS notes in paragraph 2.17 that uncertainty over quantitative risk factors resulting from lack of data would normally be expected to be reflected in the internal credit assessment. This could be relevant, for example, where firms lack data in respect of recoveries from defaulted illiquid assets or experience in working out corporate and specialised lending.

The setting and use of thresholds in respect of MA to identify areas for further assurance

2.20 A majority of respondents noted that spreads on illiquid assets could be higher than those for similarly-rated corporate bonds and that a large MA benefit does not necessarily imply 'overstatement'. They also considered there to be a risk that an overly simplistic application of thresholds by the PRA could incentivise firms to attempt to manage to the thresholds.

2.21 The PRA agrees that illiquid assets could legitimately have higher spreads than similarly-rated corporate bonds. The thresholds are not intended to be used as a means of deciding whether an MA benefit is being overstated: they will only be used as an indicator that additional assurance work should be considered, rather than as hard tests or limits. The SS has been amended to clarify this point.

2.22 Some respondents thought the PRA's focus should be on the FS, not the total spread, as the FS is a direct measure of the risks retained by the firm.

2.23 While the PRA agrees that the FS is important, a focus purely on the FS would not detect other potential indicators of risk, such as assets with anomalously high ratings when compared with their spreads.

2.24 Some respondents noted that for ERMs, it would be challenging for the PRA to find suitable 'reference assets' that could be used to calibrate thresholds.

2.25 The PRA agrees that ERMs have some unusual and complex features that make it difficult to draw direct comparisons. However, in the PRA's view it is still possible to define a plausible range of spreads and ratings, outside of which further scrutiny would be justified.

2.26 Notwithstanding the various challenges made in respect of thresholds, most respondents supported the idea that the PRA should publish the thresholds and the methodology that had been used to set them.

2.27 There have been no changes to this part of the SS as a result of the comments received.

2.28 The PRA will be issuing an information request in order to properly calibrate the thresholds and will give consideration to publishing them once its analysis of this data has been completed.

Assessing the risks from embedded guarantees in ERMs

2.29 ERMs are a specific class of unrated asset that are normally restructured via an internal securitisation in order to meet the MA eligibility criteria. Beyond the setting of appropriate thresholds for these assets, CP48/16 proposed a supervisory approach to verifying that all of the risks arising from the embedded no negative equity guarantee (NNEG) were appropriately allowed for in the FS assigned to these assets.

2.30 Some respondents considered there was too much focus on the NNEG risks in Chapter 3 of the draft SS. They highlighted that the senior notes in the MA portfolio were exposed to risks other than the NNEG, and cited pre-payment risk and risks arising from uncertain mortality. Conversely, some respondents considered that the regulatory framework had introduced artificial risks, such as the risk of loss resulting from the requirement to maintain the credit quality of the assets in the MA portfolio following a downgrade.

2.31 The PRA recognises that the ERM securitisation structures used are designed to be loss-absorbing. A well-designed securitisation structure, where a sufficient proportion of the riskiest cash flows are assigned to the junior note, should materially insulate the senior note from the NNEG risk, and result in a correspondingly reduced value of the junior note. In these circumstances it may well be that pre-payment and longevity risks are the dominant risks for the senior note. As another respondent highlighted, in an MA portfolio, the failure of the senior note cash flows to arise when they are needed is a risk that is retained by the firm and so should be captured in the FS.

2.32 To reflect the responses received, additional clarity has been added to paragraph 2.11 of the SS. The focus on the NNEG risks in Chapter 3 should not be seen to detract from the need to allow for all of the risks in the MA-eligible asset, and to reflect those in an appropriate internal rating and CQS.

2.33 One respondent argued that paragraph 3.4 of the draft SS incorrectly stated that the NNEG necessarily guaranteed that the amount repayable by the borrower *can* never be more than the market value of the property collateralising the loan. The PRA acknowledges that borrowers can choose not to exercise the guarantee. Paragraph 3.4 of the SS has been amended to reflect this borrower choice and now reads: 'the amount repayable *need* never exceed the market value of the property'.

2.34 Moreover, this respondent considered that it was inappropriate to view the NNEG as an option, arguing that:

(a) the guarantee can be neither traded nor exercised other than at the death or entry into long-term care of the borrower; and

(b) the NNEG does not apply if the borrower chooses to avoid selling the property, eg because the borrower places a value on the property than is greater than the market value.

2.35 The PRA does not consider that the inability to trade the guarantee, or the conditions on when it may be exercised, changes the nature of the risks that it poses. Further, the PRA has not seen reliable evidence that borrowers would choose to waive their rights under the NNEG in order to retain ownership of a property. Absent such data, the PRA does not consider it prudent to assume that borrowers would do this, particularly given that many ERM providers market the NNEG as an important benefit to potential customers.

2.36 The PRA considers it is reasonable to adapt standard option pricing methods to allow for the specific characteristics of the NNEG; however, the PRA does not consider it reasonable to argue that the NNEG is not an option at all.

2.37 In the CP the PRA consulted on an approach to verify the level of MA benefit claimed for ERMs, based on four principles:

(i) securitisations where firms hold all tranches do not result in a reduction of risk to the firm;

(ii) the economic value of ERM cash flows cannot be greater than either the value of an equivalent loan without an NNEG or the value of future possession of the property providing collateral;

(iii) the value of future possession of a property should be less than the value of immediate possession; and

(iv) the compensation for the risks retained by a firm as a result of the NNEG must comprise more than the best estimate cost of the NNEG.

Principle I

2.38 Most respondents agreed with this principle. Some respondents suggested the risks neither reduced nor increased and this symmetry should be reflected in the principle, while other responses suggested that the risks might increase with securitisation, mentioning liquidity risk and operational risks as examples.

2.39 The PRA considers that liquidity risks exist in both the un-restructured and restructured forms of ERM, and the act of restructuring does not significantly increase this risk. While operational risks are unlikely to be material in most cases, it is possible in principle that risks may in fact increase with securitisation. For these reasons the wording of Principle I is unchanged.

2.40 In respect of paragraph 3.11, one respondent queried whether it was appropriate to assess the MA benefit on the basis of the NNEG on the underlying ERMs, on grounds that these ERMs were not directly involved in the MA calculation. In this respondent's view, only the characteristics of the assets in the MA portfolio were relevant, and as these assets are in fact notes (and not ERMs) then the NNEG was not relevant to the calculation as it would have been filtered out by the securitisation process. Nevertheless this respondent agreed that the securitisation of the ERM should not change the risks of the underlying assets to a firm if they are holding all of the tranches.

2.41 The PRA considers that the Effective Value test as specified in the SS allows for the fact that the NNEG risk may have been fully or partially absorbed by the junior note. The value of the junior note will have been reduced to allow for the risks absorbed by this tranche, and the FS will recognise any residual risks retained by the senior note. The test aims to ensure that the NNEG risk has been properly considered, resulting in both an appropriate value for the junior note and an appropriate FS on the senior note.

2.42 Other respondents suggested that the Effective Value test did not allow for the profit margins that are typically included in loan pricing. This is also not the case; the Effective Value test set out in the draft SS recognises the profit loadings in valuation bases (eg note the reference to 'day 1 gain' in Figure 1 of the SS).

2.43 Some respondents asked for further clarity regarding the components of the Effective Value test. The SS has been amended by removing references to paragraphs 7.8 and 7.9 of Discussion Paper (DP) 1/16[1] and incorporating an expanded explanation of Figure 1 based on those paragraphs.

2.44 One respondent queried whether the proposals in the draft SS, and the use of the word 'compensation' in paragraph 3.4, were meant to set PRA expectations regarding the allowance for the NNEG in firms' pricing bases or base un-restructured ERM valuations. The PRA is content to clarify that neither of these are in scope of the SS.

2.45 Additionally, one respondent suggested that the Effective Value test would not capture the nature of the assets (eg the loan to value ratio of the loans). The PRA considers that this and other portfolio-specific features should be allowed for in the calculation of the NNEG and hence will be captured in the effective value test.

Principles II and III

2.46 Most respondents agreed with these principles, but several queried how they might be applied in practice in the absence of a deep and liquid market in options on residential house prices. Others suggested practical approaches to estimating deferment rates;[2] one proposed the use of leasehold data to estimate the value of future possession of residential property.[3] Another suggested that the deferment rates could be built up from considerations such as rental yield foregone, financing costs associated with owning residential property, transaction costs, and a general preference for ownership of liquid assets.

2.47 The PRA notes these comments on the application of the principles and the practical suggestions made by some respondents. The PRA is aware that valuation of the NNEG is difficult due to the lack of market data on property options. The valuation of guarantees on property assets is an active area of research, including how to allow for the incomplete nature of the market and the implications this would have for the value of the guarantee where the standard Black-Scholes assumptions do not hold.[4] As noted above, the PRA considers that it is reasonable to adapt standard option pricing methods to allow for the specific characteristics of the NNEG, and is aware of several academic approaches for doing so.

1 'Equity release mortgages' March 2016: www.bankofengland.co.uk/pra/Pages/publications/cp/2016/dp116.aspx .
2 By deferment rate the PRA means a discount rate that applies to the spot price of an asset resulting in the deferment price. The deferment price is the price that would be agreed and settled today to take ownership of the asset at some point in the future; it differs from the forward price of an asset in that the forward price is also agreed today, but is settled in the future.
3 See for example the following paper and the references therein: Bracke, P., Pinchbeck, E. W. and Wyatt, J. (2017), The Time Value of Housing: Historical Evidence on Discount Rates. Econ J. Accepted Author Manuscript. doi:10.1111/ecoj.12501
4 For example, see the literature review in *Frank J. Fabozzi, Robert J. Shiller, Radu S. Tunaru. A pricing framework for real estate derivatives (2012). European Financial Management vol. 18, No. 5, 762-789.*

2.48 The PRA considers that there are many ways in which firms could demonstrate compliance with these principles. For example, based on the components of the Effective Value test, firms could show that the NNEG allowance (including any related compensation for risk) is consistent with valuing deferred possession of a property by less than immediate possession, ie consistent with a positive deferment rate.[1] Firms can then consider the plausibility of that deferment rate, eg with regards to market data or academic literature on the valuation of guarantees.

2.49 Another respondent questioned why the effective value of ERMs should be restricted to the market value of deferred possession of the property, when the effective value of corporate bonds is not restricted to their market value. In this respondent's view, a typical investor would place a greater discount on the illiquidity and payment deferral of property future possession than an insurance investor using it to cover long term illiquid liabilities.

2.50 The PRA considers that the effective value of corporate bonds is restricted by an appropriately-sized FS, and that moreover the SS does not require the effective value of the ERM portfolio to be limited to its fair value. The PRA has not seen evidence that an insurance investor would be willing to accept a negative deferment rate, ie that such an investor would value immediate possession of a property for less than deferred possession. Further, the PRA considers that the analogy with corporate bonds is incomplete as many ERM cash flows go into a subordinated note. This part of the ERM cash flows (and its risks) should not benefit from MA.

2.51 The PRA has made minor amendments to the SS wording of paragraph 3.8 to make clear that in the assessment of Principles II and III, the present value of deferred possession of the property providing collateral should be considered.

Principle IV

2.52 While some respondents explicitly agreed with this principle, overall this was the area most challenged by respondents. However as discussed below this has not resulted in substantive changes to the SS.

2.53 One respondent, commenting on the overall approach of Chapter 3 of the SS, queried if it would be simpler to state that the spread attributable to the NNEG is ultimately a credit risk premium entirely representing risks retained by the firm, and should therefore not contribute to a higher MA on eligible assets. In this respondent's view, that would be consistent with the treatment of other assets in the MA portfolio. However, the respondent noted that it would be difficult to translate this view into any more concrete conclusions about the size of the allowance for the risks from the NNEG that should be deducted when determining the economic value of the ERM, since this would depend on which parts of the ERM restructure were absorbing the NNEG risk.

2.54 As mentioned above, the PRA considers that the Effective Value test allows for the loss absorbency of every part of the ERM restructure, eg via a reduced value for the junior note. This is important to avoid double counting the risk: in so far as it has been allowed for in the junior note valuation it should not then result in an increase of the FS on the senior note.

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1 For example, firms could simply show that their approach to NNEG valuation, when applied to valuing a deferment contract for n years, leads to a value that is less than the current price of the property for any deferment period n. The difference can be converted to a period-n deferment rate.

2.55 Principle IV puts the onus on firms to justify why any residual risk that the NNEG poses to the cash flows of the senior notes should not be included in the FS as a risk retained by the firm, and we have amended the SS to clarify this.

2.56 This respondent also queried whether Principle IV was consistent with the construction of the fundamental spread. In their view, the FS is composed entirely of the expected loss on an asset. This respondent acknowledged that, apart from the expected loss from defaults, there was also an allowance for the expected cost of downgrades.

2.57 The PRA's view is that both the cost of downgrades allowance and the floor imply that the fundamental spread should be larger than the expected cost of defaults on the ERM loan arising from the NNEG. Principle IV takes no view on whether the additional or excess component should be calculated on a best estimate basis or some other basis.

2.58 Other respondents agreed with Principle IV. For example stating that the valuation of the NNEG should represent an allowance for the expected risk aversion of an investor in an ERM asset with an NNEG option. Another respondent pointed to sampling risk for the valuation parameters as a source of uncertainty that investors might expect compensation for, and noted that it could be argued that some of this uncertainty would lead to a lower valuation. As noted in the SS (paragraph 3.17), at this stage the PRA is not planning to make any statement regarding the appropriateness of the allowances currently being made by firms.

2.59 Several respondents interpreted paragraph 3.9 of the draft SS as implying an expectation for firms to use a simulation based model, and suggested that a 'closed-form' calculation might be more proportionate. The PRA considers 'simulation based' models and 'closed form solutions' to be different implementations of stochastic valuation methods. The SS does not favour one over the other. This has been clarified in an additional footnote within the SS which notes that firms should choose appropriate approaches based on the principle of proportionality.

2.60 Some respondents were concerned that Principle IV might imply that a prudent valuation of the NNEG is expected and argued that the valuation of the guarantee should not include margins of prudence for risks, which should be allowed for in capital requirements instead.

2.61 Principle IV does not imply that a prudent valuation of the NNEG is expected. Other respondents pointed out that Principle IV is consistent with paragraph 3.7 of the SS, and noted that, for example, fair values also include allowances beyond the best estimate to reflect market participants' assumptions about risk, and this does not make them prudent valuations. This concept was explored in paragraph 4.10 of DP1/16, 'Equity Release Mortgages'. The responses to question 8 in that discussion paper highlighted a range of views on how the allowance for risk should be implemented. As noted in paragraph 3.17 of the SS, the PRA is not at this stage expressing a view on the different ways in which such an allowance should be made.

Appendix

Supervisory Statement 3/17 ‘Solvency II: matching adjustment - illiquid unrated assets and equity release mortgages’ available at www.bankofengland.co.uk/pra/Pages/publications/ss/2017/ss317.aspx.