



VALIDATION WORKSHOPS

6 & 7 MAY 2014

AGENDA

- ▶ **Introduction / Quick SAG update**
- ▶ **P&L Attribution Exercise**
- ▶ **Recap of findings from 2013 Validation**
- ▶ **Key changes to the 2014 Validation Guidance**
- ▶ **Technical update including:**
 - **Supplementary Questionnaire**
 - **Post-diversification calculations**
 - **Numerical illustrations**
- ▶ **Summary / Q&A**

Lloyd's expects each agent to meet the full tests and standards by end 2014...

- ▶ Lloyd's wrote to agents in January setting out its view as to where agent stood against tests and standards
- ▶ Agents submitted final 'action plans' by end February
- ▶ Review by the Standards Assurance Group (SAG) and assign initial ratings against full tests and standards
- ▶ Lloyd's will continue to work with agents during the remainder of 2014 to help them close the remaining gaps...
- ▶ ...leading up to final agent Board attestation in December

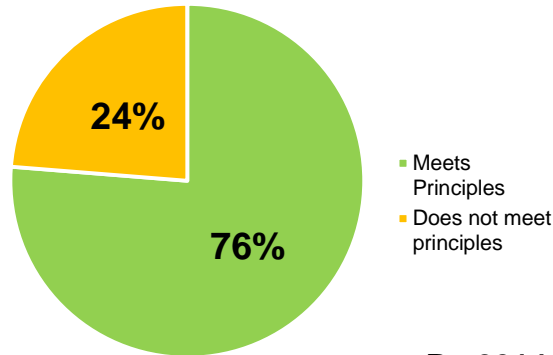
...and has set out a clear plan to achieve this

Recap on SAG process

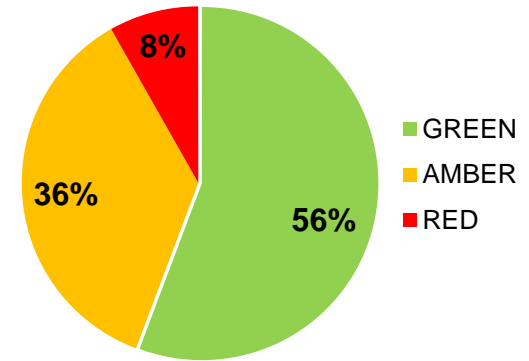
- ▶ Agent action plans received and reviewed
- ▶ SAG meetings throughout March
 - Account Manager's view on
 - a) Number of gaps
 - b) Materiality of gaps
 - c) Credibility of plan
 - Overall ratings agreed based on these 3 criteria
- ▶ Consistency meeting early April
 - Resulting in a number of rating changes
- ▶ Outcome now communicated to all agents

Outcome of SAG reviews

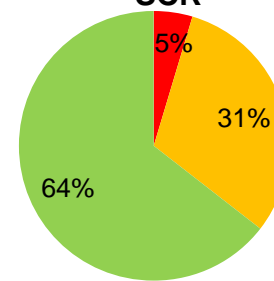
RAG ratings by Agent Dec 2013
(Principles)



SAG Agreed Rating April 2014
(Full t&s)



By 2014 Latest Ultimate
SCR



COMMON ISSUES DRIVING "FAILS"

December 2013 (Principles)

ORSA

Validation

Use Test

April 2014 (Full tests)

ORSA

Validation

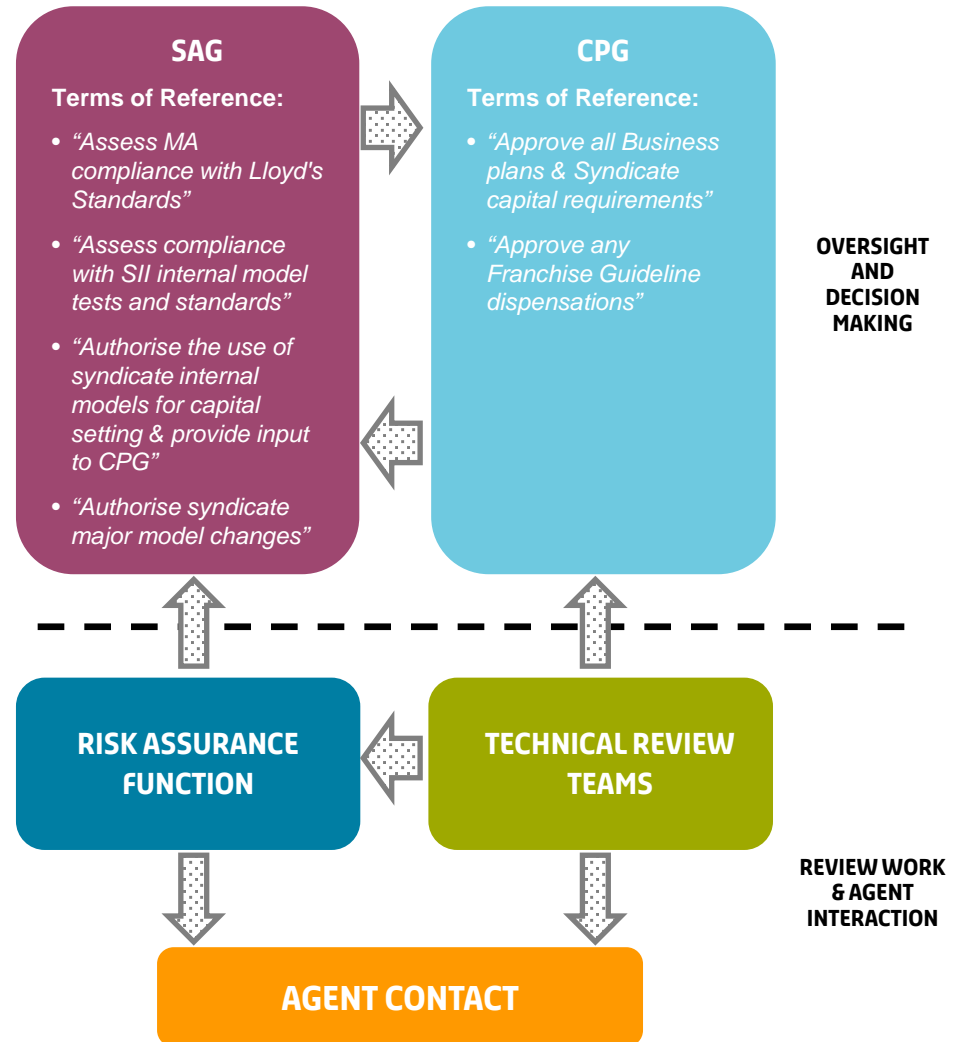
Actuarial Function Report

Model Change

Reporting & Disclosure

Our review of agent progress in 2014 will feed into the capital setting exercise for 2015

- ▶ **Standards Assurance Group (SAG)** assesses agents' progress towards Solvency II compliance
- ▶ **Capital and Planning Group (CPG)** oversees Lloyd's capital setting and syndicate business planning processes
- ▶ CPG will make decision on prudential measures based on SAG input:
 - Capital loadings
 - Business plan restrictions



Why are we also refreshing the standards?

- ▶ One set of standards covering all requirements for Managing Agents
 - A clear framework within which all Managing Agents are expected to operate
 - Consistency in interpretation, presentation and publication
 - Alignment to Solvency II and PRA requirements

CURRENT STANDARDS

Claims Management

Risk Management

Underwriting

Reinsurance

Delegated Authorities

Exposure Management

Effective operational processes

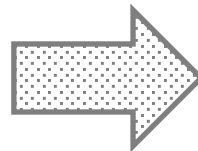
Governance

Management of investment risk

Reputation & Brand



SOLVENCY II



REVISED STANDARDS

Underwriting Management

Claims Management

Reserving

Governance

Risk Management

Scope, Use & Change

Modelling Design &
Implementation

Validation

Investment Management

International Regulatory

Compliance

Conduct Risk

Operating at Lloyd's

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Key part of model validation...

- ▶ P&L attribution (Article 123) is intended to help management as a model validation tool
 - Review actual outcome v expected outcome for the same period
 - Look at material sources of profit and loss...
 - ...at a 'sufficiently granular' level used to run the business...
 - ...to see if the model appropriately captures the risk
 - Reflect results and conclusions in the model validation process

...to ensure that all material risks are being captured

Lloyd's P&L attribution thematic review followed up exercise 12 months earlier

- ▶ Consistent format (template covering 8 key areas) used
- ▶ Agents asked to submit
 - Procedures and policies
 - Results for 2012
- ▶ 2013 model validation reports also reviewed
- ▶ Individual feedback provided to each agent
- ▶ Summary of conclusions will be published on lloyds.com

MODEL VALIDATION				
PROFIT AND LOSS ATTRIBUTION - 2014 REVIEW				
AGENT [REDACTED]		SYNDICATE [REDACTED]		
FEEDBACK SUMMARY				
PREVIOUS FEEDBACK PREVIOUS FEEDBACK: DOES THE PROFIT AND LOSS ATTRIBUTION DOCUMENTATION MEET THE PRINCIPLES OF THE TESTS AND STANDARDS?		Q1 2014 FEEDBACK PREVIOUS FEEDBACK: DOES THE PROFIT AND LOSS ATTRIBUTION DOCUMENTATION AND OUTPUTS MEET THE TESTS AND STANDARDS?		
CRITICAL ISSUE TO BE ADDRESSED IMMEDIATELY		IMMEDIATE ACTIONS REQUIRED BEFORE TESTS AND STANDARDS CAN BE MET		
PERSISTENT ISSUE TO BE ADDRESSED BY END OF Q1 2013				
DEVELOPMENT ISSUE TO BE ADDRESSED IN SUBSEQUENT SAU VERSION		ANY DEVELOPMENT ISSUES TO BE ADDRESSED IN SUBSEQUENT SAU VERSION		
1. DEFINITION OF PROFIT AND LOSS				
Profit/Loss, for the purpose of profit and loss attribution, is the actual change in economic capital resources over the relevant period not attributable to capital movements (the dividend payments or public offerings). Without such movements the profit can be calculated as the difference between the economic capital resources at the beginning and the end of the period. Economic capital resources in the context correspond to the surplus of assets over the technical provisions and other liabilities, not treated as capital on an economic basis.				
Does the Profit and Loss documentation answer the following? Indicate with an "X" in the table.				
	Q1 2014 REVIEW	PREVIOUS FEEDBACK	Q1 2014 FEEDBACK	
	YES	NO	PARTIAL	COMMENT
1. Has the agent set out clearly how profit and loss is defined?				
2. Is the process for measuring profit and loss sufficiently transparent and objective that its consistency over time can be demonstrated?				
3. Has the agent set out the major business units at which level profit and loss is defined (e.g. primary division, division division, and other departments/categories in Reports and Accounts)?				
4. Is it clear that the profit and loss is measured against and is consistent with the same (appropriately) attribution factors used for the SCR (e.g. can't be measured back to a point on the same curve as that used to determine the 25.2% level SCR)?				
2. BASIC CATEGORISATION				
The risk categorisation used by the undertaking for the profit and loss attribution should depend on the structure of the internal model as well as the intended applications of the profit and loss attribution in the use test and in the validation process.				
Does the Profit and Loss documentation answer the following? Indicate with an "X" in the table.				
	Q1 2014 REVIEW	PREVIOUS FEEDBACK	Q1 2014 FEEDBACK	
	YES	NO	PARTIAL	COMMENT
1. Has the agent clearly defined the risk categories to which profit and loss will be applied and are these sufficiently granular?				
2. Does the categorisation show clearly those risks which are covered by the internal model and those which are not (i.e. the scope of the internal model should be sufficient for the profit and loss attribution to be conducted and does the method and coverage of the profit and loss documentation agree with the internal model scope defined)?				
3. APPLICATION OF PROFIT AND LOSS IN THE USE TEST				
The results of the Profit and Loss attribution provide valuable information for risk management and decision making. The output of the Profit and Loss attribution is thus a very important input to the use test.				
Does Profit and Loss documentation and output answer the following? Indicate with an "X" in the table.				
	Q1 2014 REVIEW	PREVIOUS FEEDBACK	Q1 2014 FEEDBACK	
	YES	NO	PARTIAL	COMMENT
1. Is it clear how the categorisation of risk for P&L attribution links to the internal model and is used for the purposes of risk management and decision making (e.g. is it clear how information on the profit and loss results flows into risk management and the SCR)?				
4. APPLICATION OF PROFIT AND LOSS IN VALIDATION				
The profit and loss attribution exercise provides information relating to how the model has performed in the past. Thus the results of the profit and loss attribution provide relevant information to feed into the regular validation cycle.				
Does the Validation Report, Profit and Loss documentation and output answer the following? Indicate with an "X" in the table.				
	Q1 2014 REVIEW	PREVIOUS FEEDBACK	Q1 2014 FEEDBACK	
	YES	NO	PARTIAL	COMMENT
1. Is it clear how the results of the P&L attribution process feeds into the validation cycle and is there a clear process in place to follow up on results? (Process should be documented and evaluated at least annually).				

Good progress generally being made...

- ✓ Quality of material generally better than 2012/2013
- ✓ Clear policies and procedures in place
 - Basis of P&L clearly identified (GAAP or Solvency II is fine)
 - Consistent approach applied
- ✓ Results determined at a sufficiently granular level
 - Business units consistent with those used to run the business
 - Main P&L line items identified, linked to risk categories and whether modelled or not
- ✓ Clear linkage to review process by risk governance structure
- ✓ Results, outcomes and conclusions generally well referenced in the validation report

...with some areas for improvement identified

- ✗ Linkage of actual results with model PDF not sufficiently evidenced
- ✗ P&L line items not always clearly linked to risk categories or whether or not they are modelled
- ✗ P&L attribution not conducted on an annual basis because 'the risk profile has not changed materially'
- ✗ P&L attribution not performed for the actual result compared with the modelled outcome for the same year
- ✗ Insufficient referencing in model validation report

In summary you should...

Maintain a clear, concise set of policies and procedures setting out...

- ✓ Definition of P&L
- ✓ Granularity of business units and basis for selection
- ✓ Risk categories/P&L line items to be covered and whether or not they are modelled
- ✓ Process, review and sign-off including governance

Conduct P&L attribution for the year against the modelled outcome for that year

- ✓ Must be done at least annually
- ✓ Explain the outcome for the major components, which will be helped by...
- ✓ ...identifying these outcomes against the modelled PDF

Reference the process within model validation

- ✓ Articulate the process within model validation policy
- ✓ Summarise the work conducted, results, conclusions and actions in model validation report

What do you need to do next?

- ▶ Address Lloyd's feedback ready for 2013 P&L attribution process
- ▶ Conduct 2013 P&L attribution in time for 2014 validation report
- ▶ Include within 2014 validation report
 - Summary of results, conclusions and any actions arising

- ▶ Lloyd's will review 2014 validation reports
- ▶ We do not require to see updated P&L attribution material/detailed 2013 results unless advised individually by your account manager

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We have continued embedding of validation

- ▶ Seen significant advancements in validation across the market
 - Model assumptions and methodologies are more robust
 - increased confidence in the results of syndicate models.
- ▶ Most agents have:
 - a structured validation process implemented and embedded
 - clear links with model change and governance
 - validation results communicated to the board, management and the wider organisation

Validation is “almost there”

So which elements need a bit more work?

- ▶ Obviously varies by syndicate but in general there are five areas:
 - Potential lack of independence or objective challenge
 - Lack of clear validation test criteria and consequences of validation test fails
 - Limitations around validation of expert judgement
 - Clarity on validation of external models
 - Communication of limitations of the model found in validation

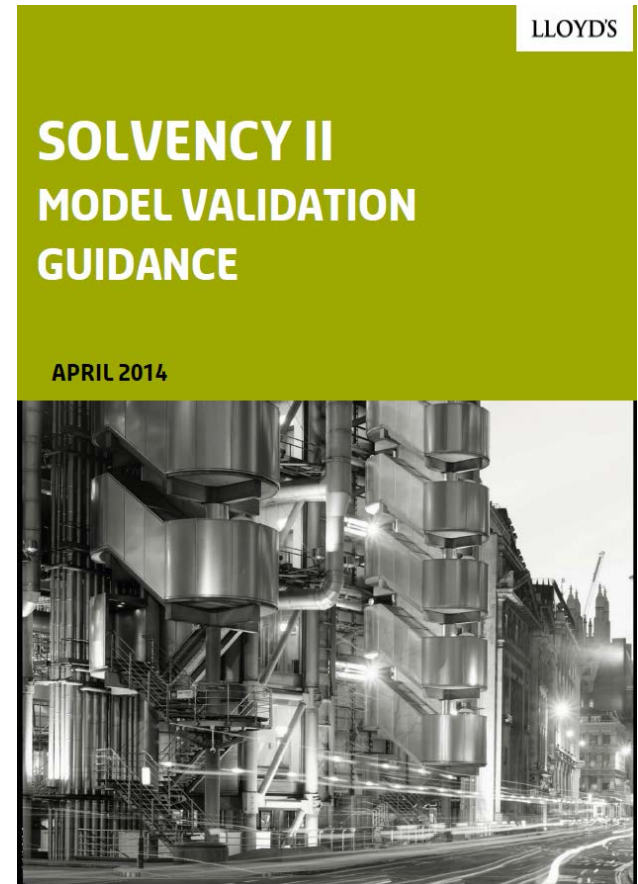
There are a small number of areas we would like to see an improvement in aggregate

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We have issued updated guidance

- ▶ The updated guidance was issued last week
 - by email
- ▶ It will be put on the website next week
 - post PRA conference
 - post these workshops
 - ...though not expecting changes
- ▶ We will also issue
 - new numerical examples
 - updated supplementary questionnaire



E.g. Expert Judgement

- ▶ Requirements include
 - Rationale documented
 - Updated when information emerges
 - Expertise justified
 - Falsifiable

- ▶ Some suggestions in guidance on how to harness expertise
 - Make options relevant to experts
 - Limit number of options
 - ...ensuring that full range is still covered

We have seen more clarity on expectations

- ▶ Whilst fundamental objectives have not changed, further guiding statements have been published:
 - PRA Supervisory Statement SS5/14 (issued April 2014)
 - EIOPA “Guidelines on the pre-application for internal models” (issued 27 September 2013)
- ▶ Definitely study these!
- ▶ Four areas are given particular emphasis in the above documents:
 - Documentation, communication and validation of expert judgement
 - Identification and validation of parameter uncertainty
 - Allowance and validation of calendar year effects
 - Validation of emergence patterns

The key questions to ask yourself

- ▶ Does the validation address previous Lloyd's feedback? What has been done to achieve this?
- ▶ Does the validation address the relevant key points raised in the PRA supervisory statement?
- ▶ Has validation been able to assess the documentation, peer review and challenge of expert judgement in line with the EIOPA guidelines?

Reminder of key dates for this year's review

Submission / approval dates	SBF and LCR	Required submissions
3 JULY	<ul style="list-style-type: none"> Provisional 2015 SBF Draft 2015 LCR Supplementary Questionnaire 	<ul style="list-style-type: none"> Aligned and non-aligned syndicates
3 JULY	<ul style="list-style-type: none"> Provisional Validation Report (optional but strongly encouraged) 	
18 JULY	<ul style="list-style-type: none"> Lloyd's SBF Feedback deadline for Non-aligned syndicates 	
16 SEPTEMBER	<ul style="list-style-type: none"> Final 2014 SBF 	<ul style="list-style-type: none"> All syndicates
	<ul style="list-style-type: none"> Final 2014 LCR Supplementary Questionnaire 	<ul style="list-style-type: none"> All syndicates
23 SEPTEMBER	<ul style="list-style-type: none"> Final Validation Report 	<ul style="list-style-type: none"> All syndicates
24 OCTOBER	<ul style="list-style-type: none"> Lloyd's non-aligned approval deadline 	
21 NOVEMBER	<ul style="list-style-type: none"> Lloyd's aligned approval deadline 	
26 NOVEMBER	<ul style="list-style-type: none"> Coming into Line 	

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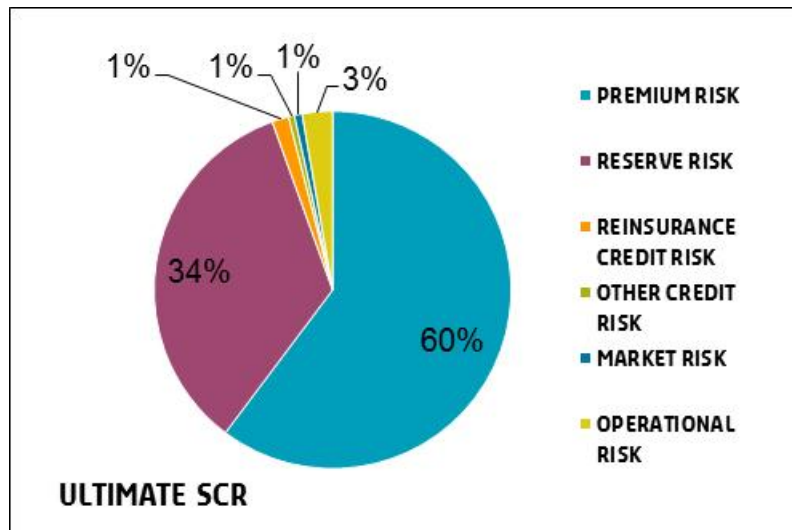
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Supplementary Questionnaire

- ▶ Very useful to us in 2013 – especially for faster turn-around
- ▶ ...and it was completed to a high standard by the market
- ▶ But it takes time to complete – so minimal additions for 2014
- ▶ **New information** requested:
 - Calculation of post-diversification amounts (more on this later)
 - RI recoveries on contracts defaulting (for loss given default)
 - Joint exceedance probabilities between 2 largest classes (premium risk and reserve risk)
 - Premium risk **including** cat (same info as for ex cat)
 - A few new qualitative questions

Supplementary Questionnaire

- ▶ Main change is new sheets for metric **outputs**
 - Tables, graphs, etc. for ULRs, dependencies, post-diversified amounts, etc.
 - Produced automatically (no work required by agents)
 - Common starting point for discussions



- ▶ To be released this week by email
 - Final version to go on lloyds.com in early June

Post diversification: new methodology

- ▶ Proposal to CALM is going ahead
- ▶ Motivation: consistency on “post-diversification” on form 309
- ▶ Main criteria for method:
 - Easy to explain
 - Neutral on SCR risk type distribution size and shape
 - No change to model design and minimal work for agents
- ▶ Solution: “spread VaR” approach
 - Rank simulations by balance sheet position
 - Average risk type amounts over specified interval
 - Scale to ensure consistency with reported LCR

Post diversification: new methodology

- ▶ Practical considerations:
 - Agents will need to sort simulations based on **both** one year **and** ultimate balance sheet positions (VaR 99.5th = SCR)
- ▶ No impact on SCR or on LCR beyond form 309 cols C and G
- ▶ No requirement to use in managing the business
- ▶ Proposal sent to CALM early March
 - Some concerns about “stability”
 - General support / no objections in principle
- ▶ Updated CALM memo to be included in email with Supp Q

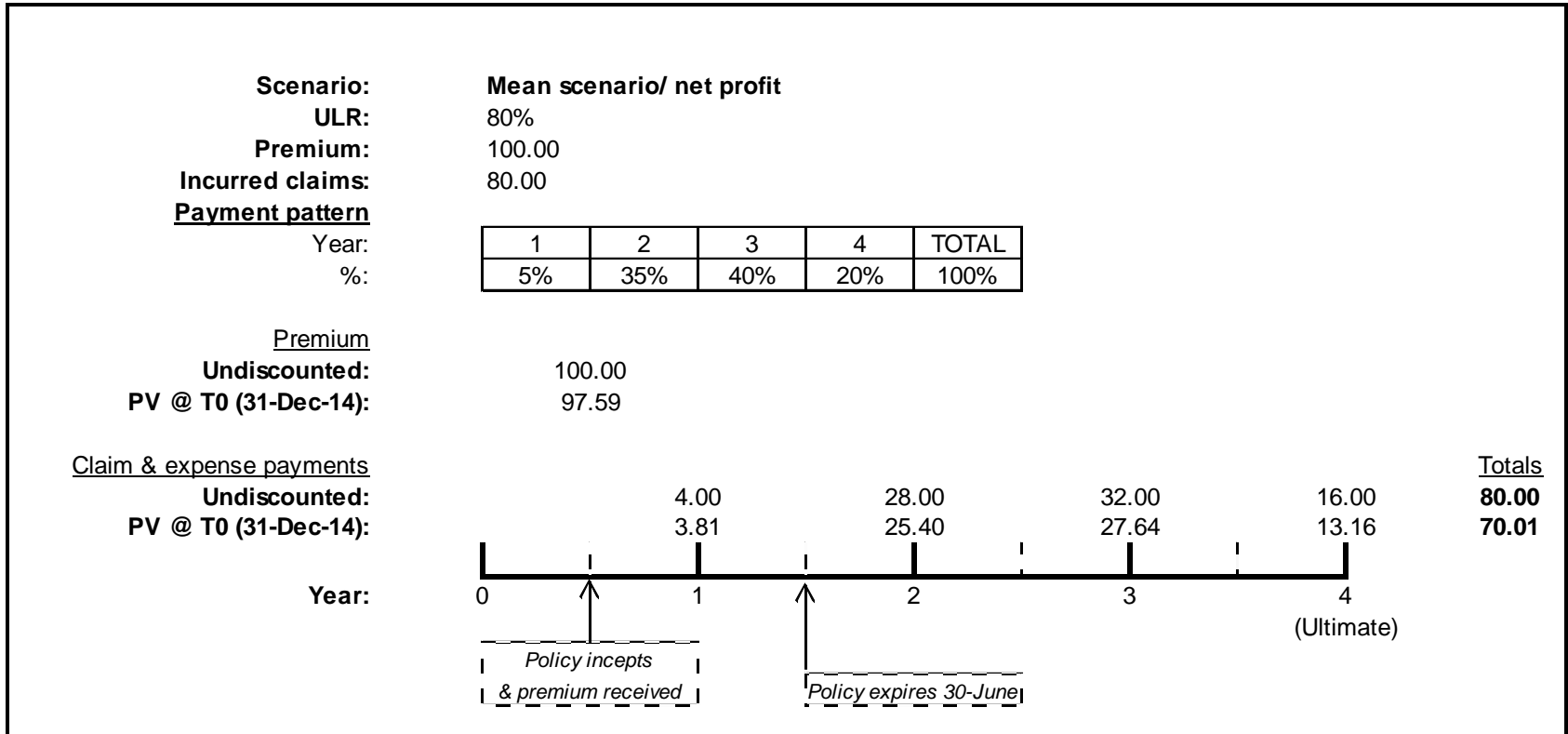
Numerical illustrations: premium risk

- ▶ Last year: guidance note on reserve risk and discounting
 - **Not** new guidance
 - Purpose: illustrate SCR guidance with simple numerical examples
 - Market feedback was positive
- ▶ This year: premium risk
 - Same policy as new business, ULO, unexpired risk
 - Ultimate and one year
 - Completing the LCR

Numerical illustrations: premium risk

- ▶ Key distinctions/themes:
 - What's recognised on the balance sheet when
 - Cashflows on bound vs. unbound (NOT earned vs. unearned)
 - Discount credit
 - One year vs. ultimate
 - LCR: what's premium risk vs. market risk
 - Concepts **not** realism
- ▶ It may take some time to familiarise yourself with the format
- ▶ Today: just an intro (release next week)
- ▶ Repeat: **not** new guidance and **no** new requirements

Numerical illustrations: premium risk



Numerical illustrations: premium risk

Period/item	Assets @ start of period (*)	Investment income cashflows	Underwriting cashflows	Assets @ end of period	Profit released @ end of period	Balance sheet contribution
Pre-risk horizon: amounts already recognised						
Balance sheet position @ T0		0.00	0.00			0.00
Risk horizon						
Cashflows occurring						
Year 1	0.00	-2.47	-96.00	98.47		
Year 2	98.47	-4.92	28.00	75.39		
Year 3	75.39	-3.77	32.00	47.16	31.92	
Year 4	15.24	-0.76	16.00	0.00		
TOTAL		-11.92	-20.00			-31.92
Provision for future cashflows on claims incurred		0.00	0.00			0.00
Post-risk horizon						
Provision for future cashflows on unexpired risk		0.00	0.00			0.00
Change in balance sheet during risk horizon		-11.92	-20.00			-31.92
Balance sheet position @ end of risk horizon		-11.92	-20.00			-31.92

(*) Premium received at 1-July of Year 1

Form 310: Ultimate

SCR	Mean	Stress	1:200
	-31.92	72.35	40.42

SCR Guidance: correction on model change

- ▶ SCR guidance says model change reports only required on 3 July
- ▶ Model Change reports are required on 3 July **and** 16 September
 - Submit to Solvency2@lloyds.com
- ▶ We are not going to reissue the guidance for this

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Summary

- ▶ 2014 is the final push for Solvency II tests and standards
 - progress remains positive there is some work to do
 - and validation is a key element
- ▶ Updated guidance has been issued
 - we will supplement this with new numerical examples
- ▶ The EIOPA and PRA documents are also “must reads”
- ▶ Key elements where further progress is needed are:
 - Expert judgement including dependencies
 - Emergence patterns
- ▶ Strongly advised to submit early validation reports in July

