

Market Briefings 18 May 2016

Internal Model Validation 9:30 – 10:45

MS6 Modelling, Design & Implementation
Self Assessment 11:00 – 11:30

INTERNAL MODEL VALIDATION



AGENDA

- ▶ **Quick SII update**
- ▶ **Validation: lessons learned**
- ▶ **Three steps to improving the Validation Report**
- ▶ **Changes to the LCR for 2016 capital setting**
- ▶ **What's new for 2016 ?**
- ▶ **Questions**



SII COMPLIANCE

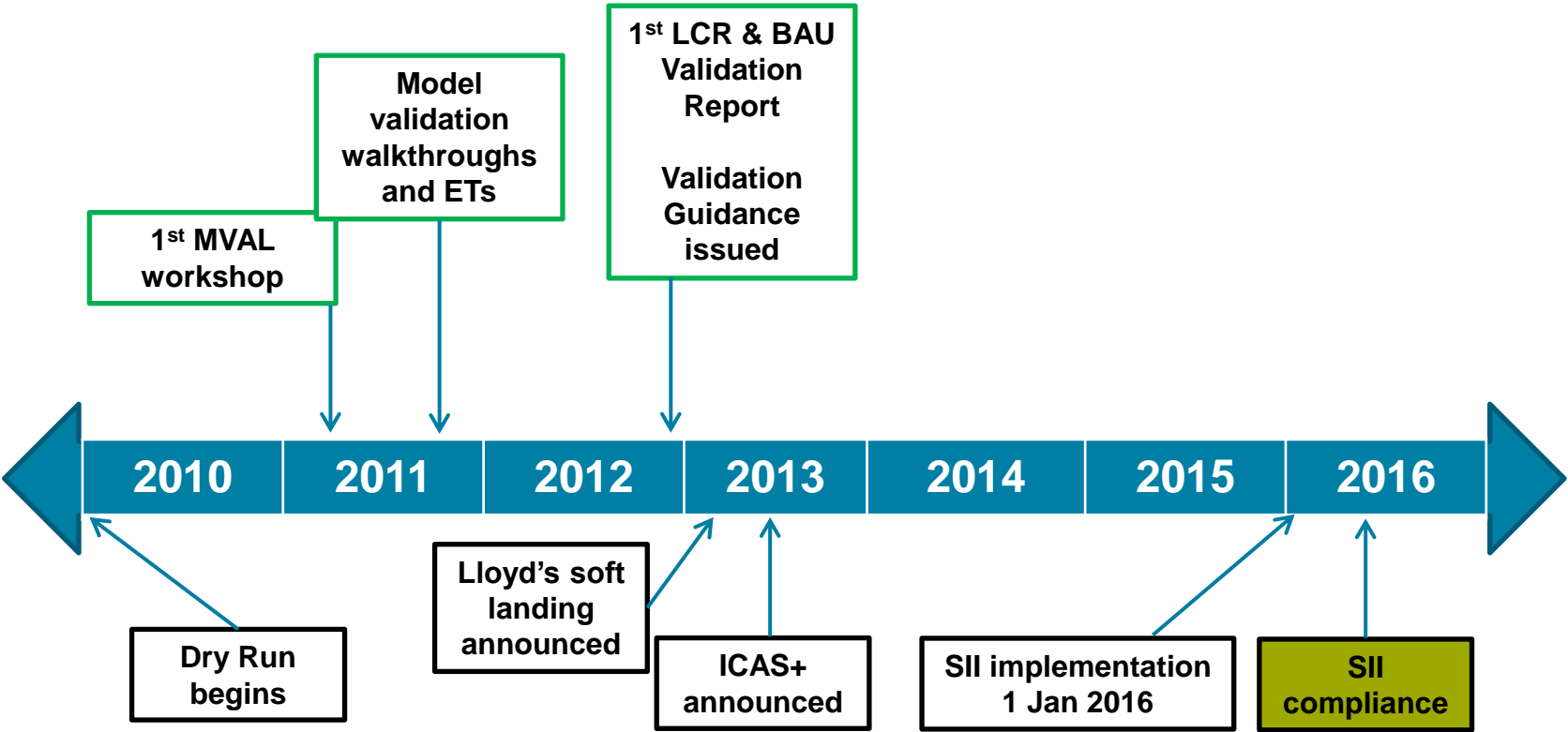
- ▶ As at the end of March, the market meets SII minimum standards for validation
- ▶ Result of reviews, feedback and development over a number of years
- ▶ Not over yet...need to maintain SII compliance

AGENDA

- ▶ Quick SII update
- ▶ **Validation: lessons learned**
- ▶ Three steps to improving the Validation Report
- ▶ Changes to the LCR for 2016 capital setting
- ▶ What's new for 2016 ?
- ▶ Questions



SO HOW ARE WE DOING?



We have come a long way since 1 Jan 2010.....

Now is a good time to take stock

TOP ACHIEVEMENTS ON VALIDATION

1. A structured validation process has been implemented and supports model change
2. Model assumptions and methodologies have become more robust (and there is a deeper understanding of external models)
3. Validation results are communicated to the board, management and the wider organisation
4. Better and effective use of validation tools
5. Improved validation of one-year risks and expert judgement

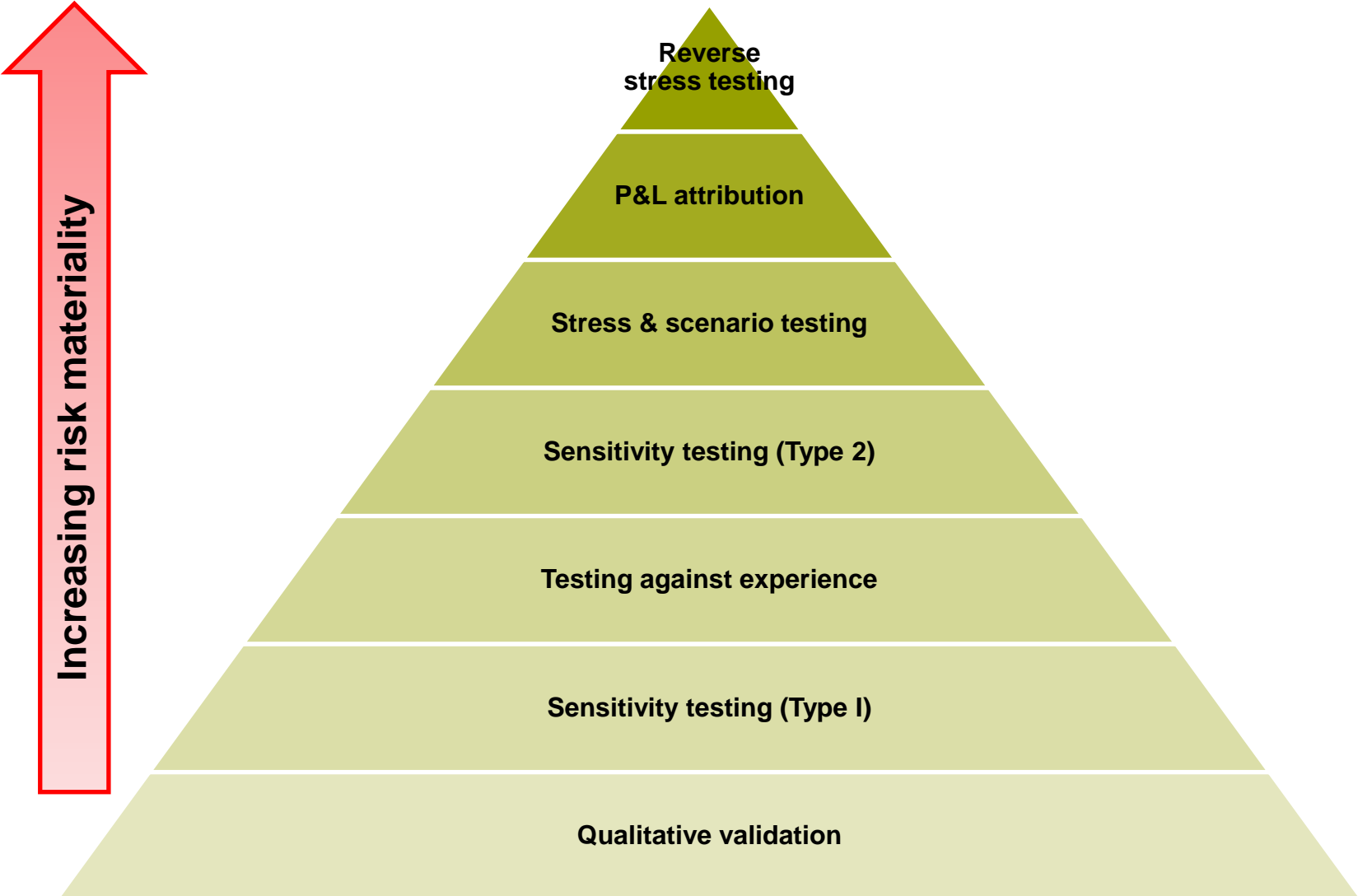
...in other words, validation is being embedded across the market

TOP 3 AREAS FOR IMPROVEMENT

1. The operation of the validation cycle needs to be clarified – what constitutes an unacceptable result, and what happens when one occurs?
2. Communication (including the Validation Report) should use risk-based as well as statistical language
3. Validation tools need to be applied in line with guidance and the purpose of the tests should be clarified explicitly

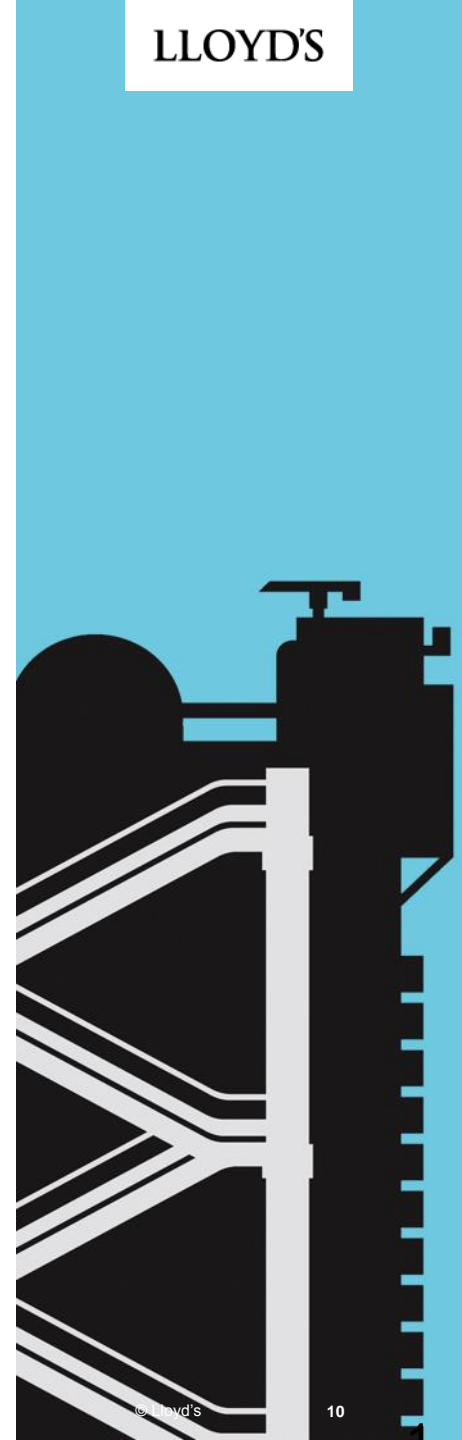
Don't do the bare minimum!

VALIDATION TESTS AND MATERIALITY: SUGGESTED HIERARCHY



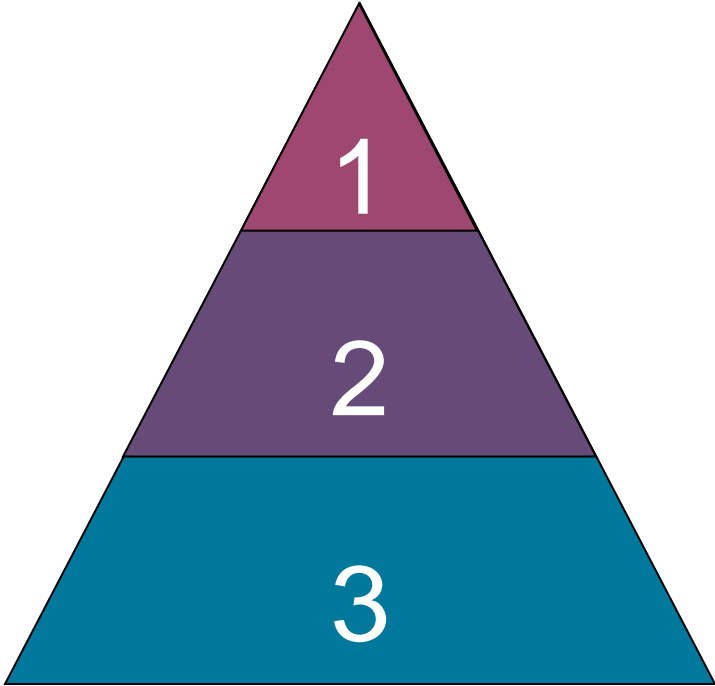
AGENDA

- ▶ Quick SII update
- ▶ Validation: lessons learned
- ▶ **Three steps to improving the Validation Report**
- ▶ Changes to the LCR for 2016 capital setting
- ▶ What's new for 2016 ?
- ▶ Questions



DOCUMENTATION OVERVIEW: RE-CAP FROM 2011 WORKSHOP

Submission to Lloyd's
- Validation Report
- Completed Evidence Templates (ETs)
- Validation proformas - technical specialist documentation



Maintained by agents
- Executive summary and board documentation
- Technical Detail
- Specialist level

SOME BROAD DISTINCTIONS: RE-CAP FROM 2013 WORKSHOP

	Validation Report (Level 1)	Technical specialist (Level 3)
Audience	Board/management	Modeller/actuarial
Language	Risk-reward	Statistical
Viewpoint	Top down	Bottom up
Outputs vs. inputs	Model outputs and why they reflect the business	Model inputs/parameters and their appropriateness
Validation tests	Emphasis on comparisons to experience, scenarios, P&L attribution	Emphasis on sensitivity testing, g.o.f., qualitative tests
Validation process	Independent & robust – in accord with the Policy	Status update – in red/amber/green
Length	30-40 pages plus 5-10 pages of appendices	75+ pages plus 200+ pages of appendices
Challenge	Writing it	Reading it

SOME USEFUL COMPARISONS: RE-CAP FROM 2013 WORKSHOP

- ▶ **Language:** RI programme analysis for financial language
 - Risk-reward comparison of programs, AEPs, net benefit of RI
 - P/L metric + volatility measure (essential for risk appetite decisions)
 - CoVs and other input parameters not informative
- ▶ **Viewpoint:** Reserve reports for top-down perspective
 - Start with syndicate level movements then drill down to sources
 - Address the materiality of classes/policy groups to overall result
 - Tail factors, BF ULRs stay in appendices
- ▶ **Validation tests:** Reserve reports (somewhat) for back-tests and scenarios
 - Actual vs. expected analyses
 - Scenarios that underlie the uncertainty in the best estimate

BY EXTENSION...3 STEPS TO A BETTER REPORT

For each major risk type, and the syndicate as a whole...

- ▶ Start with a description of the drivers of that risk type in your syndicate. Emphasise the top 1-3 drivers. Be specific. Use £££ with probabilities
- ▶ Explain the validation **outcomes** (especially failures). Explain how SCR is adequate despite failure of validation tests
- ▶ Discuss the **limitations** of the model. Quantify with 1-2 sensitivity tests.

3 KEY POINTS TO REMEMBER...

Validation report should include...

- ▶ Validation of modelling methodology: Approach to aggregation of risks – causal/driver or copula based approach, modelling distribution selected
- ▶ Validation of **parameters**: Appropriateness of volatility parameters, allowance of ENIDs
- ▶ Validation of **modelled output**: Adequacy of premium risk or SCR

Let's go through a few (partial) straw men...

PREMIUM RISK (STEP 1): DESCRIPTION OF THE DRIVERS

“...Premium risk is the largest risk for the syndicate...**risk ranking show premium risk above 1 in 50 years is driven by 2 classes.**

- ▶ **Property treaty. Mainly driven by CAT losses.** remains a significant driver of uncertainty. The exposure is mainly in the US. A top and drop reinsurance programme is in place at the 1 in 50 return period. The losses have been adjusted to allow for uncertainty due silent cyber. This resulted in an increase in losses, compared to last year.
- ▶ **General liability. Driven by large losses . The business has performed well over the last 3 years and is a profit making book.** Large losses above 1 in 20 drive the losses for the book. Business volume reduced compared to last year due to market conditions. Terms and conditions and the loss beyond 1 in 100 increased by 6%.”

PREMIUM RISK (STEP 1): DESCRIPTION OF THE DRIVERS

Contribution to total premium risk from riskiest classes (£m)				
	Mean	50 year	100 year	200 year
Premium risk – total	-23.3	78.0	136.2	183.3
Property CAT	-10.5	23.3	74.0	156.1
General liability	-3.2	19.9	42.0	74.2
All other	-9.6	18.6	20.2	31.4

Example: Contribution of property CAT increases at the tail and the contribution of other classes is not material at the tail compared to these two classes.

PREMIUM RISK (STEP 2): VALIDATION OUTCOMES

“...benchmarking against LMA data was used for additional validation. The general liability class failed the test. Modelled loss was more prudent than the estimate using LMA data. Discussion with the underwriter and the pricing team established that uncertainty due to widening of terms and conditions was the reason for the increase in losses. GL passed the test last year. Adequacy of the additional uncertainty was confirmed ...”

PREMIUM RISK (STEP 2): VALIDATION OUTCOMES

“...the active underwriter was responsible for the scenario tests for the main two classes. Scenario tests were done for other classes. Aviation failed the scenario test. Risk committee decided the scenarios were not plausible. To get further comfort, standalone distribution of aviation was increased by the scenario loss amount and the model was run. Impact on the SCR was not material. This is reasonable given the size of the aviation book...”

PREMIUM RISK (STEP 3): MODEL LIMITATIONS

“...Two of the most significant limitations in the premium risk model include the reliance on expert judgement for the following assumptions:

- ▶ **volatility in Cyber** liability large claims
- ▶ **impact of US med mal** frequency

We have carried out sensitivity tests on these two assumptions in order to assess their impact on reserve risk. **We obtained “pessimistic” and “optimistic” assumptions** in consultation with the claims team and reserving actuaries. These alternatives are intended to be plausible upper/lower bounds for each assumption.”

PREMIUM RISK (STEP 3): MODEL LIMITATIONS

Assumption/ output	Mean	Selected 99.5 th	Pessimistic 99.5 th	Optimistic 99.5 th
Cyber: Liability large claims (£m)	-5.3	15.5	17.8	14.0
UK med mal: No. claims > £250k	5	8	10	7
Total premium risk (£m)	0	183.3	194.7	176.6

Example: The pessimistic 99.5th percentile for cyber is 17.8m and the pessimistic assumption for UK med mal large claims frequency is 10. These two assumptions result in a premium risk 99.5th percentile of 194.7m.

REVERSE STRESS TEST (GOOD PRACTICE)

- ▶ Scenario or a combination of scenarios that could potentially make the business unviable
- ▶ Expert to comment on the total loss amount
- ▶ Loss amount compared to the modelled distribution
- ▶ Return period to be compared to the pass/fail criteria
- ▶ Contribution of underlying risks to be compared with the scenarios
- ▶ **Challenge to quantify and assign modelled risks to some of the scenarios**

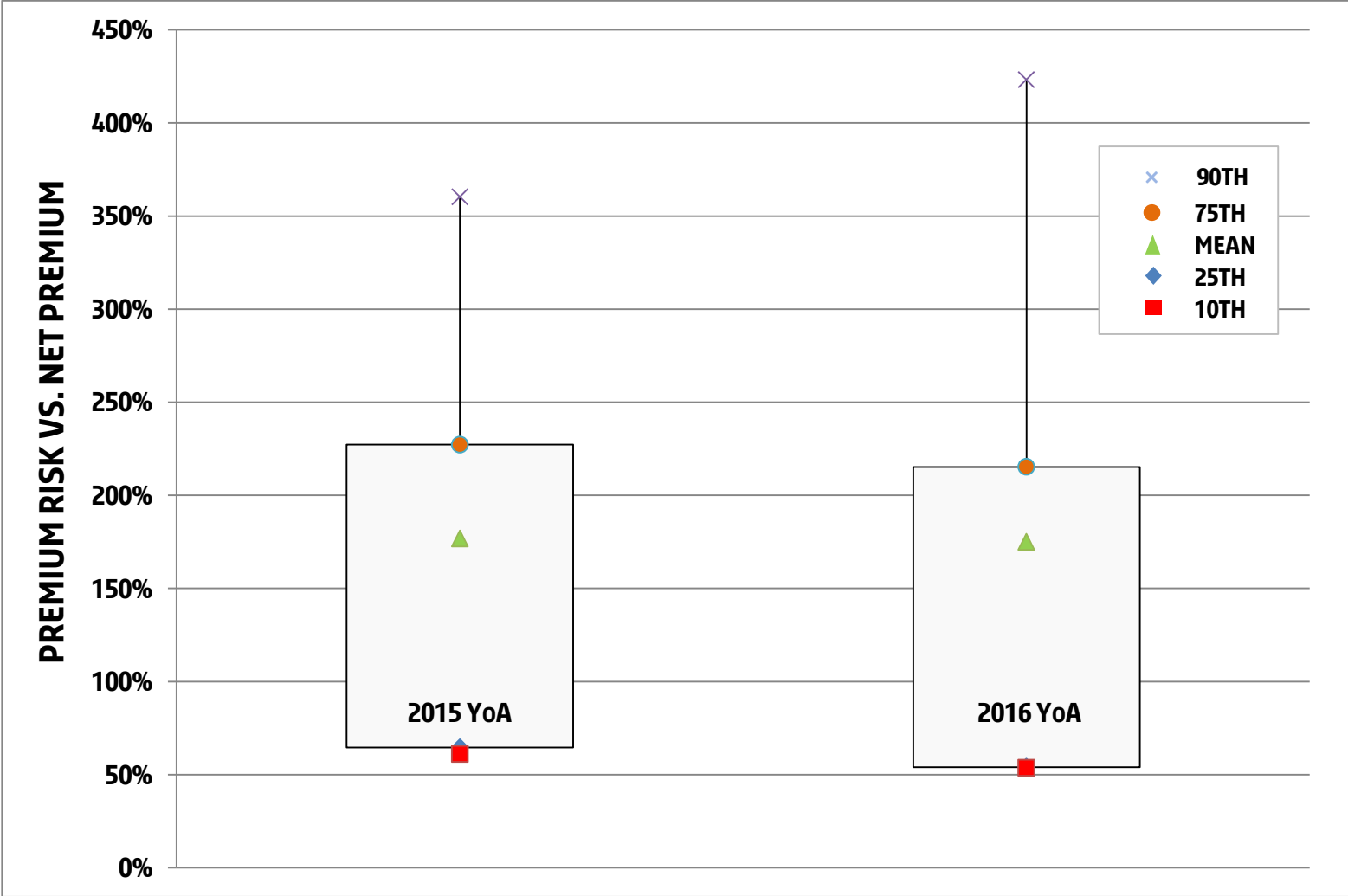
SENSITIVITY TESTS

- ▶ Purpose of the test should be clearly defined – e.g. identification of key assumptions, quantification of limitations
- ▶ Pass/fail criteria to be defined explicitly – may not be the same for all the sensitivity tests. E.g. direction of movement and quantum of movement is less than x%. Rationale behind selecting x% as a threshold should also be provided.
- ▶ Explain the failures and take the simulation error into account
- ▶ Not an adequate validation tool on its own

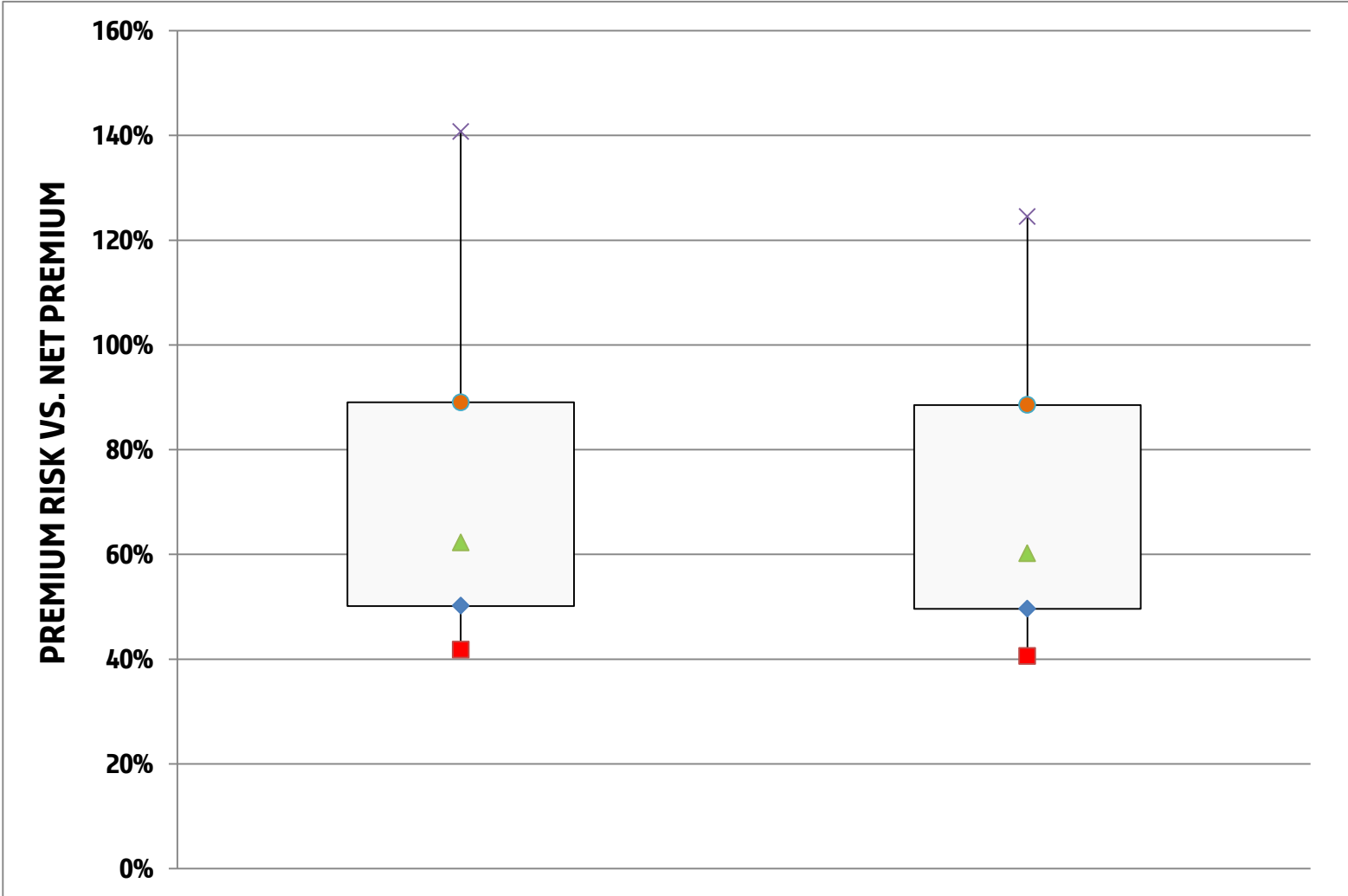
SCENARIO TESTS

- ▶ “The event severities and probabilities should be derived independently from the process used to derive the risk distributions in the model. In general, it will be more difficult to assess the probabilities than the severities. It may helpful in this regard to also consider scenarios at lower return periods, such as 20 to 50 years (twice or once in a career) and then extrapolate or build up to higher return period type events.”
- ▶ Key is to define the scenarios at the appropriate return period
- ▶ Objective pass/fail criteria is often neglected

BENCHMARKING (EXAMPLE – YOA 2016)



BENCHMARKING (EXAMPLE - YOA 2016)



Sample set is different - provide details of the sample!

VALIDATION IS NOT A ONE STEP PROCESS

- ▶ Parameterisation from start to finish involves several iterations
- ▶ Final stage (often a pass) shown in the validation/technical report
- ▶ Good practice to show the entire process for new parameters/assumptions in the technical report
- ▶ Evidences the validation process in place

EXPERT JUDGEMENT

- ▶ Sensitivity test is the first step
- ▶ More validation tests required for the key judgements
- ▶ Reference to parameter uncertainty and ENIDs is a good practice
- ▶ Falsifiability is key to the validation of expert judgement. Impact of additional data on the assumptions should be clearly evidenced

VALIDATION REPORT: FAQ

▶ How long?

- “*As a rough guide, Lloyd’s would expect the Validation Report to be between 35 and 40 pages.*” **Workshop** (May 2013)
- 5 pages/risk x 7 risks + 5 pages (appendices) = 40 ballpark
- Validation report should be supported by technical report

▶ How much detail?

- A common feedback point was lack of detail on validation outcomes
- Follow the “3 steps” described above
- Issue is materiality (£) and operation of validation cycle – not lack of technical specialist detail

VALIDATION REPORT: FAQ (CONTD.)

- ▶ How to structure technical and validation report?
 - Ideally they should be separate
 - But technical and validation reports can be part of one report
 - Technical report can also be included in the appendix of the validation report
 - Validation report must be owned and prepared by a person independent of the model design and development

VALIDATION REPORT: FAQ (CONTD.)

- ▶ How much of last year's validation do I need to repeat this year?
 - Validation is an on-going process not a one-off
 - PRA have emphasised demonstrating action on prior validation issues
 - Short answer: validation must be sufficient to show that the model is appropriate for the current risk profile
 - Limited/no validation should be justified by demonstration that risk is of limited/no materiality (or has not changed since last year)

VALIDATION REPORT: FAQ (CONTD.)

- ▶ Can there be a one year lag in P&L attribution?
 - It compares actual vs expected and a one year lag will be accepted
- ▶ Should the technical report be independent of model design?
 - It is acceptable if the technical report is not independent
- ▶ Can the validation review be based on draft numbers in July?
 - Yes. But any changes between July and September should be validated
- ▶ Should the validation report be signed off by the Board?
 - The validation report is a report to the Board and should therefore be approved by the Board.

AGENDA

- ▶ Quick SII update
- ▶ Validation: lessons learned
- ▶ Three steps to improving the Validation Report
- ▶ **Changes to the LCR for 2016 capital setting**
- ▶ What's new for 2016 ?
- ▶ Questions



LCR GROUND RULES...

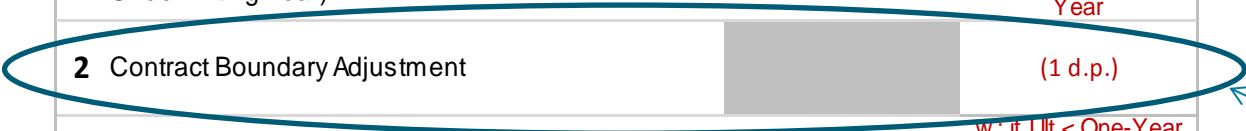
- ▶ Submit via Core Market Returns and by 1pm on 13 September
- ▶ All syndicates must complete all forms
- ▶ Attachments via Form 990, including:
 - methodology documents & analysis of change
 - the supplementary questionnaire
 - any additional evidence
- ▶ Numbers are in £m to one decimal place, i.e. £100.1m
- ▶ Unsure of format / requirements...
 - ask in June NOT 12.59pm 13th Sept
 - Contact Kevin Barnes
Kevin.Barnes@lloyds.com



Form 309

1. Headline Figures

	One-Year (Note 309.1)	Ultimate (Note 309.2)
	A	B
1 Syndicate SCR (as at 1st January in the proposed Underwriting Year)	v: if <> C11	v: if <> G11 w: if Ultimate < One Year
2 Contract Boundary Adjustment		(1 d.p.)
3 New Syndicate Loading	v: if <> 0 w hen NSL = "No" form 012	w: if Ult < One-Year v: if <> 0 w hen form 012 NSL = "No"
4 Total	A1 + A3	B1 + B2 + B3



New field

The calculation for adjustment will be provided in the supplementary questionnaire

AGENDA

- ▶ Quick SII update
- ▶ Validation: lessons learned
- ▶ Three steps to improving the Validation Report
- ▶ Changes to the LCR for 2016 capital setting
- ▶ **What's new for 2016 ?**
- ▶ Questions



KEY DATES

Submission	Deadline
Quarterly model change submission	7 July, 13 September
Interim Validation Report (optional)	7 July
Half-year 2016 QMC	1 September
Final LCR (all syndicates)	13 September
Analysis of change template	16 September
Validation Report	23 September
Coming-into-Line (year-end)	December (TBC)

Key: **Red = Market** **Black = Lloyd's**

WHAT'S NEW FOR 2016 ?

- ▶ Changes to the LCR (already discussed)
- ▶ Supplementary questionnaire
 - Qualitative questions on cyber, multi-year policies, widening of T&Cs
 - RI contract boundaries form and calculation
 - Profit and loss reconciliation with the SBF
 - Self validation tests (some of the LCR/SBF forms)
 - Submit with LCR via CMR
 - Final Excel version to be posted on lloyds.com by end of June

WHAT'S NEW FOR 2016 ? (CONTINUED)

▶ Validation Report

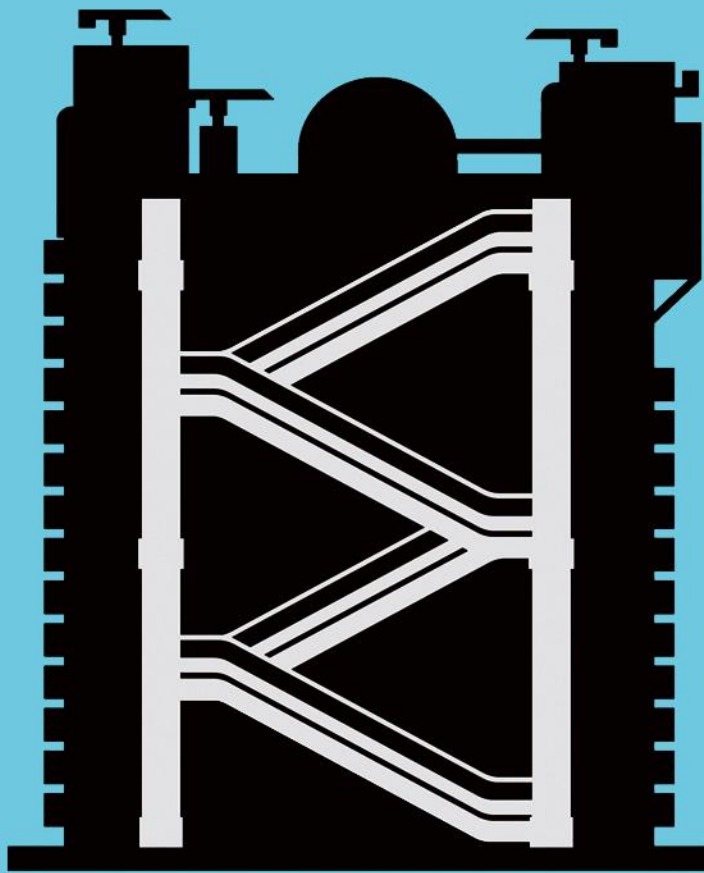
- Option to submit interim report with 7 July quarterly model change submission
- Major model changes require evidence of validation undertaken
- Focus on validation of cyber classes. E.g. uncertainty around silent cyber
- Focus on validation of adequacy of ULR distributions, given movement in premium rates

CAPITAL AND BUSINESS PLANNING PROCESSES

- ▶ No July LCR submission
- ▶ Non-aligned syndicates to be reviewed by year-end CIL
- ▶ Risk based approach to capital reviews:
 - Level of detail will vary for different categories
 - Specific details will be communicated through letter to the CEO
- ▶ Reviews will use “virtual teams“
 - MRC are the virtual team lead for capital purposes
 - Risk Assurance are lead contact points for model changes

WHAT HAPPENS NEXT?

- ▶ Slides will be posted on lloyds.com after workshops
- ▶ Contact us if you have further questions
- ▶ For specific queries on the LCR please contact **Kevin Barnes** kevin.barnes@lloyds.com
- ▶ For queries on validation please contact **Adhiraj Maitra** adhiraj.maitra@lloyds.com
- ▶ If you have specific queries on your SCR please contact your MRC analyst during “reviews season” (i.e. June – October)
 - we will let you know who your assigned analyst is shortly
 - in the meantime contact either **Adhiraj Maitra** or **Richard Rodriguez** richard.rodriguez@lloyds.com



Market Briefings 18 May 2016

Internal Model Validation 9:30 – 10:45

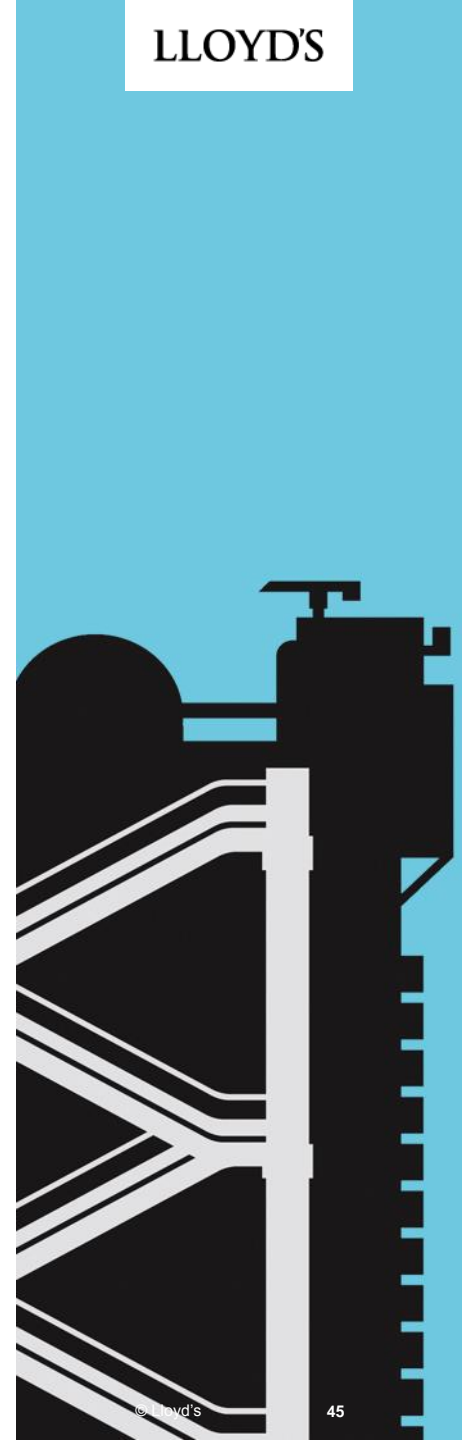
MS6 Modelling, Design & Implementation
Self Assessment 11:00 – 11:30

MS6 – MODELLING, DESIGN & IMPLEMENTATION MINIMUM STANDARDS



Agenda

- ▶ The Minimum Standards
- ▶ Self-Assessment Return
- ▶ MS6 Modelling, Design and Implementation: A more detailed look at the subsets of this Minimum Standard
- ▶ Annual Minimum Standards refresh



Agenda

- ▶ The Minimum Standards
- ▶ Self-Assessment Return
- ▶ MS6 Modelling, Design and Implementation: A more detailed look at the subsets of this Minimum Standard
- ▶ Annual Minimum Standards refresh



The Minimum Standards

- ▶ Originally developed around 2005
- ▶ Refreshed in 2014 to incorporate the new SII Tests & Standards
- ▶ Effective January 2015 and annually reviewed
- ▶ MS1 split into 7 separate standards in 2015
- ▶ Market Oversight is a key strategic priority and is supported by the Lloyd's minimum standards that all market participants are expected to achieve

Element	Definition
Standard Group	Groups of standards, generally aligned to Lloyd's market oversight teams.
Standard	A brief statement of capability or level of conduct required.
Requirement	A sub-set of requirements that specifies key areas that must be addressed in meeting the standard. Lloyd's will seek positive assurance that each requirement has been met.
Guidance	Explanation of how Lloyd's will assess whether standards have been met as well as potential ways of achieving this.

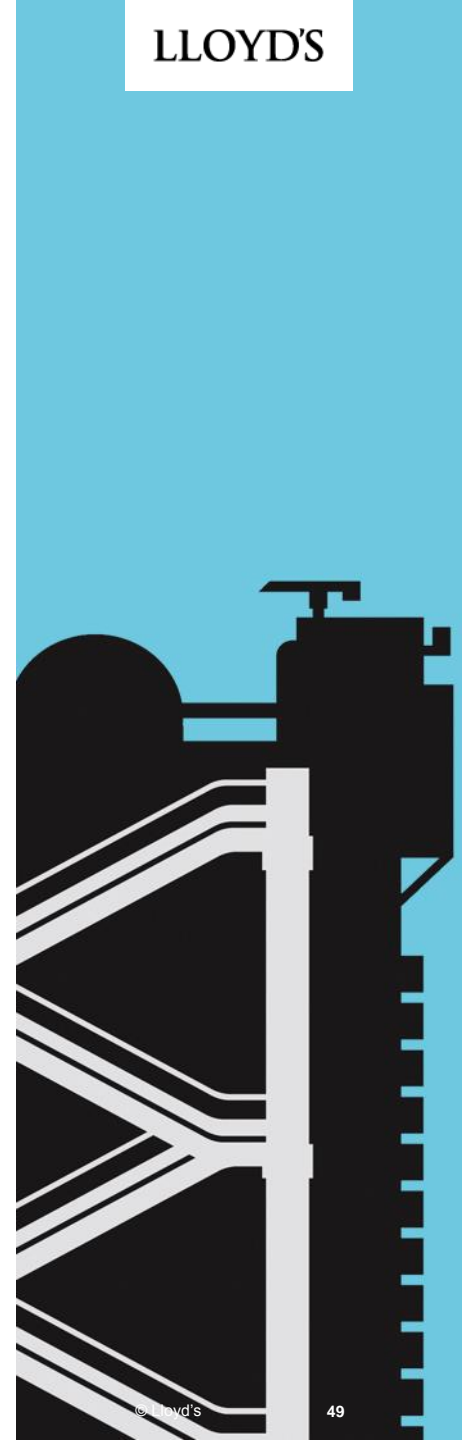
MINIMUM STANDARDS

CODE	NAME	ASSESSMENT DATES
MS1.1	Underwriting Strategy and Planning	Q4 2014
MS1.2	Underwriting and Controls	Q4 2014
MS1.3	Delegated Authority	Q4 2014
MS1.4	Pricing and Rate Monitoring	Q4 2014
MS1.5	Exposure Management	Q4 2014
MS1.6	Reinsurance	Q4 2014
MS1.7	Underwriting Data Quality	Q4 2014
MS2	Claims Management	Q4 2014
MS3	Governance	Q4 2015
MS4	Risk Management	Q4 2016
MS5	Scope, Change and Use	Q3 2015
MS6	Modelling, Design and Implementation	Q2 2016
MS7	Validation	Q1 2015
MS8	Investment Management	Q1 2015
MS9	Reserving	Q1 2016
MS10	Regulatory	Q1 2016
MS11	Conduct Risk	Q4 2014
MS12	Operating at Lloyd's	Q2 2015

The Minimum Standards

Agenda

- ▶ The Minimum Standards
- ▶ **Self-Assessment Return**
- ▶ MS6 Modelling, Design and Implementation: A more detailed look at the subsets of this Minimum Standard
- ▶ Annual Minimum Standards refresh



Purpose of Self-Assessments

The objectives are to:

- ▶ Establish whether agents are – by their own assessment – meeting the standards, and to identify standards which they believe are not being met
- ▶ Ensure agents can provide a high level description of how they meet the standards and requirements
- ▶ Agree action plans to address any identified gaps or failings
- ▶ Reinforce that agents are required to carry out regular assessments of their compliance with the standards and the role of the Senior Nominated Person (SNP)
- ▶ Assist with annual sign off of Board Attestation
- ▶ Provide a baseline against which Lloyd's can test when carrying out further assurance activities
- ▶ It is not a review activity. Lloyd's will examine the responses but this will not include a test of the responses/evidence provided. Any follow up with agents to the responses provided will trigger specific review activity.

Information to be provided for each Requirement

- ▶ Describe how the Requirement is met
- ▶ Controls
- ▶ Evidence
- ▶ Self-assessment score

GREEN (Currently Meets Minimum Standard)

RED (Currently Not Meeting Minimum Standard)

- ▶ Action(s) planned
- ▶ Action(s) deadline(s)

LLOYD'S STANDARDS SELF-ASSESSMENT TEMPLATE											
STANDARD GROUP	STANDARD	REQUIREMENT NUMBER	REQUIREMENT	REGULATORY/LLOYD'S Key: [A = Article] [P = Paragraph]	Description of how the Requirement is met	Controls	Evidence	Self-Assessment Rating	Action(s) Planned	Action(s) Deadline	Notes
					Brief description of the current procedure/systems in place for this Requirement.	List of controls currently in place to ensure the process/system described operates effectively.	The evidence available to demonstrate compliance. This can include policies/procedures and operational evidence such as examples/files, screen prints, system reports, audit/open review reports, and meeting minutes. Evidence should not be submitted unless specifically requested. Where the evidence is policy or procedure - the year it was last reviewed/updated must be provided.	GREEN (Currently Meets Minimum Standard), RED (Does not meet Minimum Standard) Where RED is selected Action(s) Planned and Action Deadline must be completed.	Description of the actions being taken to complete any gap in compliance for this Requirement. It should not be completed if Self Assessment is RED. It must be completed if Self Assessment is RED.	The month/year when the Action(s) Planned will have all been completed and the Requirement will be met.	
MS3 - Governance	GOV 1.1 - Effective System of Governance	GOV 1.1.1	The system of governance shall be proportionate to the nature, scale and complexity of the operations of the business.	Level 1: A41 P1 A41 P2 Level 2: A249 P3(a)							
MS3 - Governance	GOV 1.1 - Effective System of Governance	GOV 1.1.2	The system of governance shall provide for effective cooperation, internal reporting and communication of information at all relevant levels of the business.	Level 1: A41 P1 A41 P2 Level 2: A249 P3(a)							
MS3 - Governance	GOV 1.1 - Effective System of Governance	GOV 1.1.3	The system of governance shall include compliance with the requirements laid down in the SI Framework Directive, Articles 42 to 48.	Level 1: A41 P1 A41 P2 Level 2: A249 P3(a)							

What Managing Agents need to do

- ▶ Complete the template
- ▶ Check for gaps and inconsistencies
- ▶ Obtain sign-off by Senior Nominated Person and the Director responsible for Capital
- ▶ Submit via SecureStore by 30 June
- ▶ Provide updates regarding action(s)

What Lloyd's will do

- ▶ Review the Self Assessment Return
- ▶ Raise queries where the information needs clarification or resubmission (part or full)
- ▶ Discuss action(s) where they do not appear sufficient
- ▶ Track action(s)
- ▶ Assess what review work may be needed to test the Self Assessment information
- ▶ Identify where the returns indicate a general lack of understanding or compliance and what action may be needed and reissue guidance
- ▶ Issue additional guidance to the Market where appropriate
- ▶ Ensure the self-assessment tallies with our understanding of your SII development
- ▶ Overall findings reported to SAG

Experiences to date

- ▶ Agents must complete the self-assessment submission that will be posted on SecureStore after this presentation
- ▶ Two sign offs are required:
 - They must be different!
 - The first signatory is signing that they consider the return accurately reflects the agent's compliance with the minimum Standards i.e. having had a detailed level of review and challenge in the process.
 - The second signatory needs to know that the governance and sign-off process has been appropriate and complete
 - One of these signatories must be the SNP.
- ▶ We have returned the previous submissions where they have not met these requirements

Agenda

- ▶ The Minimum Standards
- ▶ Self-Assessment Return
- ▶ MS6 Modelling, Design and Implementation: A more detailed look at the subsets of this Minimum Standard
- ▶ Annual Minimum Standards refresh



Breakdown of MS6

SECTION	REQUIREMENTS
CALIBRATION	<ul style="list-style-type: none"> 1.1 Full Internal Model 1.2 SCR calculation 1.3 SCR to ultimate calculation 1.4 Solvency reporting 1.5 Adjustments to model output
STATISTICAL QUALITY METHODOLOGY	<ul style="list-style-type: none"> 2.1 Capital distribution 2.2 Appropriateness of methodology 2.3 Diversification benefits 2.4 Risk coverage and ranking 2.5 Risk mitigation techniques 2.6 Future management actions
STATISTICAL QUALITY ASSUMPTIONS	<ul style="list-style-type: none"> 3.1 Modelling assumptions 3.2 Future management actions assumptions
STATISTICAL QUALITY CONSISTENCY	<ul style="list-style-type: none"> 4.1 Consistency of methodology and assumptions
MODEL RESULTS	<ul style="list-style-type: none"> 5.1 Reasonable results
INTERNAL MODEL DATA	<ul style="list-style-type: none"> 6.1 Data Governance Framework 6.2 Systems and Processes 6.3 Quality Control 6.4 Data Policy and Directory 6.5 Data Consistency 6.6 Data Limitations

Common Issues

- ▶ Controls required are not just past actions, but should relate to internal policies/processes. Each control should be able to be evidenced.
- ▶ What governance is in place i.e. who takes responsibility to ensure standard is met?
- ▶ Descriptions should be specific to the individual requirement being addressed e.g. not generalised across a number of sections.
- ▶ Answers need to be of sufficient detail for a third-party (i.e. Lloyd's) to confirm that each requirement is met.
- ▶ Can use feedback from prior minimum standards reviews e.g. MS7 (Validation), MS9 (Reserving) as an example of what is required.

Few Examples

- ▶ Q: Managing agents shall submit their LCR forms and SCR reports where there is a material change in the syndicate risk profile.

Lloyd's requirement would apply – 10% threshold, guidance on model re-submission requirements (3 options available to agents)

- ▶ Q: Managing agents shall ensure they have a detailed understanding of the theory and assumptions underlying the methodology.

If library models are used without proper understanding, it should be clearly specified.

- ▶ **Answers should be based on the latest model**

Few Examples (Contd.)

- ▶ Q: Adjustments to model output

This section is unlikely to be relevant for most models. Examples could be GAAP to SII adjustments outside a model.

- ▶ Q: Appropriateness of methodology

You may refer to specific sections of methodology document submitted to Lloyd's. Brief explanation in some cases may be relevant.

Few Examples (Contd.)

- ▶ Q: Managing agents shall ensure that the methodology used for completing the following are on a consistent basis: Technical Provisions including contract boundary definitions.

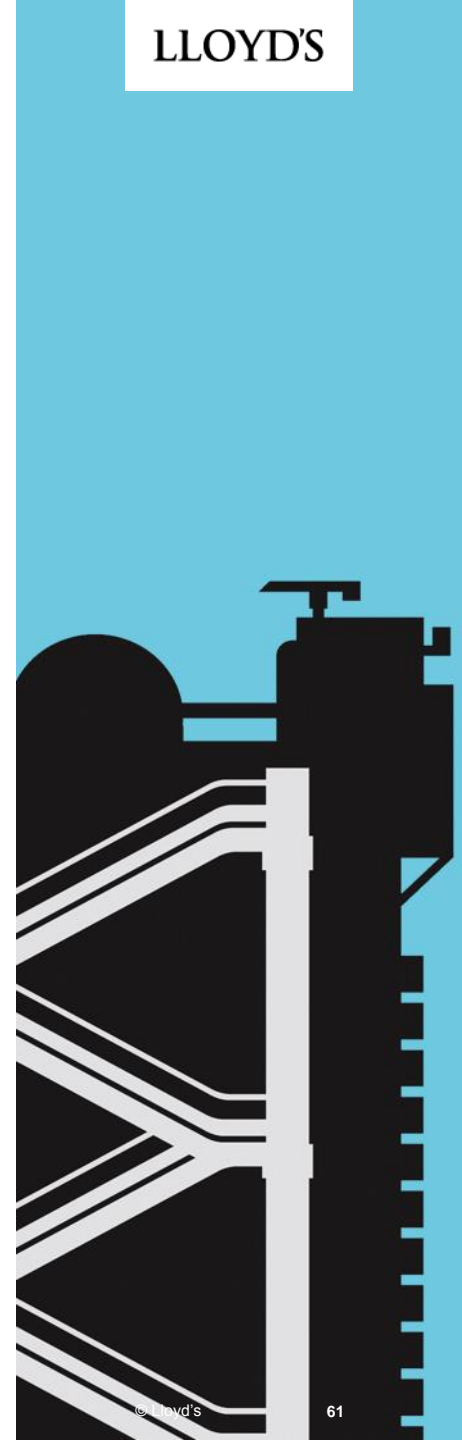
Please specify the approach used in the internal model and any differences with the one used in the QMC.

- ▶ Q: With regard to data used in the internal model, managing agents ensure that expert judgement is appropriately documented and justified.

Reference can be made to the expert judgement log that usually accompanies the validation report.

Agenda

- ▶ The Minimum Standards
- ▶ Self-Assessment Return
- ▶ MS6 Modelling, Design and Implementation: A more detailed look at the subsets of this Minimum Standard
- ▶ Annual Minimum Standards refresh



Annual Minimum Standards refresh

- ▶ Email update issued 10 May:
 - Mapping to finalised SII directive
 - Completed by the end of Q2 2016
 - May require changes to the Standards, Requirements or Guidance
 - Lineslips – new DA Minimum Standards
 - New Minimum Standards issued for early sight
 - Will be included in the Q3 issue of refreshed Minimum Standards
 - Cyber Attack – cyber essentials accreditation
 - Will form part of MS12 – Operating at Lloyd's Minimum Standard
 - Recommended at Cross Market Cyber Forum that this is implemented by end of Q2 but will not be a Minimum Standards fail until end of Q4
 - Reinsurance – updated guidance on management of collateral arrangements

What happens next ?

- ▶ Slides will be made available on lloyds.com
- ▶ MS6 self-assessment template will be added to SecureStore by the end of the week
- ▶ Submission of completed self-assessment due by 30 June, with submission via SecureStore
- ▶ There are no plans to hold further Risk Assurance workshops/ briefings during Q2 or Q3:
 - Next self-assessment (after MS6) is MS4 Risk Management on 31 December 2016
- ▶ Contact risk.assurance@lloyds.com

