

# SOLVENCY II TP, STANDARD FORMULA & IMSCR WORKSHOP

13 & 17 June 2011

# Agenda

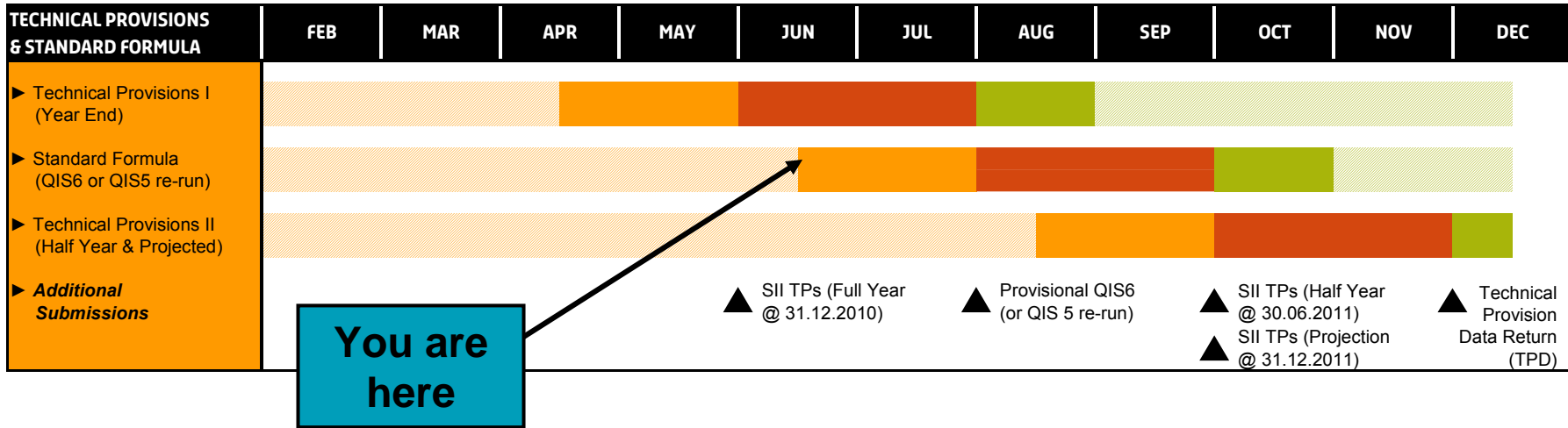
- Introduction and overview of workstreams
- Evidence Templates
- Technical Provisions and Standard Formula
- Internal Model SCR

*Table discussions and play back/Q&A*

- Next Steps and feedback

# **INTRODUCTION & OVERVIEW OF WORKSTREAMS**

# TP and Standard Formula workstream plan

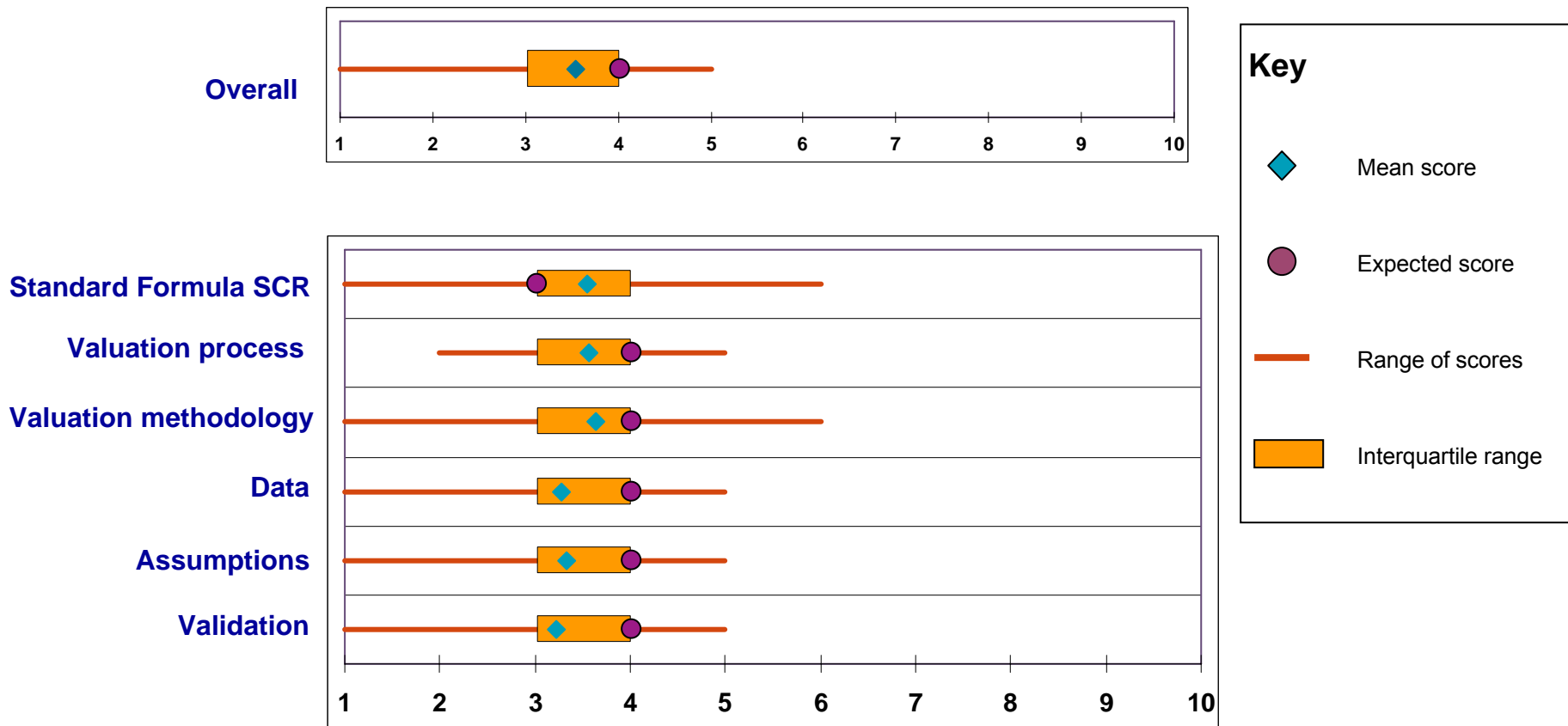


## What and when?

- Year-end 2010 TPs submitted on 27 May – currently reviewing results
- Year-end full Standard formula recalculation by 29 July
- Half-year 2011 and projected 2011 year-end TPs by 30 September
- Four evidence template submissions: 27 May, 29 July, 30 September and December 16 (final)
- TPD and GQD data by 30 November

# TP & SF Q1 2011 scores close to Q4 2010

## Self assessment scores as at Q1 2011

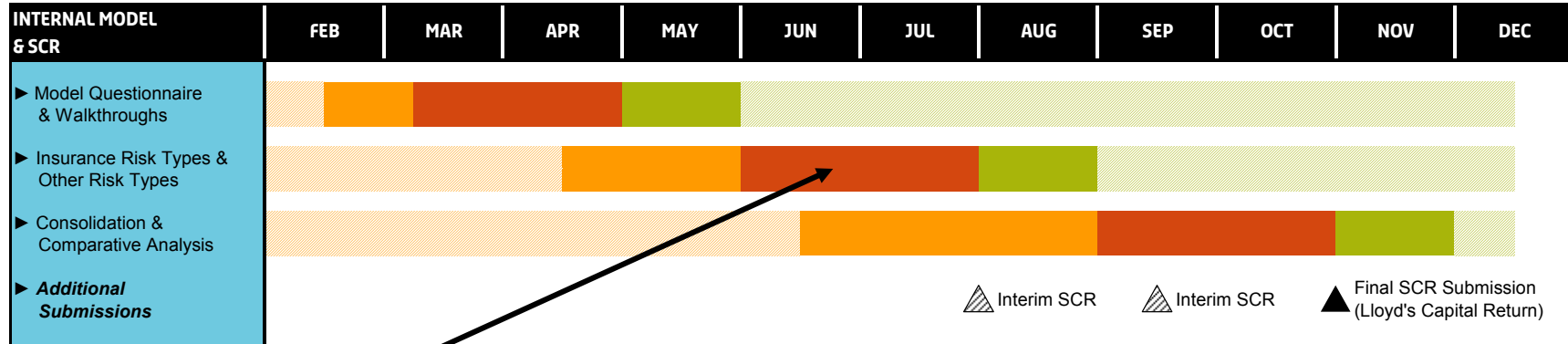


At Q4 Dec 2010 the mean score was 3.0

# Next Steps for TPs and Standard Formula

- Guidance and spreadsheet now on [lloyd's.com](https://www.loyd.com) for July SF submission
- During June Lloyd's is
  - reviewing Evidence Templates submitted
  - analysing May TP submissions
- Starting July Lloyd's will provide feedback on TPs
  - analysis pack for May TP return
  - meetings on specific issues
- Lloyd's will raise “red flags” sooner
  - you may already have had a call.....

# Internal Model & SCR Workstream plan



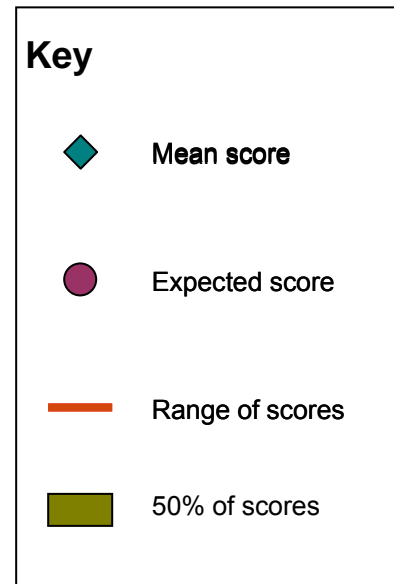
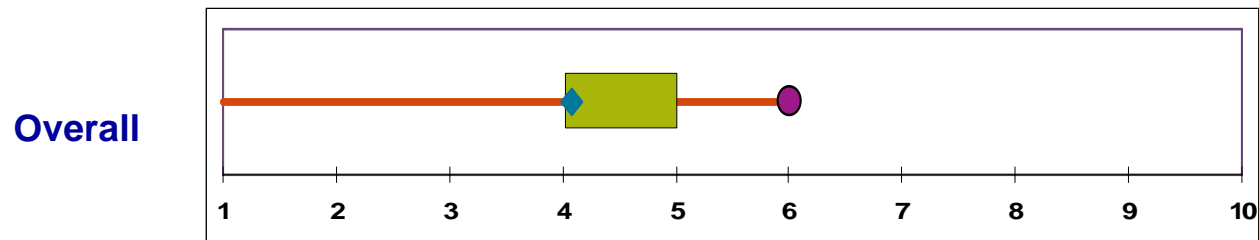
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## What and when?

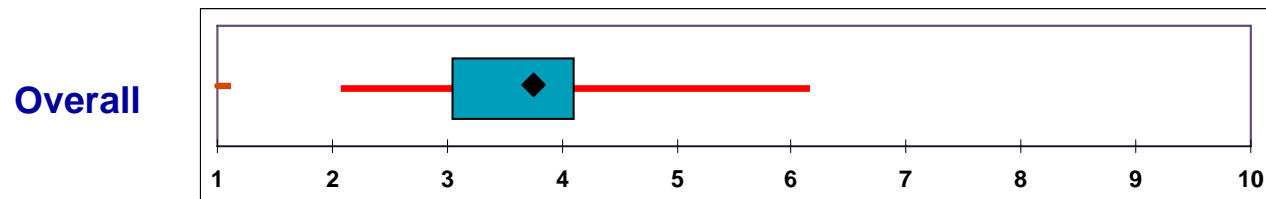
- Phase 1 walkthroughs completed and model questionnaires played back to agents
  - planning second phase and targeted, risk based follow ups
- First Evidence Template submitted 27 May – due again 26 August & 16 December
- First interim SCR submission due end July

# IM SCR scores reasonably consistent with model validation progress

## Agent self assessment (@ Q1 2011) – Model Validation



## Agent scores from IMSCR evidence templates (May 2011)

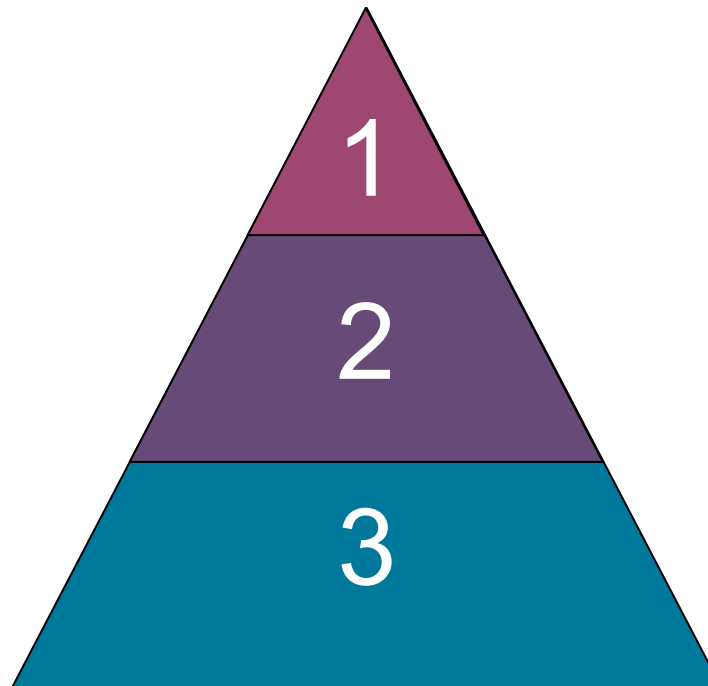




# **EVIDENCE TEMPLATES**

# Purpose of the Evidence Template is second tier in final Application Pack ...

Submission to Lloyd's
<ul style="list-style-type: none"><li>• Board summary</li></ul>
<ul style="list-style-type: none"><li>• Completed Evidence Templates (ETs)</li><li>• Validation Report, LCR &amp; ORSA</li></ul>
<ul style="list-style-type: none"><li>• Supporting technical specialist documentation and policies as required</li></ul>



Maintained by agents
<ul style="list-style-type: none"><li>• Executive summary and board documentation</li></ul>
<ul style="list-style-type: none"><li>• Technical - descriptive</li></ul>
<ul style="list-style-type: none"><li>• Technical - specialist level</li></ul>

# ... and effort now will ease the preparation and review burden at application

- As set out in 2011 guidance will be an integral part of final application
- Needs to stand alone as clear link between supporting the Board summary declaration and the detailed underlying evidence
  - More detail than FSA's E-N templates
- Complete coverage for each element
- Generic references supported by bespoke wording and signposts sections within key papers
- Concise summary of evidence and rationale for why it demonstrates compliance
- Sample of evidence requested delivered promptly

# RAG rating refers to the Evidence Template and its fitness for purpose...

- Measured against ultimate required position - not moment in time
- Expect majority to be red or amber at first submission
  - feedback should be addressed in subsequent versions
- Rating refers to ability of ET to demonstrate evidence and explain rationale
  - coverage of the relevant area as directed by the ET is clear
- ET should record documentation AND processes, systems and people as evidence

**...Not comment on overall progress to Solvency II compliance**

## ...and rating improves with targeted explanations and references...

- **Short general wordings across multiple elements referring to one large document**
- **Unclear whether underlying evidence exists or simply missed**
- **Bespoke wordings and sections of papers added to generic references**
- **Incomplete references and limited process and WIP signposted**

# ...and rationale for WHY the evidence is relevant and appropriate

- **Bespoke wordings per element with signposting to demonstrate completeness**
- **Description of why approach meets the requirements**
- **Status of supporting evidence is stated clearly with timelines to final sign-off**
- Explanatory notes and example ET section for all three RAG ratings issued 9 June and available on [lloyds.com](https://www.lloyds.com)

**TECHNICAL  
PROVISIONS &  
STANDARD  
FORMULA**

# Agenda (TP and SF section)

- **May Technical Provisions feedback**
- Standard Formula
- Risk margin



# Health Warning

**All May TP return results are still provisional  
and only included for illustration only**

## At an aggregate level Solvency II TPs have increased

- Results are relatively close to held provisions
  - Lloyd's will try to identify the drivers for the movements
    - could be distorted by acquisition cost issues
    - possible topic for table discussions?

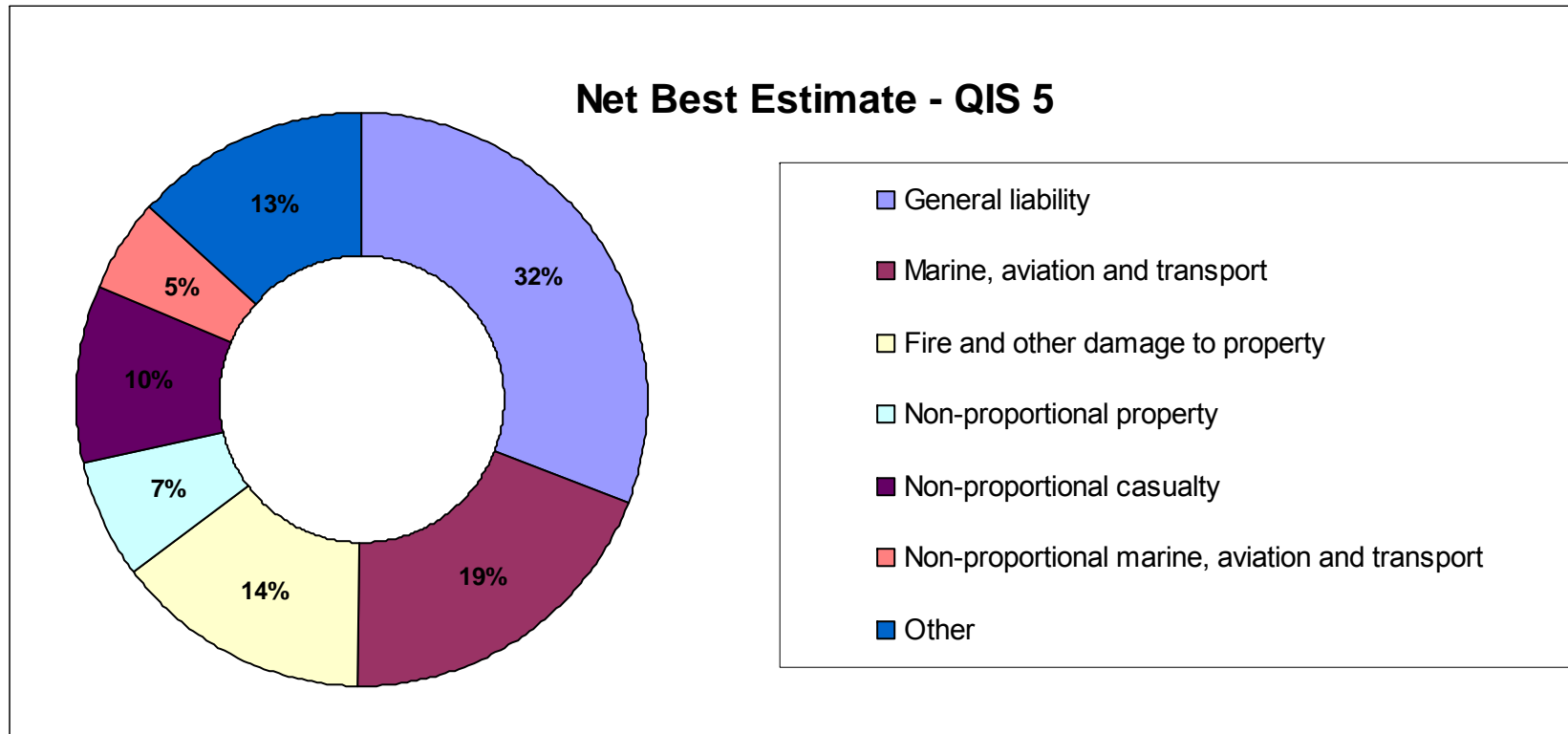
(£m)	YE 2009	YE 2010	% movement
Current basis net reserves	31,932	33,357	4%
Solvency II basis net TPs	25,903	29,499	14%
% movement	(19%)	(12%)	

Source: Lloyds QIS5 returns, y/e 2010 SRD and provisional May 2010 TP submissions

Note: excludes small number of syndicates where May TP return being verified

Note: Solvency II TPs include estimated risk margin of 10%

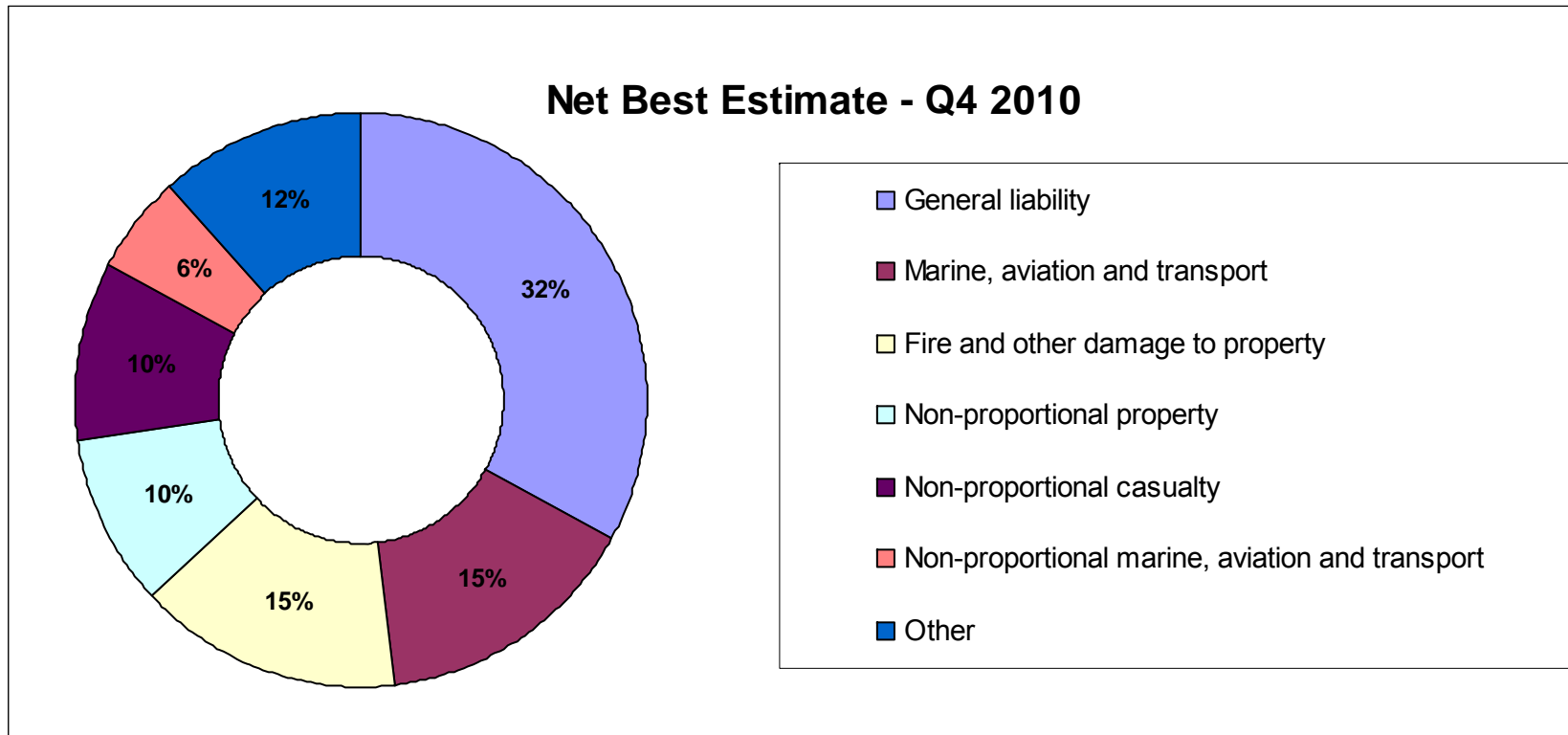
# Have seen little change in split by class



Source: Lloyds QIS5 returns and provisional May 2010 TP submissions

Note: excludes small number of syndicates where May TP return being verified

# Have seen little change in split by class



Source: Lloyds QIS5 returns and provisional May 2010 TP submissions

Note: excludes small number of syndicates where May TP return being verified

# The level of discounting appears reasonable

- Average discount credit is 6%
  - differences by lines of business are plausible

Class	Discount Credit (Net BE)
Direct - General liability	7%
Direct - Marine, aviation and transport	5%
Direct - Fire and other damage to property	2%
Non-Proportional RI - Property	4%
Non-Proportional RI - Casualty	12%
Non-Proportional RI - Marine, aviation and transport	6%
Other	8%
<b>Total</b>	<b>6%</b>

Source: Lloyds QIS5 returns and provisional May 2010 TP submissions

Note: excludes small number of syndicates where May TP return being verified

# Binary Events

- Lloyd's included a possible method last time
  - does not appear to be much progression on methods
  - Lloyd's aggregate results were around 3% for QIS5
  - currently seeing closer to 5% for syndicate returns

Class	Binary events in net BE (£m)	% of net BE	Binary events N/G ratio
Direct - General liability	306	3.9%	75%
Direct - Marine, aviation and transport	166	4.8%	68%
Direct - Fire and other damage to property	138	4.1%	74%
Non-Proportional RI - Property	164	6.8%	71%
Non-Proportional RI - Casualty	161	6.8%	84%
Non-Proportional RI - Marine, aviation and transport	57	4.2%	65%
Other	181	5.1%	75%
<b>Total</b>	<b>1,173</b>	<b>4.8%</b>	<b>74%</b>

Source: Lloyds QIS5 returns and provisional May 2010 TP submissions

Note: excludes small number of syndicates where May TP return being verified

# Expenses

- Many questions received on expenses
  - had these been considered fully as part of QIS5?
- Clarify Lloyd's position as:
  - premium cashflows are gross of acquisition costs (i.e. "gross gross")
  - do expect expenses provisions to be higher than just ULAE
    - claims handling amounts are consistent
    - have seen an increase
- Potential table discussion: are any particular areas of the expense calculation causing particular concern?

# Expenses – high level results

- Expenses are 11% of the net Technical Provisions (excl risk margin)
  - with an average discount credit on expenses of 4%

Expense Element	Provision (£m)	Provision (%)
Unallocated Claims Handling	593	20%
Gross Acquisition Costs	1,720	59%
RI Acquisition Costs	(58)	(2%)
Administration Expenses	357	12%
Overheads	163	6%
Investment Management	80	3%
Other	40	1%
<b>Total</b>	<b>2,895</b>	<b>100%</b>

Source: Lloyds QIS5 returns and provisional May 2010 TP submissions

Note: excludes small number of syndicates where May TP return being verified



# We did see the “usual suspects” for FAQs

- Most common FAQs still concern:
  - treatment of acquisition costs as part of future premiums
  - calculation of expense provisions
  - Binary Events
  - contractual obligations – especially binders
- But there is less focus on:
  - segmentation
  - inclusion of premium in cashflows

# Looking forward to the September TP submission.....

- Two elements to the September return
  - Half-year TPs as at 30 June 2011; and
  - projected TPs as at 31 December 2011
- More granular requirements for the September submission....
- ...and both returns will introduce new challenges
  - would expect that approaches and methodologies to be further developed
- Template and guidance will be available in early August

## ....and a summary of the key requirements

<b>Element*</b>	<b>September submission</b>
<b>Segmentation</b>	Solvency II class (28 non-life)
<b>Currencies</b>	“Six plus one”
<b>Expense provisions</b>	Class plus YOA, not category
<b>Discounting**</b>	Class plus YOA
<b>RI Bad Debt</b>	Class plus YOA
<b>Risk Margin</b>	Whole account, allocated to class

\* All items split between claims and premium provision, except risk margin

\*\* Lloyd's will provide yield curves to be used by all Managing Agents

# Agenda (TP & SF section)

- May Technical Provisions feedback
- **Standard Formula**
- Risk margin

# Standard Formula return

- Now available on Lloyds.com:
  - High level instructions
  - Spreadsheets (based on QIS5)
    - proposed changes to Standard Formula are not yet finalised
- Main areas required are:
  - current basis Balance Sheet
  - Solvency II Balance Sheet
  - Standard Formula SCR
  - include geographical diversification (but no USPs)
- Technical Provisions should be consistent with May return
  - ....but can include refinements to methods where appropriate

# Clarify the areas not required

- Confirmation of items in QIS5 that are **NOT required** for this return
  - Lapse risk
  - EPIFP
  - Qualitative Questionnaires
  - Internal Model Details and Results
  - USPs
  - Current Basis Reserves splits by QIS 4 class
  - Group details
  - Detailed Breakdown of Own Funds
- NOT including FAL/FIS in market risk or balance sheet
  - this will be valued centrally
  - Trust fund asset information has already been provided to agents via the LIM Asset data

## Reiterate key issues from QIS5

- All premium information should be entered gross of acquisition costs in the templates
- Non-Life Catastrophe Risk premiums should not be split across perils
- Future premium amounts now included within the Technical Provisions should be removed from the assets side of the Solvency II balance sheet (not all Agents did this for the 2010 exercise)
- Agent's should use (and document) their own methodology to assess Geographical Diversification. This includes the method used to allocate worldwide exposures
- Remember the 2010 Lloyd's FAQs are still available on the website
  - and email return to [Solvency2@lloyds.com](mailto:Solvency2@lloyds.com) as before

# Agenda (TP & SF section)

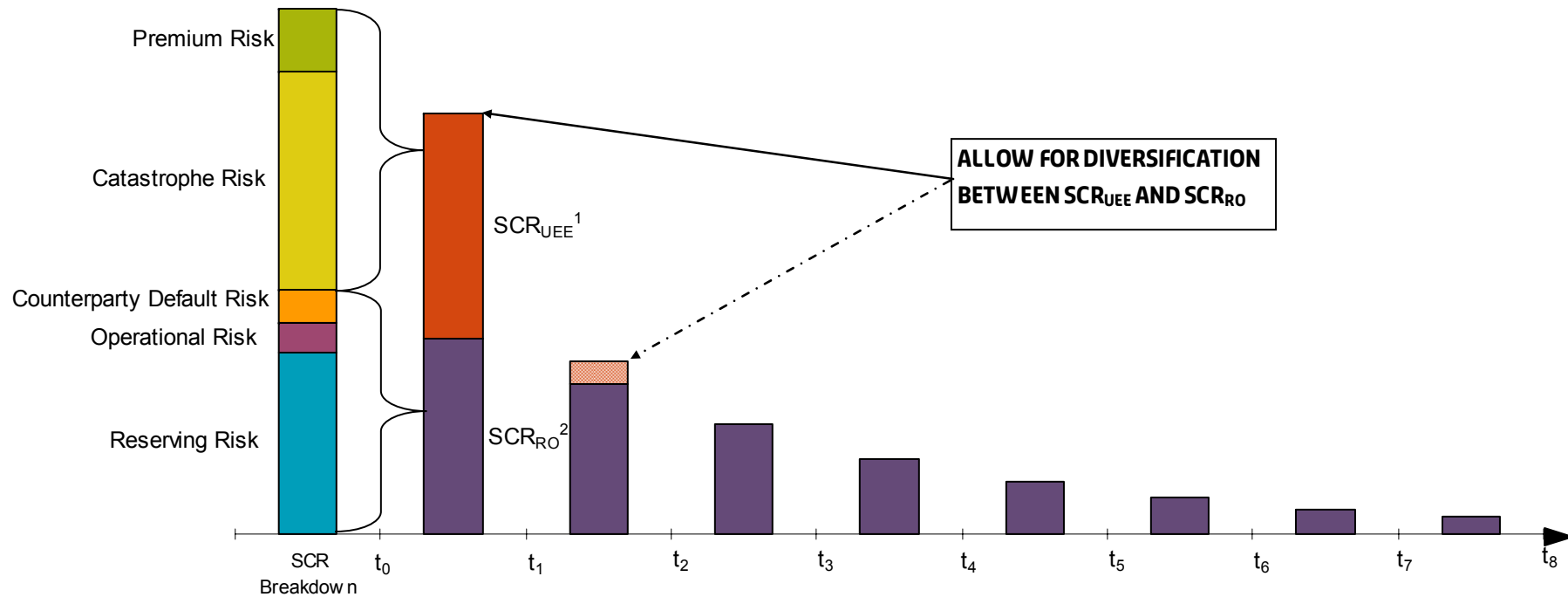
- May Technical Provisions feedback
- Standard Formula
- **Risk margin**



# Risk Margin

- Simplification 3 was extensively used in QIS5
  - Quantify SCR for Risk Margin purposes (excluding avoidable Market Risk and Type 2 Counterparty Default Risk)
  - Run off in line with best estimate
- Method was potentially applied “blindly” or inconsistently last year in the market – including Lloyd’s
- Ask Agent to consider the risk margin carefully. Proposing:
  - Calculate element of SCR which is to be run-off
    - for **current obligations** transferred to “reference undertaking” (reserving risk, operational risk and counterpart default risk)
  - also allowance for unexpired exposures between  $t_0$  and  $t_1$  (Premium risk, Catastrophe Risk)

# Risk Margin – Worked Example



Time(Years)	t <sub>0</sub> - t <sub>1</sub>	t <sub>1</sub> - t <sub>2</sub>	t <sub>2</sub> - t <sub>3</sub>	t <sub>3</sub> - t <sub>4</sub>	t <sub>4</sub> - t <sub>5</sub>	t <sub>5</sub> - t <sub>6</sub>	t <sub>6</sub> - t <sub>7</sub>	t <sub>7</sub> - t <sub>8</sub>
SCR <sub>RM</sub> <sup>3</sup>	10,307	4,225	3,574	2,443	1,697	1,182	810	546
CoC (@ 6%)	618	254	214	147	102	71	49	33
Discounted	613	244	199	130	86	57	37	24
<b>Risk Margin</b>	<b>1,390</b>							

<sup>1</sup> SCR<sub>RO</sub> – SCR component to be run-off  
<sup>2</sup> SCR<sub>UEE</sub> – SCR component relating to unexpired exposures  
<sup>3</sup> SCR<sub>RM</sub> – SCR component used to calculate risk margin

# **INTERNAL MODEL SCR**

# Agenda (IMSCR section)

- **Initial Model walkthroughs feedback**
- **Second model walkthroughs planning and purpose**
- **Lloyd's Capital Return – July submission**

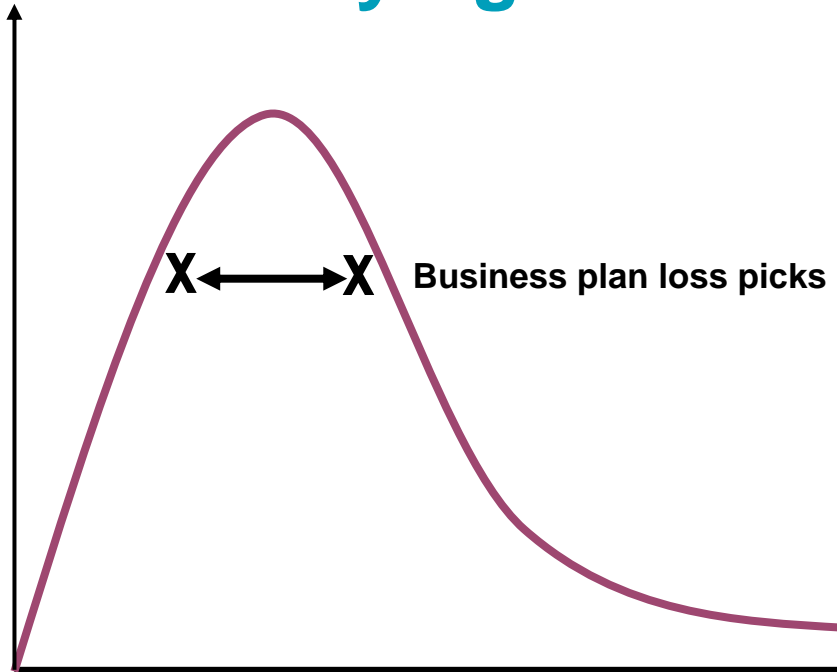
# Model walkthroughs considerably enhanced our understanding

- Lloyd's found meetings extremely useful as a starting point
- Development progressing rapidly
  - Significant work needs to be done to meet targets in the plan for delivery of the LCR requirements in July
  - Parameterisation needs a big push
- In fairness, added substantially to knowledge at Lloyd's on agents' capital models from current ICAS regime

# High degree of conformity in approach

- Don't be afraid to be different...
- ...as while methods we saw are valid there are good and bad uses for each approach
- Validation will be key and will be our main focus for round 2
- Calibration – 1 year horizon v ultimate still in testing for most agents

# Premium risk approach consistent but with varying confidence for reviewers



- Scaling to business plan loss picks
  - Limited difference fine
  - Understand the reasons for the difference
  - Validate the business plan selections

- Expert judgement
  - Parameters from underwriters, historical data, market data
- Split of cat / non cat
  - Premium identification
  - Base for attritional loss projections

# Catastrophe risk needs to address “unmodelled perils”

- Significant use of external models for peak risks
  - Different versions, agent adjustments
- Verify “other” cat including large “man-made” losses within attritional
  - Better agents using a structured approach to identify territories / perils not within vendor models
  - Others require work to validate assumptions / uplift factors
- Reinsurance protection reasonably accounted for





## Reserve risk has a dominant feature...

- Address the limitations and assumptions and one size fits all
  - Consider split of large v attritional claims
  - Correlations
- Consistency with other parts of the model
  - Underwriting risk one year on
- Reasonable approaches to gross : net
- Limited adjustments to historical data

# Aggregation reliant on matrices and copulas

- Size of matrices
  - Challenge to validate the dependencies and internal consistencies



- Expert judgement key
  - Focus for Lloyd's review team
- Limited agents relying primarily on a drivers basis (but with success)
- Note – the LIM is just as dependent on matrices as agents

# Market risk built on new ESGs

- Most agents have adopted ESGs for Solvency II
- Issues around post loss currency volatility
  - Management action to match post loss
  - Recognise potentially different approach for key currencies where exposure matched by capital deployment
- Ensure consistent approach with discounting and inflation assumptions for liabilities
- Risk to address failure to achieve risk free PLUS illiquidity premium



# Credit and operational risk face fewer issues

- Common adoption of rating agent default ratios
  - With stressed downgrades
  - Strong correlation with insurance risk
  - Consider term of future recoveries
- Operational risk is scenario based
  - Full curve fitted from limited distribution points

# Agenda (IMSCR section)

- Initial Model walkthroughs feedback
- **Second model walkthroughs planning and purpose**
- Lloyd's Capital Return – July submission

# Development from phase 1 will target issues on agent by agent basis

- Completed questionnaires will be a key part of the evidence
- Identified some issues specific to agents and some market-wide themes
- In a few cases, issues for urgent resolution were identified
  - Individual feedback in the near future
- Follow up issues for most agents
  - Personalised agenda
  - Include material risks / classes as well as specific issues

# What happens next?

- The second phase of walkthroughs will commence on 27<sup>th</sup> June
  - They will run until early August
  - Address feedback for key October submission deadline
- Attendees should be tailored to the areas under discussion (which will vary by agent), but likely to include model owner in all cases
- You should expect contact from Lloyd's in the near future to schedule these meetings



# How is the second phase different?

- Phase 2 will be more **risk focussed** than phase 1
  - Lloyd's will devote more review time to those agents that are more material and/or have larger issues
  - Some agents will get less interaction than for phase 1....
  - ....and some will get substantially more
- Phase 2 will focus on **specific elements** of agent models, and these areas will be different between agents
  - Issues identified during phase 1
  - The most material risk groups / classes of business
  - Areas emerging as themes for the market
  - A sample of other specific areas





# How is the second phase different?

- Phase 2 will look in detail at ***parameterisation and validation***
  - Agents will be expected to be able to explain the details of their approach to specific parts of the model....
  - ....and how they have been able to get comfort with the results
- Phase 2 will also be ***linked to evidence reviews***
  - There will still be lots of on-site review....
  - ....but agents should expect Lloyd's to request specific details of working for desktop review

# What will be the output from phase 2?

- Purpose is to add to the evidence from phase 1
  - Demonstrate that market modelling is appropriate
  - Support LIM application for approval from the FSA
  - Expect to complete a detailed questionnaire
- Agents will have given Lloyd's lots of information to support their application for model authorisation
  - This will make the authorisation process more straightforward
- There will be a feedback process....
  - ...for agents to address in the October Validation Report
  - may involve agreeing specific workplans with agents for outstanding areas of concern

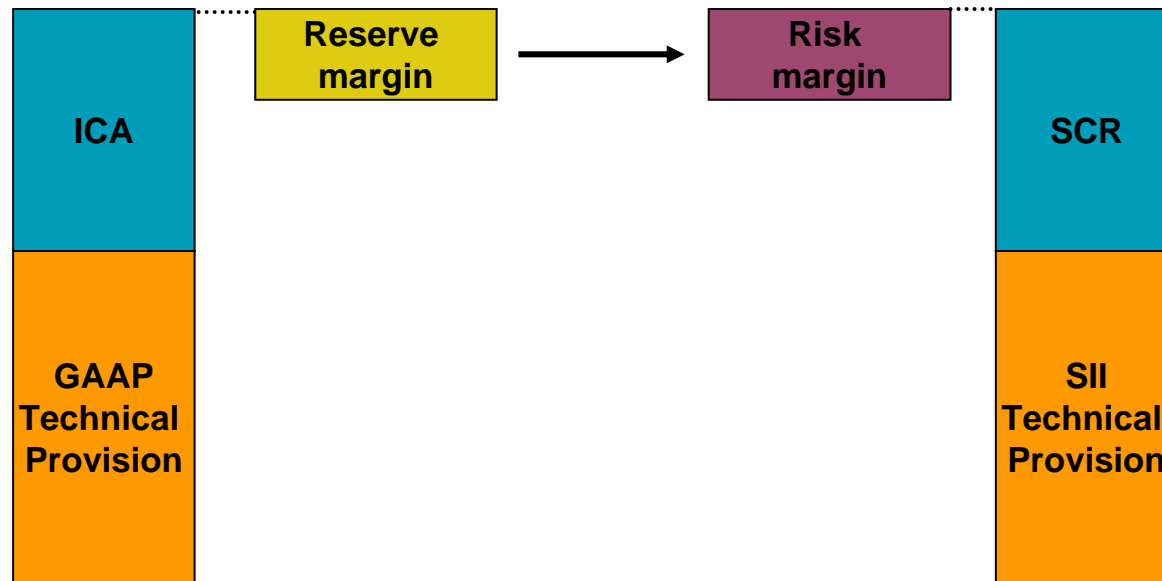
# Agenda (IMSCR section)

- Initial Model walkthroughs feedback
- Second model walkthroughs planning and purpose
- **Lloyd's Capital Return – July submission**

# July submission focuses on headline mean and 99.5% VaR

- One year and ultimate SCR with one year of new business
  - Overall
  - Insurance risk (net of reinsurance only excluding discounting)
- Either as at December 2010 or projected December 2011

# Reconciliation between ICA and ultimate SCR



- Both exclude FAL and surplus syndicate assets, including FIS
- ICA includes discounting credit as profit offset within capital
- Risk free (including illiquidity premium) in TPs and additional discounting credit as profit offset within capital

# **TABLE DISCUSSIONS**

# Suggested topics for discussion:

## Technical Provisions & SF SCR

- What is driving the movement in TPs compared to the current basis?
- Have the expenses calculations been a challenge? Any particular area?
- Had you thought about the SCR run off for the risk margin simplification method 3?
- Are there any particular items you would like to see in the feedback from Lloyd's on either the standard formula or TP returns?
- Are there any particular items on TPs or the standard formula you'd like to see the LMA try to share knowledge on?
- Have people started to think about half year/projecting TPs yet?

## IMSCR

- Currency volatility post loss
  - How to address capital deployed in currency that has exposures
  - How to build in management action
- Identify catastrophe premium
- Work to validate and support bootstrap
- Size of matrices for aggregation

# **ROUND UP AND QUESTIONS**



**NEXT STEPS**

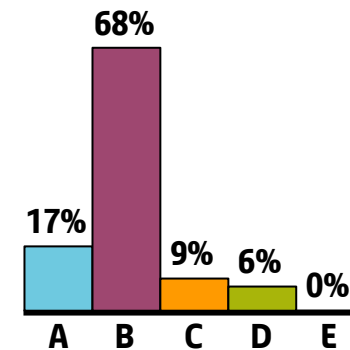
# What happens next?

- Slides will be made available on [lloyds.com](https://lloyds.com) after both workshops
- Second phase of model walkthroughs will begin in late June
  - expect a call soon to schedule!
- Standard Formula submission by 29 July
- Next workshops on TPs & IMSCR – 8 & 9 August
- Other imminent sessions:
  - Model Validation (3) - 4 & 5 July
  - Documentation & Final Application (1) - 19 & 20 July
- And before you go, a request for feedback ...

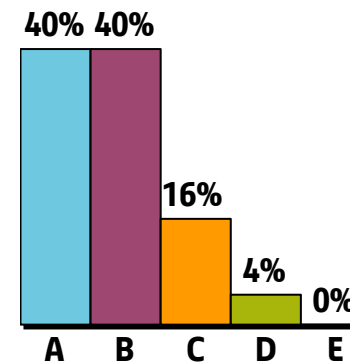
# How useful have you found today's session?

- A. Very useful and we have clear expectations for the next 3 months.
- B. Useful, but greater technical guidance would have been beneficial.
- C. Useful, but greater detail on exact timing of reviews needed.
- D. Not very useful.
- E. I'm too polite to say!

13 JUNE



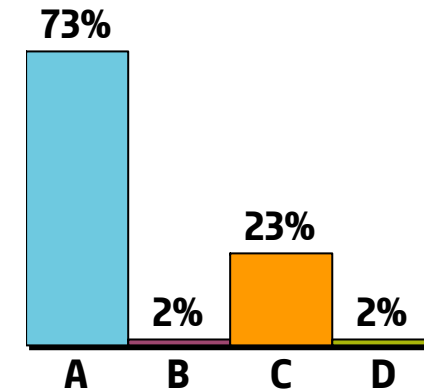
17 JUNE



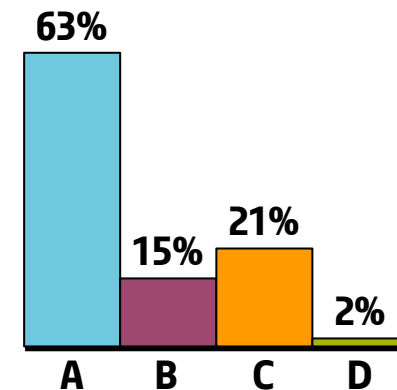
# How have you found format of today's workshop?

- 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.

13 JUNE



17 JUNE





# **APPENDIX**

# Guidance & templates on Lloyds.com

- Updated Technical Provisions detailed guidance (March 2011)
- May Technical Provisions spreadsheet template and instructions
  - EIOPA term structure as at 31 December 2010
    - Use pre-stress values
  - Riskcode to Solvency II class mapping (suggested as a starting point)
- GQD and TPD data specifications and instructions
  - Note GQD instructions will change slightly
- Evidence Templates and scoring sheets
- FAQs ....or direct queries to [solvency2@lloyds.com](mailto:solvency2@lloyds.com) or via Account Manager

# Level of SCR sign off required

- Agents must provide sufficient evidence of a robust process to allow LIM to place reliance on syndicate SCRs
- Interim submissions to provide partial / real data to test the LIM
- Full SCR return required by 31 October to calibrate the LIM

Return	Level of sign off	Provided by
July SCR	Best efforts	Capital/Risk committee
September SCR	Negative Assurance	Capital/Risk committee
Final SCR (October)	Positive Assurance	Board



## Signoffs expected for returns

- Already completed QIS5 to “better than best efforts” basis
- Lloyd’s would expect the approaches and methodologies used to be further developed and more robust.
- In many cases exercises will be based on actual year-end results
- TPD will require formal sign off – similar to SRD
- Overall level of expected sign off is:

Return	Level of sign off	Provided by
May TPs	Positive Assurance	Actuarial Function
July SF	Negative Assurance	Finance Director
Sept TPs (incl projected)	Positive Assurance	Actuarial Function
TPD	Negative Assurance	FD + other officer

# Major Developments for Technical Provisions

- Not many changes over last 12 months
- Some key items to note:
  - Segmentation and classes of business
    - Clearer requirement in most areas
  - Future Premiums
    - Claims provisions now include future premiums relating to earned business
    - Reflected in the May TP submission but not in the TPD yet
  - Risk Margin
    - Now allows for diversification (as per QIS5)

# Contract Boundaries

- No real change under latest level 2
- Focus remains on legal obligations of underlying **insurance contracts**
- Debate remains around binders
  - Lloyd's still interprets this a “look through” to focus on underlying insurance contracts
  - Others (including FSA) have spoken about other treatments
  - Need to keep flexible approach
- Important to ensure consistency in definition with capital model
  - And to ensure no double counting or missed exposures

