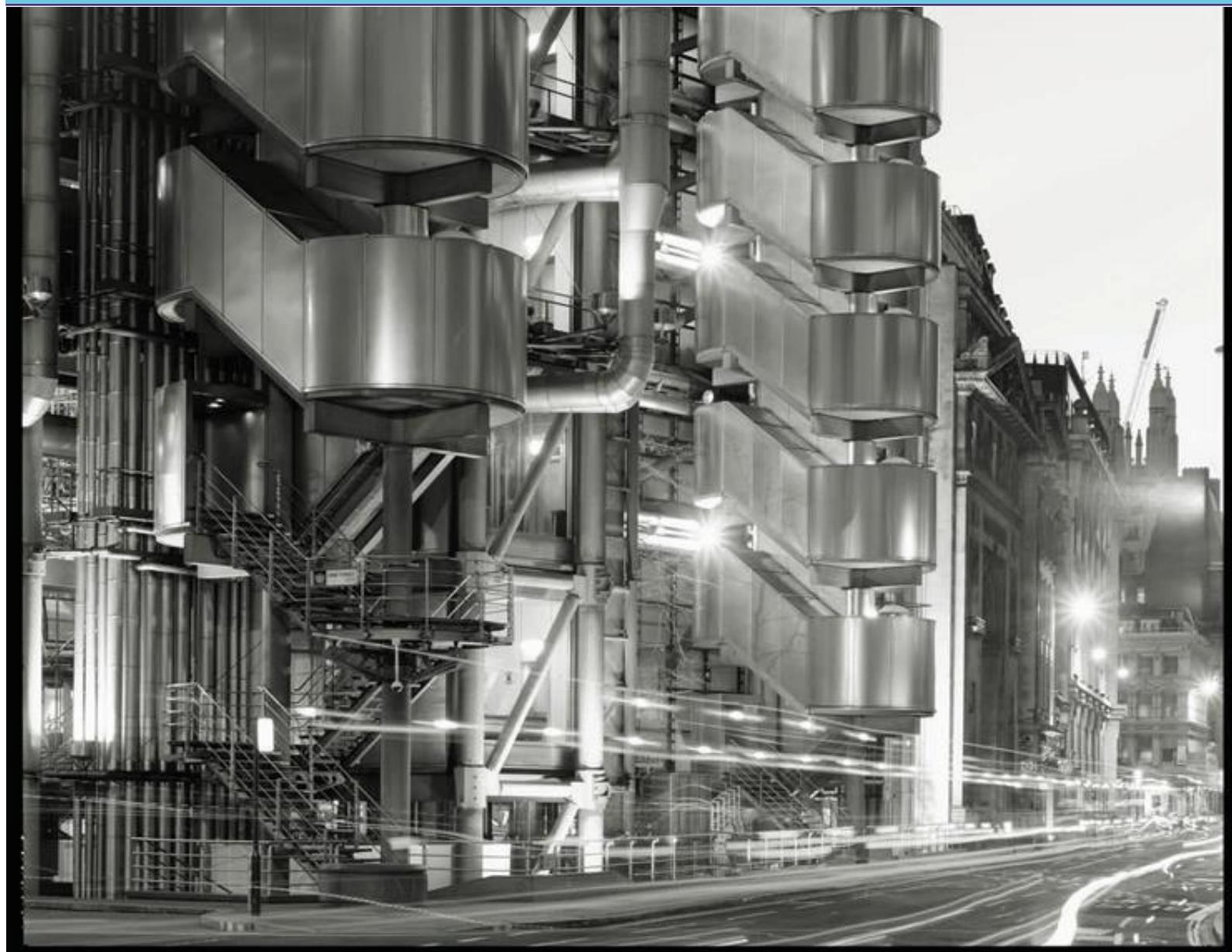


SYNDICATE SCR FOR 2017 YEAR OF ACCOUNT

**INSTRUCTIONS FOR SUBMISSION OF THE LLOYD'S CAPITAL RETURN
AND METHODOLOGY DOCUMENT FOR CAPITAL SETTING**

GUIDANCE NOTES – MAY 2016



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1 PURPOSE

- 1.1 To provide instructions and guidance in respect of the contents of the Lloyd's Capital Return (LCR), its completion, and the purpose of each form.
- 1.2 To provide instructions and guidance in respect of the contents and depth of supporting material to be provided in the methodology document in respect of the Solvency Capital Requirement (SCR) as at 1 January 2017.
- 1.3 To provide information in respect of the structure and timing of Lloyd's review.

2 SCOPE

Introduction

- 2.1 These instructions focus on submissions for the 2017 Syndicate SCRs for member capital setting. These instructions reflect the finalisation of the Solvency II legislative framework in late 2015.
- 2.2 Notwithstanding Lloyd's successful Internal Model Approval Process (IMAP) application, Lloyd's and each managing agent are required to maintain compliance to Solvency II standards and requirements on an ongoing basis.
- 2.3 Solvency II came into effect on 1 January 2016. The instructions and guidance set out in this document are based on Lloyd's application of the Solvency II framework within its capital setting purposes. The guidance produced by Lloyd's is expected to change as Solvency II becomes more embedded.

Submission requirements and deadlines

- 2.4 The Lloyd's Capital Return (LCR), supporting methodology document and 2017 YOA SCR Supplementary Questionnaire are required for all syndicates with an open underwriting year of account by 13 September 2016, including those in run-off or underwriting RITC business only. This includes syndicates planning to close all years of account at December 2016, since this information is required for calculating the reinsuring member(s) capital requirement. Lloyd's will make adjustments centrally to the SCRs of affected syndicates after the RITC contract has been finalised.

Interim July submission

- 2.5 There is no requirement for the draft LCR submission in July, for 2017 YOA. This is a change from the requirement for previous years, for which the July submission was mandatory.
- 2.6 The LCR for the 2017 YOA will be available from July 2016 and agents can use this to provide an early look to analysts for assessment. No formal review process will occur on these.

September submission

- 2.7 All forms within the LCR must be completed in each submission. The final LCR must be submitted by 1pm 13 September 2016. The LCR, which captures the quantitative information required, including the SCR, must be submitted via the Core Market Returns (CMR) system.
- 2.8 The supporting SCR methodology document and the 2017 YOA SCR Supplementary Questionnaire are required for the September submission. The 2017 YOA Analysis of Change template must be submitted by 1pm 16 September 2016 (via email to SCRReturns@lloyds.com). Agents submitting a request for approval for a major model change are advised to provide supporting documentation on the rationale for the change and its quantitative impact. As in previous years, all supporting documentation due by 13 September 2016 should be included as an attachment to the LCR via form 990.
- 2.9 Major model changes can be submitted to Lloyd's for approval at any time during the year. Upon receipt of a major model change request, together with all supporting documentation, Lloyd's will determine a review timetable for approval of the major change. This timetable will be agreed by Lloyd's and communicated to agents within 2 weeks of a complete model change submission being received. Further information is available in the [Major Model Change Guidance](#).

- 2.10 Lloyd's will provide feedback on the major model change submissions submitted by July as soon as possible and to all agents by mid-August. Lloyd's will endeavour to at least cover all perceived significant items of feedback in this initial assessment. This feedback will be based primarily on the review of the change in the model or risk profile. It will also focus on the Analysis of Change against the latest LCR submission for the 2016 YOA (including any loadings applied for year-end coming-into-line (CIL)) both in absolute amounts and relative to exposure. For agents that do submit these items, Lloyd's will review them and provide feedback on significant findings. This does not mean that further issues will not arise as reviews and discussion continue to take place. The receipt of early feedback should enable agents to address significant issues, and reduce time pressures, prior to the September submission. It is expected that more minor items will continue to be discussed after the initial feedback.
- 2.11 Lloyd's requires agents to conduct a full validation cycle and submit a validation report by 23 September 2016. The SCR methodology document should include a summary of the validation work supporting the SCR (see Appendix 5 – SCR documentation: topics to be covered). Agents should also note, as set out at the capital briefing on 26 January 2016, specific sections of the validation report can be submitted with the major model change submissions before September 2016. This does not remove the need to submit a full validation report by 23 September 2016 to SCRReturns@lloyds.com. Updated validation guidance will be published in July 2016.
- 2.12 The 2017 YOA Analysis of Change template should compare against the latest LCR submission for the 2016 YOA (including any loadings applied for year-end CIL). This should be consistent with the areas considered under agents' Model Change Policy. More information and detail provided on the movements between submissions will enhance the effectiveness and efficiency of our review. Lloyd's will require all agents to submit a report of model changes on 7 July 2016.
- 2.13 Capital review dates for all syndicates will be communicated to each managing agents in a separate communication by early July. For year-end CIL, capital will be set based on the submitted SCR plus any Lloyd's adjustments or loadings, where appropriate, plus the economic capital uplift (ECU). Capital requirements for any syndicates with reviews scheduled between December and January will be set based on the submitted SCR (including contract boundary adjustments) plus ECU for year-end CIL. Any loadings will be required to be met in accordance with the criteria and timetable set out in the July Member Capital Setting Market Bulletin.

One-year SCR and 'SCR to ultimate'

- 2.14 Lloyd's requires each syndicate to determine its SCR on both a one-year basis (consistent with the Solvency II regulatory basis) and 'to ultimate'.
- 2.15 The critical difference between the one-year SCR and 'SCR to ultimate' is that the Solvency II regulatory one-year SCR captures the risk that emerges over the next 12 months (to 31 December 2017) and the ultimate measure captures the adverse development until all liabilities have been paid. The one-year SCR is the difference between the current balance sheet (projected as at 31 December 2016) and what it would be in one year's time (i.e. 31 December 2017) including claims paid during the year, given a 99.5th percentile adverse outcome.
- 2.16 This means, inter alia, that at 31 December 2017 for the one-year SCR calculation, there is no need to model downside risk that would happen in 2018 on policies that were written

during 2017 but expire in 2018. For example on a risk written 1 October 2017, all the risks and rewards of that policy go to the 2017 year of account, but the one-year SCR would consider the adverse outcomes for events and knowledge up to 31 December 2017 and not the potential adverse outcome for the period of exposure 1 January 2018 to 30 September 2018. For the avoidance of doubt, this would include allowance for adverse events during the 12 month period that would impact the construction of the Solvency II balance sheet as at 31 December 2017.

- 2.17 Consequently, the outcomes on this business for the 2018 period of the policy cover are included at their mean best estimate (with the mean being set at 31 December 2017) of the premiums and claims arising – it is contracted for, so needs to be in the balance sheet at Time 1. The one-year SCR at 1 January 2017 considers the adverse development in reserves over 2017 only, although our modelling shows that (particularly for long tail business) reserves can continue to move out significantly after 12 months – so within the ultimate calculation required by Lloyd's, but outside the one-year SCR.
- 2.18 We consider that the ultimate SCR is the more appropriate risk measure on which to base member capital setting at Lloyd's. This captures the risk in respect of the planned underwriting for the prospective year of account in full covering ultimate adverse development and all exposures.
- 2.19 The technical provisions should also include reinsurance premium that provides cover for incepted contracts. The reinsurance premiums should be accounted for at T0. This would lead to an increase in technical provisions and a decrease in SCR. The technical provisions reported in QMC should be on this basis. For 2017 YOA, managing agents have the option of not changing their internal model to include the reinsurance premiums on this basis. However, all internal models must model technical provisions on this basis from 2018 YOA.
- 2.20 Lloyd's will make adjustments to the ultimate SCR to ensure the capital stack (technical provisions + SCR(U) + economic capital uplift (ECU)) is not reduced as a result of this change in guidance. The nature of the adjustment will depend on the basis of estimation of the technical provisions in the internal model. More details are provided in Section 5.34.

Tiering

- 2.21 The SCR considers the movement in basic own funds. Lloyd's assumes that all assets held at syndicate level are tier 1 and consequently, there is no requirement for agents to take into account considerations around tiering or definitions of basic own funds, ancillary own funds etc. Agents should contact Lloyd's as soon as possible if there is any concern that syndicate assets do not qualify as basic own funds (tier 1). Lloyd's will address the issue of tiering within member capital outside of the syndicate SCR submission and review process.

Lloyd's Capital Return

- 2.22 Article 101 in the Level 1 Directive requires firms to ensure all quantifiable risks are taken into account and that they model their risks, including calibration to the 99.5th percentile over a one-year period (SCR). The LCR captures quantitative information that, alongside the qualitative model validation work, allows agents to demonstrate that they have systems enabling them to identify, measure, manage and report risk and calculate the SCR.
- 2.23 The LCR provides two figures for the 99.5th percentile: the Solvency II statutory one-year balance sheet to balance sheet SCR and also the Lloyd's risk to ultimate SCR. The LCR provides data that forms a direct input into and is used to calibrate the Lloyd's Internal Model (LIM).

- 2.24 The supporting analysis within each form provides additional evidence that the model is producing reasonable and adequate capital assessments for each risk category. The prescriptive basis for completion, as set out in detail in Section 5, will also enable meaningful benchmarking. These supplement the notes provided with the LCR on Core Market Returns.

SCR methodology documentation

- 2.25 Although a single SCR methodology document is encouraged, where the methodology has been set out in previous Solvency II submissions to Lloyd's and remains relevant, agents do not need to repeat information. A clear reference to the appropriate sections within other documentation will suffice provided that this documentation is also submitted as an appendix.
- 2.26 As a guideline, managing agents should prepare the methodology document in accordance with requirements under Article 125 to document the design and operational details of the internal model. The document should be prepared with the objective of demonstrating equivalent compliance with Articles 121 to 124 and provide a detailed outline of the theory, assumptions and mathematical and empirical bases underlying the internal model. Agents should consider the principles of Article 243 of the Delegated Acts which requires that the document is "...sufficient to ensure that any independent knowledgeable third party would be able to understand the design and operational details of the internal model and form a sound judgement as to its compliance with Article 101 and Articles 120 to 124 of Directive". Managing agents should treat the Lloyd's review team member(s) as the knowledgeable party. Appendix 5 contains a list of topics that should be covered to enable Lloyd's review team to gain a sufficient understanding of the model.
- 2.27 Accordingly, agents should include all information that they would reasonably believe would influence the judgement of a third party regarding the appropriateness of the methodology and the adequacy of the SCR produced. As a guideline, if agents consider an analysis or commentary might be useful then we would encourage its inclusion.

Link to Validation

- 2.28 Lloyd's considers model validation is an essential process both for validating the SCR and an agent's status against the tests and standards. We therefore require agents to conduct a full validation cycle and submit a validation report on 23 September 2016. The report should validate and support the SCR submission made and will also be expected to have addressed any feedback previously provided by Lloyd's review.
- 2.29 Validation reports may be based on draft SCR numbers for 2017 YOA. This draft SCR must not be a rolled forward estimate and should be based on a business plan deemed appropriate at the time. Validation of any major changes to the assumptions or outputs of the draft version should also be included in the final validation report.

Independence requirements

- 2.30 Lloyd's considers that there should be objective challenge within the validation process; furthermore, in order to satisfy the Solvency II requirements the person taking responsibility for the validation should be independent of the model build and not "own" it. However, independent does not necessarily mean external to the firm, although Lloyd's recognises that it may be harder to achieve independence without some external input. Likewise, it does not mean that all the validation tests should be carried out by someone independent (i.e. agents do not need a parallel "validation team").

- 2.31 In order to meet the Solvency II tests and standards, agents are required to demonstrate how independence can be achieved and that the validation process is sustainable under business as usual.
- 2.32 The process to achieve independence should now be reflected in agents' validation policies. The validation report must also include evidence of objective challenge.
- 2.33 Agents should refer to guidance previously issued on validation and this can be accessed via the following link: Validation Guidance. The guidance was last updated in April 2014. A new version is expected to be released in July 2016.
- 2.34 The 2017 YOA LCR requires the 99.8th percentile of the balance sheet distribution (form 310) and claims (form 311). The syndicate 99.8th percentile will assist with the validation of the Lloyd's Internal Model (LIM). The LIM calculates demands on the Central Fund, which arise from syndicate losses exceeding the 99.5th percentile of their respective balance sheet distributions; validation therefore requires data points beyond syndicates' 99.5th percentiles. Agents will not be required to do additional validation of the 99.8th percentiles, nor will Lloyd's use the 99.8th as a test of the LCR.

Capital setting

- 2.35 Members' capital is set using SCR models utilising the 'to ultimate' calculations for coming-into-line (CIL) in December 2016 for the 2017 YOA. This SCR used is based on the 'to ultimate' as submitted in the LCR notwithstanding any capital loadings or adjustments made by Lloyd's. The eligible assets available to meet capital requirements for 2017 will be the value of funds at Lloyd's plus / minus the net balance on a Solvency II basis as at 30 June 2016. The Solvency II balance sheet submission is in the same format as the 31 December 2015 year-end QMC, and is supported by a limited review opinion provided by the syndicate auditors.
- 2.36 The results for the six months to 31 December 2016 on a Solvency II basis will be taken into account in the June 2017 mid-year CIL exercise. Again, this mirrors the existing recognition of syndicate results on a half yearly basis in arrears.
- 2.37 The existing framework requiring members to remain adequately capitalised continuously remains unchanged. Consequently, managing agents remain responsible for monitoring their SCR and advising Lloyd's of material changes. Agents are also responsible for advising Lloyd's where syndicate loss experience may reasonably be expected to have eroded member capital materially. As a guideline, we would expect agents to advise Lloyd's promptly where the ultimate SCR increases by more than 10% or syndicate loss exceeds 15% of the latest agreed ultimate SCR. The consideration of capital erosion through syndicate loss should look through to a year of account level to ensure that profits on one year do not offset losses on another, where syndicate membership changes year on year are relevant.
- 2.38 Lloyd's will require an economic uplift to be applied to determine a level of member capital that supports the risk appetite of the Society including its target Financial Strength Ratings and to support its licence network. Lloyd's expects that the aggregate uplift will be similar in magnitude to the capital required through the current 35% uplift applied to syndicate SCRs.

Reinsurance contract boundaries

- 2.39 Lloyd's guidance on technical provisions states:
 "Any future premiums payable on existing or legally obliged outwards reinsurance contracts (e.g. minimum and deposit premiums, and/or outwards reinsurance premiums owed in

respect of the ceded business to date) should be included. These premium payments should be included at the level to which they are contractually obliged based on existing or legally obliged inwards cover, with no consideration to the future inwards business.“

- 2.40 Internal models may use one of the two approaches to estimate technical provisions for 2017 YOA. In other words the internal models may or may not allow for future premiums payable on existing or legally obliged reinsurance contracts in the technical provisions. This approach will be acceptable for 2017 YOA only. The approach used should explicitly be stated in the methodology document.
- 2.41 Lloyd's will adjust the ultimate SCR to ensure Economic Capital Uplift (ECU) (35% of the ultimate SCR) is not understated as a result of this change in treatment of reinsurance premiums. The calculation for the adjustment will be provided in the Supplementary Questionnaire. The agent is required to enter the adjustment in form 309 of the LCR. Further details of the reporting requirements are provided in Section 5.34. Numerical illustration of the adjustment is provided in Appendix 4 – Reinsurance contract boundaries adjustment.

Uncertainty due to widening of terms and conditions

- 2.42 The market is continuing to soften. Lloyd's has identified a number of areas where terms and conditions are widening. There is a concern that terms can be widened but if the internal models are not adjusted to capture the additional risk then there is no internal “cost” to the underwriting decision.
- 2.43 Managing agents are expected to allow for uncertainty in areas where terms and conditions are widening and provide explanation of the parameterisation process in the methodology document submitted with the LCR in September.

Cyber

- 2.44 The SCR reviews for 2017 YOA will focus on the parameterisation and validation of all cyber lines of business the syndicate is planning to write. Details of the parameterisation process should be included in the methodology document submitted with the LCR in September.
- 2.45 Syndicates are not required to model cyber lines of business separately. Depending on the nature of business mix, an aggregate class structure may be used in the internal model. However details of the parameterisation of cyber and the rationale behind selected class structure should be provided in the methodology document.

Modelling of multi-year policies

- 2.46 The SCR reviews for 2017 YOA will focus on the modelling of multi-year contracts in the internal model. Details of the modelling process should be included in the methodology document submitted with LCR in September.
- 2.47 Multi-year contracts should be modelled until run-off for the estimation of the ultimate SCR. This applies specifically to policies that cannot be cancelled by an insurer. A syndicate's internal model should estimate lapse risk for policies where the insured reserves the right to cancel before run-off.
- 2.48 Modelling of exposure should be clearly explained for policies where the exposure increases with every passing year. The impact of the exposure assessment on the catastrophe losses should be included in the methodology document. The earning pattern for the portfolio should not be inconsistent with the duration of the multi-year contracts.

3 BASIS OF REPORTING

Going concern

- 3.1 The SCRs should be prepared on a going concern basis. Where the capital requirement would be higher should the syndicate cease at 31 December 2016, this should be noted on form 990.

Balance sheet at December 2016 (Time 0)

- 3.2 The balance sheet projection at 31 December 2016 (T0) should be prepared on the basis of net nil basic own funds on a Solvency II basis. The LCR reports the projected net technical provisions at T0 and the model should assume that equivalent assets are held.
- 3.3 When preparing the technical provisions projections, the expected claims development and payment pattern should be assumed from the date on which the projection is based up to 31 December 2016. We appreciate that this will be subject to change and would expect agents to update their projections in the September LCR for material deviations in actual versus expected. As a minimum, that should reflect actual technical provisions at 30 June 2016.
- 3.4 When preparing the balance sheet and assessing the assets subject to market risk, any member deficits in respect of uncalled losses should be assumed to be received in full as at 1 January 2017, with no disallowance. Agents should assume that the Society passes the required ICAS capital adequacy test.
- 3.5 We recognise that the actual level of assets held in the syndicate will differ from the required level to equalise a Solvency II balance sheet, for the known multiple differences between held reserves under GAAP and Solvency II. Agents should assume that all surpluses are immediately available for distribution to members and fall outside of the SCR modelling. This also applies to funds in syndicates (see Section 3.6 below). The investments held should be pro-rated to calibrate to the level of the Solvency II technical provisions – agents should not model on the basis that the riskiest assets are distributed first.

Funds at Lloyd's / Funds in Syndicates (FAL / FIS)

- 3.6 The investment income arising on surplus assets at syndicate level and on capital, whether provided as FAL or FIS, is outside the scope of the syndicate level SCR. Equally, the market risk associated with these assets is outside the scope and is considered within the central assets required to meet the Society capital requirement. This risk is effectively mutualised, although Lloyd's has prudential powers to require a capital charge to apply at member level where we consider it inequitable for all members (through central assets) to bear an increased level of risk brought by a member's portfolio.
- 3.7 The syndicate one-year SCR and ultimate SCR should, therefore, consider solely the assets needed in the balance sheet at T0 including Solvency II technical provisions and the subsequent cash inflows on new business. This applies both to expected investment returns and the market risk associated with the portfolio.
- 3.8 Technical provisions should be set on a Solvency II basis and be subject to discounting at the risk free rate and after inclusion of the risk margin.

Consistency between Capital model and SBF and treatment of different loss ratios

- 3.9 The premium volume and loss ratio assumptions for new business within the SCR submissions should be consistent with the relevant SBF they accompany (in September).
- 3.10 The principle underlying the business plan review is that loss picks are "realistic and achievable". The principle underlying the expected loss ratio selection for capital setting is that of a best estimate (i.e. mean) outcome. These two concepts are similar goals but may not always be the same. For example a syndicate may set challenging but achievable loss ratio targets which may be acceptable for business planning but could be less than a "true best estimate" and therefore not suitable for capital setting.
- 3.11 In the second case, it would be normal to expect the syndicate to re-run the capital model with underlying loss ratios that are then acceptable for capital setting. However, Lloyd's also recognises that under Solvency II and in particular to support the "use test", it may be more desirable for the syndicate to continue to run the capital model on their original assumptions. This may also be the case where differences in loss picks are relatively minor and the resultant additional work and governance to re-run the model is disproportionate. In these circumstances, Lloyd's would accept any of the following options:
- The LCR is re-submitted post a full re-run of the model using the revised loss ratios. This will need to be reviewed before it can be accepted.
 - The model is re-run based on the revised loss ratios but the LCR is not re-submitted. The results of the re-run would still be provided to Lloyd's but outside of a formal LCR submission. As the syndicate had not changed the submitted SCR it would then be expected to lead to a capital load based on the results of the re-run, once it had been reviewed and accepted.
 - A bottom line adjustment is made to the SCR based on the difference in whole account net loss ratio multiplied by the net premium volume. No further resubmission of the LCR would be required. This adjustment is expected to be broadly equivalent to the first two options and was generally agreed as a reasonable approach following discussions with the Committee of Actuaries in the Lloyd's Market (CALM).
- 3.12 The exact approach adopted by a syndicate should be discussed and agreed with the Lloyd's review team.

Foreign exchange

- 3.13 The LCR should be reported in converted sterling using the published 30 June 2016 rates for the September return. The rates will be set out in a Market Bulletin.
- 3.14 The managing agent may prepare its underlying model in any currency and present figures in the methodology document in US dollars where that is the dominant currency of exposure. All figures presented in the LCR, however, must be reported in converted sterling, as above. All figures presented in the LCR are at one decimal place with the exception of the FX rate, which has two decimal places.
- 3.15 Lloyd's does expect models to allow for the risk of unfavourable currency fluctuations following a severe loss unless the syndicate can demonstrate that the FAL strategy would deem this unnecessary. For example, if all catastrophic losses are expected in USD and the dedicated members supporting the syndicate have a defined strategy, with history, of holding USD FAL then this risk can be assumed to be mitigated. Otherwise, this situation should be included in the models.

Mean balance sheet projections

- 3.16 When preparing the mean balance sheet 'to ultimate' (or to one-year), we expect that modelled insurance premiums and claims for contracted business (pre risk margin) will run-off at the projected figures included in the T0 balance sheet – i.e. no gain or loss arises. Consequently, there should be no concept of "reserve margins" as the Solvency II technical provisions are assumed to be set at pure best estimate and these should be treated as a surplus asset (see Section 3.5 above).
- 3.17 Underwriting profits emerging on new business should be consistent with the loss ratio assumptions used to set capital. Note that the 2017 SBF will include both new business and the expected outcome on contracts bound prior to December 2016 that will be recognised within the T0 Solvency II balance sheet.
- 3.18 In respect of investment return, the projection 'to ultimate' in the model may recognise compound income in respect of retained profits. We would expect the model to assume that the profit is deemed to be released as recognised annually (on a Solvency II basis) and require that this is no later in full than 36 months (on RITC) – this should avoid distortion in the results from inclusion of excess investment income up to the final claims payment date and would not reflect the reality of full distribution of profits at Lloyd's. Otherwise, the presentation could overstate the difference between the expected outcome and the adverse ultimate SCR. Note this only applies to mean balance sheet projections and should have no effect on the 99.5th percentile assessment of risk.
- 3.19 Regarding managing agent profit commission, we would recommend that all models exclude the impact of additional accrual of profit commissions in the mean expected balance sheets. This approach would ensure a consistent basis of preparation across all syndicates irrespective of whether profit commission is charged. Where agent models are built so that the accrual is embedded in the calculations, agents should comment on the amount of accrued profit commissions (beyond the amount recognised in the T0 balance sheet) in the supporting methodology documentation.

Risk free yield curves

- 3.20 EIOPA publishes technical information relating to risk free rate term structures on a monthly basis. Agents may utilise the June rates in projecting their technical provisions at 31 December 2016 in their September LCRs. Agents are free to use their own projected risk free rates to produce these figures, with evidence to support their selection.
- 3.21 When preparing the estimated balance sheets at 31 December 2017 (T1) for the regulatory SCR, agents are required to use their own models and assessment of the prevailing risk free rates and the associated interest rate risk. The risk should be included within market risk in the LCR.

Ring Fenced Funds

- 3.22 We consider that overseas trust fund deposits do not fall within the definition of Ring Fenced Funds and agents are not required to model these separately. Lloyd's has discussed Ring Fenced Funds with the PRA and any adjustments for these will be made centrally. The liquidity risk that arises from material overseas regulatory requirements should be included in the model. Agents should include liquidity risk within market risk when completing forms 309 and 314 in the LCR and include commentary within the SCR methodology document on their assessment of liquidity risk.

Contract boundaries

- 3.23 EIOPA have now issued clarification regarding the contract boundary treatment of premium income arising under binding authorities. This is consistent with our previous view that the authorisation of a binder does not lead to contractual arrangements with policyholders and, therefore, that one-year SCRs capture solely the contracted underlying risks not the ultimate premium under the binder. Given this is now the definitive approach, agents should explain in their documentation, with suitable justification, any instances where they have taken any different approach.
- 3.24 Agents should ensure consistency in their treatment of contract boundaries when calculating the SCR and preparing their actual and projected T0 balance sheet and the T1 solvency balance sheets.

New syndicates

- 3.25 New syndicates are required to model hypothecated prior years when considering the 'SCR to ultimate'. This applies to any syndicate with less than three complete years of account, including the prospective 2017 YOA. No hypothecated prior years should be included in the one-year SCR calculation. Appendix 2 - Ultimate SCR for new syndicates sets out an example of the approach to be adopted. Please note, Special Purpose Syndicates (SPSs) are not normally considered as "New Syndicates".
- 3.26 New syndicates are required to enter the new syndicate loading of 20% of the SCR (where applicable) into the relevant field within form 309. This loading should be post the reinsurance contract boundaries adjustment discussed in Section 5.34. Lloyd's will adjust the SCRs should any further amendments be required.

4 PRINCIPLES

Lloyd's review

- 4.1 Lloyd's review of each syndicate ultimate SCR is designed to reach a confident conclusion on adequacy for capital setting to maintain policyholder protection.
- 4.2 We also have an obligation to ensure capital requirements at member level are set equitably. Consequently, reliance will be placed on benchmarking including comparison of individual syndicate SCRs against market averages and peers within the market.
- 4.3 We have allocated responsibility for each risk category to the most relevant department to produce a multi-disciplinary team for each syndicate. The capital review will be led by the analyst within Market Reserving & Capital (MRC). Each element of the SCR and the associated qualitative assessment has been assigned to a primary owner (for example Exposure Management have primary responsibility for assessing pre-diversified catastrophe risk) and on a "four eyes" principle an assigned challenge owner.
- 4.4 The capital reviews will also be conducted in co-ordination with the Business Plan review. Accordingly, agents should expect to deal with a number of different staff members in a co-ordinated manner during the review periods with the main capital contact being the allocated MRC analyst.
- 4.5 The review will be a ground up assessment of each risk category, alongside the top down assessment, assisted by benchmarking and peer comparisons. We expect to conduct a "full" review that will inevitably require resource and management time from agents. Over time this should facilitate a more rolling and less intensive review level as business as usual going forward.
- 4.6 The first stage in the review will subject the LCRs to initial checks and request resubmissions or clarification, where necessary.
- 4.7 Then we will review each syndicate's submission and its methodology. We expect this to be a mixture of desk based review and on-site meetings and / or presentations from agents.
- 4.8 We will take into account the additional information provided in the 2017 YOA SCR Supplementary Questionnaire.
- 4.9 We aim to give feedback on potential significant issues by mid-August for major model change submissions in July or prior.

Uncertainty

- 4.10 Simulation error is common to all models. Where applicable, we would expect agents to select from the "middle of the range" when compiling their SCRs and advise us through the methodology document of the potential impact of selecting alternative runs / random seeds.
- 4.11 The uncertainty in establishing a 1:200 capital assessment is understood. The methodology document should identify the key sensitivities affecting the SCR and provide explanations of why the modelling approach is appropriate for quantifying these extreme outcomes.
- 4.12 In view of this uncertainty and the duty of Lloyd's to set capital equitably, we would expect agents to understand that a different view may well have merit, where it, for example, may sit within the agent's own range of foreseeable SCRs.
- 4.13 Lloyd's expects agents to demonstrate stability in model results.

Credibility

- 4.14 We will treat all agent submissions on a goodwill and good intent basis. While the review process does bring a duty to assess adequacy and probe assumptions and model outputs, agents are entitled to expect the Lloyd's teams to adhere to a code of conduct similar to that adopted by auditors. We will aim to demonstrate professional scepticism during the review of the SCR by applying similar principles to those laid down by the Auditing Practices Board (APB) for auditors. These principles are documented in the APB's paper titled "Professional scepticism" dated March 2012. The reviewer will:
- Develop a good understanding of the syndicate and its business
 - Have a questioning mind and be willing to challenge management assertions
 - Seek to understand management motivation for possible misstatement of the SCR
 - Investigate the nature and cause of deviations or misstatement identified and avoid jumping to conclusions without appropriate evidence
 - Be alert for evidence that is inconsistent with other evidence obtained or calls into question the reliability of documents and responses to enquiries
 - Have the confidence to challenge management and the persistence to follow things through to conclusion
- 4.15 Over time, we will place greater reliance on SCRs and internal models for agents where credibility is enhanced; whether through explanations that provide reasoned and persuasive answers to questions raised; best estimate projections that match actual results subject to explained deviations; LCR pro-forma information that fits together reasonably; detail that is declared to be available to support agent assumptions being provided promptly on request and / or simply the first submission from agents being within the foreseeable range of likely outcomes.
- 4.16 Where less credibility is affirmed, we will, for prudential reasons, take a more sceptical approach and, while remaining equitable, will tend towards selecting more pessimistic assumptions and requiring agents to model these to produce alternative ultimate SCRs. We will distinguish between simple errors, typos or odd inconsistencies that arise in complicated and lengthy documentation and instances of misstatement. A judgement will be made regarding the significance of errors and agents should note that we take the view that a series of even small individual errors could be evidence of a lack of review, potential lack of management engagement and ownership and ultimately of a less reliable internal model.

Transparency and "prudent assumptions"

- 4.17 The SCR is defined as the 1:200 value at risk. There is no requirement to build in implicit or explicit prudence within the modelling and agents should perform each part of their modelling at the required stress level. During previous reviews, it was common to experience difficulty in assessing aggregate capital adequacy in instances where agents point to one area of prudence offsetting other areas where challenge has highlighted a perhaps weaker area. Consequently, the review approach will be to assess each component for adequacy and agents will receive limited, if any, credit for "offsetting" margins elsewhere in the model.
- 4.18 We recognise that there is a place for selecting prudent assumptions and parameters, where there are model limitations or a simplified approach has been taken. For these areas, however, we would expect that the element of deemed prudence is not material and not

quantifiable (if it is quantifiable, this would suggest that the more accurate assessment of risk is available). Again limited credit, if any, will be given in the overall assessment of adequacy.

- 4.19 For stress tests, the most informative results when assessing the ultimate SCRs will be derived from scenarios that the agent considers to be approximate to the 1:200 stress point. There is less value in reporting stress tests in the documentation that are either a) passed by the model where the scenario is assessed at a 1:10 or 1:100 probability or b) failed by the model but assessed as being significantly more extreme than the required 1:200 confidence level.

Model change and Analysis of Change

- 4.20 Lloyd's will require all agents to submit a report of model changes on 7 July 2016 and 13 September 2016. Ideally, the submission should record all model changes made since the last submitted SCR (through the quarterly model change or the LCR). This submission should make clear which changes are classified as major and which are minor.
- 4.21 Lloyd's has provided a standard template to be used by all agents for this submission; this is available on lloyds.com together with relevant guidance on completion.
- 4.22 We expect that agents would have completed their annual re-parameterisation of the model and key assumptions ahead of the September 2016 submission, subject to validation. Any changes to the risk profile or model prior to September will be reported through the quarterly model change submission in July and any major model change submissions prior to September.
- 4.23 Agents should include an Analysis of Change with the September return. This should capture the differences between the September submission and the previous LCR submission. This should be organised between model changes, the results of validation and supplementary work and adjustments to model inputs (e.g. planned premium income).

Consistency with the SBF

- 4.24 As set out in Section 3.9 to 3.12 above, the LCR submissions should be considered in conjunction with the relevant SBF return provided in September. Agents will be expected to explain in more detail any differences between profit, ULRs, premium volume and expected claims amounts to provide accurate LIM and central fund calculations. Additional tools will be added to the Supplementary Questionnaire to aid agents to identify any differences.
- 4.25 We strongly recommend that SBFs represent the best estimate of planned underwriting activity and do not include prudence within the plan assumptions. We recognise that some agents have embedded business reasons (prudence or setting stretch objectives for example) for managing their underwriting plan to a level that they consider more appropriate than pure best estimate.
- 4.26 Lloyd's expects consistency of "best estimates" between various returns such as QMB, TPD and the Solvency II balance sheets on the QMC. Our review will consider this and agents should note that the mean projected outcome will be a specific area of challenge in the assessment of capital adequacy.
- 4.27 The SBF represents the requested level of underwriting exposure to be undertaken for 2017. Accordingly, agents should model as a minimum the planned exposure as set out in the SBF and not adjust this downwards for management judgement that these represent "aspirational" plans or "theoretical maximums" (for example the RDSs). This is in addition to the substantive

operational risk that planned exposures are exceeded, which should be addressed in the SCR.

ICA Guidance

- 4.28 The guidance to approach and methodology set out in the 2010 ICA Minimum Standards & Guidance remain relevant to the production and presentation of the SCR in the LCR and the supporting methodology document. The ICA Guidance evolved over a number of years and was subject to detailed scrutiny by market practitioners. It includes a number of helpful considerations for agents when submitting their methodology documents. The guidance has not been repeated here, but we would strongly encourage agents to refresh their knowledge of its contents and include appropriate commentary to address issues raised in the guidance, where it covers their material risks.

5 LLOYD'S CAPITAL RETURN (LCR) - FORM BY FORM

FORM309 - LCR SUMMARY

Headline contents

- 5.1 Table 1 reports the headline aggregate one-year SCR and ultimate SCR as at 1 January 2017 and includes a field for new syndicate loads; agents with a syndicate to which such a loading applies are required to confirm the amount with Lloyd's in advance. See Appendix 1 for a detailed definition of the ultimate SCR. Table 2 provides analysis of the SCRs by risk categories both pre and post diversification. For run-off syndicates a flag is required where premium risk is not zero; details are to be reported on form 990. The 2017 YOA LCR will include a new field for reinsurance contract boundaries adjustments; the calculation behind this will be provided in the Supplementary Questionnaire. See Appendix 4 for an example of this calculation.

Insurance risk

- 5.2 Premium risk should capture the risk in respect of all underwriting exposures from 1 January 2017 for all years of account. We appreciate that some models are prepared on an underwriting year basis, however, for consistency we require line 2 to reflect all future underwriting risk and that reserve risk on line 3 is the risk that reserves on earned business deteriorate. Premium risk should include catastrophe risk (see form 313) for all events occurring after 1 January 2017.
- 5.3 The total insurance risk on line 1 should represent the diversified aggregate of premium risk and reserve risk. For columns C and G (Pre-diversification) this should be captured prior to correlation / diversification with other risk categories.
- 5.4 All anticipated future underwriting profits should be included within the assessment of premium risk. There should not be a profit offset included within line 10 (diversification between risk categories).
- 5.5 The discount benefit at the risk free rate credited at T0 on insurance liabilities will partly unwind on a one-year basis and fully unwind on an ultimate basis; the unwinding of the discount should not be included within insurance risk but should be offset against the returns earned on the supporting assets at the risk free rate. The 1:200 outcomes on premium and reserve risk should be consistent with the stress on an undiscounted basis. The risk of changes to the net value of assets and liabilities arising from changes in the risk free rate should be included within market risk.
- 5.6 For reserve risk, as the assets eligible for discounting represent solely the existing assets at T0 plus future premiums and excludes cash injections to meet capital shortfalls, we would expect this benefit to be restricted to a maximum of the discounting credit within the T0 balance sheet. Agents are advised to read the [SCR Guidance – Numerical Examples](#) for further clarification on Sections 5.5 and 5.6.
- 5.7 The risk free discounting credit in the SCR should reflect that existing assets may be depleted more quickly in a 1:200 scenario and consequently the risk free return will reduce compared to best estimate projections. More detail is in Appendix 3 – More detail on Market Risk.
- 5.8 Excess returns over risk free should not be included here as they should be reported within the market risk category (line 7) and in table 2 of form 314.

- 5.9 We expect agents to capture the impact of the market cycle on insurance business. With respect to applying expected loss ratios and 1:200 loss experience, we would not normally expect material differences to apply over the life of the 2017 YOA. Accordingly, agents may model the one-year and ultimate premium risk for the 2017 YOA as a whole, with no requirement to apply judgement to model different outcomes dependent on the timing of individual risk attachments. Where agents consider this is a material area of difference between assumptions for the one-year SCR compared to the ultimate SCR, please include a commentary on its impact in the methodology document. This is a separate point to loss emergence recognition, which is expected to be a material driver of difference between the two modelled 1:200 outcomes.
- 5.10 Lloyd's expects claims inflation to be included in insurance risk – this is covered in more detail in Appendix 3 – More detail on Market Risk.

Risk margin

- 5.11 The risk margin is designed to represent the cost of providing the required regulatory capital that would apply to another undertaking to take on the technical provisions (TPs). The balance sheet at Time 0 has a risk margin added to the TPs for this “cost of capital”. The one-year SCR also has a risk margin in at 12 months' time, based on the technical provisions in the (stressed at 99.5th percentile) balance sheet at that date, and so includes the movement in the risk margin over one year.
- 5.12 The ultimate SCR does, however, include a gain from the risk margin running off to zero. This is because at the ultimate time horizon, all claims have been paid, no technical provisions exist and so there is no associated cost of capital. This means that as the calculation of the SCR is the difference between ultimate 1:200 losses (no risk margin) and the Time 0 balance sheet (including risk margin), a credit is effectively produced. This credit must also be applied to the stand alone component risks of the ultimate SCR, and should be set off against reserve risk in line 3. Alternatively, agents may consider it appropriate to apply some of the credit to premium risk as well. Lloyd's will require agents to state in the supporting SCR methodology document which approach has been used and how much has been allocated to reserve and/or premium risk. This will allow Lloyd's to adjust appropriately when assessing the aggregation of premium and reserve risk.

Binary events (or Events Not in Data (ENIDs)) and other expenses

- 5.13 The balance sheet at T0 includes allowances for certain administrative and investment expenses and ENIDs that increase TPs. These may be more extreme than 1:200 so that the ultimate SCR effectively credits them back when considering the aggregate cash flows at the required stress point. This credit is produced implicitly in the ultimate SCR calculation; no offset to reserve risk or premium risk is required, in contrast to the credit from the risk margin. A worked example will be included in the updated “SCR Supplementary Questionnaire – Notes” available on lloyds.com. The size of the reduction must be stated in the supporting SCR methodology document and is also required as an input in the Supplementary Questionnaire.
- 5.14 The presentation of the T1 balance sheet on an expected outcome basis, and for stressed distribution points including the 1:200, should include the required allowance for ENIDs, as they are within the balance sheet at T1 on a Solvency II basis.
- 5.15 The balance sheet at T1 should also include the allowance for ENIDs on the unexpired proportion of exposure – the “unemerged risk” at December 2017.

- 5.16 Additional ENID risk at the 1:200 confidence level arising on new business should be included within premium risk on line 2.

Lapse risk

- 5.17 Lapse risk should be included within premium risk in respect of new business bound from 1 January 2017 on line 2 and within reserve risk on line 3 where it relates to incepted business. We would normally expect this risk to be immaterial, but where it is considered material, please include commentary within the SCR methodology document. This applies to both life and non-life business.

Credit risk

- 5.18 The aggregate credit risk on line 4 should represent the diversified aggregate of reinsurance credit risk and other credit risk (but not on financial assets – see Section 5.21). For columns C and G (Pre-diversification) this should be captured prior to correlation / diversification with other risk categories.
- 5.19 Reinsurance credit risk should be reported under this risk category in full on line 5. This should exclude dispute risk or reinsurance exhaustion, which should be modelled and reported within insurance risk on lines 1-3.
- 5.20 Reinsurance bad debt provisions within technical provisions at T0 are set out on form 312. Projected mean modelled insurance losses should assume this provision runs out at no profit or loss, as under Solvency II this is the underlying pure best estimate. For additional mean provisions modelled to emerge on new business, this can be included implicitly within the insurance risk assessment or included within the reinsurance credit risk category – the amounts and treatment should be set out in the document. The stress level of reinsurance credit risk on line 5 should take account of the amount already being held at best estimate and should, therefore, be the excess deviation from currently held provisions to the 1:200 confidence level.
- 5.21 Credit risk excludes the default risk applying to financial investments, which should be reported within market risk (see Section 5.23 below).

Market risk

- 5.22 Market risk should represent the net 1:200 deterioration from the opening balance sheet at T0. It should include the risk to the value of the assets and liabilities arising from volatility in the level or market prices of the following (Article 105 of the Directive):
- interest rates
 - equities
 - property
 - credit spreads over risk free interest rates
 - currency exchange rates
- 5.23 The risk from limited diversification in the asset portfolio or from default of a single issuer or group of issuers of securities should also be included within market risk.
- 5.24 The expected return in market risk is the total expected returns from the syndicate's assets, allowing for a net nil balance sheet at T0 plus the new premium income, reduced by the total risk free discounting already allowed for in the booked insurance liabilities. The discounting credit at T0 is expected to unwind to ultimate but any associated loss due to unwinding will

not be included in insurance risk (see Section 5.5). Market risk should also include the risk that there are changes to the risk free rate in the valuation of T1 technical provisions in the one-year SCR.

- 5.25 If not modelling on both a one-year and ultimate basis, agents should state clearly the time horizon adopted for market risk when assessing the ultimate SCR and ensure this is consistently applied for expected returns and associated asset risk. If modelling on an ultimate basis, agents should provide evidence that the time horizon is consistent with the length of the claims payment pattern. Both expected returns and asset risk should exclude capital and surplus syndicate assets.
- 5.26 Foreign currency risk should be included here.
- 5.27 A more detailed description of market risk is provided in Appendix 3 – More detail on Market Risk.

Liquidity risk

- 5.28 Liquidity risk should be included within market risk on line 7.

Operational risk

- 5.29 Operational risk should be analysed between “stand-alone” risks e.g. business interruption through loss of the building or technology and risks associated more closely with other risk categories e.g. mis-reporting of case reserves or rogue underwriter. Agents should make clear in their methodology document the delineation between operational risk and inclusion of the capital impacts in other risk categories to ensure no duplication or omission. In particular, agents should be explicit in the allowances made in assessing operational risk for historical data considered to capture implicitly such risks e.g. binding authorities exceeding limits or contracting business outside its terms of reference.

Group risk

- 5.30 Group risk should be included within operational risk on line 8.

Diversification

- 5.31 The total of individual risk categories post diversification (line 9 of columns E and I) should equal the diversified total on line 11 of columns C and G.
- 5.32 Lloyd’s issued guidance on a standardised approach for calculating the post diversification amounts in early April 2014. This guidance has been included in the “SCR Supplementary Questionnaire – Notes” available on lloyds.com.
- 5.33 Agents are now required to use the standardised methodology for calculating the post diversification risk by category.

Reinsurance contract boundaries

- 5.34 A 35% economic capital uplift (ECU) is applied on the regulatory capital held at Lloyd’s. SCR decreases as a result of allocation of reinsurance premium to Technical Provisions. The SCR is adjusted to ensure the ECU is unaffected by the re-allocation of reinsurance premium. Details of the adjustment will be available in the new Supplementary Questionnaire. Form 309 will have a field to enter this adjustment for ultimate SCR and agents are required to complete this field. The ultimate SCR in table should continue to be the output from the internal model without any adjustment due to reinsurance contract boundaries.

FORM 310 – KEY CAPITAL ASSUMPTIONS

Headline contents

- 5.35 The form reports the projected change in balance sheet in one year's time (i.e. at December 2017) as the mean in line 1, column A. This is the difference from the balance sheet at time 0 (31 December 2016), which is set to net nil where assets equal liabilities. Agents should assume that all declared losses up to that point are called in full and made available at T0, with no solvency disallowance, and any surplus assets or profits (on a Solvency II basis) are distributed.
- 5.36 This fits with Lloyd's 100% distribution policy and the assumption that reported losses are funded in full.
- 5.37 The projected balance sheet 'to ultimate' is reported in row 2 on a mean expected outcome basis and at the 1:200 confidence level.
- 5.38 Columns B to F also report the balance sheet at various distribution points on a one-year and ultimate basis. Column H reports the 99.8th percentile on an ultimate basis.
- 5.39 The 99.5th percentile losses in Column I are equal to the one-year SCR and ultimate SCR as shown on form 309, and are pre-populated from that form.

Mean balance sheet projections

- 5.40 The mean balance sheet projections should be completed in accordance with the Basis of Reporting set out in Sections 2.16 to 2.19 above.
- 5.41 The mean at one-year is the expected result on a Solvency II basis in 2017, covering underwriting profit and investment income. To ultimate, the mean profit is expected to be higher for many agents, although we would expect the biggest difference to relate to investment income in excess of the risk free rate (as that is already booked as a discount in the technical provisions) and the running down to nil of the risk margin. We do not expect the form to report materially higher underwriting profits to ultimate than at one-year, since the expected result (to expiry of the risk) on contracted business should be booked in the balance sheet at T1.
- 5.42 We would broadly expect the mean to be comparable to the expected profit in the 2017 SBF, certainly directionally on an ultimate basis. Agents should explain material differences in the methodology document after allowing for the inclusion of expected profits in the T0 Solvency II balance sheet for un-incepted obligations. Where recognition patterns affect emergence of profits at the expected outcome, supporting analysis should be provided. Supplementary questionnaire will include a section on the reconciliation of underwriting profit, between LCR and SBF entries. Differences should be explained.

Balance sheet distributions – other percentiles

- 5.43 Reporting the various distribution points provides evidence that may be subject to validation, which should cover the full probability distribution. The internal model needs to produce modelled surpluses / deficits on an expected basis (mean) and other points as well as simply considering the 99.5th percentile downside. This enables comparison of the Lloyd's internal model syndicate curves with multiple data points rather than one or two, which improves the parameterisation.

- 5.44 The 99.8th percentile will also be collected on the 2017 LCR. The 99.8th percentile will be used in the validation of the LIM (refer to Section 2.34). As with insurance operations in general, the various outcomes of next year's trading is expected to be skewed – the downside is much worse than the upside compared to planned outcomes. Agents should provide commentary in the document in terms of the break-even return period and where historical experience is relevant and would sit compared to the projected model outputs.

Volatility

- 5.45 The difference between the mean and the 99.5th SCR point is a measure of the volatility of the plan and the reserves. We expect agents to compare this to the volatility in the data provided for the Lloyd's Catastrophe Model and the total modelled insurance losses, reported on form 311. As form 310 captures all risks, we would expect the deviation from the mean here to exceed the deviation in insurance risk (modelled insurance losses) on 311. Where it does not, even allowing for discounting and future investment income that are booked here on form 310 but excluded from form 311, agents should address the explanation for this in the supporting document.

FORM 311 – NON-LIFE STATISTICS

Headline contents

- 5.46 Section 1 reports the total insurance gross and net claims and claims expenses falling within the model from 1 January 2017. The amounts should all be stated on an undiscounted basis.
- 5.47 On a one-year basis, the total represents claims and claims expenses technical provisions projected to be brought forward from 31 December 2016 plus claims that will emerge on business contracted for in the next 12 months. In other words, total claims payments from 1 January 2017 on all business written and bound prior to 31 December 2017. For the ultimate basis, the total represents claims technical provisions at December 2016 plus claims arising on all new business bound to the 2017 year of account in full.
- 5.48 Columns B to H report the claims and claims expenses at various distribution points on a one-year basis.
- 5.49 Section 2 analyses the expected net claims and claims expenses (mean) by underlying pure year of account. The brought forward claims provisions are pre-populated from form 312 in column I of this section. Column J records adjustments, if required, for differences between the forecast technical provisions and the equivalent capital model outputs. The column should be reserved for differences in respect of opening claims provisions only. Column K reports expected claims arising on business contracted in the next 12 months post 31 December 2016.

Basis of reporting

- 5.50 Premiums and premium expenses should be excluded.
- 5.51 Claims expenses represent allocated loss adjustment expenses (ALAE). Unallocated loss adjustment expenses (ULAE) should be excluded.
- 5.52 All figures should be on a Solvency II basis, except that they should be undiscounted and exclude the risk margin.
- 5.53 We do not expect material adjustments to be made in column J, as agents should prepare consistent claims and claims expense projections for inclusion on form 312 and as part of the internal model. Agents should include a commentary in the supporting SCR documentation, where these adjustments are significant.
- 5.54 The final year of account in the Section 2 table is 2017, since at T1 (i.e. at 31 December 2017) risks will have been bound but not yet incepted for the 2018 year of account. These figures are pre-populated from form 312 in column K (new business).
- 5.55 The mean expected claims arising on business bound in the twelve months from 1 January 2017 to 31 December 2017 should be reported in Column K. A warning message alert is included in the software for claims reported against underlying years of account 1993 to 2014 inclusive. We consider that it is unlikely that the model will include additional business attaching to these mature years of account and agents should include a commentary in the supporting SCR documentation, where these amounts are significant.
- 5.56 The sum of mean expected net claims and claims expenses within the model in Section 2 should equal the total reported in Section 1 column A line 1, which is a validation built into the software.

- 5.57 All entries should exclude reinsurance bad debt provisions, but include allowance for reinsurance dispute and exhaustion. Accordingly, the net insurance claims pre-populated from form 312 are taken from the entries prior to the projected bad debt provision (separately reported on form 312 in column N). The expected bad debt provisions and risk of additional defaults fall within reinsurance credit risk.
- 5.58 We would expect agents to compare the net claims for the 2017 pure YOA against the total net claims in the 2017 SBF and provide a commentary on their consistency.
- 5.59 The final row in Section 2 reports claims arising on un-incepted legal obligations (ULO) as at 31 December 2017 for the 2018 YOA. We are content for agents to prepare models assuming these equal the anticipated claims arising on un-incepted legal obligations at December 2016 for the 2017 YOA. Agents should enter adjustments in Column J where this is not the case (perhaps for new syndicates with planned increases year on year), and include appropriate commentary in the supporting documentation.
- 5.60 We do not expect agents to model changes to prospective market conditions applying to ULO for the purpose of adjusting entries for the 2018 YOA on this form.

Volatility

- 5.61 The difference between the mean and the 99.5th SCR point is a measure of the volatility of the plan and the reserves. We expect agents to compare this to the volatility in the data provided for the Lloyd's Catastrophe Model and the total insurance risk and overall SCR on forms 309 and 310. As form 311 captures net claims only, we would expect the deviation from the mean here to be lower than the total risk modelled on form 310.
- 5.62 Where there is a significant relationship between adverse claims experience and movements in modelled premiums, agents should address the explanation for this in the supporting document. This should include analysis of reinstatement premium income that is driven by the adverse claims experience and other movements. Other movements should be described in some detail – for example, foreign exchange risk post loss which is reported within market risk on form 309 and should be excluded from this measure of stand-alone claims volatility.
- 5.63 As noted in Section 2.34, the 99.8th percentile, on an ultimate basis, will be collected in the 2017 LCR. It will be used to assist with validation of the LIM.

FORM 312 – TECHNICAL PROVISIONS

Headline contents

- 5.64 The form breaks down the forecast technical provisions as at T0 (December 2016) between gross and net premiums and claims and shows them by pure year of account (1993 - 2016, Section 1).
- 5.65 There are premium and claims entries for the 2017 YOA due to the inclusion of un-incepted legal obligations (Section 2).
- 5.66 The entries for insurance losses are split between claims, expenses and the discount applying to them (at risk free rates). The separate entries for expenses (columns B and I) are in respect of ULAE and administrative expenses.
- 5.67 For premiums, the form shows the amounts gross of acquisition costs, acquisition costs and discounting effect. The net best estimate liabilities (claims less premiums) are then subject to a risk margin being applied, also shown by YOA, to derive total technical provisions.

Basis of reporting

- 5.68 All amounts should be on a Solvency II basis and represent the pure best estimate of all possible outcomes as at December 2016. The projection should be on a similar basis and preferably as adapted for the preparation of the June 2016 QMC, or Solvency II Balance Sheet.
- 5.69 The projected provision for bad debts in respect of anticipated reinsurance recoveries within technical provisions should be reported separately in column N.
- 5.70 Acquisition costs relate to amounts that fall to be deducted from gross premium income for stamp monitoring purposes and for calculation of Central Fund contributions. They should, therefore, exclude internal costs re-allocated to acquisition costs for accounting purposes – these should be included in expenses.
- 5.71 The claims reserves form part of total future claims payments and should be included within modelled insurance losses, at the mean, on form 311. Form 311 covers modelled claims and excludes premiums.
- 5.72 We would expect the ULO for the 2017 year of account at T0 to be comparable with the ULO in one year's time (for the 2018 YOA).
- 5.73 We would expect agents to compare the ULO for the 2017 YOA against total net premium income forecast in the SBF to determine whether the proportion reported as a ULO as at December 2016 is reasonable. Agents should also comment on the expected net profit (or loss) expected on the ULO and its consistency with the overall loss ratio and combined ratio expectations in the 2017 SBF.
- 5.74 Agents should prepare a reconciliation of the Solvency II projected technical provisions from the actuals at the date of preparation and include this in the supporting documentation.
- 5.75 Where agents model the risk margin at whole account level, this may be pro-rated to year of account based on net insurance losses.

FORM 313 – FINANCIAL INFORMATION

Headline contents

- 5.76 Section 1 reports the latest planned gross and net premium income for the proposed (2017) YOA and the current (2016) YOA.
- 5.77 Section 2 reports the average claims duration of expected net claims – in calendar years to one decimal place – and confirms the exchange rate applied to US dollars. This should be the March rate of exchanges for the July submission and June rates of exchange for the September return.
- 5.78 Section 3 reports the analysis of net insurance losses between natural catastrophe claims and all other business. This is required for the expected claims and the 1:200 adverse experience both for the one-year SCR and for the ultimate SCR. The total modelled losses (line 8) after diversification should equal the total on form 311 Section 1, lines 1 and 3.
- 5.79 The LCR requires the split between natural catastrophe claims reported on the LCM and all non-LCM natural catastrophe losses.
- 5.80 The form includes a check box to prompt agents to consider whether there is any material difference in the treatment of all reinsurance applicable to natural catastrophe claims in the LCM data feed compared to the full internal model.

Basis of reporting

- 5.81 Section 1 is included as a confirmation to us that the internal model is consistent with the latest submitted SBF for the 2017 YOA and the latest approved SBF for the 2016 YOA. The SBFs also form key data feeds to the LIM and the syndicate SCR benchmark. Furthermore, the view of natural catastrophe risk within the internal model should be consistent with the latest version of Forecast Factors submitted to Lloyd's Exposure Management and Reinsurance review team.
- 5.82 The average claims tail is the estimated duration of payment of net claims at the mean from 1 January 2017. Agents are expected to model that estimated net claims up to the value of the mean are expected to settle more rapidly in a 1:200 adverse scenario in view of the increased quantum of total claims. Where the duration diverges materially at the 1:200 point, agents should include appropriate commentary in the supporting documentation. See Appendix 3 regarding asset/liability mismatch.
- 5.83 The catastrophe net claims included in Section 3 should only cover the five peak perils and classes included in the LCM (line 2); these are defined in the LCM Guidance & Instructions document. Please note that the methods used for estimating losses based on forecast exposures in the LCR should be entirely consistent with the methods used for estimating in-force losses for the LCM Quarterly Return, and vice versa. For example, where a syndicate uses outputs from catastrophe models as inputs to the Internal Model, and then applies additional factors for cat-risk in the Internal Model, the LCM Quarterly Return method should reflect this. 'Non-LCM' (line 3) means losses arising from natural catastrophe only, in region-perils not specifically covered by the LCM. For example, US flood would be 'non-LCM', as would Australia earthquake. Losses arising from man-made events should not be included. Total natural catastrophe claims reported in line 1 should exceed those reported in line 2 and line 3. Lloyd's does not support discounting for 'recognition' of natural catastrophe losses. For example, no discount should be applied to the outputs of catastrophe models to account for

situations where a proportion of losses arising from events occurring during 2017 would only be 'recognised' as catastrophe after 31st December.

- 5.84 Claims are reported on a net loss basis (claims less reinsurance recoveries). Any associated reinstatement premiums (inwards or outwards) should be reflected in the insurance risk and overall SCR calculations. In other words, the entries on form 313 should be on the basis of "Net Loss" not "Final Net Loss" per the definitions used for reporting catastrophe losses.
- 5.85 Agents should include a commentary on the treatment of whole account reinsurances in allocation of net insurance losses between catastrophe and other. Where this is different to the LCM data inputs, agents should also address this in their analysis.
- 5.86 The 'total all other insurance losses' covers both non cat premium risk and reserve risk modelled losses pre diversification between these elements – the diversification on line 3 is the total diversification applied for insurance risk, not the diversification between cat and non-cat premium risk. The supporting commentary should set out how these estimates fall within the totals for premium risk, reserve risk and diversified insurance risk on form 309.

FORM 314 – ADDITIONAL QUANTITATIVE ANALYSIS

Headline contents

- 5.87 The purpose of form 314 is to capture additional quantitative information that will assist Lloyd's in evaluating and comparing syndicate SCRs.
- 5.88 Further quantitative information will be obtained in the 2017 SCR Supplementary Questionnaire. The updated questionnaire will be issued in June 2016. No major changes to the mandatory information are planned.
- 5.89 The additional information on insurance risk captured in Section 1 are the means (and stresses) of the premium, reserve and total insurance risk distributions. The means and stresses will assist Lloyd's in evaluating whether the deteriorations at the 1:200 confidence level are appropriate, given the syndicate's mix of business, years of history, diversification by region/class, and so on. They will also allow for a more accurate assessment of the diversification within insurance risk. The mean for premium risk will normally be negative (a profit); for reserve risk, the mean should be equal to the negative of the sum of the risk margin at T0 plus any credit from ENIDs at the mean (also a profit), with a small allowance for simulation error. The premium risk mean should also be consistent with what is provided on the SBF, after allowing for the impact of discounting.
- 5.90 Section 1 also captures the mean and 1:200 on investment returns. Lloyd's will compare agents' own view of the riskiness of their portfolio with an estimate obtained using the disposition of a syndicate's assets and Lloyd's view of the riskiness of those assets.
- 5.91 Section 2 provides a breakdown of the components of market risk. For a description of the components of market risk, see Appendix 3.
- 5.92 Section 3 reconciles the one-year and ultimate distributions of basic own funds. The components of the difference between the distributions are shown at the mean, stress and 1:200. The main purpose of section 3 is to provide insight into the contributions of differences in a) loss emergence and b) contract boundary definitions of exposure to the aggregate difference between the one-year and ultimate SCRs.

Basis of reporting

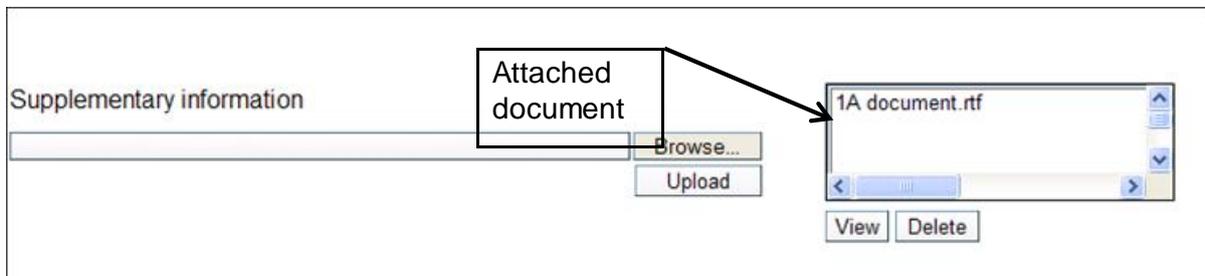
- 5.93 The means reported for premium and reserving risk in Section 1 should be from the same distributions used to obtain the 1:200 reported on form 309.
- 5.94 The interest rate risk and foreign exchange risk shown in Section 2 must include risk to both liabilities and assets.
- 5.95 The first item (line 2) in Section 3 is an adjustment for 2018 bound but not incepted contracts. The balance sheet at T1 includes all cash flows associated with these unaccepted contracts; the expected results must, therefore, be included in the one-year distribution of basic own funds. They are excluded from the ultimate, which includes 2017 and prior years of account risks only. (They will be included in the 2018 YOA ultimate SCR.) This adjustment will therefore increase the ultimate SCR relative to the one-year (where these contracts are expected to be profitable).

- 5.96 The entry for line 3 will depend on contract definitions. It covers policies from binder business incepting in 2018 but attaching to the 2017 and prior years of account and not recognised as written as at year-end 2017. Where these contracts are not recognised as written at year-end 2017, they will be excluded from the one-year SCR calculation. Conversely, the ultimate basis includes the risk on all contracts attaching to 2017 and prior, so their volatility must be modelled (unlike the unaccepted contracts in line 2, which are included at the best estimate of the associated cash flows). It is expected that these contracts will show a loss at the 1:200, and that they will therefore increase the ultimate SCR relative to the one-year.
- 5.97 The presumption on the one-year basis is that the claims will be transferred to a buyer at T1 for a price equal to the technical provisions (best estimate liabilities plus risk margin). The one-year SCR must be sufficient to cover an increase in both claims liabilities and the risk margin at T1 in a stressed scenario. Conversely, on an ultimate basis, the SCR must offset the deterioration in the claims portion of technical provisions only; the risk margin does not represent a liability. Therefore assets necessary to cover the risk margin at T0 (line 5) on a one-year basis are available either to pay claims (in a stressed scenario) or returns to capital providers (in a profitable scenario) on an ultimate basis. Similarly, the portion of the one-year SCR that is required to cover an increase in the risk margin in the stressed scenario (line 4) is not required on an ultimate basis. The entry for line 5 should be the same as the risk margin shown on form 312 in the balance sheet at T0. The impact of lines 4 and 5 is to reduce the ultimate SCR relative to the one-year SCR.
- 5.98 On a one-year basis, risks that have not expired by the end of 2017 would be shown on the T1 balance sheet at their mean value (valued at time 1). For example, for a risk written 1 October 2017, the one-year SCR would include downside risk only for experience through to 31 December; results for the unexpired period from 1 January through to 30 September 2018 would be included at the mean. Conversely, on an ultimate basis, the unexpired risk is included at the 1:200. Line 6 reports this difference in volatility. There is no impact at the mean, which should be the same on both bases.
- 5.99 Ultimate volatilities will normally be higher than one-year volatilities for all risks. Enter the total excess of ultimate over one-year volatilities in line 7, column I.
- 5.100 In general, the diversification credit will be larger for more skewed or volatile distributions. Since ultimate volatilities will in general be larger than those for one-year (prior to any adjustments such as netting off the risk margin from reserve risk), the ultimate diversification credit should reduce the ultimate SCR relative to the one-year. In order to ensure consistency, the diversification credit should be calculated using the same distributions used to compare the volatilities in line 7. For example, if individual class distributions are used to compare volatilities in line 7, these should also be used when comparing diversification credits in line 9.
- 5.101 The diversified total in line 10 should equal the ultimate SCR as shown on Form 309. If the difference is significant, agents should provide possible explanations in the SCR methodology document for the reasons. The step-by-step approach of Section 3 will assist in validation of the one-year SCR calibration and overall distribution. This objective will be not be served by agents forcing the reconciliation.
- 5.102 Agents are reminded to check signage carefully on form 314 as a number have historically needed to be resubmitted to correct this.

FORM 990

Headline contents

- 5.103 This form reports additional comments and should include file attachments for supporting documentation.
- 5.104 Select the **[Browse...]** button to find the document on your local computer system then select **[Upload]**. There is no file size limit, but larger files may take longer to insert and save. Lloyd's preference for the format of the documents is: word, pdf or excel and the naming convention should contain the syndicate number and agent name.
- 5.105 Uploaded documents can be viewed or deleted using the buttons under the document panel:



- 5.106 To add general comments to a return, select **[Add New Item]** under the *Add any section comments* on form 990. Enter a Subject and enter the appropriate free format text.

6 QUANTITATIVE INFORMATION WITHIN SCR METHODOLOGY DOCUMENT

Sensitivity tests and drivers of the 1:200 stress

- 6.1 Sensitivity tests reporting the impact of changes to key assumptions should be accompanied by numerical tables.
- 6.2 Agents should consider the incremental capital required for each change in key assumptions and provide commentary on the results. We would also expect agents to comment on the incremental impact of adding risk categories to the dominant risk. For example, include an analysis of the impact of adding new business (premium risk and associated credit and operational risk etc.) to the capital required solely to run-off the contracted for business at 1 January 2017.
- 6.3 The key drivers of the SCR should be set out in the document including reverse stress tests that analyse the threats that would cause a (near) insolvency of the business. Again, we require this to be supported by numerical examples that demonstrate the capital for each driver - e.g. material reserve deterioration in a key class - and the capital requirement when that occurs alongside a neutral position for other risk categories and when combining with other adverse developments.
- 6.4 The requirements are that stress and sensitivity tests are included with the Validation Report in September at the latest.

Information for benchmarking

- 6.5 Lloyd's has developed a suite of benchmarking tests to enable comparison between syndicates to assist us discharge our duty to set capital equitably. Much of this will be drawn from the LCR, but there is additional data that should be included in the documentation to facilitate further analysis:
 - Total net and gross premium (net of brokerage & commission) on risk from 1 January 2017 to ultimate and the proportion of premium that is on risk in calendar year 2017 compared to ultimate.
 - Total reinsurance recoveries relied on within modelled losses prior to assessment of bad debt provisions, at the 1:200 stress points. These should be analysed by rating band with identification of the major individual counterparties (all those in excess of 10% and any non A rated reinsurers with more than 5% of total). Agents should consider the most appropriate method for presenting these results and include a comment on the approach taken.
 - Gross and net 1:200 ULR and derived reinsurer ULR at whole account level on business on risk from 1 January 2017 and for major classes (premium in excess of 10% of total).
 - The catastrophe modelled losses shown in form 314 should include an approximate gross and net catastrophe ULR at the 1:200 (all cat not just the LCM perils). Agents should base the ULR on a whole account basis, although we would consider it useful to include and comment on the indicative ULR on catastrophe exposed business. Where significant catastrophe risk runs into 2018, an analysis of the diversification assumed for exposures in the two calendar years – i.e. some analysis that demonstrates the approach with

numerical tables for the treatment that derives from having premium exposed in different periods for the same peril - is required.

Material reinsurance contracts

- 6.6 Where the SCR takes credit for material reinsurance arrangements, for example a whole account stop loss or quota share treaty, Lloyd's requires that the document clearly sets out the SCR pre and post the reinsurance. This should show the premium and anticipated recoveries at the underwriting (or reserve) risk level, diversified insurance risk, the incremental reinsurance credit risk and at aggregate level after all diversification between risk categories. The SCR should naturally account for the reinsurance premium in 100% of simulations and the diversified appropriate recovery (net of any premium adjustment) at the stress point after including all modelled losses that fall outside the cover.
- 6.7 This will provide insight into the reliance being placed on the cover and ensure that, after the economic uplift is applied, the credit against member capital is, in aggregate, no greater than the maximum recovery.
- 6.8 Where the treaty is very material, consideration will be given to Lloyd's risk appetite for retention of risk and to the concentration risk arising. Accordingly, we would expect the capital charge to increase in step with the materiality of the contract and be significantly higher than perhaps the stand-alone Financial Strength Rating, albeit appropriately stressed, would indicate.
- 6.9 Where treaties are placed intra-group, Lloyd's requires agents to treat them on a par with external reinsurers with comparable financial ratings or strength. Lloyd's will give limited credit, if any, to arguments that the agent has insight to the sister company that leads to management having greater comfort in the counterparty risk than is publicly apparent. By a similar argument, credit risk on recoveries owing from a special purpose syndicate should also be accounted for in the SCR.

Reinsurance risk

- 6.10 Reinsurance credit risk should be reported under this risk category in full. This should exclude dispute risk or reinsurance exhaustion, which should be modelled and reported within insurance risk.
- 6.11 Reinsurance bad debt provisions within technical provisions at T0 are set out on form 312. Projected mean modelled insurance losses should assume this provision runs out at no profit or loss, as under Solvency II this is the underlying pure best estimate. Where additional mean provisions are modelled to emerge on new business, this can be included implicitly within the insurance risk assessment or included within the reinsurance credit risk category – the amounts and treatment should be set out in the document. The stress level of credit risk should take account of the amount already being held at best estimate and should, therefore, be the excess deviation from currently held provisions to the 1:200 confidence level.

APPENDIX 1 - DEFINITION OF THE ULTIMATE SCR

The undiscounted stress in the 1:200 net cost to ultimate for all years of account combined, including the 2017 prospective year of account's underwriting LESS the sum of projected net liabilities on the Solvency II balance sheet at T0 (December 2016) and premiums received for the 2017 and prior years of account underwriting that are not already included in the T0 balance sheet projected net liabilities.

'Ultimate' is defined as the final realised position – not the most prudent time step path to ultimate. For liquidity risk, the costs associated with trust funding requirements or peak losses in the interim must be considered if material and included within market risk.

We require managing agents to capture insurance and reinsurance credit risk to ultimate. Other risk categories may be modelled over a shorter time horizon (subject to a one year minimum). The modelling time horizon should be clearly set out in the methodology document.

This means agents may model market risk over a one year period. This involves consideration of the risk and return on assets held over one year. Agents may also consider a time horizon between one-year and ultimate, however, agents should note that the time horizon for modelled market risk and the credit for excess returns above the risk-free rate should be consistent.

The risk margin at T0 should be assumed to run down to zero in the ultimate SCR calculation and effectively forms a profit offset. This should be booked under reserve risk in the LCR.

The ultimate SCR considers all risks attaching to the 2017 year of account and excludes exposures relating to underwriting years beyond the proposed YOA. This differs from the one-year SCR where un-incepted legal obligations on the T1 balance sheet will relate to underwriting years beyond the proposed YOA.

The ultimate SCR will differ from the ICA due to the asset and liability valuations being based on a Solvency II basis. For example, an ICA includes credit for the recognition of profits on the UPR at T0 whereas this profit flows through into the starting balance sheet for the SCR. The SCR also excludes credit for expected profits on un-incepted legal obligations at T1 whereas the ICA includes credit for profits.

For new syndicates (in first three years of trading), the ultimate SCR should include a minimum of two prior years' hypothecated reserves based on the prospective underwriting year's business plan. This is different to the one-year SCR, which should be based on actual exposures.

Net liabilities, rather than assets, should be adopted as the starting position and should exclude surplus assets at a syndicate level which are used to meet member solvency requirements. Please note the market risk on member capital requirements are mutualised at Lloyd's, subject to equity between members.

APPENDIX 2 - ULTIMATE SCR FOR NEW SYNDICATES

A new syndicate is defined as a syndicate with less than three complete years of account by the end of 2016.

Where a syndicate starts underwriting at Lloyd’s part-way through 2016, the SBF premiums should be annualised and then hypothecated to back-years. (Where the period to year-end is too short to reliably annualise, the second year plan should be taken as proxy for annualised first year.) The main reason for hypothecation is the avoidance of large yearly increases in the FAL requirement which would otherwise occur as a result of syndicate growth during the first few years of underwriting.

For a new syndicate that commences trading on 1 January 2017, agents should include two prior years of reserve risk. The level of such reserves should be hypothecated assuming the same classes of business and premium volumes (as per the initial agreed SBF) were written in the previous two years.

Where a syndicate enters its second year, the first year’s annualised exposures should be modelled as the most mature year. The “year two” annualised exposures should be used for the proposed year and also hypothecated as the second year.

Where a syndicate enters its third year, the first year’s annualised exposures should be modelled as the most mature year. The syndicate can treat the two most recent years of account naturally.

An example of how this process should work:-

- Syndicate A starts writing business at Lloyd’s on 1 July 2016.
- The SBF proposed premium is £40m for 2016.
- The syndicate incepts most of its business on 1 January; therefore, the 2016 annualised premium is £100m
- The syndicate proposes to write £150m in 2017
- The syndicate proposes to write £200m in 2018
- The payment pattern for the syndicate is 20%, 30%, 30% and 20% for the first four underwriting development years respectively.
- All business is written to an 80% ULR

Mean claims exposure

The syndicate should model the following *expected* claims exposures in their SCR:

2016 SCR	2016 YOA: £80m (£100m premium)	2015 YOA: £64m (£100m premium)	2014 YOA: £40m (£100m premium)
2017 SCR	2017 YOA: £120m (£150m premium)	2016 YOA: £96m (£150m premium)	2015 YOA: £40m (£100m premium)
2018 SCR	2018 YOA: £160m (£200m premium)	2017 YOA: £96m (£150m premium)	2016 YOA: £40m (£100m premium)

As can be seen from the example, the hypothecated back-year methodology will still result in capital increases for new syndicates over time where the syndicate has an aggressive growth strategy.

Hypothecated back-years are not required for the one-year SCR calculation as regulatory capital is based on actual exposure.

SCR calculation

Continuing with the example above, assume that the 1:200 ULR is 150%. The principles behind the calculation of insurance risk and the SCR can be illustrated as follows.

Lloyd's normally applies a "new syndicate load" to the capital requirements in respect of new syndicates and this is typically 20%. The load is not shown in the calculation, but would be applied to the final SCR of £150.9m (as calculated on the following page).

Form 309 now includes cells A3 and B3 to enable agents to include the new syndicate loading (based on a percentage pre-agreed with Lloyd's) within the LCR submission. Cells A4 and B4 aggregate the modelled syndicate SCRs plus the new syndicate load to produce the final SCR.

In the syndicate's first year of business, capital is normally set by Lloyd's and an LCR is not required.

An LCR is however normally required in years two and subsequent. This is especially useful to help avoid any significant discrepancies for the agents when switching to their actual model, and also assess against Solvency II model tests and standards during the transition phase. New syndicates should agree with Lloyd's in advance of the capital setting process whether they should use the benchmark model or their internal model.

	Yr 1	Yr 2	Yr 3	Yr 4
Payment pattern	20%	30%	30%	20%

New Syndicate Loading

	2017 YOA	2016 YOA	2015 YOA
Mean ULR	80%	80%	80%
1:200 ULR	150%	150%	150%

	2017 YOA	2016 YOA	2015 YOA
2017 SCR			
Premium	£150.0m	£150.0m	£100.0m
Risk Margin less Proposed YOA expenses and profit on ULOs	-£12.0m	£5.0m	£2.0m
Mean Insurance Losses	£150m x 80% =£120m	£150m x 80% x (1 - 20%) =£96m	£100m x 80% x (1 - 20% - 30%) =£40m
1 in 200 Insurance Losses	£150m x 150% =£225m	£150m x 150% x (1 - 20%) =£180m	£100 x 150% x (1 - 20% - 30%) =£75m
Starting Premium (Proposed YOA) or Mean losses (Prior years) net of RM, Proposed YOA expenses and ULOs	£138.0m	£101.0m	£42.0m
Underwriting Risk or Reserve Risk by YOA before New Syndicate Load	-£87.0m	-£79.0m	-£33.0m

Risk Capital

Reserve Risk if YOA are fully dependent	£112.0m
Diversification % between YOAs within Reserve Risk	21%
Reserve Risk after YOA diversification	£88.4m
UW Risk	£87.0m
Insurance Risk if UW and Reserve Risk are fully dependent	£175.4m
Diversification % between UW Risk and Reserve Risk	19%
Insurance Risk after diversification between UW and Reserve Risk	£142.5m
1 in 200 total of Credit, Market and Operational Risks if fully dependent	£35.0m
Diversification % between Insurance and other Risks	15%
Final SCR	£150.9m

APPENDIX 3 – MORE DETAIL ON MARKET RISK

This appendix gives further guidance and detail on market risk.

Market risk is the risk arising from the level or volatility of market prices of financial instruments which have an impact upon the value of the assets and liabilities of the syndicate.

Booked Solvency II Technical Provisions at Time 0 are discounted at the risk free rate of return by currency. Most syndicates will expect to receive a return in excess of risk free on the assets backing the booked liabilities; this will occur through a combination of an active investment strategy and investing in higher risk/return assets. In both cases this exposes the syndicate to market risk and the degree of market risk is normally proportional to the level of expected return in excess of risk free. The degree of market risk is further influenced by the level of mismatch between assets and liabilities, this will include currency and duration mismatches.

Lloyd's expects market risk to ultimate to be adequately captured in syndicate's capital models.

Lloyd's would accept market risk on a 1 year balance sheet to balance sheet basis as a proxy for the ultimate risk. The approach, with rationale, must be included in the SCR document.

Lloyd's expects that projected profits are distributed as they are recognised on a Solvency II basis and this is no later than 36 months on RITC (see 3.18). It is also expected that no surplus assets (either in FAL or FIS) are included and that investment returns are not rolled up indefinitely. If market risk is being assessed on a longer time frame, then any subsequent projected profits from investments returns beyond 36 months should be assumed to be distributed at the end of the year in which they occur (as with any expected profits).

Market risk should be valued for each of the underlying assets of collective investment vehicles and other investments packaged as funds (i.e. a look-through approach).

The key individual elements of market risk are described as follows.

Interest rate risk

Interest rate movements will directly impact the value and expected return on fixed interest securities and cash and may impact other asset classes. In general interest rate increases will reduce the value of held securities and increase the return on reinvestment (and vice versa).

The risk free rate to be used on an ultimate basis is fixed at T0; there is no risk associated with changes in the risk free rate on an ultimate basis.

There is not a corresponding amount relating to liabilities expected to net off on an ultimate basis unless there are liabilities specifically linked to interest rates – inflation is covered below.

Interest rate risk should be included in line 1 (Interest rate) of table 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

Interest rate movements will directly impact the modelled revaluation of assets in 12 months' time. The expected risk free rate will also be directly linked to interest rates and hence the revaluation of the liabilities in 12 months will be impacted by movements in interest rates.

The impact on both assets and liabilities should be included in market risk on a one-year basis.

Spread risk

Spread risk is the risk of a change in the credit spread on a corporate bond, which in turn may impact the returns and reinvestment return. Migration risk is the risk that a bond's rating migrates to a different (lower) rating, resulting in a higher credit spread and reduction in value.

There is generally no direct impact on liabilities from spread risk.

Spread risk should be included in line 2 (Credit) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Default (Credit) risk

Default (or credit risk) is the risk of non-performance/ default of a held security. It will relate to all asset classes not considered risk free and does include cash or cash equivalents.

Default risk may be correlated to general economic conditions which in turn are linked to other risk categories such as inflation (on both assets and liabilities) or interest rates.

There is no direct impact on liabilities from default risk.

Default risk should be included in line 2 (Credit) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Equity risk

Equity risk relates to the level or volatilities in equity prices. Where pooled investments cannot be reasonably segregated into underlying assets classes then they should be treated as equities or the highest risk class considered in the model.

There is generally no direct impact on liabilities from equity risk.

Equity risk should be included in line 3 (Equity and other) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Property risk

Property risk relates to the level or volatilities in real estate prices. This does not include mortgage backed securities that should be included in both spread and credit risk.

There is generally no direct impact on liabilities from property risk although there could potentially be a link between property risk and property losses.

Property asset risk is immaterial at a Lloyd's aggregate level.

Property risk should be included in line 3 (Equity and other) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Currency Risk

Currency risk relates to exchange rate fluctuations that impact the value of the liabilities differently to the assets. The assets may then be worth less than the liabilities in converted sterling. Currency risk is principally derived from currency mismatch between assets and liabilities.

Lloyd's expects models to allow for the risk of unfavourable currency fluctuations following a severe loss unless the syndicate can demonstrate that the FAL strategy would deem this unnecessary. For example, if all catastrophic losses are expected in USD and the dedicated members supporting the syndicate have a defined strategy, with history, of holding USD FAL then this risk can be assumed to be mitigated. Otherwise, this situation should be included in the models.

There is no direct impact on liabilities (in the underlying currencies) from currency risk.

Currency risk should be included in line 5 (Foreign exchange) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Concentration risk

Concentration risk arises from a lack of diversification in an asset portfolio or large exposure to default by a single issuer of securities.

This is strongly linked to default risk and will normally be assessed concurrently. Syndicates need to be clear on how they have assessed any additional risk if the portfolio is exposed to a single issuer (or group or related parties). The standard formula includes a methodology for assessing concentration risk.

There is no direct impact on liabilities from concentration risk.

Concentration risk should be included in line 2 (Credit) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Liquidity risk

Liquidity risk relate to projected cashflows where assets backing a set of liabilities are not available at the time liability payments are due. This can occur through circumstances such as holding illiquid assets or timings that funds become available (for example having to pay gross claims before reinsurance recoveries are received or overseas trust fund arrangements).

The liquidity risk is valued as the associated cost of borrowing required to cover the liquidity strain.

There is no direct impact on the underlying liabilities from liquidity risk.

Liquidity risk should be included in line 4 (Liquidity) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Other (Market) Risks

Lloyd's are not expecting "other" market risks but this does not mean some unique features of a syndicate portfolio could give rise to an additional risk.

Other high risk, variable reward investments (such as hedge funds) should be included as Equity risk.

Other (market) risk should be included in line 6 (Other) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Mean Reversion

Many agents are using vendor supplied economic scenario generators ("ESGs") to generate economic series for their internal models. These ESGs may include assumptions regarding the long term mean reversion of certain economic series, such as interest rates or foreign exchange rates. The assumption of mean reversion can significantly impact the level of market risk. Lloyd's is aware that it will often not be straightforward or advisable to alter the mean reversion assumption.

Given the above, Lloyd's expects agents to undertake the following with regards to mean reversion:

- clearly state within the SCR methodology document for which economic series mean reversion has been assumed
- provide a justification in the SCR methodology document or Validation Report of why the assumption is appropriate for the given series and in the current economic environment
- sensitivity test of the impact of mean reversion assumptions, where the ESG provides the facility to do so
- if modelling on both a one-year and ultimate basis, provide a justification of the difference between the one-year and ultimate risk, taking into account the duration of the portfolio and differences in assumptions over an ultimate vs. one-year horizon

Inflation risk

Inflation risk relates to the risk of inflation being different to anticipated and accounted for when setting the balance sheet at time 0.

Best estimate liabilities will normally include an implicit allowance for inflation. The risk is that inflation is higher than expected, increasing the ultimate settlement cost. The inflation on liabilities can be split into either general inflation being higher than expected or excess "claims inflation" (circumstances beyond general inflation that leads to an increase in claims costs only such as an adverse judicial ruling). Under extreme conditions and almost all 1:200 scenarios, claims inflation will exceed additional income from underlying investments.

There has been variation between syndicates in the categorisation of the risk of increased claims and allocated expense payments resulting from higher than expected inflation. Lloyd's considers that as inflation directly impacts the size of claims and expense payments, it should be captured under insurance risk. Whilst inflation has historically had a strong link with interest rates, it will not necessarily result from volatility in the market prices of financial instruments. Demand surge following a catastrophe, higher government spending, and legislative rulings affecting the cost of claims are examples of sources of inflation not directly linked to financial instruments. Furthermore, inflation is not listed in Article 105 as one of the contributors to market risk.

General inflation (as measured for example by a consumer price index) will often be linked with depreciation of the currency. The net impact of this risk on assets and liabilities of the syndicate should be included within market risk (see currency risk section above).

If any stand-alone asset inflation risk is modelled, this should be included on line 1 (Interest rate) of Section 2 (Market Risk) on form 314 of the LCR.

Difference on one-year basis

The only difference on a one-year basis versus ultimate is the time horizon.

Asset Liability Mismatch

It is expected that syndicates assess the impact of accelerated liabilities payments on the rate of depletion of assets following shock/adverse events.

The following (simple) example shows that whilst the simple average term for liabilities is four years and remains four years after a 50% shock, the average term of the held assets matching mean liabilities reduces below three years (2.9 as below) even though originally well matched.

Expected cash flows - pre-shock

	Year							Total	Average Term
	1	2	3	4	5	6	7		
Liabilities outflow	100	100	100	100	100	100	100	700	4
Asset income	100	100	100	100	100	100	100	700	4

Expected cash flows - post 50% liabilities shock

	Year							Total	Average Term
	1	2	3	4	5	6	7		
Liabilities outflow	150	150	150	150	150	150	150	1050	4
Asset income	150	150	150	150	100			700	2.9

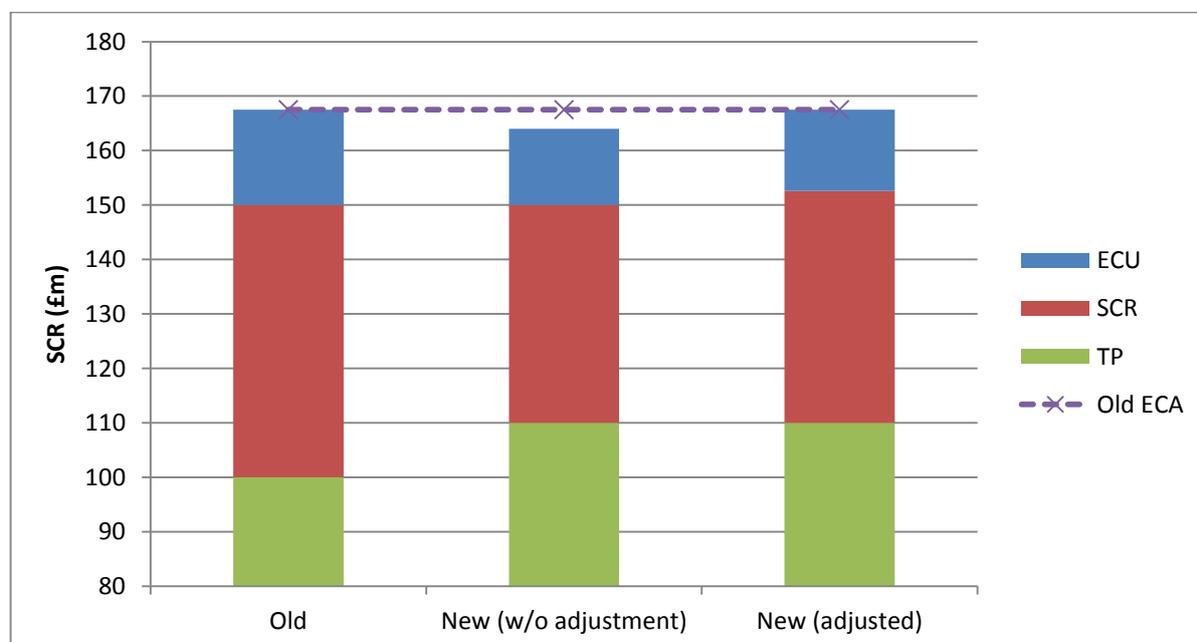
APPENDIX 4 – REINSURANCE CONTRACT BOUNDARIES ADJUSTMENT

Allowance of reinsurance premium in the technical provisions for legally obliged reinsurance (as a result of the guidance change mentioned in Section 5.34) has an impact on both the technical provisions and the ultimate SCR. The capital stack (technical provisions and ultimate SCR) remains unaffected by the adjustment. In other words, the increase in technical provisions has been offset by a decrease in capital of the same magnitude.

However, at Lloyd's the capital stack also includes the ECU, which is 35% of the ultimate SCR. Hence a decrease in the ultimate SCR leads to decrease in ECU and thus a decrease in the capital stack at Lloyd's. Hence Lloyd's will adjust the ultimate SCR to ensure the capital stack remains unaffected by the allocation of reinsurance premiums to the technical provisions.

The table below shows the original capital stack at Lloyd's, the unadjusted capital stack (following allocation of reinsurance premiums to the technical provisions) and the adjusted capital stack. In each, the risk remains unchanged. Reinsurance premium of £10m is allocated to the technical provisions in this example.

	Old	Impact of change	New (w/o adjustment)	New (adjusted)
ECA	67.5	-13.5	54.0	57.5
ECU	17.5	-3.5	14.0	14.9
SCR	50.0	-10.0	40.0	42.6
TP	100.0	10.0	110.0	110.0
Total (TP+SCR+ECU)	167.5	-3.5	164.0	167.5
RI CB adjustment	10.0			
RI CB SCR adjustment	2.6	$= 3.5/1.35$		



APPENDIX 5 – SCR DOCUMENTATION: TOPICS TO BE COVERED

The SCR documentation should be sufficiently detailed to allow “...any independent knowledgeable third party [to] be able to understand the design and operational details of the internal model and form a sound judgement as to its compliance with Article 101 and Articles 120 to 124 of Directive” (Article 243 of the Delegated Acts).

This Appendix provides a detailed listing of topics that agents should comment on in order to enable Lloyd’s to form such a judgement.

Agents should apply the principle of proportionality in their documentation. The items below should be discussed in greater detail for more material risks. Methodologies and assumptions applying to more than one risk can be described once, with variations or exceptions discussed where appropriate. Some items will not be relevant to all approaches. The objective should be to provide a start-to-finish “walkthrough” of the steps taken in the analyses and modelling.

	Methodology or Assumption	Example	SCR documentation reference	
1	Insurance risk		Premium risk	Reserve risk
1.1	Data selection and groupings			
	Valuation date of data used			
	Reporting basis: underwriting year, accident year or reporting year			
	Gross or net claims			
	Paid and/or incurred claims			
	Adjustments to data	Historical claims inflation; IBNER on large claims		
	Claims history excluded from the analysis and reasons for excluding	Specific accident or underwriting years; discontinued business		
	Claim size definitions and groupings used in the analysis	All claim sizes modelled together; Attritional/large/ cats analysed separately		
	Class groupings used in the analysis and reasons if different from classes used in pricing/best estimate reserving	Reserve risk: aggregating triangles		
	External data or benchmarks	LMA data		
1.2	Distributions and intra-risk dependencies			
	Granularity of reserve risk distributions by reserve type	Total outstanding reserve; Case/ IBNR/ IBNER modelled separately		
	Classes of business in run-off and special modelling considerations	COV of reserves increases with time since discontinued		
	Reserve margins and credit claimed			
	New classes of business and special modelling considerations			

	Modelling of underwriting cycle and/or rate changes			
	Planned exposure increases/decreases	Material changes to policy terms & conditions		
	Distribution assumption(s) and parameterisation method(s)	Reserve risk: Distribution-free for Mack method; Over-dispersed Poisson GLM with bootstrap Premium risk: Pareto distribution fit to historical large claims		
	Method for determining the goodness-of-fit of the distribution	Reserve risk: residual patterns if using triangle based method Premium risk: Chi-square or other test with large claim distribution		
	Allowance for parameter uncertainty	Reserve risk: bootstrap if using bootstrap-based method; Premium risk: allowance for variability in parameters of Pareto large claim distribution		
	Application of user defined options in external software	Reserve risk: bias adjustment and centring of residuals		
	Exposure/ILF curve selection and method for converting to frequency/severity distribution if using exposure-based method for premium risk	Premium risk: SwissRe curve parameter and why chosen; loss ratio and frequency assumptions, etc.		
	Allowance for future trends in claim costs	Claims inflation; judicial ruling		
	Allowance for events not in data (ENIDs)	Latent claims		
	Adjustments to tail of distribution	Capping to reflect policy limits; Fattening the tail for extreme events not captured in the history		
	Method for scaling reserve risk distribution to actuarial best estimate	Multiply COV of ultimate claims by actuarial best estimate ultimate		
	Method for estimating variability in total unpaid claims if using incurred data	Simulate ultimate claims from COV of ultimate claims derived from incurred data; subtract paid claims		
	Treatment of allocated claims expense	Explicitly modelled as percentage of claims or included with claims; Consistency with business plan and TP assumptions		

	Treatment of discounting and investment income	Discussion RE: non-discounting of stressed claims;		
	Allocation of risk between premium and reserve risk on 2016 YOA if modelling on an UWY basis	Proportional allocation based on earnings pattern		
	Application of reinsurance programmes	Explicit calculation of recoveries based on programme terms; variable or fixed net-to-gross ratio		
	Allowance for RI exhaustion and dispute risk			
	Dependencies between accident or underwriting years	Drivers including cats or inflation; Explicit dependencies using copulas or shock factors		
1.3	One-year risk horizon and risk margin			
	Method for determining one-year risk	Reserve risk: actuary-in-a-box or risk recognition pattern Premium risk: earnings pattern		
	Risk margin derivation			
	Allocation of risk margin credit between ultimate reserve risk and premium risk			
1.4	Validation summary			
	Summary description of validation tests applied to Insurance risk and their outcome	Refer to <u>Validation Guidance</u> Appendix 1 for examples		
	Summary of material expert judgements and their justifications			
	Method for ensuring consistency between reserve risk and premium risk volatility	Ultimate COVs decrease with age of underwriting/accident year		
	Appropriateness of distributions at 1:200 and other percentiles	Stress tests; comparison to claims history		
	Consistency between the methods used in the model and the methods used to calculate the technical provisions			

	Consistency with business plan	Loss ratios and premium		
	Consistency between one-year and ultimate risk	One-year risk less than ultimate (prior to reduction for risk margin); One-year emergence relative to ultimate is higher for short-tailed classes		
	Insurance risk exceeds premium risk and reserve risk individually			
2	Credit risk		RI credit risk	Other credit risk
2.1	Data selection and groupings			
	Description of all sources of counterparty risk	RI credit risk: reinsurers, ILWs Other credit risk: brokers, coverholders, third party administrators, banks and investment counterparties		
	Creditor groupings for modelling probability of default	RI credit risk: reinsurers grouped by credit rating or modelled individually Other: brokers or cover-holders grouped by credit rating or modelled individually		
2.2	Distributions and intra-risk dependencies			
	Probability of default assumptions			
	Allowance for credit rating downgrade or transition			
	Credit risk mitigation and how modelled	Funds withheld and letters of credit; percentile of recoverables at which security is held		
	Loss given default/recovery rate assumptions, including evidence of not relying "solely or automatically on external credit assessments" (Delegated Act Article 254 paragraph 4)	RI credit risk: S&P credit ratings, with review of additional information that may have emerged on a reinsurer since the last rating was issued		
	Dependencies between creditors	RI credit risk: dependency between large natural cat event and multiple reinsurer downgrade and/or default		
	Concentration risk	RI credit risk: exposure at 1:200 by reinsurer		

	Basis risk on RI recoveries indexed to event or market results	ILW basis risk		
	Allowance for RI credit risk on intra-group reinsurance			
	Allowance for RI credit risk on reinsurance purchased from other Lloyd's syndicates			
	Impact of simplifications of net-to-gross calculation on RI credit risk	Understatement of recoverables in tail due to fixed net: gross assumption; non-modelled contracts		
2.3	Validation summary			
	Summary description of validation tests applied to Credit risk	Refer to <u>Validation Guidance</u> Appendix 1 for examples		
	Summary of material expert judgements and their justifications			
	Credit risk exceeds RI credit risk and Other credit risk individually and their outcome			
3	Market risk		Market risk	
3.1	Data selection and groupings			
	Description of primary sources of market risk and their materiality	Foreign exchange rate risk; interest rate risk; investment return risk; liquidity risk; asset-liability mismatch		
	Sources of data used for modelling economic series (if not using an external ESG)			
3.2	Distributions and intra-risk dependencies			
	ESG used (if any) and key assumptions			
	Mean reversion assumption and economic series to which it applies			
	Allowance for risk arising from change in risk-free rate			
	Dependencies between economic series	USD and GBP; real interest rates and inflation		
	One-year risk estimation and explanation of difference with ultimate	Analysis of why one-year risk exceeds ultimate (if true)		
	Justification for time horizon if not one-year			

	Method used to allocate sources of market risk on Form 314		
3.3	Validation summary		
	Summary description of validation tests applied to Credit risk and their outcome	Refer to <u>Validation Guidance</u> Appendix 1 for examples	
	Summary of material expert judgements and their justifications		
4	Operational risk		Op risk
4.1	Data selection and groupings		
	Categorisation of operational risks		
	Mapping to the risk register		
	Operational risks arising from insurance risk	Rogue underwriter; mis-reporting of case reserves; business interruption	
	Modelling of operational risks arising from the following specific areas (if relevant to syndicate's business) <ul style="list-style-type: none"> delegated underwriting new syndicates and/or new classes of business growth 		
4.2	Distributions and intra-risk dependencies		
	Trigger for operation risk losses	Stand-alone frequency/severity; conditional on external factor, e.g. premium growth	
	Types of distributions used		
4.3	Validation summary		
	Summary description of validation tests applied to Operational risk and their outcome	Refer to <u>Validation Guidance</u> Appendix 1 for examples	
	Summary of material expert judgements and their justifications		
5	Dependencies (between SCR risk categories)		Dependencies
5.1	Data selection and groupings		
	Description of data used to parameterise or validate dependencies	Historical aggregated class of business loss ratios to backtest modelled aggregated class loss ratios	
	Description of dependency structures/ relationships	Between attritional and large claims for premium risk within a class of business	
5.2	Inter-risk dependencies		

	Key drivers of dependency and their impact in the tail	Cat events and inflation driving dependency between underwriting classes		
	Explicit dependencies and their impact in the tail	Copulas and matrices; common shock factors		
5.3	Validation summary			
	Summary description of validation tests applied to Credit risk and their outcome	Refer to <u>Validation Guidance</u> Appendix 1 for examples		
	Summary of material expert judgements and their justifications			
6	SCRs and risk margin		SCRs and RM	
	Method for determining one-year risk	Reserve risk: actuary-in-a-box or risk recognition pattern Premium risk: earnings pattern		
	Risk margin derivation			
	Allocation of risk margin credit between ultimate reserve risk and premium risk			
	Method used to select 99.5 th percentile for SCR and each risk category	Average over 99.4 th – 99.6 th percentiles of simulations		
	Number of simulations and estimation of simulation error			
	Analysis of change from last year's LCR by risk category and explanation of differences			