LLOYD'S

GOVERNANCE, RISK MANAGEMENT & USE WORKSHOP

13 & 14 March 2012

Agenda

- Introduction & FAP update
- GRMU themes arising from FAP Review
 - ORSA
 - 2011 Follow up activity

Table discussions

- Model Scope
- Model Change
- 2012 Review activity

Table discussions

• Next steps

INTRODUCTION & FAP UPDATE

Completion stats by workstream (as reported via agent Q4 scores)



Highest scoring sub elements are broadly supported by Lloyd's review ...



... whilst those at the lower end are in some cases still not supported by review



Heatmap – sorted by material gaps reported

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Profit and loss attribution and backtesting Assumptions		External models and data	Model robustness and stress and scenario testing	Dependencies	Methodological consistency and credibility	Methodological adequacy	Actuarial function	Validation	Data directory and data policy	Use test	Theory, assumptions, mathematical and empircal	ORSA outcomes	Data	Risk management	Probability distribution forecast and risk ranking	Financial guarantees and options, future management actions and non contractual	Calibration	Supervisory reporting and disclosure	Valuation process	ORSA process	TP Assumptions	Validation policy	ORSA documentation	Documentation process	Design and operational details	Final application pack	Valuation methodology	Circumstances where the model does not work	erectivery Insurance risks	Other risks	Aggregate SCR	Valuation of assets & liabilities (excluding technical provisions)	Standard formula SCR	Model change policy	Model change documentation	Risk mitigation techniques	General governance requirements	Model governance	Risk coverage	Outsourcing	Internal control	Fit and proper	Internal audit
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Update on FAP review status

- FAP reviews ongoing to end March
- Structured timeline with tight deadlines for all reviews to be completed
 - each agent pack presented to DROP includes 20 individual documents
 - 30 plus individual reviewers across all workstreams
- Results communicated to agents as soon as possible after DROP session
 - formal letters will follow for all agents
- All review documents will be provided to agents for feedback purposes
- Remember this is a point in time assessment and will be kept under review

36 FAP reviews completed to 9 March and revised ratings issued



Note - 38% of agents by materiality yet to be reviewed

Is the feedback you are receiving from the FAP review useful and helping future planning?

- A. Yes feedback is clear, sufficiently detailed and explicit on actions required
- B. Yes but feedback could be more detailed and explicit on actions required
- C. No feedback is not sufficiently clear or detailed to be useful
- D. What feedback?



GRMU THEMES FROM FAP REVIEWS

Own risk and solvency assessment

- First submission
- Coverage of regulatory requirements
- ORSA Policy
- Short term capital planning
- Senior Mgt/Board involvement
- Recognition of progress and work to complete
 - Process will take time to embed
 - Good practice still being defined

- X Basic information not always included
- X Syndicate level information
- X Conclusions from process
- X Stress & Scenario testing
- X Forward looking perspective
- X Assessment of capital
- X Links to risk appetite/monitoring
- Reliance on underlying documentation

ORSA Resubmission

"At present, Lloyd's does not require an ORSA submission from all agents during 2012. All agents submitted a draft ORSA report and an ORSA policy as part of the FAP on 16 December 2011 and Lloyd's will review and provide feedback to all agents on these and follow up on issues to be addressed during Q2 2012. As this is the first review of ORSA reports, there is likely to be substantial feedback provided to agents which will lead to some re-work and resubmission of these documents during 2012."

- Given level of feedback, we will be looking for a re-submission at the end of Q2 from a number of agents.
- Submission does not need Board approval but we will be looking for evidence that all feedback has been addressed.
- We would expect Board involvement in the ORSA to be undertaken as part of 5 October Final Application Status sign off.
- Guidance currently scheduled for end May
- For those where a June re-submission is not required, we still need a reaffirmation to support the SBF process in September 2012.
- Underwriting teams reviewing documents as input to SBF process

2011 Follow up activity

- Good progress generally being made on our review points.
- For some agents, certain areas will need to be revisited as the solutions become more finalised and embedded.
- Some topics are still being developed:
 - Risk appetite
 - Risk reporting of model outputs
 - Refining Board level risk reporting
- We will continue to follow up throughout 2012 until all recommendations have been completed.
- Recommendations not yet closed should feature in Agent Status report submissions.

GROUP DISCUSSIONS

Suggested topics for discussion

- How has your ORSA progressed since the December submission?
- What are the main areas of ORSA development which are causing you problems?
- Have you defined and quantified stress and scenario tests?
- How have you approached the forward looking assessment?
- In addition to ORSA, what are the key areas in the GRMU workstream that you are still working on?
- Where have you got to on evidencing risk culture?
- What are your plans for further embedding the risk management framework during 2012?

How much further developed would you say your ORSA is since December?

- A. No change
- B. A little change but nothing significant
- C. Significant change to underlying processes but not the ORSA report
- D. Significant change to the report but the process is largely the same
- E. Completely different



Which area of ORSA development is causing the most problems?



D

Ε

С

Α

В

What work have you currently completed on defining and evidencing your risk culture?

- A. Fully completed
- B. We have a good risk culture, we just need to evidence it
- C. We need to add some elements to our risk culture but broadly it is in place
- D. The basics are there, but we still need to do a lot of work
- E. Not really thought about it



MODEL SCOPE

Model Scope – 2010 guidance

"Managing agents should note that the scope of the internal model under Solvency II is significantly broader than the capital calculation kernel alone and it will **not be sufficient just to have a sophisticated capital model**. To secure internal model approval, agents will need to demonstrate that the internal model plays a **key part in the running of the business**, that there is sufficient governance and standards around the model and that the risk management process is embedded within capital setting. An internal model not meeting these requirements will not be approved for Solvency II capital setting purposes.

Agents must be able to define the scope of the internal model for each managed syndicate. Lloyd's will not mandate use of a specific scope for internal models as this should be relevant to the business and risk profile of each syndicate. Internal model scope does not need to be consistent across agents for the purposes of the Lloyds internal model (LIM) but agents will need to ensure that they satisfy both the SCR calibration requirements and model outputs required by the LIM.

Agents should note that any component or process that can have a significant impact on the SCR must satisfy the requirements of Solvency II, irrespective of whether or not it has been defined as "within scope" of an internal model.

Agents should also note that Lloyd's **review process will not be limited by the scope of the internal model** but will cover anything which is considered material to its review and decision making process."

Model Scope – our 2012 view

"the modelling approaches reflect the nature, scale and complexity of the risks inherent in the business of the

undertaking which are within the scope of the internal model;"

"all material quantifiable risks identified by the risk management system which are within the scope of the internal model are covered by the internal model;"

"Insurance and reinsurance undertakings shall be able to demonstrate that **the internal model covers all material quantifiable risks within its scope**. The assessment whether all such risks are covered shall take into account an appropriate set of qualitative and quantitative indicators specified by the undertakings."

- We are considering mandating elements of scope and a maximum SCR trigger level for Model Change
- Documentation needs clear rationale for included and excluded elements.
- Clear guidance that CAT models and ESGs need to be within the scope of the internal model
- Our review process will consider all material elements.

Lloyd's – LIM scope



Model Scope – common feedback themes

- Specific model scope documentation
- Coverage of key risks
- Thought in terms of the areas/risks covered
- Common elements outside the scope across the market

- X Clarity in certain elements of documentation
- X Reliance on diagrammatical representation
- X Rationale for out of scope elements
- × 3rd party models often out of scope
- X Clarity on an amendment to scope versus a model change

Further investigation of certain out of scope elements will be picked up as part of Q2 review activity.

MODEL CHANGE

Model Change – 2010 guidance

"Managing agents will be required to develop a model change policy for the internal model. **This policy will be subject to review and agreement by Lloyd's** and will define the process by which a managing agent may develop its internal model, and the interaction necessary with Lloyd's.

Under Article 120, agents will have a responsibility to ensure the ongoing appropriateness of the design and operation of the internal model, and that it continues to **appropriately reflect the risk profile of the insurance undertaking**.

Therefore, changes in the business of the insurance undertaking may give rise to the need to alter the internal model. Potential changes may also be identified as part of the validation process of the model, or arise from changes in available data or modelling techniques. Whilst it is recognised that on-going development of internal models is desirable, it is **important that model developments do not alter the model in ways which affect its suitability for setting capital requirements.**

The model change policy forms **one element of the overall governance of the internal model** and there is an **interaction between the definition of the internal model and the model change policy.** If the definition of the internal model is very wide then it is more likely that there could be changes to elements of the model which would not have a significant effect on the SCR (or other criteria used to assess the impact of model change).."

Model Change – key elements of latest guidance

- Policy shall include specification of minor and major changes to the model which need to include qualitative and quantitative measures
- Clearly defined governance process to surround model changes
- Changes to the Model Change Policy need to be approved by supervisory authority
- Documentation supporting a change to the model should include:
 - A description of the rationale for each of the minor and major changes
 - A description of the implications of each of the major changes for the design and operations of the internal model
 - Where a major change or a combination of minor changes has a material impact on the outputs of the internal model, a quantitative and qualitative comparison of the outputs before and after the change relating to the same valuation date.

What constitutes a LIM change?

Model change types

- Change to model methodology
- Change to model governance
- Change to business process
- Change to external models

Aspects not classified as model changes

- Non-functional modifications
- Model update (e.g. parameters are recalculated (including calibration to the market) with new data but the methodology has not been changed)
- Modifications to the model scope (will always require FSA approval)
- Modifications of the model change policy (will always require FSA approval)

Definition of major and minor LIM changes

- When a change is classified into either a major or minor change, the following criteria should be considered:
 - Impact on SCR/FAL Burn
 - Number of components affected
 - Complexity of the change
 - Solvency II compliance
- Quantitative limits to be proposed and depend on the outcome of the change- able to be explained, and change thresholds
- Each of the criteria is to be assessed in forming a view of major/minor.

Model Change – common feedback themes

- Well documented Model Change Policies
- Thought in terms of approach and definitions
- Generally, definitions consider the appropriate areas
- Use of examples to support definitions
- Many SCR triggers in the range of 10-15%

- X Some very complex approaches being adopted
- \times Wide range of SCR triggers (5 50%)
- X Focus on quantitative definitions without supporting rationale
- X Aggregation of minor changes
- X Template documentation to support changes
- X Wider changes than the calculation kernel
- Clarity on an amendment to scope versus a model change

2012 REVIEW ACTIVITY

Q2 Reviews – Model Scope and Model Change

- Q2 activity will include walkthrough sessions on Model Scope and Model Change as well as discussion on GRMU FAP feedback
- The purpose of these sessions will be to:
 - Discuss and follow up on recommendations made as part of the FAP review.
 - Understand the processes which will sit below the policies submitted and walkthrough how these will work in practice.
 - Review and obtain copies of other supporting evidence e.g. templates for documenting model changes.
 - Gain an understanding of any development activity planned in these areas.

H2 Reviews – Use Test & Embedding

- H2 activity will focus on meeting the requirements of the Use Test and how the Solvency II solution will be embedded across the business.
- This activity is likely to focus on wider areas than just those contained within the GRMU workstream.
- The purpose of these sessions will be to:
 - Discuss and follow up on recommendations made as part of the FAP review.
 - Review and obtain copies of supporting evidence e.g. specific Use Test documentation
 - Gain an understanding of any development activity planned in these areas.
- The broad Use Test sessions will be supported by specific Director/NED interviews and other staff interviews to fully gauge the level of embeddedness.

GROUP DISCUSSIONS

Suggested topics for discussion

- Do you currently have CAT and ESG in or out of scope of the internal model?
- How have you determined your defined trigger level and what analysis do you have to support this?
- At what stage are you at in implementing your approach to model change?
- Have you had any changes to the model which have gone through the process?
- What documentation do you have supporting the model change policy e.g. reporting templates, checklists etc.?
- Should Lloyd's prescribe an SCR trigger and mandate elements of model scope?

Should Lloyd's mandate elements of model scope?



Should Lloyd's prescribe an SCR trigger for a major model change?





14 MARCH RESULTS

Do you have analysis to support your currently defined SCR threshold for a major change?



At what stage are you at in implementing your approach to model change?

- A. Still being designed
- B. Fully designed but needs implementing
- C. Partially implemented
- D. Fully implemented and ready for first change
- E. Fully implemented and we have changes going through the process





14 MARCH RESULTS



NEXT STEPS

Next Steps

- Slides will be made available on lloyds.com after both workshops
- All FAP reviews complete and decisions communicated by 30 March
- All agent status reports due back from agents after initial completion by 15 March
 - agreed by Lloyd's with any additional FAP gaps added by 30 March
 - used as basis for monitoring ongoing progress and keeping rating under review
- Other upcoming sessions:
 - Director Briefings 22 & 23 March
 - Documentation Workshops 12 & 17 April
 - Data Workshops 13 & 18 April

