

# Model risk management principles for banks

BSA response to PRA CP 6/22

October 2022

# Summary

The BSA welcomes the opportunity to comment on the PRA's proposals for model risk management (MRM). In brief, we fully recognise the need to manage effectively the substantial risk posed by models that have a material impact on a firm's business decisions. At the same time, we also welcome the clear recognition in CP 6/22 that implementing MRM needs proportionality. And we support the explicit linkage between the "simpler firm" definition and the partial dis-application of some of the MRM principles. Critical to MRM policy being both effective, and (in resource terms) efficient, is ensuring focus on the most important, and most risk-bearing, models. This also means avoiding spreading requirements thinly across a wider range of tools that are in reality spreadsheets, calculators, algorithms, or other kinds of end-user computing applications (EUCAs), but which are not true models. So we encourage firmer, clearer differentiation from the outset as to what is or is not a true, genuine model.

## Detail of response

We note that the PRA's proposals have been informed by supervisory experience in three particular areas where true models operate: IRB modelling of capital for credit risk; stress testing models; and IFRS 9 expected credit loss models. We agree with the PRA's view that MRM for true, genuine models is a separate risk discipline in its own right, while it also needs to be closely aligned to the broader operational risk management framework. We also agree that the use of artificial intelligence in modelling techniques involving machine learning may introduce new and unique risks as well as magnifying existing model risks. At the same time we recognise that non-model quantitative methods (QMs) - such as calculators, algorithms, or even basic spreadsheets - also pose risks, but these form part of operational risk more generally, rather than this separate risk category / discipline of model risk.

Subject to the foregoing, and to PRA's intentions on proportionality, we are broadly content with the MRM Principles set out in the CP. Our main area of possible disagreement relates to the need to differentiate between true, genuine models, and non-model QMs / EUCAs. The rest of this response, drawing on input from society practitioners, deals specifically with this concern. In brief, they and we are concerned at the prospect of "gold plating" at implementation, due to excess of zeal or excess of caution. For simpler firms especially, this could result in overkill,

negating the PRA's welcome aspiration for proportionality, as well as dissipating effort over too wide a field.

Generally, as mentioned above, we are supportive of the proposals within the Consultation Paper, particularly given the strong emphasis on proportionality for smaller firms in the text as currently released. Our concerns regarding the practical application of the Principles revolve around:

- A possible maximalist interpretation of the model definition provided in Principle 1.1 (a), reinforced by 1.1 (b) requiring material 'non-models' which are 'complex' to be considered under the application of the MRM principles.
- The view that proportionality for simpler-regime firms is not applicable for Principle 1.

On the former point, whilst the PRA Model Definition is very close to that used by the US Federal Reserve in [SR 11-7](#) (which has been used by several institutions over the last few years) the risk from a maximalist interpretation remains. Informal discussions with PRA Supervision indicate that the PRA is indeed aware of this risk, but we suggest that the model definition could be refined to be clearer on this point, and there could also be more of a steer in the language of the proposed Supervisory Statement to guard against it. Risk practitioners need to be supported in reaching the proportionate outcome that the PRA has itself identified (that simpler firms will probably have few or no true models) by resisting the inclusion of QMs and EUCAs "just to be on the safe side".

There is, of course, genuine concern about the use and governance of critical decision-making tools in firms, but we question the applicability of the specific MRM proposals to decision-support tools which do not use significant data transformations. For example, a calculator (even if using a large number of inputs or set assumptions), regardless of the sensitivity of the decisions it drives, will not be suitable for modelling validations such as back-testing as it will always produce the same output given the same inputs. Whilst the definition is helpful, the terms 'techniques' and 'assumptions' within the definition cast an extremely wide net taken in isolation. As stated by Principle 1.1 (b) the tendency to place critical 'non-models' within the Model Risk Framework does not appear to be a sensible application of the limited amount of modelling/risk resource within the industry, particularly at less sophisticated institutions. We agree that, as stated in Principle 1.1 (c), controls need to be in place but are concerned that, in practice and without clarification, point (b) will be used to over-rule point (c) to bring simple EUCAs into

the Model Framework contrary to the stated intent within the CP around proportionality.

It would therefore be useful to provide some further guidance around the definition to try and capture what is distinctive about a true model. Is it, perhaps that a model seeks to provide a mathematical representation or approximation to present or future reality, rather than simply calculating one desired quantity from a variety of input quantities. The risk therefore goes beyond whether the formulae are correct and the calculation itself has been correctly performed. The bigger risk implicit in a true model is that the representation of reality is in fact defective, in a way that may not be immediately apparent on the surface, so that even if the calculations are performed correctly, the outputs may be wide of the mark. The Federal Reserve's definition of a model in SR 11-7 includes additional narrative and makes clear that the outputs of the model are 'estimates' which is missing from the PRA definition but could usefully be included.

We believe that the terms 'mathematical techniques' or 'assumptions' taken on their own, potentially present too broad an interpretation which could capture relatively simple calculators or spreadsheets. Additionally the treatment of material, yet non-model, decision-support tools could be clarified to take into account their limited relevance to the MRM principles.

On the latter point, we note the statement in paragraph 2.10 (especially considering comments in 2.8), suggesting that maintaining the model inventory will be less burdensome for simpler firms. If a maximalist view is taken on the model definition, the scope of such capture could be far larger than the assumption that the PRA has made in the CP that small firms will have few or even no models (paragraph 2.11). Comment from relevant non-PRA sources, especially from professional firms involved for instance in outsourced internal audit, has suggested that this will be the case, and many relatively simple spreadsheets will need to be captured, at least in the initial level of identification. Boards and non-executive directors may also tend towards overkill, either influenced by such comments, or of their own volition. This can all arise purely through excess of zeal, or excess of caution, unless a contrary steer can be given by PRA.

Additionally, whilst simple firms may ultimately prove to have few high-risk models, we are concerned that the filtration process to categorise decision-making tools will, if enforced to a maximalist degree, present an onerous amount of administration for small societies needing to capture a wide array of decision-making tools for initial consideration. We feel that EUCA controls should be the most appropriate way to address the risks posed by such tools, and that there is a danger that over-application – mission creep - at this stage will not only increase the workload unnecessarily for small and medium firms, but actually obscure the correct focus of a Model Risk Management Framework by diluting it with too many items within the captured set.

To conclude, we broadly support both the management of the risk from true, genuine models along the lines of the MRM Principles in the CP; and the management of risks from non-model QMs and EUCA's as an aspect of operational risk. All we are concerned about is the possible overkill resulting from too many non-model QMs / EUCA's having to be reviewed and inventorised as models, so diluting the focus and hence value, while burdening the firm. We hope this can be addressed by the PRA giving the necessary steer through the language of the proposed Supervisory Statement.

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