

SOLVENCY II MODEL VALIDATION WORKSHOP

4 & 5 July 2011

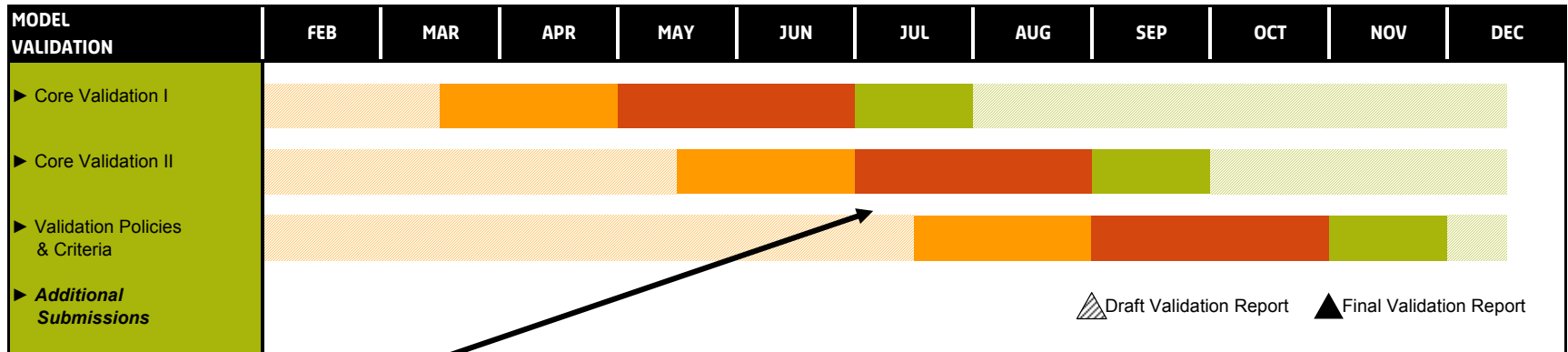
Agenda

- Introduction
- Validation Report Update
- Risk materiality
- Methodological Adequacy
- Validation Policy
- Data Directory & Data Policy
- Risk Mitigation Techniques
- Future Management Actions
- Financial Guarantees

Table discussions and play back/Q&A

- Next Steps and feedback

Progress to date on workstream



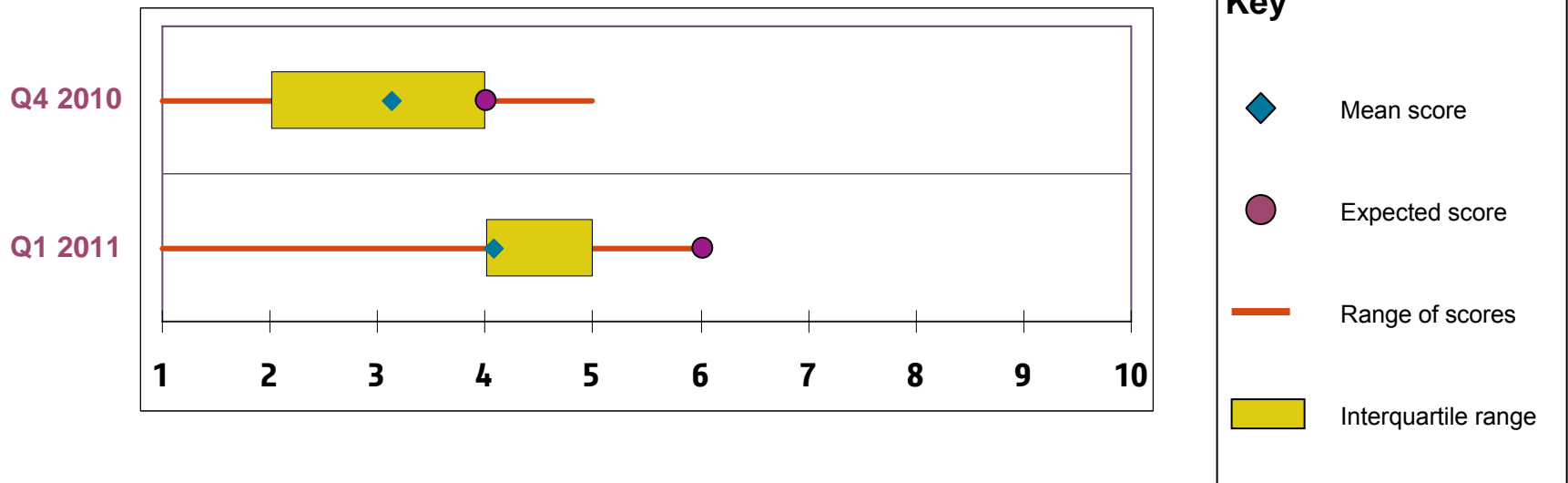
You are here

<p><u>Core Validation I</u></p> <ul style="list-style-type: none"> • Assumptions & Expert Judgment • Dependencies • Model robustness • Stress & Scenario testing • Backtesting 	<p><u>Core Validation II</u></p> <ul style="list-style-type: none"> • Calibration • Probability distribution forecast • P&L attribution • External models 	<p><u>Policies & Criteria</u></p> <ul style="list-style-type: none"> • Risk Materiality • Methodologies • Validation policy • Data directory & policy • Risk mitigation • Mgmt actions • Guarantees etc
<p>Model Demonstrations</p>		

Shift in self assessed scores during Q1 2011...

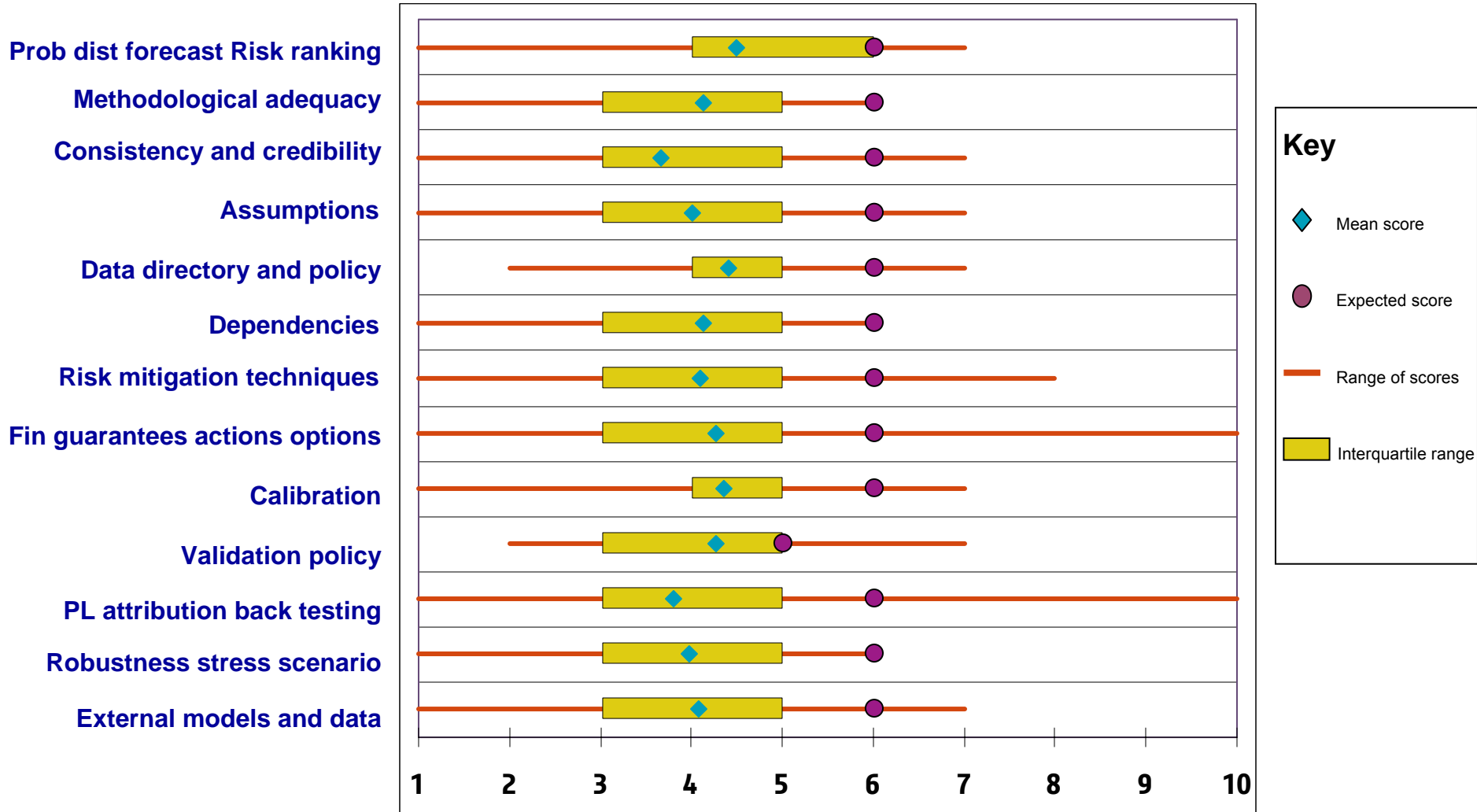
MODEL VALIDATION (OVERALL SCORES)

Agent self assessment



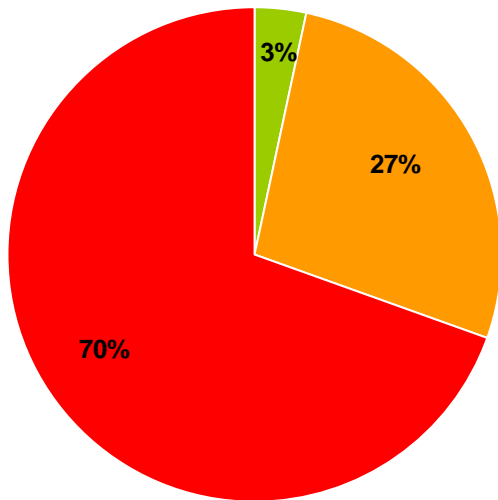
...with wide range of individual scores

Agent self assessment scores as at Q1 2011

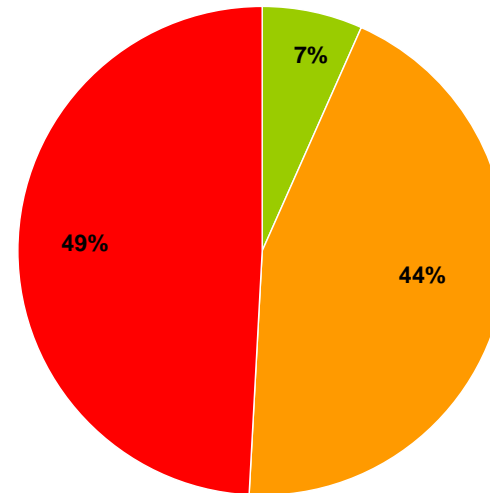


Evidence templates have been a key area of focus for Lloyd's and agents

**MODEL VALIDATION
ET RATINGS (END APRIL SUBMISSION)**



**INTERNAL MODEL SCR
ET RATINGS (END MAY SUBMISSION)**



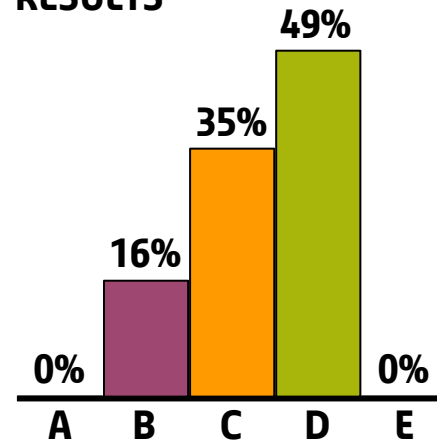
- Key component of Final Application Pack
 - explaining how requirements have been met
- Expectation is that these will continue to develop and improve through 2011

VALIDATION REPORT UPDATE

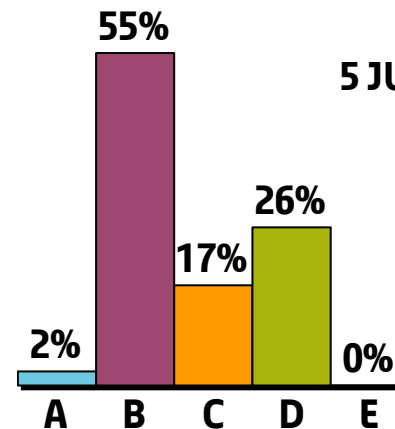
When is a final Validation Report required by Lloyd's?

- A. September
- B. October
- C. November
- D. December
- E. Sometime in 2012....

4 JULY RESULTS



5 JULY RESULTS



The deadlines for the Validation Report submissions have been pushed back

Version	Original	Revised
Draft	August 26	<i>September 30</i>
Final	October 31	<i>December 16</i>

- Delay allows validation walkthrough feedback to be addressed in draft submission
- Greater time to incorporate “draft” feedback into “final” submission
- Aligns timing with Final Application Pack as Validation Report is a key component
- But there is still a lot to do! The draft version must have substantial sections completed in order for Lloyd’s to do a meaningful review.

RISK INDICATORS OF MATERIALITY

Key messages on indicators of materiality

1. All material risks must be covered by the internal model.
 - “[I]t is essential to ensure that there is no material risk that is in the model scope but is not included in the model.” (5.199)
2. Materiality can be assessed using qualitative or quantitative indicators.
 - “[I]t also seems natural to rely on both qualitative and quantitative indicators that reveal the materiality of the risks concerned.” (5.203)
3. Indicators may rely heavily on judgement – and they can be approximate
 - “[T]he determination of risk indicators, irrespective of whether they are qualitative or quantitative, may to a great extent involve expert judgement.” (5.205)
 - “[D]etermination of quantitative indicators can be approximate...” (5.204)
4. Quantitative indicators are preferred to qualitative indicators
 - “[Q]uantitative risk indicators are to be preferred ...” (5.206)

Risk Identification

- *model must reflect entire risk profile (5.199)*
- *starting points: risk register (p.12) / ORSA risk identification (5.202)*



Risk Indicators of Materiality

- *determination may involve expert judgement (5.205)*
- *quantitative preferred but supplement with qualitative (5.206)*
 - *CEIOPS recommends minimum standards (5.207)*
- *consider if risks immaterial individually are material in aggregate (5.216)*

Quantitative (5.204-5.210; p.3)

- *can be somewhat approximate*
 - *99.5% VaR over 12mo*
 - *others used in RM*
 - *capital allocation to risk*
 - *etc.*

Qualitative (5.211-5.215)

- *risk attracts management action*
 - *existence of dedicated RM*
- *existence of dedicated risk mitigation*
 - *identification in ORSA*
 - *etc.*



Risk Coverage in Model

- *each risk identified as in /out (Lloyd's Guidance p.12)*
 - *explanation for risks not covered (p.12)*
- *demonstrate that all material risks are covered (p.12)*
- *define triggers for re-assessment of model coverage (5.201)*

When can indicators of materiality be of use?

- During the model design stage – to verify that no material risk has been excluded
 - *Example: to test whether clash exposure on a portfolio of med mal for US obstetricians is material and needs to be modelled*
- During the UW year – to test whether the model must be updated
 - *Example: to test whether a small new Caribbean marine portfolio, in-force from 1st April, is material in the tail in aggregate with another Caribbean portfolio of similar size*
- During the validation process – to show that the difference between alternatives is not material
 - *Example: to show that higher (lower) correlations do not have a material impact in the tail when using a Gaussian copula*

Examples of quantitative indicators

Risk Type	Test	Indicator description	Criteria / threshold
Premium ex Cat	Materiality of a property per risk portfolio	<i>Exposure based stress tests.</i> Stress test using a total loss on a number of risks with the largest PMLs or SI in the risk profile	Compare the results to a larger material risk or to the SCR
Reserving	Materiality of small portfolio	<i>Distribution parameterised with other data.</i> Use class best estimate and the CoV from a similar larger class to parameterise a distribution	Compare key percentiles with 90 th , 99.5 th etc. to SCR or larger material class
Aggregation	Materiality of risks in aggregate	<i>“Normal approximation” to aggregation.</i> Assume the that the joint distribution is normal. Individual risks can be combined at selected percentiles using a correlation matrix and matrix multiplication	Compare percentiles of aggregate risk at different correlations

What's required on risk indicators?

- They're needed when you want to demonstrate that a risk excluded from the model is not material. (5.207)
- Develop them as needed – there's no need to build up a suite in advance.
- It's up to agents to set the criteria for materiality.
- There isn't anything new / complicated about risk indicators – but their use is more structured under S2.

METHODOLOGICAL ADEQUACY

Key messages on methodological adequacy

1. Agents must show that their actuarial and statistical methods are adequate.
 - *“The undertaking shall provide evidence that the actuarial and statistical methods used are adequate.” (5.101)*
2. Methodological adequacy is evidenced using criteria defined by the agent.
 - *“The demonstration of methodological adequacy shall be based on a set of defined criteria that **may** include the following: applicable; relevant; appropriate; transparent; up-to-date; detailed and parsimonious; and robust and sensitive” (5.101)*
3. Proportionality matters – criteria should be more detailed for more material risks.
 - *“In assessing the methodological adequacy of the internal model...have regard to the proportionality principle.” (5.65)*

How can criteria for adequacy be of use?

- They can provide a qualitative form of validation (for external models as well).
 - They can provide conceptual justification for use of one methodology vs. alternatives
- They can demonstrate an understanding of the method and its assumptions.
 - Example: why is bootstrapping an appropriate reserve risk methodology?
- They can provide justification for use of expert judgement to modify a methodology.
 - In cases where the method does not satisfy all criteria
 - This parallels the use of expert judgement as a complement to existing data or as a substitute for missing data (5.159)

Syndicate 999 example: External model for US Wind

Criteria	Agent interpretation for vendor models	Criteria satisfied	Criteria not satisfied/ limitations
<p>Appropriate</p> <p><i>The method is suited to the modelling goals and data available.</i></p>	Model is defined at the lowest level of data granularity available	Model is defined for SI coded at street level	Sensitivity testing may be required to test impact of using data at lower resolution
	The perils covered are modelled	Key variables driving loss from WS are modelled: event strength, path and probability; peak wind speeds by location; MDRs due to building construction, etc.	Flood resulting from extreme rainfall after storm is a non-modelled secondary peril
	Model output is the full probability distribution of financial loss	Full OEP and AEP curves produced	Distribution is based assumption that there is no clustering of events
	Etc.		

Syndicate 999 example: bootstrapping for reserve risk

Criteria	Agent interpretation for reserve risk models	Criteria satisfied	Criteria not satisfied/ limitations
<p>Detailed and parsimonious</p> <p><i>The method strikes a balance between complexity and practicality.</i></p>	Data inputs required are readily available (<i>practicality</i>)	Claims triangles	Application to individual claims would require modifications
	The three types of trends in reserving data are quantified: DY, UWY, CY (<i>complexity</i>)	DY and UWY	CY not captured
	Dependencies between UWY/DY periods are modelled (<i>complexity</i>)		Process risk distributions are independent
	The method/software can be used and understood by an analyst after 2-5 days training (<i>practicality</i>)	In house training course takes 2 days	
	Etc.		

What's expected on methodological adequacy?

- Be prepared to provide conceptual criteria for methodologies for key risks.
- Identify where your methodologies meet the criteria – and where they don't.
- The methodological adequacy criteria should be thought of as part of the validation process – not as an additional requirement.

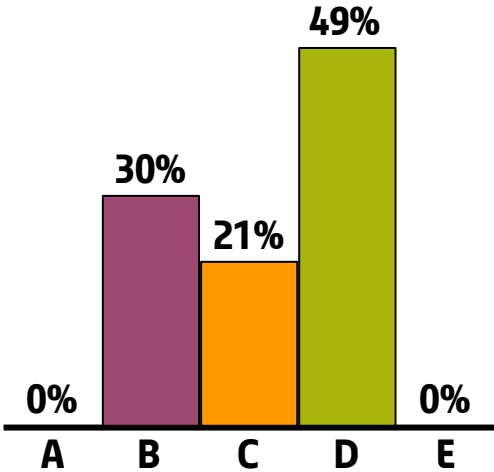
VALIDATION POLICY

What stage is your validation policy currently at?

- A. Fully embedded, with at least one cycle of validation complete
- B. Signed off, currently being implemented
- C. Final draft, requires sign-off
- D. We're in the process of drafting it
- E. What's a validation policy?

4 JULY - DATA NOT COLLECTED

5 JULY RESULTS



Why do agents need a validation policy?

- Validation of agent internal models is key to ensuring robust results and supporting LIM application...
- ...however, validation is a necessarily judgemental process, and writing out an entire process map for every validation in advance is not likely to be possible
- Lloyd's is not mandating any specific validation steps...
- ...although we need to be satisfied that each agent is doing enough to ensure quality in results
- We therefore require each agent to set out their Validation Policy – a document explaining how they approach validation, and why this is appropriate

What does a validation policy need to cover?

- **The purpose and scope of the validation** (*DOC48/09 8.133 - 135*)
 - What parts of the internal model are covered?
 - How you will gain comfort with the areas in scope
 - Explicit consideration of Expert Judgment
- **The validation tools that are used** (*DOC48/09 8.136*)
 - Set out the approaches to gain comfort in the Internal Model
 - Some are mandatory (testing against experience, testing robustness, stress and scenario testing and P&L attribution)...
 - ...so make sure these are covered
 - But Lloyd's will expect agents to be using other tools as well

What does a validation policy need to cover?

- **The frequency of the validation process** (*DOC48/09 8.137 - 139*)
 - How often are validation processes performed for each respective part of the internal model?
 - Triggers for requiring additional ad-hoc validation outside of the usual cycle
- **Governance of validation results** (*DOC48/09 8.140 - 144*)
 - Clear responsibilities for tasks
 - Clear lines of reporting and escalation
 - Involvement of senior management and board

What does a validation policy need to cover?

- **Limitations and future developments** (*DOC48/09 8.145 - 146*)
 - All known limitations of the current validation policy (e.g. excluded items)
 - agents will need to be able to provide plans for remediation
- **Documentation of the validation policy** (*DOC48/09 8.147*)
 - A “*knowledgeable third party*” (e.g. Lloyd’s, an external reviewer, the FSA) must be able to understand your validation process and validation responsibilities clearly from the policy
 - Your policy should fit with your structure

What does a validation policy need to cover?

- **Independent review** (*DOC48/09 8.148 - 149*)
 - How does the agent ensure use independent review in its validation process?
 - Responsibilities, reporting structures and remuneration structures (for external reviewers)
 - Refer to independence in ***all parts of*** the validation process
 - How is independence maintained over time
 - Agents should ensure that a ***proportionate approach*** is taken to ensure sufficient objective challenge

Practical Considerations

- **Clarity**
 - Try to make the standards you have applied clear and unambiguous for a third party
- **Granularity**
 - A validation policy needs to be comprehensive...
 - ... but should be relatively infrequently changing
 - Ensure level of granularity isn't too high – detail can be captured in supporting procedures / standards
- **Independence**
 - Very important to robust validation...
 - ...but we need to be proportionate
 - Ensure objective challenge appropriate to materiality

Practical Considerations

- **Embedding**

- Agents don't just need a validation policy – there needs to be evidence of it operating effectively in practice...
- ...so make sure that it fits with both the model and business
- Link to the Model Change Policy

- **Ownership**

- Explicit ownership will make development and maintenance easier
- Ensure senior engagement with the policy

- **Maintenance**

- Someone needs to keep policy up-to-date...
- ...so make sure there is a BAU process to do this

What sort of evidence is needed?

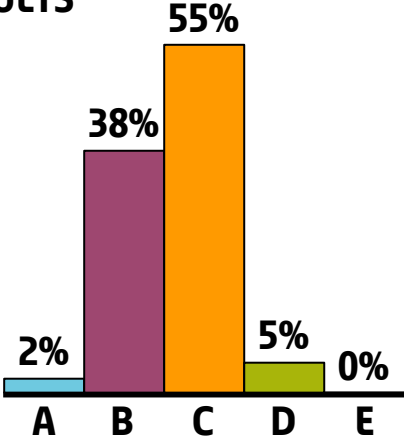
- Every agent needs to have a ***Validation Policy document***
 - Include an explanation in your evidence templates, which address the requirements line-by-line
- Lloyd's will also expect ***evidence that the policy is embedded:***
 - A Validation Report that is conducted in line with the Validation Policy
 - Validation & testing process, results and conclusion documentation – tested in the walkthroughs and in Evidence Reviews
 - Evidence of validation governance operating effectively (e.g. sign-off of results, escalation of exceptions)
 - Evidence that validation conclusions (including limitations) are understood by users of model output

DATA DIRECTORY & DATA POLICY

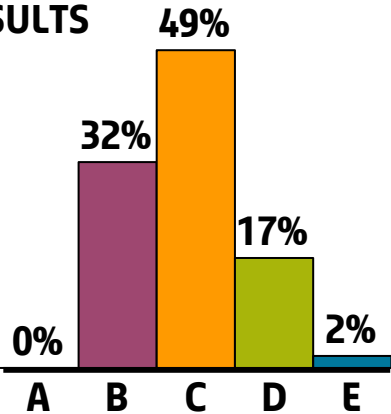
How would you assess the overall quality of data used in your model?

- A. Perfect – I couldn't ask for anything more
- B. Mostly good. A few weaknesses, but we can allow for those
- C. Generally reasonable. Most weaknesses addressed, but still occasional surprises
- D. Fairly poor. Most of my team's time is spent cleaning and rectifying data
- E. I don't use data in my model!

4 JULY RESULTS



5 JULY RESULTS



Data... Data... Data...

- Has been referred to as the three greatest challenges for internal models gaining Solvency II approval
- Data quality has not historically been a strength for the market – we haven't always collected or stored the right information
- Lack of data / poor quality data is not necessarily a barrier to modelling...
- ...but caution and control is needed to avoid “garbage in – garbage out”



Explicit requirements for data

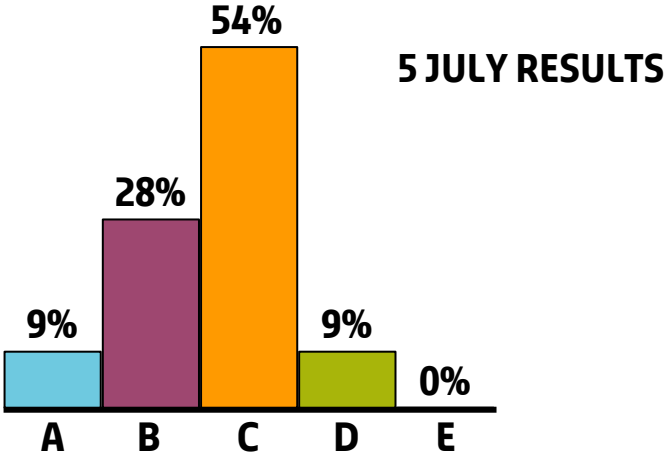
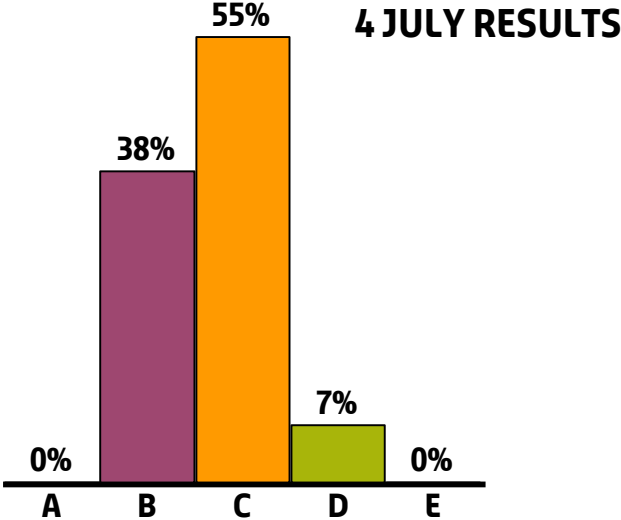
- Guidance explicitly states that the following items are required:
- **Data Policy**
 - *“The policy on data quality and update shall, as a minimum, cover the following areas:*
 - *“Undertaking-specific definition of data quality*
 - *“Processes for checking and validating data (including exception reporting*
 - *“Documentation of Expert Judgment in data*
 - *“The process for data updates, frequency of regular updates and triggers for unscheduled updates” (DOC 48/09 5.186)*
- **Data Directory**
 - *“Undertakings shall compile a directory of any data used, specifying its source, characteristics and usage” (DOC 48/09 5.176)*

Implicit requirements for data

- The guidance also has several implicit requirements. These could be achieved in a variety of ways
 - **Data processes / standards** – the practical support required to implement the data policy
 - **Data governance** – clear reporting and escalation lines for the monitoring and management of data quality
 - **Data deficiencies log** – understanding limitations in the data and linking this to both model output and data remediation plans
 - **Data monitoring & MI** – the processes, controls and management information in place to support quality monitoring and control
- Lloyd's is not mandating an approach in these areas - agents will need to ensure that their systems and processes achieve the right objectives

What stage is your data policy?

- A. Embedded
- B. Used within team
- C. Being drafted by IT
- D. We've thought about it
- E. It's my policy to use whatever data I can get my hands on



Practical considerations in producing a data policy

- **Define scope clearly** – identify the data types, sources and uses that are to be covered by the policy (e.g. data for Internal Model and TPs)
- **Link with Technical Provisions** – there are specific standards on the data requirements for TPs – don't re-invent the wheel
- **Think about embedding** – the data policy should be a useful business tool, not just a compliance exercise, so make it practical
- **Support with processes and standards** – don't try to get too much operational detail into the policy, but ensure this is captured elsewhere
- **Create your own definition of data quality** – think about the way you are using your data and the things that can go wrong
 - Need to consider how to ensure data is “Complete”, “Accurate” and “Appropriate”, and to link processes and controls to these definitions

“Accurate”, “Complete” and “Appropriate”

- Agents will need to consider qualitative and quantitative factors in defining what they mean by these terms
- **Accurate** – “degree of confidence that can be placed in the data”
 - Can I rely on this data? What might be making it unreliable? What controls do we have to ensure it remains reliable?
- **Complete** – “comprehensive information for the undertaking”
 - Is anything missing from this data? What controls do we have to ensure that nothing is missing?
- **Appropriate** – “data do not contain biases which make them unfit for purpose”
 - How suitable is this data for what I am trying to do with it? How does the data fit with the modelling methodology?

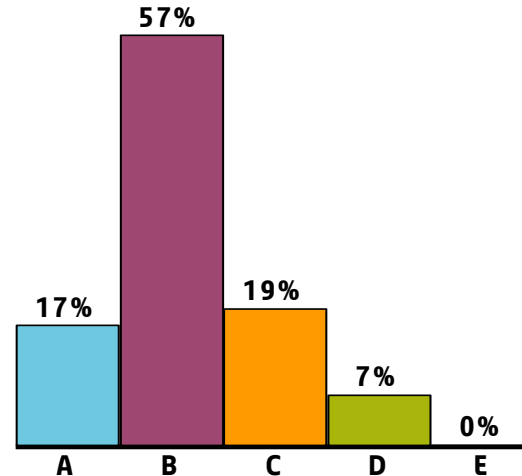
“Accurate”, “Complete” and “Appropriate”

- Agents should be able to demonstrate that
 - Data used is free from material mistakes, errors and omissions
 - Data is to a large degree consistent in time
 - Comprehensive data available for all business units and model variables
 - No relevant data is excluded without justification
 - Granularity is sufficient for adequate actuarial techniques
 - Data is relevant to the business and its portfolio of risks
 - Data used for prediction is a good guide to the future

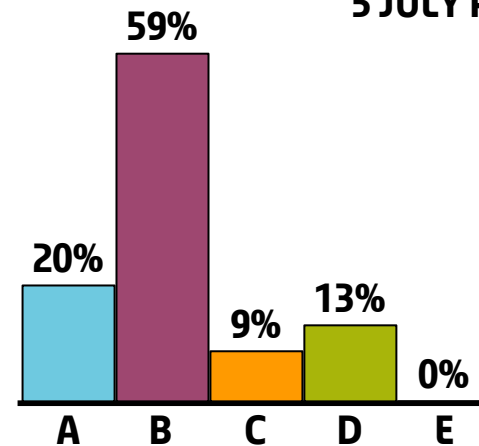
How does data governance operate in your firm?

- A. Robustly, with clear reporting lines and sign off
- B. Informally, but people generally know what they are responsible for
- C. It's all looked after by the IT team – I try not to get too involved
- D. We've thought about it, and it's probably an issue
- E. Data governance? Why would I need that?

4 JULY RESULTS



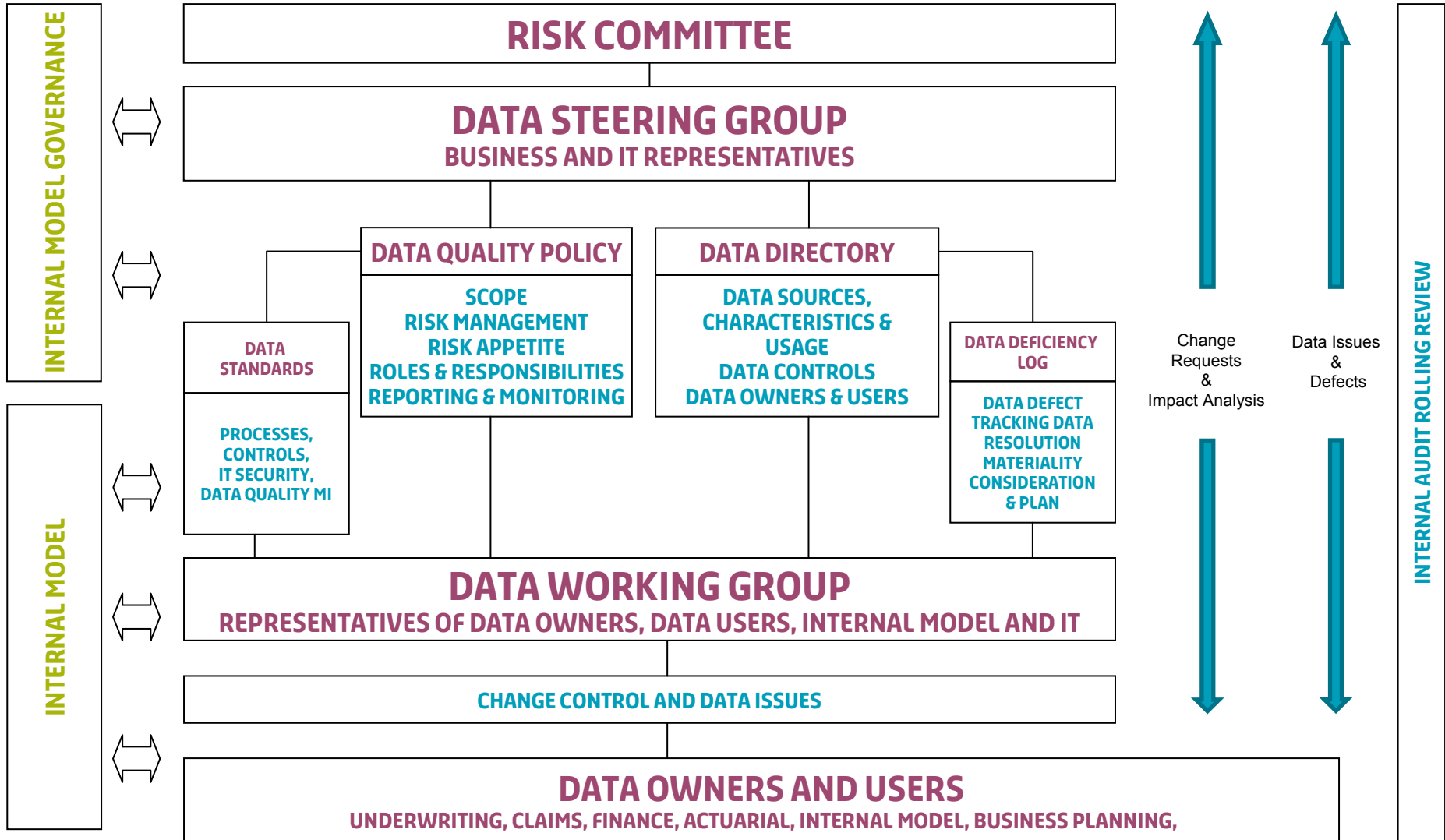
5 JULY RESULTS



Points to consider on Data Governance

- ***Make data governance practical*** – ensure that structures fit with your business operations
- ***Involve a wide range of stakeholders*** – while the internal model is the main focus, there are other users and owners of data

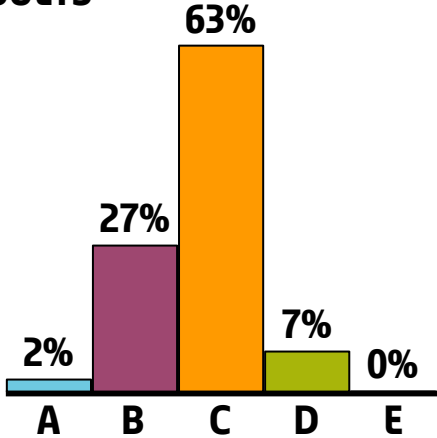
Syndicate 999 Example - Data Governance



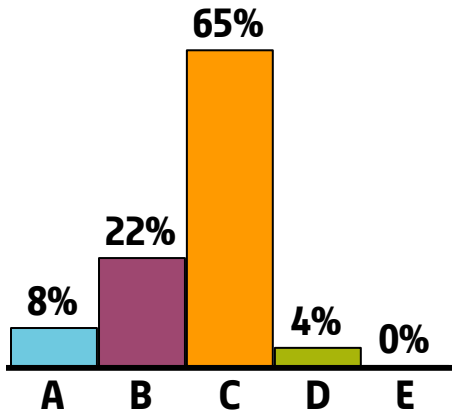
What stage is your data directory?

- A. Embedded
- B. Used within team
- C. Being drafted by IT
- D. We've thought about it
- E. What's a data directory?

4 JULY RESULTS



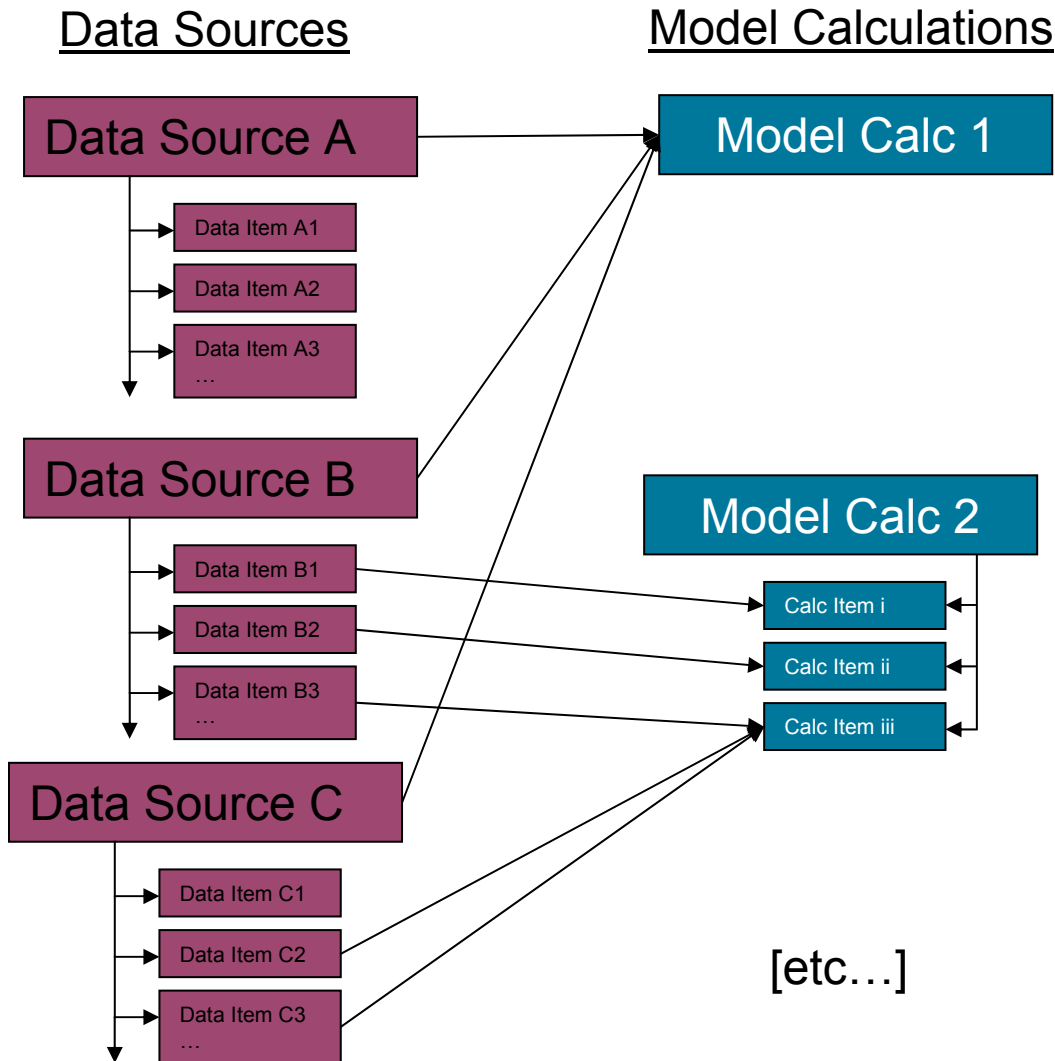
5 JULY RESULTS



Points to consider on the data directory

- **Coverage** – Think about what needs to be included - at a minimum, this is the Internal model, not just CCK, but there may be other important stakeholders
- **Granularity** – The need to strike a balance between usability and detail. Don't try to capture too much
- **Practicality** – Focus on the actual uses of data when designing the directory
- **Make it a dynamic business tool** – ensure that the design is something that people will use for change control going forward
- **Deficiencies** – a process for capturing data deficiencies and limitations will support practical goals of the data directory

Syndicate 999 Example - Data Directory Mappings



Determining Granularity

- Granularity is a key consideration for the data directory
 - Too detailed, and there will be thousands of lines
 - Too high-level and it won't add any value
- Agents should consider making the directory useful as a change management tool
 - More granularity will make change management clearer...
 - ...but it will increase the burden of keeping the directory updated

Syndicate 999 Example – Data Directory

- Large loss data has been identified in the data directory as being used in several places in the Internal Model
 - Calculation: Parameterisation of the Large loss severity distribution
 - Validation: Backtesting the Large Loss frequency distribution
 - Validation: Testing reinsurance performance
- As these are material components of the internal model, Syndicate 999 is required to assess this data against its quality standards
- The following slide shows a simplified example of a report from the data directory entry for this single data item
 - Note that a mixture of qualitative and quantitative considerations would have been used to assess data quality against each criteria
 - Note also that limitations may need to be addressed within the model (e.g. by considering benchmark data when parameterising) – this link should be made explicitly

Syndicate 999 Example – Data Directory

This extract from the data directory focuses on a single data item. Would also expect to be able to extract all data items / sources for a single user or use

Ref	D4.1.7			
Data item	Property - Large Losses			
Data Source	Claims system (via LL_Extract)			
Source Owner	Claims			
Key Controls	1. Audit of claims system 2. LL_Extract reviewed and signed off by underwriters 3. Technical review of LL_Extract by data manager			
Data User	Internal Model			Underwriting
Data Use	Parameterisation of LL severity	Validation of LL frequency	Validation of RI performance	Setting LL pricing load
Completeness	key controls ensure completeness			
Accuracy	key controls ensure accuracy			
Appropriateness	Some limitations	Broadly appropriate	Broadly appropriate	Some limitations
Limitations / Deficiencies	1. Credibility 2. Timeliness (1 mth lag) 3. No IBNER	1. Credibility	1. Credibility	1. Credibility 2. No IBNER
Actions	Use of benchmark data and UW expert judgment during selection process	Used only as part of validation suite	Used only as part of validation suite	Supported with other analysis

Discussion with users required to understand potential limitations and therefore assess against quality criteria

The same data may have different quality results for different uses

Considering users outside of the internal model will improve the function of the directory as a business tool

RISK MITIGATION TECHNIQUES

Risk Mitigation - Definition

- Traditional & non-traditional risk transfer ...
 - E.g. Reinsurance, ILW's
- ... on both the asset & liability side of the balance sheet ...
 - E.g. Derivative protections on the asset positions, profit commissions
- ... and may or may not involve risk transfer.

- Risk mitigation which is planned for the future is categorised under Future Management Actions

Risk Mitigation - Requirements

1. Economic effect over legal form	Must test if, on an economic basis risk mitigation occurs. Ignore accounting or legal form.
2. Legal certainty, effectiveness and enforceability	Verify that risk mitigation can occur and there is legal certainty that you can enforce mitigation.
3. Liquidity and ascertainability of value	Verify that, in a stressed scenario, internal or external conditions will still exist to allow the risk mitigation.
4. Identification and assessment of secondary risks	Consider and document all additional risks that are present due to the risk mitigation.
5. Direct, explicit claim on the protection provider	There is no uncertainty over the exposure covered, and make sure to include the risk that the counterparty won't cover in the secondary risks.
6. Provision for risk mitigation techniques in the internal model	If at all possible, run the model to assess the risk both gross and net of risk mitigation techniques to understand the materiality.

Risk Mitigation – Possible examples & secondary risks

Risk mitigation examples	Example secondary risks to consider
Reinsurance, including Intra Group Reinsurance, ILW	Credit risk in stressed scenario, reinsurance exhaustion, reinsurance costs, potential disputes, operational risk of incorrect placement / coverage, basis risk of ILW, future placement terms, operation of inuring contracts
Derivatives or structured products	Credit risk in stressed economic scenario, basis risk, risk on look-through assets, model risk, legal risk
Operational risk controls	Control failure in stressed insurance or economic scenario
Collateral / LoC's	Credit risk in stressed scenario, form and risk of collateral, renewal terms and cost of LoC, disputes over liquidation rights

Risk mitigation – Reinsurance example

<p>1. Economic effect over legal form</p>	<p>Outputs from pricing exercises or capital modelling including, say:</p> <ul style="list-style-type: none"> - distribution of the class loss ratio on a gross & net basis - prob of insolvency & mean profit with/without the programme.
<p>2. Legal certainty, effectiveness and enforceability</p>	<p>Refer to specific clauses in the slip/contract to define the circumstances when you can recover.</p>
<p>3. Liquidity and ascertainability of value</p>	<p>Refer to creditworthiness of the counterparty, and include the risk it can't pay (etc) in the secondary risks</p>
<p>4. Identification and assessment of secondary risks</p>	<p>Documentation of the secondary risks within the risk register or similar, and within the internal model.</p>
<p>5. Direct, explicit claim on the protection provider</p>	<p>Refer to specific clauses in the slip/contract for coverages.</p>
<p>6. Provision for risk mitigation techniques in the internal model</p>	<p>Reporting of insurance risk on both a gross and net of reinsurance basis.</p>

FUTURE MANAGEMENT ACTIONS

Future Management Actions - Definition

- Any predictable decision that the senior management can make
 - In general will decrease the SCR although may increase the SCR
 - Will, by definition, be something that is not yet in place, or could also include “rolling over” strategies
- Additional requirements over and above “Risk mitigation techniques” will apply.
- Examples
 - Reinsurance purchase
 - Asset rebalancing
 - Cycle management and rate variability – think about your implied management action in the model

Future Management Actions - Requirements

Trigger events	Document the trigger events, and demonstrate that the model takes account of the time lag between event and action.
Materiality	Should determine the SCR on the basis of with and without the future management action
Board approval	<p>The intention to follow the management action must be Board approved before inclusion in the internal model, including circumstances where the action may not be followed</p> <p>Track record of carrying out the actions, and no deviations, will be taken into account by Lloyd's.</p>
Deviations from planned action	<p>Significant deviations from planned actions must be reported to Lloyd's</p> <ul style="list-style-type: none"> • Model may no longer meet approval standards • SCR may not be appropriate, with capital add-ons
Stressed scenario	Intention to carry out the future management action and the effect of the action in a stressed scenario must be considered

FINANCIAL GUARANTEES

Financial guarantees; contractual options & non – contractual payments

- Not typically an issue for London Market insurers:
 - Benefit promises usually don't contain options
 - Asset portfolios usually fairly standard
- Issues to consider are:
 - Movement in option value is usually non-linear w.r.t. the underlying
 - Greater information may be required to value an option
 - Must be consistent with any methodology to value in TP
- Examples
 - Options and guarantees in the written book (financial products etc)
 - Reinsurance cover with the option to commute

TABLE DISCUSSIONS

Suggested topics for discussion

- Do you have any concerns on the amended Validation Report submission dates?
- What are the biggest challenges you are finding with your data from a Solvency II perspective?
- The workshops have now covered the bulk of the material for the Model Validation workstream – what are your largest current challenges with model validation?
- What items would you like on the agenda for the final Model Validation workshop?

ROUND UP AND QUESTIONS

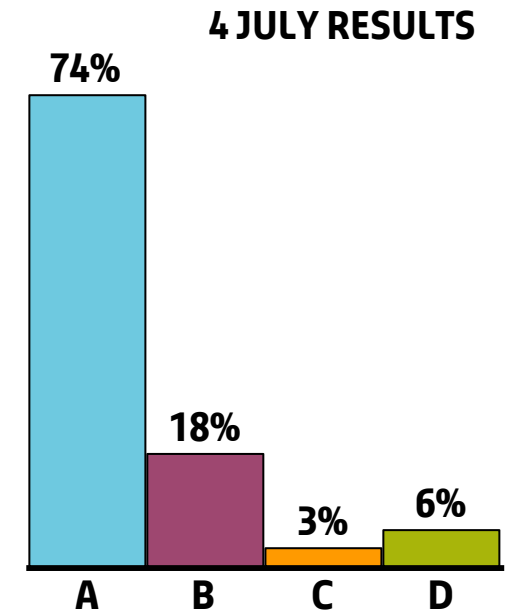
NEXT STEPS

What happens next?

- Slides will be made available on lloyds.com after both workshops
- Validation walkthroughs – initial sessions over next 2-3 weeks and follow up sessions now booking
- Updated model validation evidence templates will be reviewed and feedback revised
- Next workshops on validation – 1 & 2 September
 - use for Validation Report and issues arising from reviews
- Other upcoming sessions:
 - Documentation & Final Application – 19 & 20 July
 - IMSCR & TPs – now 8 & 23 August
 - Governance, Risk Management & use – now 9 & 24 August
- Finally, before you go, a request for feedback ...

Do you agree with revised Validation Report deadlines

- A. Yes – this will give us additional time to prepare our validation report and achieve a better end product
- B. Yes – now I can have some extra holiday in August
- C. No - I would prefer to stick to original timings
- D. No – my whole summer is now ruined!

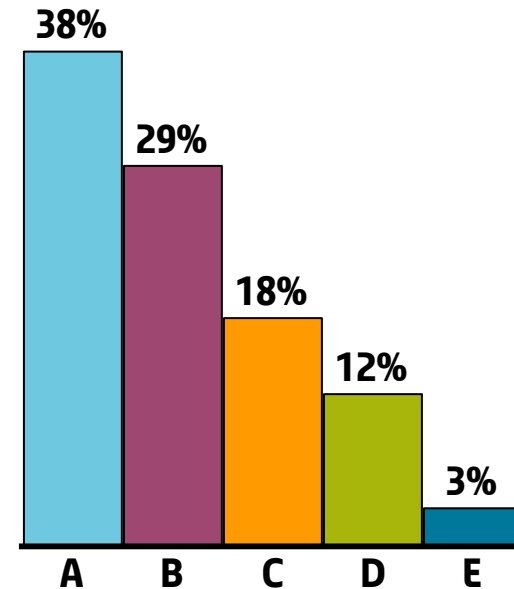


5 JULY – DATA NOT COLLECTED

How useful have you found today's session?

- A. Very useful and provided helpful practical guidance and clarification
- B. More detailed guidance and worked examples would have been helpful
- C. We have clear views on Lloyd's expectations for validation
- D. Greater detail needed on format and timing of Lloyd's reviews
- E. I'm too polite to say!

4 JULY RESULTS

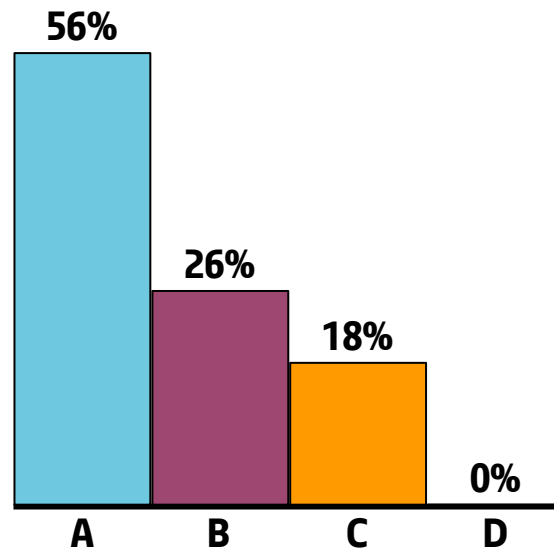


5 JULY - DATA NOT COLLECTED

How have you found format of today's workshop?

- A. It was a good balance between presentation and discussion
- B. Would prefer less presentation and more discussion
- C. Would prefer less discussion and more presentation
- D. Other.

4 JULY RESULTS



5 JULY - DATA NOT COLLECTED

