

4. MODEL VALIDATION

Workstream overview

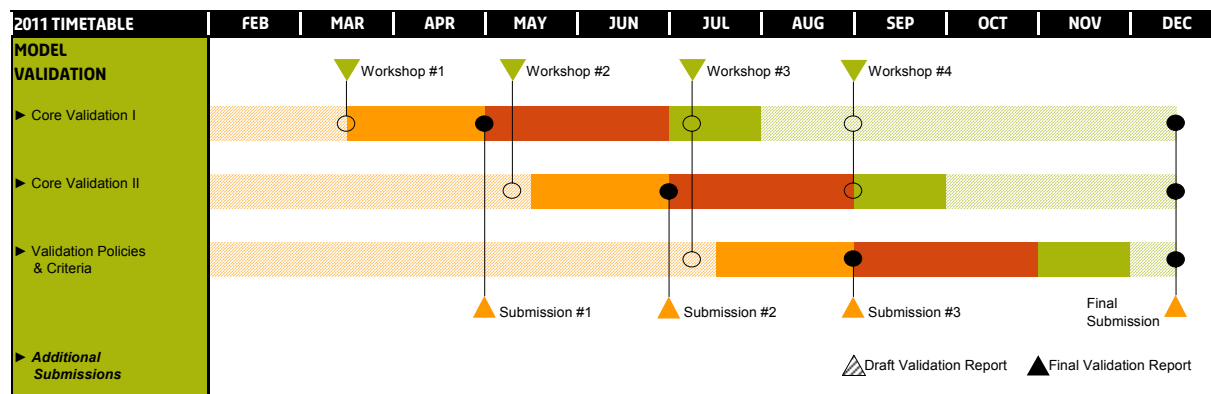
The Model Validation workstream is a continuation of the Statistical Quality Standards (SQS), Calibration, Validation and Profit & Loss Attribution (CVP) and External Models & Data (EMD) elements covered in the 2010 Dry Run. The focus of the workstream will be to ensure that syndicate models produce an appropriately calibrated SCR and that models are demonstrably compliant with the relevant tests and standards of the Directive.

The key workstream deliverable for agents will be a validation report due in draft on 26 August and final version on 31 October 2011.

Primary Audience: Risk Management Function, Actuarial Function, Capital modelling actuaries, IT Department

Objectives	2010 Dry Run	Directive Article(s):
<ul style="list-style-type: none"> Demonstrate that syndicate models meet the tests and standards set out in Articles 121 to 124 and 126. 	CVP, SQS & EMD	121-124; 126
<ul style="list-style-type: none"> Ensure that agents provide a validation report to verify appropriate calibration of the SCR and substantiate compliance with the tests and standards set out in Articles 121 to 124 and 126. 		
<ul style="list-style-type: none"> Demonstrate that syndicate internal models have been validated to a standard that is sufficient for the purposes of the Lloyd's Internal Model and capital setting. 		
Core modules & indicative topics		Review techniques:
<p>Core Validation I</p> <ul style="list-style-type: none"> Assumptions & expert judgement Model robustness Stress & scenario testing Back-testing Calibration 	Walkthroughs of model inputs, calculations and outputs (including controls for each stage) Quantitative scenarios Interviews	
<p>Core Validation II</p> <ul style="list-style-type: none"> Dependencies Probability distribution forecast P&L attribution External models 	Board sign off documentation Follow up evidence referenced in validation reports	
<p>Validation Policies & Criteria</p> <ul style="list-style-type: none"> Risk materiality Methodological adequacy, consistency & credibility Validation policy Data directory & Data policy Risk mitigation techniques Future management actions Financial guarantees; contractual options; non-contractual payments 		

Workstream timetable



Workshops	Dates:
Workshop #1	15 & 16 March 2011
Workshop #2	9 & 10 May 2011
Workshop #3	4 & 5 July 2011
Workshop #4	1 & 2 September 2011
Evidence template submissions	Dates:
Submission #1	28 April 2011
Submission #2	30 June 2011
Submission #3	26 August 2011
Final Submission	16 December 2011

Additional submissions	Description:	Dates:
Draft Validation Report	The Draft Validation Report is an interim deliverable intended to document an agent's planned validation processes and initial results, as a basis for discussion and feedback with Lloyd's prior to the final report.	26 August 2011
Final Validation Report	The Final Validation Report will be expected to document the set of activities and results of independent assurance undertaken or commissioned by a syndicate to confirm that the model complies with the tests and standards of the Directive. Lloyd's will provide further guidance on the required content of the Validation Report but will not mandate the format.	31 October 2011