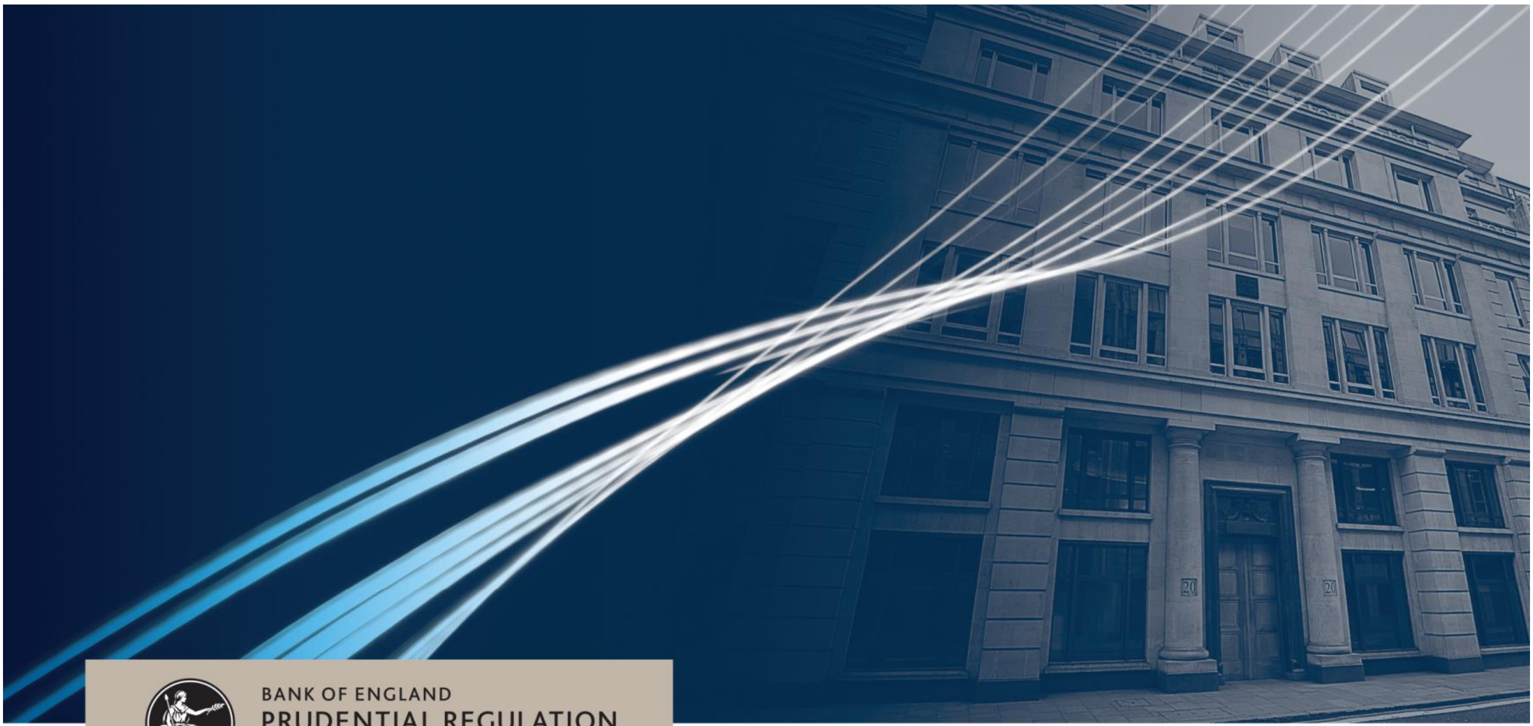

BANK OF ENGLAND
PRUDENTIAL REGULATION AUTHORITY

Consultation Paper | CP10/18

Solvency II: Updates to internal model output reporting

April 2018

Prudential Regulation Authority
20 Moorgate
London EC2R 6DA

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AUTHORITY

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Responses are requested by Friday 13 July 2018.

Please address any comments or enquiries to:

Rachel Evans
Prudential Regulation Authority
20 Moorgate
London
EC2R 6DA

Email: CP10_18@bankofengland.co.uk

Contents

1 Overview

1.1 In this consultation paper (CP), the Prudential Regulation Authority (PRA) proposes updates to Supervisory Statement (SS) 25/15, 'Solvency II: regulatory reporting, internal model outputs',[1] and SS26/15, 'Solvency II: ORSA and the ultimate time horizon – non-life firms'.[2]

1.2 The CP is relevant to all UK Solvency II firms and the Society of Lloyd's in respect of each of their syndicates and in respect of outputs of the Lloyd's internal model.

1.3 The PRA proposes to amend the life, counterparty and non-life templates and the associated instructions (LOG files) in SS25/15 and SS26/15 with the changes set out in the appendices and as described below. These changes would take effect from year-end 2018 reporting onwards. The proposals follow the analysis of the year-end 2016 PRA internal model output request, feedback from individual firms and the PRA's package of insurance reporting reforms.[3]

1.4 The PRA has also considered the areas recommended for reform made by the Association of British Insurers (ABI) and discussed with the Treasury Select Committee.[4]

Responses and next steps

1.5 This consultation closes on Friday 13 July 2018. The PRA invites feedback on the proposals set out in this consultation. Please address any comments or enquiries to CP10_18@bankofengland.co.uk.

2 Proposals

2.1 This chapter sets out the proposed changes to reporting of internal model outputs for the following templates and LOG files:

- Internal model risk outputs (life) (IM.01) (SS25/15);
- Internal model counterparty risk (IM.02) (SS25/15 and SS26/15); and
- Internal model outputs (non-life) (IM.03.01 to IM.03.11 and MO.03.01 to MO.03.11) (SS25/15 and SS26/15).

Internal model outputs for life insurance firms

2.2 The PRA proposes the following changes:

(a) To request 'biting scenario' information in IM.01 for all risk variables. This provides insight into the interactions between calibrations of individual variables when determining the Solvency Capital Requirement (SCR). 'Biting Scenario' is a scenario which gives rise to losses equal to the SCR for any given entity. The PRA is requesting firms to provide the

1 February 2017: www.bankofengland.co.uk/prudential-regulation/publication/2015/solvency2-regulatory-reporting-internal-model-outputs-ss.
2 February 2017: www.bankofengland.co.uk/prudential-regulation/publication/2015/solvency2-orsa-and-the-ultimate-time-horizon-non-life-firms-ss.
3 CP2/18 'Changes in insurance reporting requirements', January 2018: www.bankofengland.co.uk/prudential-regulation/publication/2018/changes-in-insurance-reporting-requirements.
4 The full PRA response to the Treasury Select Committee's inquiry into Solvency II is available at: www.bankofengland.co.uk/prudential-regulation/publication/2018/pra-response-to-the-treasury-committees-inquiry-into-solvency-2.

biting stresses for various univariate standardised risk drivers (as currently prescribed for the IM.01).

(b) To update the instructions for credit spread stresses to clarify that it takes account of the combined impact of spread widening, migrations and default. This is an area where the PRA has identified that life firms' interpretations of the instructions have diverged, and therefore the clarification should increase the comparability of life firms' stresses.

(c) To update the definition of best estimate for longevity risk such that the expectation of life includes the impact of best estimate mortality improvement assumptions. This is again an area where firms' may interpret the instructions differently.

2.3 The proposed changes to the templates and LOG files for life firms are not considered to increase the reporting burden on firms materially because the internal model firms would generally calculate and analyse the biting scenarios information as part of their SCR attribution process.

Internal model outputs - counterparty

2.4 The PRA proposes to remove the request for counterparty risk information for non-life firms from IM.02, and retain it for life firms. The PRA considers that it is not proportionate to require this information from non-life firms when considering their risk profiles against reporting burden. This is expected to reduce the reporting burden for non-life firms.

Internal model outputs for non-life insurance firms

2.5 The PRA proposes the following changes to IM.03.01 to IM.03.11 and MO.03.01 to MO.03.11:

(a) Remove skewness for reserve risk, premium risk, catastrophe risk and market risk. Currently the PRA receives skewness for various gross and net distributions. While skewness enables the PRA to define the distributions more clearly, it does not add significantly more useful information. Removing this item is expected to reduce the burden on non-life firms.

(b) Request net undiscounted standard deviation for premium and reserve risk. Currently the PRA receives the standard deviation for the gross undiscounted and net discounted distributions, but not the standard deviation for the net undiscounted distribution. The net undiscounted figures enable the PRA to analyse the impact of applying reinsurance to the distributions without discounting obscuring the results. Therefore, the standard deviation adds a useful measure of the volatility that cannot be inferred from the limited distribution alone.

(c) Catastrophe risk: enable non-life firms to submit one-year losses when one-year and ultimate losses are the same. Currently many non-life firms provide the same one-year and ultimate natural catastrophe losses, because these losses are short-tailed and expected to run-off within one year. While the PRA expects this to be appropriate for natural catastrophes, it expects to see a difference between one-year and ultimate losses for man-made catastrophes. The proposed amendments enable non-life firms to submit one-year losses if they indicate one-year and ultimate losses are the same for natural catastrophe, and to complete the ultimate losses for man-made catastrophe only.

(d) Catastrophe risk: remove the premium and total sum insured by perils. Currently some non-life firms are unable to provide this information as policy coverage may be global, or at least cover more than one named peril; in other cases, premiums and sum insured include exposure to attritional or large losses as well as catastrophe. The PRA therefore cannot infer meaningful analysis from the data. Removing this item is expected to reduce the burden on non-life firms.

(e) Catastrophe risk: remove the split of natural catastrophe losses by property and liability. Currently non-life firms are expected to submit natural catastrophe losses separately for property and liability lines of business. Natural catastrophe losses predominantly affect property, but the PRA has identified non-life firms artificially separating the losses between the two lines of business. The PRA proposes to remove the split between property and liability to avoid unnecessary assumptions, but retain the split for man-made catastrophe, where it expects a distinction between property and liability losses.

(f) Catastrophe risk: remove the split of gross occurrence exceedance probability (OEP) losses between direct insurance and reinsurance. Currently it is often impractical to divide the natural catastrophe and man-made catastrophe losses between direct insurance and reinsurance for non-life firms that underwrite both types of insurance. Given that non-life firms cannot split premium or sum insured between these categories, the PRA cannot infer meaningful analysis from the data.

(g) Catastrophes risk: remove losses by firms' 'own perils'. Currently non-life firms submit catastrophe losses under their own specified perils beyond the 11 perils that the PRA has specified. The PRA believes the 11 perils specified are sufficient to capture the bulk of catastrophe losses and therefore proposes to remove the request for 'own peril' losses. Non-life firms would have the option to list other significant perils as additional commentary.

(h) Catastrophe risk: clarify the requirement to provide vendor model information. Currently there is a lack of clarity about the level of detail required on vendor models. Consequently the quality of data provided is variable. Vendor model information would provide useful indications of industry trends as well as identifying outlying selections, with the potential to generate very different loss figures depending on the model version used and the switches applied. The PRA therefore proposes clarifying the information requested about vendor models. For example, provider, version number, and adjustments made or switches selected.

(i) Catastrophe risk: request gross aggregate premiums and total sums insured by territory. Given that premiums and sum insured by perils are not useful measures of exposure for catastrophe losses, the PRA proposes to request premiums and total sum insured data by territory instead. The list of territories is to be confirmed, but the PRA is proposing to include the United Kingdom, most European countries, the United States sub-divided into areas such as Florida, Texas, Louisiana, California, New Madrid, and Rest of World. There would be an option for non-life firms to enter exposure data on the basis of aggregated categories such as EU-wide, US-wide and Global for programmes which extend beyond one territory.

(j) Catastrophe risk: request a broad split of business between direct insurance, reinsurance and retrocession. The PRA proposes to sub-divide premiums into the proportion (percentage) received for direct insurance, reinsurance and retrocession. This is because the nature of these covers leads to different damage ratios (lowest for direct, highest for retrocession), and would give the PRA an indication of whether their resulting damage ratios are consistent with the covers they write.

(k) Market risk: remove 'Market Value' and 'Model outputs' at asset category level for all currencies and the total portfolio, but keep the 'Market Value' for the total portfolio. The PRA no longer considers the information useful for monitoring ongoing model appropriateness. Removing this information for non-life firms would improve consistency with the market risk information requested from life firms.

(l) Market risk: reclassify the asset categories. Currently the instructions for the types of assets are not aligned to the Solvency II balance sheet reported in template S.02.01. The PRA proposes to clarify the instruction that non-life firms provide only the market values of assets in scope of the market risk part of the internal model. In addition, the PRA proposes to reclassify the types of assets such that they align with those defined in the Solvency II balance sheet. This alignment would inform supervisors of the quantum of assets not in scope of the market risk model.

(m) Market risk: remove 'Nominal Value'. The PRA no longer considers the information useful for its analyses and proposes to use market values, which are more consistent with Solvency II measures.

(n) Market risk: remove 'IE100'. The PRA no longer considers the information useful for its analyses and does not expect inflation-linked sensitivities to play a material part of non-life firm asset review.

(o) Market risk: request 'term 25' for risk free rates, swap spreads and inflation data where the SCR includes an amount for risk relating to pension scheme obligations. Currently this is only requested if non-life firms had period payment order (PPO) obligations. The PRA proposes to include those non-life firms with pension scheme obligations also, because these non-life firms' basic own funds may be impacted by interest rates, swap spreads and inflation.

(p) Market risk: request an inflation measure actually used for assets rather than only the retail price index (RPI). Currently the PRA requests non-life firms to submit an inflation risk distribution based on the RPI. In line with feedback from industry, the PRA proposes to give non-life firms the option to provide an inflation risk distribution based on alternative metrics other than RPI.

(q) Others: add a mapping of own lines of business from the previous year. Currently, the PRA collects insurance risk correlations by a non-life firm's own lines of business. However, it is difficult to use this data to analyse the year-on-year changes in correlations by own lines, as non-life firms may change the way they label them or they may split or merge the own lines differently year-on-year (eg business previously labelled as 'Commercial Motor' is now submitted as 'CM' or firms had previuosly reported 'Private Motor' and 'Commercial Motor' separately but now submit the business as a merged category labelled 'Motor'). The PRA proposes an additional mapping showing how last year's and this year's own lines of business have changed to resolve these issues.

(r) Others: add a mapping to show the percentage of how own lines of business are allocated to Solvency II lines of business. Currently, the template restricts the mapping of one own line to one Solvency II line. This is inaccurate for many lines of business where mapping to multiple Solvency II lines is appropriate. For example, Retail Motor can be mapped to Motor Vehicle Liability as well as Other Motor. The PRA proposes to revise the template to allow for multiple mappings. This would also improve the data quality of Solvency II lines of business information.

(s) Others: clarify that the historical loss ratios reporting could be either accident year or underwriting year depending on how premium risk is parameterised. Currently the PRA's instruction on how this should be reported is unclear. Some non-life firms are reporting accident year historical loss ratios when they model premium risk by underwriting year which leads to difficulties in carrying out back-testing analysis. The PRA proposes to make the instructions clearer such that non-life firms report the historical loss ratios consistent to how they have parameterised premium risk and for non-life firms to comment on what has been used.

(t) Others: clarify expectations that the PRA welcomes commentaries as they help to support the way non-life firms report their model. While the instruction is clear in some areas where the PRA requests non-life firms to explain what has been reported, there are some areas which are less clear. For example, some non-life firms do not explain why the total gross written premium is unequal to the sum of gross written premium by lines of business; why modelled mean losses between one year and ultimate do not equal; why SCR submitted as part of the internal model outputs request does not reconcile to those reported in Solvency II quantitative reporting templates or national specific templates. The PRA proposes to clarify the instructions such that it is clear where non-life firms are expected to explain the inconsistencies. This is not considered an additional expectation, as non-life firms are already requested to provide additional information where appropriate. The clarification would include examples of what could be expected in terms of commentary. The PRA believes that improved commentary will reduce post-submission questioning and resubmissions.

3 Discussion point

3.1 This section poses a discussion point relating to catastrophe risk. The PRA welcomes opinions through the consultation feedback process.

3.2 To date the PRA has requested man-made catastrophe losses in total. The PRA is considering whether to split man-made catastrophe loss data into aggregate, terrorism, cyber, and all other man-made catastrophe. Cyber and terrorism risks are rapidly becoming materially important perils in their own right. While the PRA understands that some non-life firms are currently unable to separate out total man-made loss levels into the different causes, it seems plausible that this may change within a short time. Requesting this separation now may therefore avoid the need for further changes in the short term. Alternatively, the PRA could continue with the existing requirement to provide man-made losses on an aggregate basis only for now, and consider further changes if and when the growing importance of these risks warrants it. This has the advantage of requiring no change to the recording of man-made catastrophe losses at present.

4 The PRA's statutory obligations

4.1 In carrying out its policy making functions, the PRA is required to comply with several legal obligations.

4.2 The PRA is required by the Financial Services and Markets Act 2000 (FMSA) to consult when setting its general policies and practices.[1] In doing so, it is required to comply with

1 Section 2L of FMSA.

several statutory and public law obligations. The PRA meets these obligations by providing the following in its consultations:

- a cost benefit analysis;
- an explanation of the PRA's reasons for believing that making the proposed policy is compatible with the PRA's duty to act in a way that advances its general objective,[1] insurance objective[2] (if applicable), and secondary competition objective;[3]
- an explanation of the PRA's reasons for believing that making the proposed policy is compatible with its duty to have regard to the regulatory principles;[4] and
- a statement as to whether the impact of the proposed policy will be significantly different to mutuals than to other persons.[5]

4.3 The Prudential Regulation Committee (PRC) should have regard to aspects of the Government's economic policy as recommended by HM Treasury.[6]

4.4 The PRA is also required by the Equality Act 2010[7] to have due regard to the need to eliminate discrimination and to promote equality of opportunity in carrying out its policies, services and functions.

Cost benefit analysis

4.5 The proposals should be read alongside CP11/18, whereby the PRA proposes that firms submit the internal model output data request in XBRL format via BEEDS.

4.6 For life insurance firms, the changes proposed to SS25/15 are expected to have a negligible impact on reporting burden. While the changes request additional information, it is expected that the majority of firms would calculate biting scenario information as part of their SCR attribution process, where firms allocate the total SCR to the underlying risk factors.

4.7 For non-life firms, the changes proposed to both SS25/15 and SS26/15 would result in a reduction in reporting. This is aligned to the PRA's commitment to reduce the reporting burden, focused on the aspects of reporting within the PRA's control.

Compatibility with the PRA's objectives

4.8 The proposals are compatible with the PRA's statutory objectives under FSMA to promote the safety and soundness of firms it regulates and contributing to securing an appropriate degree of protection for policyholders by helping the PRA to better monitor and analyse detailed internal model information at individual firm level, sector level and industry level.

4.9 When determining the general policy and principles by reference to which it performs particular functions, the PRA is legally required, so far as is reasonably possible, to facilitate effective competition in the markets for services provided by PRA-authorised persons in carrying out regulated activities. The proposals are not expected to have a material effect on

1 Section 2B of FSMA.
2 Section 2C of FSMA.
3 Section 2H(1) of FSMA.
4 Section 2H(2) and 3B of FSMA.
5 Section 138K of FSMA.
6 Section 30B of the Bank of England Act 1998.
7 Section 149.

competition, as all firms with an approved internal model are expected to provide the PRA with information relating to their model outputs.

Regulatory principles

4.10 In developing the proposals in this CP, the PRA has had regard to the regulatory principles. The principle of particular relevance is that a burden imposed on a firm should be proportionate to the benefits expected to result from the imposition of that burden. The PRA considers that the proposed changes should reduce the burden for non-life firms and make a negligible difference to life firms as it is expected that the required processes to produce any additional data should largely already exist.

Impact on mutuals

4.11 The proposals in this CP will affect mutuals. In the PRA's opinion, the impact of the proposed changes on mutuals is expected to be no different to the impact on other firms.

HM Treasury recommendation letter

4.12 HM Treasury has made recommendations to the PRC about aspects of the Government's economic policy to which the PRC should have regard when considering how to advance the objectives of the PRA and apply the regulatory principles set out in FSMA.[1]

4.13 The aspect of the Government's economic policy most relevant to the proposals in this CP is competition. This aspect has been considered in the 'compatibility with the PRA's objectives' section above.

Equality and diversity

4.14 The PRA does not consider that the proposals give rise to equality and diversity implications.

1 Information about the Prudential Regulation Committee and the recommendations from HM Treasury are available on the Bank's website at www.bankofengland.co.uk/about/people/prudential-regulation-committee.

Appendices

1	**Updates to SS25/15 ‘Solvency II: regulatory reporting, internal model outputs’**
2	**Updates to S26/15 ‘Solvency II: ORSA and the ultimate time horizon – non-life firms’**

Appendix 1: Updates to SS25/15 'Solvency II: regulatory reporting, internal model outputs'

In this appendix, new text is underlined and deleted text is struck through. The links to the relevant templates and LOG files will also be updated. The consultation versions are available on the Bank's website at: www.bankofengland.co.uk/prudential-regulation/publication/2018/solvency-ii-updates-to-internal-model-output-reporting.

…

2.5 General insurance firms calculating their SCR using an approved internal model or partial internal model should use the templates IM.03.01 to IM.03.11~~IM.03.11 and IM.02~~ in Appendix 1 of this supervisory statement.

…

Appendix 2: Updates to SS26/15 'Solvency II: ORSA and the ultimate time horizon – non-life firms'

The links to the relevant templates and LOG files will be updated. The consultation versions are available on the Bank's website at: www.bankofengland.co.uk/prudential-regulation/publication/2018/solvency-ii-updates-to-internal-model-output-reporting.