MILLIMAN BRIEFING NOTE

The PRA QIS Exercise – Qualitative Questionnaire

What does it cover and what will it mean for firms?

Florin Ginghină, FIA, FCCA
Lewis Duffy

On 20 July 2021, the Prudential Regulation Authority (PRA) launched its Quantitative Impact Study (QIS) covering the review of Solvency II in the UK. In conjunction with this, on 13 August 2021, the PRA launched a QIS Qualitative Questionnaire, to consider the wider effects of potential reforms beyond the balance sheet impacts. This was also accompanied by the publication of a Dear CFO letter.

In July 2021, Milliman published an extensive paper outlining the scope and contents of the QIS, and discussing the potential impacts for UK firms. Under the QIS, two methodology variants were tested for each of the Risk Margin and Matching Adjustment (**MA**), under two scenarios (**Scenario A** and **Scenario B**).

In conjunction with the QIS, on 13 August 2021 the PRA launched a QIS Qualitative Questionnaire (the **Questionnaire**). The aim of this questionnaire is to gauge the wider impacts of the possible QIS outcomes on UK firms beyond their balance sheets. The two scenarios contained in the QIS (Scenario A and Scenario B) are referenced in the Questionnaire.

Qualitative Questionnaire

The PRA stated three objectives of the Questionnaire:

- To make the current regime more streamlined and/or flexible
- To understand the costs of complying with the current regime
- To understand the business impacts of potential policy design options

The Questionnaire is Microsoft Excel-based, and it comprises 13 sheets split into three parts:

1) A basic information and an introduction sheet.
2) Ten main sheets, which cover the two key areas explored in the QIS (Risk Margin and MA) and also the transitional measure on technical provisions (**TMTP**) and internal model frameworks. Also included are sheets covering impacts of the potential policy design options to firms' businesses and strategy (Risk Appetite, Business Growth, Reinsurance and Investment), and a sheet exploring the impact of design and calibration changes on investments under a stress scenario ("Investments under stress").
3) A stress scenario sheet, setting out the severity, length and shape of a stress scenario. This sheet does not request any further information but provides a quantitative view of the stress scenario referenced in the "Investment under stress" sheet.

The stated PRA objectives are each addressed in the main sheets. A breakdown of where each of these objectives are addressed in the Questionnaire is shown in Appendix A of this paper.

Participants are expected to take an evidence-based approach to these questions, referring where possible to relevant management actions taken in the past. The PRA has indicated that it would also welcome any supplementary evidence and information informing firms' responses.

Like the QIS itself, the deadline for submission of responses to the Questionnaire is Wednesday 20 October 2021. Submissions are to be made via the Bank of England Electronic Data Submission (**BEEDS**) portal.

The three main parts of the questionnaire are discussed in more detail in the following sections.

First part: Basic Information and Introduction sheets

The first sheet, Basic Information, is a request for information on participating firms. Its format is like that seen in other PRA requests for information, such as the Quarterly Reporting Template forms.

The second sheet in this part, Introduction, includes guidance on how to complete and submit the questionnaire. The information is largely unchanged from that included in the Dear CFO letter accompanying the launch of the questionnaire.

Second part: Main sheets

Each sheet in this part is discussed below. We limit our analysis to stating the number of questions in each sheet and their applicability, and highlighting those questions which we believe are of particular interest considering previous communication by the PRA, and the design variants of the Risk Margin and MA tested under the QIS.

RISK MARGIN

The majority of the nine questions (and two sub-questions) included apply to all firms. The two sub-questions apply to firms using one of the simplifications to TMTP and/or Risk Margin specified in the European Insurance and Occupational Pensions Authority (EIOPA) guidelines.

Question 1 concerns the current annual cost of running the Risk Margin for regulatory purposes, and includes the two sub-questions on simplifications mentioned above.

Questions 2 to 9 require firms to estimate the ongoing and one-off costs for each Risk Margin variant tested under the QIS (the Scenario A margin over current estimate or MOCE approach and the Scenario B risk tapering approach), as well as asking firms to consider the costs, benefits and detriments associated with each Risk Margin variant relative to the current approach.

TMTP

The questions included in this sheet refer to the costs associated with various aspects of TMTP (re)calculations (Questions 1 to 3), any simplifications currently utilised by firms (Question 4 and sub-questions) and the benefits and drawbacks of any proposed simplifications in TMTP (re)calculations relative to the status quo (Question 5).

The majority of the five questions apply to all firms using the TMTP, with two sub-questions to Question 4 applying to firms using TMTP simplifications only and sub-questions 5b to 5d being conditional on affirmative responses to sub-question 5a.

SCR – INTERNAL MODEL FRAMEWORK

All 14 questions in this sheet apply to firms that use a full or partial internal model. Sub-question 1c and Question 6 apply to all firms.

The following areas relevant to internal model frameworks are covered in the questions:

- Internal model tests and standards that firms find problematic or onerous to satisfy, as well as any amendments firms may wish to be made to the current tests and standards (Questions 1a and 1b)
- Any changes firms may wish to be made to the current internal model application and approval framework (Question 1c)
- Treatment of risk exposures that are difficult to model reliably (Questions 2a and 2b)
- Flexibility in the use of expert judgement (Questions 3a and 3b)
- Differences in approaches for internal models and the own risk solvency assessment or ORSA (Questions 4a and 4b)
- Granularity of approval for partial internal models—for example, approval for specific asset classes (Questions 5a to 5d)
- Approaches to streamlining the internal model approval process (Question 6)
- Impact of any the proposals in Questions 1 to 6 on firms' business and investment plans (Question 7)
- Changes firms may wish to make to their internal models in response to options discussed in previous questions, including benefits and drawbacks of these potential options (Questions 8a to 8c)
- Costs associated with internal model applications, maintaining the internal model and major model changes (Questions 9 to 11)
- Savings to the costs for internal model application (Question 12) and maintaining the internal model (Question 13) resulting from options discussed in previous questions
- Approaches that firms may use to monitor the ongoing appropriateness of their internal model Solvency Capital Requirement (**SCR**) and the drivers of change in SCR over time, in addition or as alternatives to those outlined in SS15/16[1] (Question 14)

[1] SS15/16: Solvency II: Monitoring model drift and standard formula SCR reporting for firms with an approved internal model; Paragraphs 2.2 and 2.3.

MA APPROVALS AND ELIGIBILITY

Question 1 applies only to firms with construction phase assets[2] in their MA portfolios. Questions 2 to 4 apply to all firms applying the MA. Questions 5 to 7 apply to all firms applying the MA that have not already responded to HMT's Call for Evidence. Question 8 applies only to firms whose liabilities include Income Protection products.

The following areas are covered in these questions:

- Assets in construction phase:
  - Current exposure and risk framework limits (Question 1a)
  - Current spreads on assets under construction (Question 1b)
  - The firm's appetite for these assets, and whether increased investment in these assets would be for diversification purposes (Question 1c)
  - The firm's appetite for these assets in pound sterling terms (Question 1d)
- Assets where cash flows are fixed in size and timing, but the issuer has optionality over the redemption date:
  - Exposure to these assets where the assets have adequate prepayment protection for the contractual cash flows and their spreads (Question 2a)
  - Exposure to these assets where the asset does not have adequate prepayment protection for the contractual cash flows and their spreads (Question 2b)
  - Credit spreads on the assets considered in Question 2b (Question 2c)
  - Firms' appetite for the assets considered in Question 2b (Question 2d and Question 2e).
- For assets where the issuer has optionality over redemption date, the possible redemption dates are contractually bound and the first call date has not been reached:
  - Exposure to such assets (Question 2f)
  - Credit spreads on such assets (Question 2g)

On assets discussed in Questions 1 and 2, we note that rebalancing some of the incentives in the current Solvency II rules, such as to allow a more beneficial treatment for assets with call and prepayment features and infrastructure assets with a construction phase, was specifically mentioned in the Dear CEO letter accompanying the QIS.

- Streamlining new MA approvals:
  - Central estimate and range of costs associated with seeking approval for new assets or liabilities to be included in existing MA portfolios (Question 3a)
  - Factors that materially affect the estimates in Question 3a (Question 3b)
  - Additional costs incurred as a consequence of MA applications (Question 3c)
  - Areas of the MA approval process that could benefit from streamlining (Questions 3d to 3g)
- Assets not currently included in MA portfolios that firms believe satisfy the conditions or the principles of MA:
  - Identification of such assets and an indication of the size of their market (Question 4a)
  - Factors that could be used to determine their MA eligibility and how these assets could contribute to satisfying the objectives of the current Solvency II review[3] (Question 4b)
  - The firm's appetite for these assets (Question 4c)
  - The spreads on such assets (Question 4d)
  - Detrimental effects of including these assets in MA portfolios (Question 4e) and how these effects could be mitigated (Question 4f).
- Improvements that could be made to address less serious MA breaches and associated downsides and benefits (Questions 5a to 5d).
- The role of internal credit rating frameworks (Questions 6a to 6e).
- Assets that firms would like to invest in, but for which the time required to receive approval to include them in MA portfolio disincentivises investment (Questions 7a and 7b).
- Features of Income Protection products (Questions 8a to 8c).

[2] Construction phase assets, also known as "greenfield" infrastructure assets, involve an asset or structure that needs to be designed and constructed. Investors fund the building of the infrastructure asset as well as the maintenance when it is operational. An asset that becomes operational is known as a "brownfield" (infrastructure) asset.

Compared to brownfield assets, among other things, greenfield assets are subject to construction risk.

[3] The three objectives in the Solvency II review are to spur a vibrant, innovative and internationally competitive insurance sector, to protect policyholders and ensure the safety and soundness of firms and to support insurance firms to provide long-term capital to underpin growth.

MA FUNDAMENTAL SPREAD CALCULATION

All questions apply to all firms utilising the MA.

The following areas are covered in the questions:

- Cost of calculating the MA (Question 1) and meeting the regulatory requirement in respect of managing the MA portfolio (Question 2).
- Cost of implementing the MA calculation (Question 3), calculating the MA (Question 4) and meeting the regulatory requirements in respect of managing the MA portfolio (Question 5) *under Scenario A*.
- Cost of implementing the MA calculation (Question 6), calculating the MA (Question 7) and meeting the regulatory requirements in respect of managing the MA portfolio (Question 8) *under Scenario B*.
- Sufficiency of the granularity of the Fundamental Spread (**FS**) under the existing regime (Question 9a), and how this could be improved (Questions 9b to 9d).
- Sufficiency of the granularity of the FS *under Scenarios A and B* (Question 10a), and how this could be improved (Questions 10b to 10d).
- Benefits (Question 11a) and downsides (Question 11b) of the FS variants outlined *in Scenarios A and B*. Firms are encouraged to comment on the overall design structure, as well as the design and calibration of individual components - Expected loss (**EL**), credit risk premium (**CRP**) and valuation uncertainty (**VU**).

RISK APPETITE

All questions apply to all firms. Sub-question 2b applies to firms that consider that the design of the Risk Margin affects their risk appetite, and sub-question 3b applies to firms that consider that the design of the MA affects their risk appetite.

The following areas are covered in the questions:

- Firms' risk appetite metrics (Question 1)
- How the design of the Risk Margin (Questions 2a and 2b) and the MA (Questions 3a and 3b) affect firms' risk appetite
- Whether firms' risk appetite metrics would change and what new risk appetite metrics firms would expect to be utilised under Scenario A (Question 4) and Scenario B (Question 5). Question 6 requires firms to comment on their responses to Questions 4 and 5.

BUSINESS GROWTH

All questions apply to all firms.

The following areas are covered in the questions:

- Whether firms write new business (Question 1)
- Firms' current plans for business growth (Questions 2 and 3)
- Whether firms' plans for business growth would change under Scenario A (Questions 4 and 5) and Scenario B (Questions 6 and 7). Question 8 requires firms to explain their responses to Questions 4 and 6 if they answered yes and to provide further comments.

REINSURANCE

All questions apply to all firms.

The following areas are covered in the questions:

- Proportion of firms' new business liabilities ceded in reinsurance arrangements or subject to alternative risk transfers (Question 1)
- Whether firms would change the proportion of new business liabilities ceded in reinsurance arrangements under Scenario A (Question 2) and Scenario B (Question 3). Question 4 asks firms to provide further comments if they answered yes to Question 2 or 3.
- Any other changes firms are likely to make to their key reinsurance programmes under Scenario A (Question 5) and Scenario B (Question 6).

INVESTMENT

Question 1 applies to all firms. Questions 2 and 3 apply to all firms applying the MA. Question 4 applies to all firms with ring-fenced funds (that are not MA portfolios). Question 5 applies to all firms with assets backing life business other than in MA portfolios and ring-fenced funds. Question 6 applies to all non-life firms.

The following areas are covered in the questions:

- Whether and how the design of the Risk Margin (Question 1) and FS (Question 2) affect firms' investment strategies
- Firms' asset allocation at year-end 2020 by asset classes, and how and why this might change under Scenario A and Scenario B: in MA portfolios (Question 3), in ring-fenced funds (Question 4), in firms' remaining life portfolios (Question 5) and for non-life firms (Question 6).

We note that the level of details of firms' asset allocations in Question 3 (MA portfolios) is higher than for other questions, with assets being required by credit rating among other things.

INVESTMENT UNDER STRESS

The structure of the questions and their applicability in this sheet is similar to the Investment sheet, with the following key differences:

- The questions assume an environment under stress (e.g., falls in risk-free interest rates, equity values, property values, deteriorating credit quality, heightened asset price volatility and reduced liquidity), based on the impact of the global financial crisis in the UK.
- Instead of firms' asset allocations under Questions 3 to 6, the questions ask for the impact of a stress on firms' likely acquisition or disposal of assets over the course of the stress, as set out in the Stress Scenario sheet (which we discuss in the next section). Firms are required to explain the reasons for changes to their investment strategies under Scenario A and Scenario B, including any management actions assumed and any simplifying assumptions and key judgements made. Firms are also required to give a qualitative assessment of how their answers would change if the TMTP were recalculated after the onset of the stress.
- The level of granularity on asset portfolio allocations requested in this sheet is less than in the Investments sheet.
- The answers to Questions 3 to 6 are limited to the following five options:
    1. Acquire a lot more/dispose of a lot less than if there were no stress (> 5% of pre-stress holdings)
    2. Acquire a bit more/dispose of a bit less than if there were no stress (1% to 5% of pre-stress holdings)
    3. Acquire/dispose of around the same as if there were no stress (a change of less than 1% of pre-stress holdings)
    4. Dispose of a bit more/acquire a bit less than if there were no stress (1% to 5% of pre-stress holdings)
    5. Dispose of a lot more/acquire a lot less than if there were no stress (> 5% of pre-stress holdings)

The stress scenario referred to in this sheet is set out in the final sheet of the questionnaire.

Third part: Stress scenario

The last sheet of the questionnaire does not request any further information, but provides a quantitative view of a stress scenario, setting out its severity, length and shape. The stress scenario is referenced in the "Investment under stress" sheet.

The areas stressed are risk-free yields (by term), credit spreads, stock price index, commercial and residential real estate prices, implied equity price and swaption volatilities and credit downgrades. Credit spreads and credit downgrades are further split by credit ratings.

The stress scenario is assumed to start in Q3 2021 and lasts about 21 months.

Firms are required to assume the following after the onset of the stress:

- No TMTP recalculation
- The only assets that can be sold are where a secondary market already exists
- No capital can be raised
- Authorities take no financial stability action

Summary and Milliman comments

We expect that answering the Questionnaire is likely to represent a significant and complex exercise for firms. The range of questions is wide and will require inputs from various business units across firms (including but not limited to Capital Management, Asset and Liability Management, Pricing, Strategy, Investments, Finance, and Reinsurance). Some questions require familiarity with the design variants of the Risk Margin and MA in the QIS, with other questions requiring firms to consider methodological implications to elements of their Solvency II balance sheets (e.g. MA, Internal Model/Partial Internal Model SCR), which can be a complex exercise. Some questions go to the heart of company strategy and may require board-level input.

We note that several of the questions request feedback and information on the costs of complying with various aspects of the current regime which might reasonably be regarded as onerous—such as the TMTP regime and certain aspects of the MA regime. We believe it positive that the PRA is requesting this information and that it may lead to future simplifications. We also believe it positive that the PRA is requesting suggestions and ideas for simplification in these and other areas.

How Milliman can help

Participation in the Solvency II QIS is voluntary; however, it is expected that many companies will be keen to submit responses or at least to understand the potential impact any changes to the Solvency II regime may have on their balance sheets.

Milliman would be happy to discuss with firms how best to approach the QIS exercise and can offer a wide range of services to assist firms, including:

- Assisting in performing the QIS exercise, including:
  - Performing part or all of the exercise
  - Working on a consulting or seconded basis
  - Quantifying balance sheet impacts using Milliman's sample business portfolios
  - Reviewing the work carried out by the firm's internal teams
- Providing "backfill" resource to free up team members to carry out the exercise
- Training on the changes covered in the QIS and other PRA publications, including to boards and senior management
- General support on the changes that may impact the firm more widely, including on:
  - Asset-liability matching
  - Reinsurance arrangements
  - Risk management
  - Cross-border arrangements

The PRA has confirmed in the accompanying Q&A that work on the QIS can be outsourced to consultants provided that requirements around governance and validation are met. In relation to the Qualitative Questionnaire in particular, we are able for example to assist by sense-checking draft responses for reasonability and internal consistency.

Please get in contact with your usual Milliman consultant or the Millman contacts below if you wish to discuss further.

CONTACT

Florin Ginghină
florin.ginghina@milliman.com

Lewis Duffy
lewis.duffy@milliman.com

Appendix A – Questionnaire Summary

TABLE A.1: STATED OBJECTIVES AND EXAMPLES OF RELEVANT QUESTIONS BY QUESTIONNAIRE SHEET

Relevant Questions/Stated Objectives Sheets	Streamlining and flexibility	Understanding costs of compliance	Understanding business Impacts
Risk Margin		1, 2, 3, 6, 7	
TMTP	4, 5	1, 2, 3, 4c	
SCR – Internal Model Framework	1, 3, 5, 6, 7, 12, 13	1c, 9, 10, 11, 13	7
MA Approvals and Eligibility	3d, 3e, 3f, 3g, 5, 6, 7	3	7
MA FS Calculation		1-8, 9c, 10c	
Risk Appetite			2-6
Business Growth			2, 4, 6
Reinsurance			2-6
Investment			1-6
Investment under stress			1-6