

IMAP Thematic Review Questionnaire

BACKGROUND

The questionnaire is split into four topics:

- 1) Risk Management
- 2) Use Test
- 3) Data Management
- 4) Validation including valuation of assets and liabilities

Each topic is contained in a separate tab.

The last worksheet entitled 'Next Steps' asks you whether, based on the answers to the questions for each of the four topics, you would like to discuss good practice with the FSA

INSTRUCTIONS

For each question, please select one of the four choices from the yellow drop down box. These are:

- 1) Large gap to meet requirement
- 2) Medium gap to meet requirement
- 3) Small gap to meet requirement
- 4) At or nearly at required standard

Note that for each question there is the option to provide additional free format comments. These can be found in the yellow boxes next to the drop down boxes.

Our focus for this review is to understand good practice in relation to the internal models being developed for Solvency II. However we appreciate that your current economic or risk based capital model may be more advanced than the internal model you intend to use for Solvency II. Where this is the case, please select your choice of answer in respect of your current model but note this in the comments box next the question.

The aim of the questionnaire is for us to select firms to visit and the topic(s) to discuss with them so that we can understand what good practice looks like. If you are a group with more than one material entity, please complete this questionnaire for the material entity which exhibits the better practice within the group and record the entity in the box at the top of the appropriate tab.

LINKS WITHIN THE QUESTIONNAIRE

- 1 [Risk management](#)
- 2 [Use Test](#)
- 3 [Data Management](#)
- 4 [Validation including valuation](#)
- 5 [Next Steps](#)

Risk Management

Name of Material Entity this questionnaire relates to			
		Please select from drop-down box	Optional further comments
Risk Management Function			
<i>You have evidence available to demonstrate the risk management function/process is:</i>			
1	Integrated within the business		
2	Integrated into your decision making process		
<i>The risk management function is responsible for the way in which the internal model is</i>			
3	Designed and documented		
4	Tested and validated		
5	Implemented		
6	Used to produce results, including the production of summary reports on performance		
7	Updated, including suggesting areas for improvement and providing updates on the status of efforts to improve previously identified development areas		
8	Integrated with the risk management system		
9	Integrated with the day-to-day functions of the firm		
Risk Management System/Framework			
<i>As part of the risk management system/framework you have in place the following:</i>			
10	A clearly defined and well documented risk management strategy		
11	Adequate written policies		
12	Appropriate processes and procedures		
13	Appropriate internal reporting procedures		
14	Appropriate feedback loops		
15	Reports that are submitted to the administrative or management body		
16	An ORSA process reflecting the risk profile of your business		
<i>You have evidence available to demonstrate that the risk management system/framework covers the following areas:</i>			
17	Underwriting and reserving		
18	Asset-liability management		
19	Investment, in particular derivatives and similar commitments		
20	Liquidity and concentration risk management		
21	Operational risk management		
22	Reinsurance and other risk-mitigation techniques		

Use Test

Name of Material Entity this questionnaire relates to			
		Please select from drop-down box	Optional further comments
Foundation Principle: the undertaking's use of the internal model shall be sufficiently material to result in pressure to improve the quality of the internal model.			
1	You can demonstrate that the scope of the internal model covers sufficient uses and material risks to be widely used in and play an important role in the system of governance, risk management and decision making		
2	You can demonstrate that the internal model informs significant risk management and business decisions		
Principle 1: Senior management and the administrative management or supervisory body shall be able to demonstrate understanding of the internal model			
<i>You can evidence that senior management and the administrative management or supervisory body can demonstrate a good understanding of the internal model in terms of the following:</i>			
3	Structure of the model		
4	Methodology behind the model		
5	How the limitations of the model are factored into the decision-making process		
6	All risks covered by the internal model		
Principle 2: The internal model shall fit the business model			
<i>You can evidence that the internal model is aligned to your business model in the following areas:</i>			
7	Reconciliation between the outputs of the internal model and internal and external financial reporting		
8	Various modelling approaches adopted in the internal model that reflect the nature, scale and complexity of the risks modelled		
9	You have processes to ensure that changes in the internal model reflect changes in the business model		
10	The internal model is at least able to produce results between entities and material lines of business		
Principle 3: The internal model shall be used to support and verify decision-making in the undertaking			
11	The output of the internal model is referenced as part of the decision making process		
12	You can demonstrate by documentation, which incorporates additional information, how the decision was arrived at. This is for decisions where the internal model supports the decision or the decision conflicts with the results of the internal model		
Principle 4: The internal model shall cover sufficient risks to make it useful for risk management and decision-making			
13	The internal model includes an assessment of all potentially material risks in the risk register of the business		
14	The internal model reflects the risk appetite of the business		
Principle 5: Undertakings should design the internal model in such a way that it facilitates analysis of business decisions			
15	Your internal model has been designed to facilitate analysis of business decisions		
16	The design of the internal model generates results that inform internal debate amongst senior management and the risk management function		
<i>You can demonstrate that the results of the Internal Model have been used for:</i>			
17	The development plans for the Internal Model		
18	Internal project plans		
19	Governance strategy		
20	Model change and data policy		
Principle 6: The internal model shall be widely integrated with the risk-management system/framework			
21	You can demonstrate that the internal model is central to the risk management function		
<i>You make use of the internal model in the following risk management areas:</i>			
22	The quantification of risks		
23	Use of output to formulate a range of risk limits		
24	Setting risk strategy		
Principle 7: The internal model shall be used to improve the undertaking's risk-management system			
25	The internal model is designed to allow you to gain more insight into your risks		
26	The internal model is used to improve risk management by using a feedback loop between risk management and the internal model		
Principle 8: The integration into the risk-management system shall be on a consistent basis for all uses			
27	You can demonstrate wide integration of the internal model into risk management		
28	The internal model is able to produce results for internal and external reporting		
Principle 9: The Solvency Capital Requirement shall be calculated at least annually from a full run of the internal model, and also when there is a significant change to the undertaking's risk profile, assumptions underlying the model and / or the methodology arising from decisions or business model changes, and whenever a recalculation is necessary to provide up-to-date information for decision making or any other use of the model, or to fulfil supervisory reporting requirements			
29	You have processes in place to identify circumstances that will cause you to recalculate your internal model. For example, following a significant change to your risk profile, assumptions underlying the internal model and/or the methodology arising from the decisions or business model changes		

Data Management

Name of Material Entity this questionnaire relates to			
		Please select from the drop-down box	Optional further comments
Data Framework and Governance			
<i>You have a clear framework defining your data. In particular:</i>			
1	You have a clear blueprint for managing data in a structured manner as it flows across your organisation		
2	You have a framework for validating the data quality		
Scope of data-quality standards			
3	You have a clear and comprehensive scope to which you apply your data quality standards.		
Data quality policy and process			
<i>You are able to articulate your policy on data quality. In particular you have a process in place which enables you to describe how you classify your data as sufficiently:</i>			
4	Accurate		
5	Complete		
6	Appropriate		
Data quality control/monitoring/updating			
<i>You have processes in place for checking and monitoring data quality, in particular you ensure:</i>			
7	That data is refreshed on a timely basis		
8	Capture and validation of source data input		
9	Accurate and complete transfer of data between systems from the data source to the risk models/calculation engines		
10	The capture and validation of modifications to or deletion of data from the data source to the risk models/calculation engines		
11	Circumstances that trigger unscheduled data updates have been considered		
Data and expert judgement			
<i>You have robust processes in place when using expert judgement in relation to data. In particular you:</i>			
12	Verify the expert judgement (both internal and external)		
13	Provide context to the judgement by ensuring that the uncertainty surrounding the expert judgement is transparent		
14	Clearly document where expert judgement is used		
15	Validate the expert judgement		
IT systems			
<i>You have a framework that covers the following:</i>			
16	End-to-end design of the IT solution that supports your business		
17	The maintenance arrangements for the IT platforms and applications		
External Data			
<i>You can demonstrate the role of external data and the extent to which it is used within your business modelling, in particular:</i>			
18	You have clear documentation behind any adjustments made to external data		
19	You have appropriate in-house expertise in the understanding of the external data		
20	You have processes in place to demonstrate that external data is appropriate for use in the internal model		

Validation		
Name of Material Entity this questionnaire relates to		
	Please select from drop-down box	Optional further comments
Validation of specific elements		
<i>You can demonstrate that you validate the following parts of an internal model:</i>		
1	Data	
2	Method	
3	Assumptions	
4	Expert Judgement	
5	Documentation	
6	Systems/IT	
7	Model Governance	
8	Use Test	
Scope		
9	You currently have a validation policy with a clearly defined scope	
Tools		
10	You can demonstrate all the tools used to validate the internal model	
Governance		
11	You can demonstrate the governance surrounding the validation policy	
Limitations		
12	You have evidence to demonstrate the limitations of the internal model.	
13	You can demonstrate how limitations of the internal model are expected to be resolved or managed in future	
Frequency		
14	You have articulated your policy on the frequency of validating the internal model	
Documentation		
15	You have documentation of the validation policy that can be well understood by a third party	
Independence		
16	You can demonstrate how an independent review takes place	
Stress and Scenarios		
17	You are able to demonstrate how you use stress and scenario testing to validate the model result	
Backtesting		
18	You can demonstrate how you use back testing to validate the model	
Key Assumptions		
19	You can demonstrate how the key assumptions in the model have been derived, understood and challenged	
Third Party Models		
20	You can demonstrate how you validate the performance of third party models used	
Feedback		
21	You have procedures in place that lead to changes in the internal model resulting from issues identified as part of the validation process.	
Valuation of Assets and Liabilities		
Responsibilities		
22	You have identified responsibilities for valuation of assets and liabilities and the interactions between them	
Policies and Processes		
23	You have full documentation that describes your valuation policies and processes for assets and liabilities.	
Systems and Processes		
24	You have identified the systems and processes that need to change to enable a Solvency 2 compliant valuation of assets and liabilities.	
External Models		
25	Where external models are used in the valuation of assets and liabilities, you understand the assumptions used in them, as well as how these assumptions should change in the calculation of capital requirements	
Reconciliation		
26	You are able to reconcile the models and assumptions underlying your capital calculation to those in the balance sheet assets and liabilities	
Valuation of Assets		
27	You understand the valuation assumptions and methodologies for assets valued on a mark-to-model approach	
28	You have processes in place to independently verify the market value of assets	
Valuation of Liabilities		

29	You are able to carry out a best estimate valuation for your discounted technical provisions and other liabilities which meets Solvency 2 standards		
30	You have a robust system to calculate other liabilities under stressed conditions		

Given the answers to this questionnaire please select the thematic areas that you would rate yourself a 3/4 overall (ie either at or nearly at required standard or small gap exists) and would therefore be happy to discuss good practice further with the FSA.

	Please select from drop-down box	Optional further comments
Risk Management		
Use Test		
Data Management		
Validation including Valuation		