Bank of England PRA

Funded reinsurance

Supervisory statement | SS5/24

July 2024

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1: Introduction

1.1 This supervisory statement (SS) sets out the PRA's expectations in respect of UK Solvency II firms that are life insurers ('firms') entering into or holding funded reinsurance arrangements as cedants. Funded reinsurance is a form of collateralised quota share reinsurance contract which transfers part or all of the asset and liability risks associated with a portfolio of annuities to a counterparty.[1]

1.2 The PRA recognises that reinsurance is an important part of risk management. However, in the context of funded reinsurance, the PRA's concern is that counterparty risks may be underestimated as a result of the risk profile of the counterparties, the complexities of the arrangements, and the uncertainty around the effectiveness of management actions in stress.

1.3 The PRA recognises that funded reinsurance arrangements can be used by firms as part of a diversified asset strategy. However the PRA considers that there are increased risks in connection with funded reinsurance, including from a systematic use of funded reinsurance as an integral part of a firm's business model or from the use of more complex arrangements where it may be more difficult for firms to assess the full extent of risks involved.

1.4 In this SS, the PRA therefore builds on existing requirements and expectations that apply in respect of firms' reinsurance arrangements by setting out additional specific expectations in relation to funded reinsurance arrangements to mitigate the risks arising from these arrangements. For the avoidance of doubt the expectations in this SS supplement relevant requirements (including under the Solvency 2 framework) and other existing PRA expectations that apply to firms in relation to their outwards reinsurance arrangements, but do not modify or replace any relevant requirement or other existing PRA expectation.

1.5 The PRA understands that through a thorough assessment of the risks arising from their counterparties and collateral exposures, firms may identify some diversification benefits from their funded reinsurance portfolios which result in lower solvency capital requirements or make higher investment limits appropriate. These may include diversification between the cedant risk profile and the counterparty's risk profile, diversification between the collateral portfolio and the counterparty's asset portfolio, and diversification between the collateral portfolio and the cedant's asset portfolio. Conversely these transactions may also generate material increased risks and a heightened level of uncertainty of risk in stress, for example by impacting the collateral quality, liability valuation, risk of contract recapture, and risk of

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1 This is often referred to as asset intensive reinsurance, asset backed reinsurance, and/or annuity quota share reinsurance.

multiple counterparty failure within a firm's portfolio. The PRA expects firms to be prudent in recognising benefits when facing such a high level of uncertainty in the probability and potential size of the losses associated with funded reinsurance.

1.6 To determine whether these expectations are being met, the PRA will seek assurance on firms' practices in a proportionate way, focusing on the exposures that in its view present the greatest risk. The PRA may consider this as a topic in a firms' Periodic Summary Meeting, or where appropriate look to commission a Skilled Persons review. The PRA will continue to monitor how market practice evolves and will keep under review whether there is a need for further specific policy measures. This could include tools to address a potential build-up of sector wide vulnerability, where these might pose a risk to UK financial stability.

1.7 This SS should be read in conjunction with **Chapter 3 of the Conditions Governing Business**, **Chapters 6, 7 and 11 of the Technical Provisions**, the **Solvency Capital Requirement - General Provisions**, and the **Solvency Capital Requirement - Internal Models Parts** of the PRA Rulebook. This statement should also be read in conjunction with SS20/16,[2] SS7/18,[3] SS8/18,[4] and SS1/20.[5]

1.8 This SS expands on the PRA's general approach as set out in its insurance approach document.[6] By clearly and consistently explaining its expectations on firms in relation to funded reinsurance, the PRA seeks to advance its statutory objectives of ensuring the safety and soundness of the firms it regulates and contributing to securing an appropriate degree of protection for policyholders.

1.9 Chapter 2 sets out PRA expectations for ongoing risk management of existing funded reinsurance contracts. Chapter 3 sets out PRA expectations with respect of the calculation of solvency capital requirements for such arrangements. Finally, Chapter 4 sets out PRA expectations relevant to a firm's decision making process when it comes to entering into and structuring new funded reinsurance arrangements.

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2 SS20/16 Solvency II: reinsurance coutnerparty credit risk: **www.bankofengland.co.uk/prudential-regulation/publication/2016/solvency2-reinsurance-counterparty-credit-risk-ss**.

3 SS7/18 Solvency II: matching adjustment: **www.bankofengland.co.uk/prudential-regulation/publication/2018/solvency-2-matching-adjustment-ss**.

4 SS8/18 Solvency II: internal models – modelling of the matching adjustment: **www.bankofengland.co.uk/prudential-regulation/publication/2018/solvency-2-internal-models-modelling-of-the-matching-adjustment-ss**.

5 SS1/20 Solvency II: prudent person principle: **www.bankofengland.co.uk/prudential-regulation/publication/2020/solvency-ii-prudent-person-principle-ss**.

6 PRA's approach to supervision: **www.bankofengland.co.uk/prudential-regulation/publication/pras-approach-to-supervision-of-the-banking-and-insurance-sectors**.

2: Ongoing risk management

2.1 This section sets out PRA expectations in respect of the risk management processes that firms are required to have in place to identify, measure, monitor, manage, and report the risks to which they are exposed in relation to their funded reinsurance agreements (among other things).[7]

2.2 Given the nature of the risks associated with funded reinsurance, the PRA expects firms' risk management processes to be particularly focused on the whole tail risk to which they are exposed.[8] This reflects the fact that the loss distribution for funded reinsurance is unusually fat tailed, characterised by infrequent but very large losses.

2.3 The PRA expects firms' analysis of the risks arising from their funded reinsurance arrangements to provide sufficient evidence to enable their actuarial function to express an informed opinion on the adequacy of the firm's reinsurance arrangements.[9] The PRA expects this analysis to demonstrate with a high level of confidence that the firm can withstand in a viable form either a single recapture event or multiple recapture events involving highly correlated counterparties. For this to be possible the size and structure of transactions should be limited in such a way that the financial and non financial impact of recapture are capable of being reliably estimated, particularly in stress. This can then be compared to the financial resources likely to be available to the firm in such stressed conditions.

Counterparty internal investment limits

2.4 As part of their investment risk management policy, developed in accordance with **Conditions Governing Business 3 and Article 260 of the on shored Commission Delegated Regulation (CDR)**, firms' internal investment limits should be designed taking into account the expectations set out in paragraphs 2.5 to 2.14 below.

2.5 For the purposes of developing internal investment limits in relation to funded reinsurance, the PRA expects firms at a minimum to calculate an 'immediate recapture' metric, taking into account the expectations set out in paragraphs 2.6 to 2.12. This metric

[7] PRA Conditions Governing Business 3.1: **https://www.prarulebook.co.uk/pra-rules/conditions-governing-business**.

[8] PRA Conditions Governing Business 3.1 and 3.2: **https://www.prarulebook.co.uk/pra-rules/conditions-governing-business**, SS20/16 Solvency II: reinsurance coutnerparty credit risk: **www.bankofengland.co.uk/prudential-regulation/publication/2016/solvency2-reinsurance-counterparty-credit-risk-ss** and SS1/20 Solvency II: prudent person principle: **www.bankofengland.co.uk/prudential-regulation/publication/2020/solvency-ii-prudent-person-principle-ss**.

[9] PRA Conditions Governing Business 6.1: **https://www.prarulebook.co.uk/pra-rules/conditions-governing-business**

should measure the impact on the firms' solvency capital requirement (SCR) coverage ratio of an immediate recapture of all business ceded to a counterparty, ignoring the likelihood of such an event. While other metrics might consider potential management actions in accordance with applicable legal requirements, this metric should be calculated before management actions are taken into account to maximise the reliability of the information provided to management. The immediate recapture metric applies only for the purpose of setting internal investment limits and not for other purposes, including to a firm's recapture plan or collateral policy. Additional aspects of the use of the 'immediate recapture' metric to set internal investment limits are set out in paragraphs 2.6 to 2.12.

2.6 The PRA expects firms to consider the nature of the collateral that they may inherit in such a recapture event and whether this would be sufficient and adequate to cover the technical provisions and risks recaptured. The PRA also expects firms to assume limited to no re-collateralisation of the portfolio by the funded reinsurance counterparty in stress.

2.7 If firms assume recapture within the matching adjustment (MA) portfolio, the PRA expects them to take into account prudent rebalancing and trading costs either through a reduced assumed MA spread or by allowing for these costs separately. Where funded reinsurance agreements grant substitution rights to the counterparty, the PRA expects firms to consider the risks that they recapture a 'worst-case' collateral portfolio, that is, a portfolio compliant with their collateral investment guidelines but at the lower end of credit quality and with poorly matched assets. The PRA also expects firms to allow for the increased costs of managing the portfolio post recapture.

2.8 The exposure measurement basis of the immediate recapture metric should consider a range of scenarios covering the whole distribution of the risks in the tail. As such, the PRA expects firms' exposure for funded reinsurance to be measured in stressed conditions. This includes stresses to the liability cash flows and the value and quality of collateral. In particular, the PRA expects firms to consider the risks beyond the 1 in 200 confidence level over one year, for example taking a tail value at risk (TVaR) approach or using stress and scenario testing.

2.9 The PRA expects firms to set internal investment limits such that a singular idiosyncratic event of a recapture of business from one counterparty does not threaten the firm's business model. What constitutes a threat to the firm's business model should be defined by the firm itself in line with its risk appetite, risk management policies, risk tolerance limits and investment strategy alongside its overall business strategy. The PRA however considers that firms should avoid taking on single counterparty exposures which, upon recapture, could threaten their ability to continue to meet their solvency risk appetite or require significant value destroying management actions to be taken (such as closure to new business).

2.10 Where a firm's business model is reliant to a material extent on funded reinsurance with one counterparty, the PRA considers that this could present challenges with regards to compliance with the prudent person principle (PPP). Given the complex nature of risks associated with funded reinsurance arrangements and the associated uncertainties around valuation and the impact of recapture, the PRA expects firms to pay particular attention to these arrangements and avoid overexposures[10] or excessive reliance on a particular funded reinsurance arrangement.[11]

2.11 The limits should be set to avoid over exposure in any periods of high SCR coverage above firms' long term target SCR coverage ratios which could result in a breach of the exposure limit set by the firm when SCR coverage returns to long term target levels.

2.12 The PRA expects firms to consider broader factors when setting internal investment limits beyond the current external credit rating of the counterparties. The PRA expects firms to design appropriate counterparty approval and ongoing monitoring processes and to use the output of such processes to inform this limit setting rather than relying solely on changes to external credit ratings, which may take longer to react to underlying changes in risk.

2.13 Firms are reminded that in addition to setting internal investment limits to single counterparties, the PRA expects firms to have additional limits which considers other forms of concentration risks.[12] For funded reinsurance this should include a limit based on the simultaneous recapture from multiple highly correlated counterparties. This should be based on an assessment of similarities in the risk profile of the counterparties operating in the funded reinsurance market. For example where a firm is exposed to multiple counterparties where credit risk makes up a majority of their post diversification capital requirements ie where the firm has an indirect concentrated exposure to credit risks the PRA expects firms to have an internal exposure limit that considers this concentration risk.

2.14 The PRA also expects firms to set an aggregate limit focused on the firm's own need for a diversified asset strategy as well as operational capabilities on recapture, independent of the counterparties. In setting this solvency based limit, the board should consider the recapture plan set out in paragraph 2.20 to 2.23 and in particular the ability of the firm to perform the required rebalancing of the asset portfolio, the required hedging activities, and the operational processes associated with the recapture.

[10] SS1/20 Solvency II: prudent person principle: **www.bankofengland.co.uk/prudential-regulation/publication/2020/solvency-ii-prudent-person-principle-ss**.

[11] Investments 5.2: **https://www.prarulebook.co.uk/pra-rules/investments/02-07-2024**

[12] PRA Conditions Governing Business 3.1: **https://www.prarulebook.co.uk/pra-rules/conditions-governing-business** and SS1/20 Solvency II: prudent person principle: **www.bankofengland.co.uk/prudential-regulation/publication/2020/solvency-ii-prudent-person-principle-ss**.

Collateral policy

2.15 The PRA expects firms to have clear collateral policies in place as part of their risk management policies, with consideration of the collateral they are accepting exposure to factored into their limit setting process. The PRA expects the collateral policy to allow firms to formulate an executable recapture plan under stressed conditions (described in paragraph 2.20 below). Such a collateral policy should also allow firms to have a reliable estimate of the impact of recapture given the value and quality of asset liability matching of recaptured collateral; so that the firm can survive the impact of a recapture without it threatening the firm's business model (see paragraph 2.9).

2.16 The PRA expects a detailed collateral policy for illiquid assets in collateral pools backing funded reinsurance given the increased risk associated with their presence in collateral structures (due to the opaque nature of the value of illiquid assets and the lack of a deep and transparent secondary market for them). This may reference existing methodologies or documentation, and the level of detail should be proportionate to the size of exposures. It should cover at a minimum:

- approaches to credit assessment;
- valuation methodology by asset class;
- MA eligibility conditions monitoring;
- SCR modelling of the assets; and
- investment management approaches on recapture under different circumstances, including consideration of how assets may be managed long term if they cannot be easily sold.

2.17 Firms with MA approval which intend to assume they can recapture collateral assets into their MA portfolio are reminded that they must ensure ongoing compliance of such assets with the MA eligibility conditions as part of their internal risk management policies. Where firms have set out broad contractual definitions of MA eligibility conditions which may not match the firm's own MA approvals, the PRA expects firms to undertake robust testing of samples of assets held in the collateral portfolio to confirm MA eligibility in line with their approvals on a regular basis. The frequency of this ongoing monitoring should reflect the characteristics and materiality of the collateral assets.

2.18 For the purposes of their collateral management arrangements, the PRA expects firms should also only assess MA eligibility conditions in line with their own permissions, rather than assume that potential future applications for MA approval will be successful.

2.19 Finally, the PRA expects firms to develop supporting analysis to clearly demonstrate that in both prevailing and stressed economic conditions, the recapture from a counterparty would not result in a breach of the MA conditions (including the matching of cash flows).

Recapture plan

2.20 The PRA expects firms holding or entering into funded reinsurance arrangements to have a recapture plan which at a minimum covers the following:

- approaches to monitoring the financial condition of the counterparty to the funded reinsurance arrangement, and activities carried out if a deterioration is identified;
- a step by step process for achieving the recapture of all the assets and liabilities from relevant counterparties, taking into account all applicable laws;
- a step by step process for asset transfers by asset class, including contract novation (eg derivatives);
- actions to ensure MA compliance where recapture into the MA portfolio is assumed; and
- areas of uncertainty in the recapture process.

2.21 The PRA expects the high level principles underlying the recapture plan, including a statement on the uncertainties inherent to the recapture process, to be approved by the board. The PRA also expects further board involvement in reviewing and approving the recapture plan to be proportional to the level of risk being taken, reflecting how internal investment limits have been set and what potential impacts on a firm's business model have been accepted. The PRA would expect that the potential management actions in the event of a reinsurance recapture and the firm's analysis of these actions should be approved by the board, as indicated in paragraphs 3.6 to 3.8 of SS4/18.[13]

2.22 The PRA expects firms' recapture plans to articulate a clear and structured decision making process for assessing whether ceded business should be recaptured when optional contractual termination event clauses are triggered. For example contracts often have solvency based termination triggers set above a regulatory intervention level which allow for a recapture of the ceded business at the option of the cedant. When the clause is triggered and the option becomes available to the cedant these can generate complex decisions for

[13] SS4/18 Financial management and planning by insurers: http://www.bankofengland.co.uk/prudential-regulation/publication/2018/financial-management-and-planning-by-insurers-ss

management as to whether to recapture early to avoid further deterioration in the quality of the counterparty and collateral, or whether to wait for the counterparty to cure the breach. Both outcomes generate material risks and balance sheet implications for firms.

2.23 To inform their recapture plan and their funded reinsurance internal investment limits, the PRA expects firms to analyse their funded reinsurance exposures at least annually. Where exposures are material, the PRA expects firms to carry out stress testing specific to their funded reinsurance in their own **risk and solvency assessment** (ORSA) report.[14] This assessment, which will be relevant to setting internal investment limits for funded reinsurance, should be informed by the recapture plan and quantitatively test, where possible, the outcome of the recapture process focusing in particular on relevant stressed conditions.

[14] PRA Conditions Governing Business 3.8: **https://www.prarulebook.co.uk/pra-rules/conditions-governing-business** and SS19/16 Solvency II: ORSA **www.bankofengland.co.uk/prudential-regulation/publication/2016/solvency2-orsa**.

3: Solvency capital requirement

3.1 This section sets out PRA expectations for firms' assessments of risks associated with funded reinsurance arrangements with the aim of capturing all material and quantifiable risks in their SCR when taking into account the effects of funded reinsurance as a risk mitigation technique.

3.2 For firms calculating their SCR on the basis of the standard formula, the PRA reminds firms of the requirement to include in their ORSA a clear assessment[15] of the appropriateness of the standard formula including a consideration of the nature, scale, and complexity of the risks transferred, the risks retained, and the risks to which they are exposed to in respect of funded reinsurance arrangements.

3.3 For firms using internal models or partial internal models to calculate their SCR, the Solvency II Use Test requires the output of such models to play an important role in risk management, decision making, and capital allocation.[16] The PRA expects firms to undertake robust modelling which takes into account the risks associated with funded reinsurance arrangements and to recognise the importance of the internal models or partial internal models output to the decision making process when it comes to deciding whether to enter into a funded reinsurance arrangement as a risk mitigation technique. Failure to do so may incentivise short term behaviours not compatible with the long term sustainability of the business.

3.4 In the context of funded reinsurance the PRA sets out in paragraphs 3.6 to 3.16 the specific expectations in respect of measuring the counterparty credit risk capital charge in firms' internal models or partial internal models, with the aim of capturing all material and quantifiable risks[17] and taking into account the effects of funded reinsurance as a risk mitigation technique.[18]

15 PRA Conditions Governing Business 6.1: **https://www.prarulebook.co.uk/pra-rules/conditions-governing-business** and chapter 11 of SS19/16 Solvency II: ORSA: **www.bankofengland.co.uk/prudential-regulation/publication/2016/solvency2-orsa**.

16 SCR – Internal Models 10: **https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024** and Art 226 onshored CDR 2015/35: **https://www.legislation.gov.uk/eur/2015/35/article/226**.

17 General Provisions 3.3: **https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---general-provisions/26-06-2024** and SCR - Internal Models 11.6: **https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024**.

18 General Provisions 3.5: **https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---general-provisions/26-06-2024** and SCR - Internal Models 11.8: **https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024**.

3.5 Firms must document the design and operational details of its internal model and indicate any circumstances under which the internal model does not work effectively.[19] In doing this the PRA expect firms to specifically document their level of confidence that their internal model for counterparty risk is working effectively to effectively support the relevant management decisions regarding funded reinsurance. Where a sufficiently high level of confidence cannot be achieved the PRA expects firms to reflect the increased uncertainty in their system of governance, including the risk management system[20]. The PRA expects firms to reflect such uncertainty by setting tighter limits to the funded reinsurance volume in paragraph 2.9 to 2.14 or further limits to the nature and structure of the transactions in paragraph 4.6 and 4.11, depending on the nature and source of the uncertainty.

Probability of default

3.6 For probability of default (PD) the PRA's expectations for firms in relation to their funded reinsurance arrangements include the following:

- **Adequate data** – firms should clearly articulate their data choice[21] for assessing the PD of their counterparties. This should include a consideration of whether the counterparties operate in a similar market and whether the business models are adequately reflected in the data.

- **Stressed PD** – the PRA expects firms to calculate a PD both in prevailing conditions and under stress conditions to reflect all material risks[22] including the heightened risk of default in stressed credit conditions.

- **Termination clauses and dispute** – firms are reminded that they can take only account of risk mitigating effects of reinsurance in their internal models if the risks of the reinsurance are properly reflected.[23] One aspect of this is the cedant's position not only on the default, insolvency or bankruptcy of the counterparty but also on the occurrence of any other credit event set out in the transaction documentation.[24] The PRA expects that firms' calibration of

19 SCR – Internal Models 15: https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024.
20 SCR – Internal Models 10: https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024.
21 SCR – Internal Models 11.2(2): https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024.
22 SCR – Internal Models 11.6: https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024.
23 SCR – Internal Models 11.8: https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024 and Article 235 of the onshored CDR 2015/35: https://www.legislation.gov.uk/eur/2015/35/article/235.
24 Article 235 of the onshored CDR 2015/35:https://www.legislation.gov.uk/eur/2015/35/article/235.

stressed PD be informed by their internal policy on the actions they would take if certain contractual triggers are breached (referred to in paragraph 2.20).[25] Given the beneficial nature of these clauses for idiosyncratic counterparty risk management the PRA expect firms to be able to demonstrate that their presence in contracts reduces the scale and likelihood of large losses on recapture.

- **Solvency ratio** – the PRA expects firms to analyse how the solvency ratio of their counterparties changes under various market stresses and how this could inform their stressed PD.[26]

- **Validation** - for the purposes of complying with the requirement in **SCR - Internal Models 14.1(1)(b)** in respect of funded reinsurance arrangements the PRA also expects firms to develop validation processes to specifically explain the sources of any day one new business gain[27] generated by entering a funded reinsurance arrangement. This could for example be carried out by comparing the premium paid to the counterparty and the premium which would have been charged by the firm in the absence of the funded reinsurance arrangement. Whilst the difference may largely be driven by differences in cost of capital or investment strategy, it could help isolate other unexplained elements which indicate an increased level of risk not captured by the internal model.

- **Forward looking** – firms should consider whether their historical data captures all risks including forward looking risks of deterioration of the counterparty conditions.[28] The PRA expects firms to consider how the PD used can be informed by market surveillance activities or information implied from market traded instruments such as credit default swaps.

- **Non public information** – among other things firms should consider whether private information gathered as part of their counterparty approval processes

25 SCR – Internal Models 11.3: **https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024**.

26 SCR – Internal Models 14.1 (1)(d): **https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024**.

27 A new business gain refers to an increase in regulatory surplus (own funds less SCR) which arises when premium paid to the reinsurer is lower than the premium received from the pension scheme, and the counterparty risk exposure does not generate significant SCR. BPA are historically written at new business strain.

28 SCR – Internal Models 11.2(2): **https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024**.

set out in paragraph 2.12 would help inform their assessment of PD.[29] For this purpose the PRA would not expect firms to use this private information to assign a lower PD to their counterparty.

3.7 Where data driven PD rates are perceived to be insufficient as a result of the analysis set out in paragraph 3.6 the PRA expects firms calculating their SCR using internal models or partial internal models to consider whether the rating of the counterparty needs to be adjusted downwards in their models or whether the data driven PD needs to be adjusted to reflect the inherent uncertainty.

3.8 The PRA also expects firms to set out and justify their approach to aggregating the capital charges from individual counterparty risks within their internal models or partial internal models, both between counterparties and more generally with other risks, and in particular credit risks.

Loss given default or downgrade

3.9 For loss given default or downgrade (LGD) the PRA's expectations for firms in relation to their funded reinsurance arrangements includes the following:

- **Stressed liabilities** – firms should stress the cash flows of the insurance obligations ceded under the reinsurance using the same approaches used in the relevant modules of the internal model or partial internal model. This should include stressing longevity risks and market risks within the liabilities such as inflation and market sensitive policyholder options.[30]

- **Allowing for credit deterioration of the counterparty** – the PRA expects firms to consider the impact of deterioration in the credit quality of counterparties[31] as part of the stressed counterparty default adjustment (CDA) in the context of their reinsurance recoverables, taking into consideration the lifetime of the reinsurance contract.

- **Risk margin on recapture** – the PRA expects firms to consider the impact on the risk margin of the recapture of risks.[32]

29 SCR – Internal Models 11.2(2): https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024.
30 SCR – Internal Models 11.6: https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024.
31 SCR – Internal Models 11.6: https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024.
32 SCR – Internal Models 11.6: https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024.

- **Management actions** – firms are reminded that management actions may only be taken into account in a firm's internal model where the requirements in SCR - Internal Models 11.8(3) are satisfied, including if they can reasonably be expected to be carried out.[33] If there is insufficient data to demonstrate availability and pricing of certain management actions in a recapture event (for example the ability to source longevity reinsurance replacement), firms should adopt a prudent approach and not take into account such management actions in their internal models or partial internal models.

3.10 The PRA also expects firms to be able to demonstrate that their internal models or partial internal models capture wrong way risk. This may lead to a close interaction between the stressed PD and stressed LGD for counterparties where credit risk makes up a majority of their post diversification capital requirements or where the counterparty has originated the assets in its collateral portfolio. In such instances, deterioration in wider credit conditions can simultaneously increase PD and LGD.

Collateral

3.11 For the calculation of the risk mitigating impact of collateral on the firms' SCR calculation as it relates to funded reinsurance arrangements,[34] the PRA's expectations include the following:

- **Look through** – the PRA expects firms to stress the collateral portfolios on a look through basis to reflect the risks the firm would ultimately be exposed to on recapture. This should include key market risks such as a credit spread stress, credit transition, and other stresses that might affect the underlying portfolio.

- **Collateral mismatch risk** – the PRA expects firms to consider where mismatches may arise between the stressed value of the underlying insurance liabilities that have been ceded and the stressed collateral required under the terms of the funded reinsurance arrangements.

- **Re-collateralisation** – where large gaps between the required collateral and the available collateral in the collateral portfolio emerge after immediate stresses, the PRA expects firms to apply prudent assumptions in setting

[33] SCR – Internal Models 11.8(3)(b): https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024 and article 236 of the onshored CDR 2015/35: https://www.legislation.gov.uk/eur/2015/35/article/236.

[34] SCR – Internal Models 11.8 (2): https://www.prarulebook.co.uk/pra-rules/solvency-capital-requirement---internal-models/26-06-2024 and article 235 of the onshored CDR 2015/35: https://www.legislation.gov.uk/eur/2015/35/article/235.

recovery rates to reflect the risk that the counterparty might not be able to replenish the collateral.

3.12 The PRA expects firms to consider the risk that their counterparty to the funded reinsurance arrangement might not be willing or able to replenish the collateral portfolio in certain stressed conditions. This could be due to breaching solvency risk appetite, breaching regulatory solvency ratio, regulatory intervention ahead of breaching solvency ratio, or competing demands on their resources. The PRA expects firms to be able to demonstrate that their internal models or partial internal models consider the potential for reduced effectiveness in stressed conditions of the risk mitigation technique.[35]

Recapture within MA portfolio

3.13 For firms with MA approval the PRA considers that there are challenges and material uncertainties as to the ability of firms to recapture the assets and liabilities for the business ceded under a funded reinsurance arrangement into their MA portfolio without breaching MA portfolio compliance requirements. For the purpose of internal models or partial internal models the PRA therefore expects firms to assume that they recapture the assets and liabilities for the business ceded under a funded reinsurance arrangement outside of the MA portfolio unless they are able to demonstrate clearly that such an inclusion would not result in MA non compliance in prevailing as well as stressed economic conditions, taking into account future management actions that can reasonably be expected to be carried out.[36] Where firms perform this analysis on the aggregate MA portfolio the analysis should consider both prevailing and stressed economic conditions on the whole book post recapture.

3.14 Where a firm can demonstrate MA compliance on recapture in its MA portfolio in line with paragraph 3.13 above, the calculation of the SCR should be based on the spread of the collateral portfolio after the rebalancing necessary to achieve MA compliance. This should consider all material and quantifiable risks and may include but is not limited to:

- the stressed fundamental spread applicable to the collateral portfolio;
- the cost of replacing MA ineligible assets with alternative MA eligible assets of suitable quality;
- the cost of replacing assets where aggregate internal risk appetite limits for the management of the MA portfolio are reached;

35 Article 235 of the onshored CDR 2015/35: **https://www.legislation.gov.uk/eur/2015/35/article/235**.

36 Article 236 of the onshored CDR 2015/35: **https://www.legislation.gov.uk/eur/2015/35/article/236**.

- the cost of setting up a cross currency hedge programme in stress for currency mismatches in the collateral portfolio;

- trading activity to achieve internal appetite for the level and nature of cash flow matching on recapture of their collateral portfolio. This should clearly consider stressed trading costs relevant to the collateral asset portfolio; and

- the cost of other hedging after the recapture (including but not limited to foreign exchange, inflation, and interest rates derivatives which may not be recaptured).

3.15 The PRA understands that the collateral guidelines agreed with the counterparty to the funded reinsurance usually define MA eligibility conditions. Due to possible mismatch between the contractual definitions and the firms' actual MA approvals, the PRA considers that there are at least two risks that may arise in such situations relevant to firms that intend to assume recapture in the MA portfolio. The first is that non MA eligible assets are included within the collateral portfolio by mistake (for example as a result of the counterparty's controls being inadequate). The PRA expects this risk to be clearly reflected in a firm's internal models through an allowance for mistake, unless the firm has clear and regular monitoring activities to verify the MA eligibility conditions of collateral assets. The second risk is that the collateral portfolio contains assets for which the insurer does not currently have MA approval. In these instances the PRA expects firms to treat these assets as non MA eligible in their internal models or partial internal models.

3.16 Firms are reminded that the expectations set out in section 5 of SS8/18, for maintaining compliance with the MA requirements in stress conditions are relevant in the context of funded reinsurance.

4: Entering into and structuring of funded reinsurance arrangements

Risk assessment

4.1 In accordance with the requirements of the PPP firms may only invest in assets, the risks of which they are able to identify, measure, monitor, manage, control and report, and take into account in the assessment of their own solvency needs in the ORSA.[37] This chapter sets out PRA expectations for the purpose of complying with PPP requirements when considering whether to enter into and agree to the terms of a funded reinsurance arrangement.

4.2 The PRA considers that to demonstrate compliance with PPP requirements a firm's decision to enter into a specific funded reinsurance arrangement would need to take into account all of the risks generated by the arrangement as a whole. A firm's reliance solely on internal pass or fail criteria, as set out in internally approved minimum guidelines, for negotiating and agreeing the terms of its funded reinsurance arrangement might be insensitive to the risk reward trade off made as part of the structuring process and insufficient to take account of all the risks.

4.3 As part of the assessment of risks, the PRA therefore expects firms, when negotiating funded reinsurance arrangements, to undertake a quantitative assessment to identify and measure the specific risks they might incur, for the purpose of determining their internal limits and risk management processes. This comprehensive risk identification process should then support the structuring process, allowing the implementation of adequate safeguards in funded reinsurance arrangements to mitigate the risks generated. Of key importance to this assessment are the market risks that firms indirectly expose themselves to when entering funded reinsurance arrangements.

4.4 For such a quantitative assessment the PRA considers that the following four step framework may assist firms in considering how this could be carried out. The steps in the framework are:

Step 1: identify all forms of basis risk and collateral mismatch risk that exist within the arrangement (reinsurance contract and collateral agreements).

Step 2: stress the risk factors that would lead to basis risk and collateral mismatch risk identified at the appropriate magnitude and over the appropriate time horizon.

37 Investments 2.1(1): **https://www.prarulebook.co.uk/pra-rules/investments/**.

Step 3: based on the outcome of the quantitative risk assessment, determine whether the new arrangement falls within the firm's approved internal contractual risk appetite set out in paragraph 4.6.

Step 4: where the result is outside of the firm's risk appetite, firms should consider all potential options including reflecting this by seeking improved contractual protections in the reinsurance contract and collateral agreements.

4.5 The PRA considers that the framework described in paragraph 4.4 could help firms to ensure that their approach to identifying, measuring, monitoring, managing, controlling and reporting covers all material and quantifiable risks to which they would be exposed if they entered into the funded reinsurance arrangement. The PRA expects firms either to use this framework or satisfy themselves if they take a different approach that they are able to identify, measure, monitor, manage, control and report on all material and quantifiable risks to which they would be exposed if they entered into the funded reinsurance arrangement.

4.6 The PRA expects firms to have an approved internal contractual risk appetite statement setting out the maximum acceptable loss at the individual funded reinsurance contract level. Step 3 is to ensure that the proposed new contract is consistent with the risk appetite statement.

Basis risks

4.7 For the purpose of step 1 in the framework referred to in paragraph 4.4, the PRA expects a firm's identification of risks to include, at a minimum, an assessment of possible gaps between expected reinsurance cover and actual cover, for example, as a result of any of the following, as applicable:

- **Simplifications** – where the policyholder benefit structure has been simplified in the reinsurance contract for operational reasons or for ease of contract administration, gaps may arise under certain conditions between the reinsurance recoverable and the liabilities. For example a uniform escalation structure of benefits rather than reflecting the various limited price inflation formats may lead to gaps arising under certain inflationary conditions.

- **Modelling** – where the contract requires a projection of future cash flows under agreed assumptions (for example longevity improvement rates), differences or disagreements in views between the cedant and the counterparty can lead to large gaps. This is particularly relevant with respect to the event risk component of longevity risks.

- **Exclusions** – the contract might exclude certain elements of policyholder benefits or options (for example on spouse eligibility, lump sum, or fixed escalation). These can all lead to complex basis risk, particularly in cross terms such as the interaction of longevity and inflation.

Collateral mismatch risks

4.8 Similarly, for step 1 of the framework, the PRA expects a firm's assessment of collateral mismatch risks to include the following areas at a minimum:

- **Simplifications** – collateral mismatch gaps may arise from the nature of the collateral discounting curve used to determine the required amount.[38] Basis risk can arise where the indices used do not move in line with the required portfolio, or if the deductions for expected losses do not match the fundamental spreads methodology.

- **Underlying collateral behaviour** – where the collateral portfolio behaves differently from the required collateral amount there is a risk that large gaps may emerge in stress and the counterparty might be unable to replenish in stress. For example currency mismatches where the discount curve is stipulated in GBP but the underlying portfolio is mostly non GBP exposures, large losses may arise in certain stressed conditions.

Time horizon

4.9 The PRA expects firms to perform a quantitative assessment as set out in steps 1 and 2 in paragraph 4.4 under plausible stress scenarios, both for the full life of the contract and at potential contract termination ahead of contract completion. If the contract terminates early disputes on long term longevity improvements assumptions, for example, could result in large gaps.

4.10 For the collateral mismatch risk set out in steps 1 and 2 of paragraph 4.4, shortfalls can emerge both from how the collateral terms are defined and from the frequency of margining. The look through stresses applied should reflect how these underlying risks can lead to shortfalls in the collateral pool which might not be replenished before the counterparty defaults.

4.11 Where the margining is undertaken only on an infrequent basis, the PRA expects firms to consider the risk that large shortfalls emerge at recapture. These shortfalls could emerge

[38] This curve building process involves a bottom up approach of a swap curve with the addition of option adjusted spreads of corporate bonds of different ratings and deductions for expected losses and cross currency swaps costs.

from the length of the resulting period between the final successful collateral call before the default and the formal valuation of collateral after the default, and the resulting potential decline in collateral value during that period. Where more frequent, ad hoc revaluation options are available firms should only allow for this if they have clear approved policies on how they would use this power.

Contractual mitigations

4.12 Contractual protections can be a powerful tool to manage risks and incentivise the right behaviour on the part of the counterparty. The PRA therefore expects firms to have internally approved minimum guidelines on contractual features for funded reinsurance transactions which they would apply when deciding whether to enter into a funded reinsurance arrangement. This would include, but is not limited to, the approaches to termination clauses, substitution rights for collateral assets, valuation approaches, concentration limits, and choice of applicable law. This should also cover investment guidelines taking into consideration the PPP[39] and the firm's internal investment strategy. The PRA expects firms to document the rationale for the choice of the minimum guidelines adopted in their policies.

4.13 The PRA also expects firms to use clear risk based collateral haircuts or over collateralisation linked to the risk being addressed. The PRA expects that asset specific risk based haircuts (rather than general over collateralisation) will be used where the risks relate to the specific assets in the collateral pool. The PRA expects that over collateralisation may be appropriate for risks that are not asset specific such as liability risks and asset liability mismatch risks. The haircut and over collateralisation policy should take into account the following expectations as a minimum:

- haircuts and over collateralisation should be calibrated to ensure that the risk of a shortfall in the realisable value of collateral in the event of default relative to the total amount due from the reinsurer to the cedant is within the level of confidence required by the approved internal contractual risk appetite statement (as defined in 4.6);

- haircuts and over collateralisation should allow for the expected volatility of key risk factors that drive the movement under stressed conditions in the value of the collateral assets and the total amount due from the reinsurer. This includes price volatility and currency volatility (if the risk is not hedged);

39 Investments Part: https://www.prarulebook.co.uk/pra-rules/investments/ and SS1/20 Solvency II: prudent person principle: **www.bankofengland.co.uk/prudential-regulation/publication/2020/solvency-ii-prudent-person-principle-ss**.

- haircuts and over collateralisation should capture other broader risk considerations that affect the value of collateral and the value of obligations from reinsurer to cedant in the event of default. This includes but is not limited to the impact of wrong way risks and cash flow mismatches on these values;

- haircuts should be based on the market risks of the assets defined as eligible under the collateral agreement;

- haircuts and over collateralisation should be calibrated at a high confidence level, using a long historical time period that includes at least one stress period; and

- haircuts and over collateralisation should be calibrated to incentivise the correct behaviours on the counterparty.