2020 SCR Guidance

Instructions for Submission of 2020 Lloyd’s Capital Return and Associated Documentation

July 2019

Disclaimer

Contents

1 Purpose

This document provides instructions for the submission and key focus areas for the 2020 Lloyd's Capital Return (LCR).

These instructions refer to previous SCR guidance where relevant. This guidance should be considered in conjunction with Lloyd's Validation and Model Change guidance. In particular the more detailed 2017 YOA SCR Guidance and the notes on the supplementary questionnaire and the analysis of change published in 2017 will remain applicable.

2 Submission Requirements and Deadlines

2.1 Overview

As stated in Market Bulletin Y5253, 2020 YOA submissions will follow a phased timetable. Deadlines have been communicated to syndicates by their oversight manager and any questions should be directed to the oversight manager. The table below provides the requirements for each element of capital reporting. Deadlines are 1pm on the day each item is due.

Item	Description	Submission	Deadline
LCR	Quantitative capital return	All forms complete on MDC	Phased submission deadline
Methodology document	Qualitative document supporting the LCR submission	Attachment in MDC	Phased submission deadline
Analysis of change	Spreadsheet return	Form 600 in MDC	Phased submission deadline
Supplementary questionnaire	Spreadsheet return	Forms 400-500 in MDC	Phased submission deadline
Focus Areas	Spreadsheet return	Attachment in MDC	Phased submission deadline
Model Change Template	Spreadsheet return	Upload to SecureStore	Monday after LCR deadline
Validation	Documentation providing model validation	Upload to SecureStore	One week after LCR deadline
Validation signposting template	Spreadsheet return	Upload to SecureStore	One week after LCR deadline

A submission is required for all syndicates with a business plan or open underwriting year of account at the time of submission, including those in run-off or underwriting RITC business only. This includes syndicates planning to close all years of account at December 2019, since this information is required for calculating the reinsuring members' capital requirement.

A key focus for all submission items is how the capital reflects the up-to-date syndicate risk profile, with the expectation that capital responds in an intuitive way to the evolution of this.

Applications for major model changes can be submitted with the LCR. Further information is available in the Model Change Guidance. The Model Change Template has to be submitted by all syndicates even if no major model change application is made.

The validation report is a key document for the Board's sign-off of the capital requirements. Further information is available in the Validation Guidance. If there is a difference between the validated modelled outputs and the final submitted numbers, then confirmation of the appropriateness of the validation in supporting the submission number should be provided. Lloyd's are requiring agents to fill in an additional sign-posting template for the validation this year in order to facilitate the review of the validation reports.

The Analysis of Change template should compare against the previous LCR submission and provide commentary (or signposting to further commentary) within the template.

2.2 Focus Areas

A new return has been produced for the September/October 2020 LCR reporting to provide advance notice to syndicates of specific areas of focus for their review. The return contains syndicate specific information from recent data collections and LCR submissions and has been distributed to syndicates at the beginning of July. This is intended to provide syndicates with additional time to consider and respond to areas of modelling that Lloyd's expects to raise as part of the review. Completion of responses to these areas is required with the submission as part of the 'Focus Areas' return in the table above. Some further guidance on what responses are expected is given in section 2.11.2.

2.3 Basis of Capital Return

The September/October return should be submitted on the basis of the expected business outcome at the following 1st January. For example, if an LPT transaction is expected to take place, it should assume this is executed, with clear commentary and analysis on any such transaction. If an SBF resubmission is required during the review process the syndicate should assess the capital impact of this change and a resubmission may be required dependent upon the materiality of the change. The bases of any ad hoc / March returns are outlined in the following sections.

The LCR provides (solvency) capital requirements (SCRs) over two time horizons: one-year and to ultimate. Both requirements must be fully analysed and validated by the syndicate.

The main 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 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 and what it would be in one year's time including claims paid during the year, given a 99.5th percentile adverse outcome.

The LCR and supplementary returns capture 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.

The supporting analysis within each return provides additional evidence that the model is producing reasonable and adequate capital assessments for each risk category. The prescriptive basis for completion is set out in detail in Section 5 of the 2017 YOA SCR Guidance.

2.4 Ongoing Monitoring of Capital

All syndicates are required to consider the impact of emerging information on their capital requirement and notify Lloyd's if this causes a capital movement of greater than 10% (measured before impact of risk margin, foreign exchange and RICB).

2.5 March Re-Assessment

Following year-end, all syndicates are required to re-assess their capital based on: actual balance sheet technical provisions based on audited QSRs, business plan changes, risk profile changes and rates of exchange. Lloyd's requires syndicates to re-run their models to assess the movement.

A submission to Lloyd's of the movement in capital requirement is required on the 24th February 2020 via MDC. If this return indicates a material movement in capital, then a full capital submission is required by 1pm on 2nd March 2020. As a guide, Lloyd's would require a resubmission of the LCR if a syndicate modelled a 10% absolute movement in the uSCR, prior to any adjustment for latest risk margin, foreign exchange and RICB. Whilst recognising the discretionary 10% threshold, Lloyd's reserves the right to request a capital resubmission, for the mid-year coming-into-line exercise, where deemed appropriate.

Any LCR resubmission should be accompanied by validation that is proportionate to the nature and level of model change. It is expected that this will inform the board's decision to approve the SCR and submission to Lloyd's.

2.6 Reinsurance to Close (RITC)

Different procedures apply depending on the nature and timing of a RITC transaction. Please engage with your point of contact to confirm requirements in individual cases. The below provides general guidance.

RITC contracts can be implemented in syndicate or central modelling to assess the impact on members. The timing of the transaction, both in terms of lead-in and point of execution, relative to coming-into-line, will usually be the driving factor of which approach is taken. If the modelling of the RITC transaction is not being included in syndicate submissions, Lloyd’s may require multiple and split LCRs to be provided to show capital requirements before and after the transaction, all of which are subject to Lloyd’s review.

If the modelling of the RITC transaction is being included in syndicate submissions:

- The ceding syndicate should remove the relevant business from its submission; this includes removal from the model opening balance sheet and removal of the associated modelled risk and might result in a major model change application.
- The receiving syndicate should include the relevant business in its submission, this includes in both the model opening balance sheet and the risk modelled. The business should be included in the year of account for the originating business, not the year of account during which the RITC occurs.
- Lloyd’s will review the post-RITC capital requirements in the same way as any other model change is reviewed, being commensurate with the materiality of the transaction

2.7 SCR Methodology Documentation

Managing agents should prepare the methodology document in accordance with requirements under Article 125 of the EU Directive (2009/138/EC) 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 of the Directive 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 (2015/35) 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 [the] Directive”*. Managing agents should treat the Lloyd’s review team member(s) as the knowledgeable third party. Appendix 1 of the 2019 SCR guidance contains a list of topics that should be covered to enable Lloyd’s review team to gain a sufficient understanding of the model. Managing agents should submit the completed list, mapping the documents to the topics in the appendix, along with the LCR return.

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. Please note that in order to make a sound judgement on the appropriateness of the model, it is required that agents split data by class with meaningful class names and at sufficient granularity in the supplementary questionnaire. It is not acceptable to call classes “Class 1, Class 2” etc and it is also important that the level of granularity ensures that the class is homogenous enough in terms of risk profile that modelling as one class is warranted and that the outputs are consistent with the level at which assumptions are set.

Documentation on model appropriateness is required to be updated on at least an annual basis, as a minimum providing a confirmatory statement that previous documentation remains relevant.

2.8 Reinsurance Acquisition Costs

Reinsurance acquisition costs should be allowed for in the Technical Provisions and should be reported in form 312 of the LCR. Acquisition costs for outwards reinsurance should be allowed for in net premium and not reported in the net acquisition cost. This is consistent with the TPD (see TPD FAQ for more information), net premium in column K should include the acquisition costs for outwards reinsurance and net acquisition cost in column L should be equal to the gross acquisition cost in column E.

2.9 Foreign Exchange

The LCR should be reported in converted sterling using the published prior 30 June rates for a year-end coming-into-line submission. For the 2020 YOA year-end coming into line, the rates are set out in Market Bulletin Y5255. Lloyd’s does not expect submissions to include the expectation of material FX profit and this item will be disallowed if above a threshold of materiality of £1m.

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, Supplementary Questionnaire and Analysis of Change, however, must be reported in converted sterling, as above.

Lloyd's expects models to allow for the risk of unfavourable currency fluctuations following a severe loss unless the syndicate can clearly demonstrate that the Funds at Lloyd's (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.

2.10 Reinsurance Contract Boundaries

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."*

The internal model opening balance sheet must allow for future premiums payable on existing or legally obliged reinsurance contracts in the technical provisions.

Lloyd's will adjust the ultimate SCR to ensure Economic Capital Uplift (ECU) (currently 35% of the ultimate SCR) is not understated as a result of this treatment of reinsurance premiums. The calculation for the adjustment is provided in the Supplementary Questionnaire. The agent is required to enter the adjustment in Form 309 of the LCR and should reconcile figures to the Pillar III solvency reporting where relevant.

2.11 Specific Modelling Considerations

This section includes a number of areas that Lloyd's considers should be explicitly included in the model documentation. This list is by no means exhaustive. Thematic review areas for the 2020 SCR are included in the next section.

2.11.1 Uncertainty due to policy features

In recent years, Lloyd's has identified a number of areas where policy terms and conditions are widening. 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 addition to uncertainty arising due to changes in terms and conditions, syndicates should also consider any trends in line size (maximum and average) as part of the evolution of their risk profile.

2.11.2 Volatility parameters

The market has experienced adverse outcomes in recent years. Where this experience suggests a difference to the previously assumed risk profile, Lloyd's expects model calibration to be updated to incorporate this updated view. In particular, we have flagged syndicates that had particularly high return periods in their backtesting data provided and have asked them for more detail in the Focus Areas return. Comments provided by agents are considered based on the criteria below. If these criteria are not met, further explanation of model appropriateness is likely to be required.

Backtesting	Flag	Criteria for acceptance
Return periods for 2016, 2017, 2018 own experience	1 year worse than 1 in 20 OR 2 years worse than 1 in 10	• Change in reinsurance programme and gross values pass the test • Exited lines with poor experience and showing backtesting results excluding these • Clear articulation of how the parameterisation assumptions for the 2020 SCR consider

Backtesting	Flag	Criteria for acceptance
	(Net or gross)	recent experience (e.g. attritional claims parameters, dependency parameters), e.g. if parameters have changed for 2020 SCR (and if not why that is appropriate)
Return periods for equivalent of WTC experience	Worse than 1 in 200 (Net or gross)	• Change in reinsurance that would make that level of loss less likely on current exposures and gross values pass the test • Detailed reasoning of no exposure to the gross loss to that extent • Clear articulation of how parameterisation assumptions consider industry experience/scenarios, e.g. what allowance is there in parameters for these losses?

In addition to the information on loss ratio assumptions, the Supplementary Questionnaire also requires syndicates to provide the number of years of data, with each of full or partial credibility, used to inform parameterisation for each class. As guidance, consider full credibility to apply if: you use data volatility metrics to inform parameterisation based on these years of data with no allowance for relative credibility weighting between years.

Syndicates are expected to be able to provide justification of the appropriateness of the data used to inform parameterisation. Syndicates are requested to highlight any changes to their parameterisation in the documentation provided to Lloyd's.

2.11.3 Cyber risk

Details of the cyber risk parameterisation process should be included in the methodology document submitted with the LCR. 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, agents should aim to model it separately where possible and details of the parameterisation of cyber and the rationale behind the selected class structure should be provided in the methodology document.

Agents are required to provide information on cyber (direct and incidental), both qualitative and quantitative, in the Supplementary Questionnaire.

2.11.4 Non-modelled risks

The model documentation should include information on the level of non-modelled catastrophe risk included in the model and clear justification for this.

Lloyd's Exposure Management are undertaking a review of model completeness, i.e. potential "non-modelled" risks, relating to risks that may not be taken into account in the external catastrophe vendor models. Where event losses have a return period out of line with market expectation, this must be understood, as this may indicate that the representation of risk is not sufficiently complete and does not account for "non-modelled" elements manifesting in actual claims. This consideration should include the alignment of historical events with catastrophe models and forward-looking items which may cause additional uncertainty in model representation of risk.

Exposure Management have been working with the LMA Exposure Management Working Group to identify potential material sources of non-modelled risk in the market, using the ABI non-modelled risks framework.

A data collection template has been sent to agents to ask where, and how, particular sources of loss are represented within syndicate modelling frameworks, and for estimates of their impact. It is expected that completion of this template requires input from both Exposure Management and Capital Modelling teams.

2.11.5 Modelling of multi-year policies

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. In addition, a syndicate’s internal model should estimate lapse risk for policies where the insured party reserves the right to cancel before run-off.

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 be consistent with the duration of the multi-year contracts.

2.11.6 Liquidity risk

This risk should be clearly considered and quantified in the submission, with a particular focus from any syndicates with material reinsurance benefit to the SCR.

3 Thematic Review Areas

3.1 Model Loss Ratios

In line with previous SCR guidance, assumptions used for the model should be on a Solvency II best estimate basis. The basis of loss ratio assumptions for the LCR is required to be a best estimate, based on realistic and appropriate assumptions. As highlighted in the PRA's Supervisory Statement (SS5/14), this is not expected to incorporate improvements in performance unless the measures taken have been shown to be effective. Lloyd's considers that only syndicates with a consistent track record of performing to plan can justify the use of SBF assumptions for capital setting purposes as Lloyd's has observed adverse performance compared to plan in the market's actual experience in recent years.

Individual syndicates are required to assess the appropriateness of the internal model assumptions, including the realism and appropriateness of prospective year loss ratios. Lloyd's Syndicate Reserving team is issuing syndicate specific data to the market comparing the last six years of the syndicate's planned vs actual loss ratios, excluding any event driven classes and any years of account that have particularly high or low differences to remove the effect of catastrophes and other outliers from experience. Based on this historic difference between loss ratios an "adjusted ULR" will be calculated, applying the six-year average difference to the 2019 SBF ULR provided to Lloyd's for each class. These "adjusted ULRs" are then used to produce an aggregate "adjusted ULR" for the whole account. The difference between the plan and modelled ULR in the syndicate's LCR submission is considered a self-load and is then compared with this "adjusted ULR" difference to the 2019 SBF. If the self-load is not sufficient to negate the "adjusted ULR" difference the syndicate will be loaded.

The actual loading is calculated slightly differently and repeats the "adjusted ULR" calculation using only historically adverse classes. Any historically favourable classes will use their SBF plan loss ratio when aggregating up to a whole account level. This new "adjusted ULR" – SBF difference then has the self-load applied to it. The potential loading is made up of two parts:

1) The mean claims element, which is calculated as the residual difference multiplied by the prospective year net premium.
2) The stress loading, which is calculated as 4 times the CoV of the additional mean claims amount.

The stress loading factor of 4 reflects the fact that the claims distribution is positively skewed and has been calibrated considering market level data and testing of alternative assumptions (e.g. assumed distributions and in comparison to diversified premium risk). The mean claims amount and the implied stress loading are calculated on both a gross basis (netted down for reinsurance) and directly on a net basis with the larger of two loadings selected.

3.2 Model Opening Reserves

Agents are required to consider their projected balance sheet technical provisions actual versus expected over time for any systematic effects. Methodology or projected reserves should be adjusted to allow for material findings (e.g. if reserves are found to be systematically under-projected) and clearly highlight any changes in the model documentation submitted to Lloyd's.

In order to ensure that the methodology used to roll forward Q2 LCR technical provisions is sufficient to ensure Q4 technical provisions are not under-capitalised in the SCR, Lloyd's is asking the market to fill in a form with syndicate specific data for their process of rolling forward for the last three as at dates.

If a syndicate has underestimated their technical provisions consistently against what was later observed, a new process is expected.

If a new process is being used in 2019 we are asking for the syndicate to back-test, completing the same data for the last three years, but for what would have been the output if the new methodology was used.

Any differences between the QSR and rolled forward LCR must be explained with an associated "impact" detailing how much the explanation should negate the difference.

Any potential load is calculated using the average residual for the last three as at dates.

3.3 Earned Margin

If the earned margin stated in the QSR as provided by the Signing Actuary diverges from the earned margin claimed by the syndicate in their QSR submission, then the SCR might be understated and Lloyd's will load the syndicate to negate the difference.

3.4 Profit from unearned premium

If the associated profit from unearned premium (as derived from the loss ratio on unearned premium) in the SAO as provided by the Signing Actuary Is different from the profit in unearned premium claimed by the syndicate in their QSR submission, the syndicate will be loaded by the difference in percentage multiplied by their QSR Premium value.

3.5 Best estimate reserve reviews

The best estimate reserving process of syndicates is reviewed by the syndicate reserving team throughout the year based on various metrics/KPIs used by Lloyd's to monitor the market. The broad structure of these reviews will follow MRC's "Reserving Framework" document.

Any potential loads will be driven by data but rely on expertise and judgement within MRC. Where judged to be necessary, loadings will be recommended by the Lloyd's Chief Actuary.

3.6 Market Risk

In the past, some syndicates have submitted a negative contribution of market risk to SCR, which was not following the principle that additional risk should result in additional capital being held. Hence last year Lloyd's disallowed any negative contributions from market risk to capital on a one-year and ultimate basis. A working group of Lloyd's and market representatives has met during 2019 to investigate the reasons for the negative contributions and propose an approach to the negative contributions from market risk to capital for the 2020 SCR review.

The group concluded that negative contributions are acceptable under certain, though limited, conditions given the fact that market risk is at times driven by investment returns, which can conceivably outweigh the risk from liquidity, FX and credit risk in the tail of the capital distribution. However, the working group also investigated some drivers of negative contributions that should be disallowed under Lloyd's guidance. Hence syndicates with a negative contribution of market risk to SCR (one-year and/or ultimate) are requested to provide additional information in the Focus Areas return in order for Lloyd's to assess the modelling of market risk.

If the template is not filled in or is not answered satisfactorily then as a default a loading equal to the negative contribution of market risk for ultimate SCR will be applied. For the one-year SCR market risk will only be loaded to level of the negative contribution from all but interest rate risk on liabilities (if this data is provided by the syndicate) as the benefit from discounting is allowable on the one-year SCR.

If the questions in the additional template are answered satisfactorily, then the loading will be adjusted to reflect the acceptable items, or no loading will be applied.

The Focus Areas return will collect:

- A more detailed split of interest rate risk into assets and liabilities in order to split out the impact of discounting;
- Mean investment return as a proportion of available assets: Investment returns have been identified as the main driver of the negative contribution – hence justification will be required of the mean investment return, ensuring that this is appropriate by asset class and for the time horizon modelled;
- Mean FX risk: Lloyd's will not allow any material FX profits at the mean (i.e. larger than £1m);
- Justification of the approach taken to modelling the insurance vs market risk dependency: Profitable scenarios from market risk in the tail will depend on the strength of the dependency modelled;
- Affirmation of the consistency of discount rates for technical provisions: Inconsistency between discount rates used in the model could lead to a "risk-free lunch" which will be disallowed;
- Affirmation that the investment return and market risk on FAL/FIS are outside the scope of syndicate level SCR as excess assets in the model could lower the contribution of market risk.

3.7 Diversification

It is well understood that the level of dependencies included in syndicate's internal models is a material driver of capital, both on an ultimate and one-year basis.

There are many methods of introducing dependencies between classes of business and risk categories e.g. copulas, common drivers, tail drivers etc. Lloyd's does not prescribe a particular structure and considers the individual dependency structure used in an internal model in the SCR review. The unique and complex nature of many dependency structures means that it is often difficult to consistently assess from a bottom-up analysis whether any particular approach is appropriate. As a result, Lloyd's also examines the output of internal models to ensure that sufficient dependency has been introduced.

In previous SCR reviews, the principal metrics used to assess dependency were the SST ("sum of squares test") and JEPs ("Joint Exceedance Probabilities"). The JEP test was found to be limited by distortions in the far-tail of distributions and in measurement of contribution to SCR. A working group of Lloyd's and market representatives has met during 2019 to provide input on testing of dependency structure. The aim of the group was to establish whether a sum of squares test (SST) provides a useful test of the strength of model dependency.

A variety of different metrics were explored and judged against objective criteria with data from the working group participants being used to inform the decision. This group has concluded that the SST is a useful high-level indicator, but further information can be considered if it indicates an issue with diversification. The Focus Areas return includes previous SST outcomes and requests additional information that is required to gain comfort on the appropriateness of the dependency structure if the test was failed.

The additional evidence consists of

- The use of randomised simulations for premium, reserving and insurance risk in order to assess model output against "true" independence
- Using an alternative measure, the APC (Average Percentile Contribution), on both randomised and modelled sims to assess contributions to the tail

The additional evidence will be collected on a net and gross of reinsurance basis and including and excluding catastrophes.

Average Percentile Contribution examines premium/reserving risk contributions in the 99.5th percentile tail of insurance risk and expresses these as a percentile of the standalone Premium/Reserving risk distribution. Randomised simulations are required to provide a baseline to measure dependency.

The above will allow Lloyd's to assess dependency within internal models using different metrics against a truly independent distribution. However, Lloyd's considers this level of dependency to be an absolute minimum rather than a test of adequacy.

4 Lloyd's Review Process

Lloyd's is committed to ensuring transparency in its decision-making related to the approval of capital. This section outlines some of the considerations that will be made as part of capital reviews.

A capital review uses a number of high level metrics/diagnostics supplemented by detailed investigation. The high level metrics apply across risk types and generally consider the model output in the context of risk profile (especially emerging risks/experience) and movements from previous figures.

Test Area	Metrics considered	Questions asked
Overall Reserve risk Premium risk Catastrophe risk Credit risk Market risk Diversification Operational risk One Year	• Stress/Exposure • Contribution to capital • Movement from previous submission and identified drivers • Market decile and movement in this • Comparison to Central view • Sum of Squares test of Diversification	• Does the position match the risk profile – are the key risks driving capital? • Does the movement match the risk profile change? Has it been explained? • Is it consistent across risk types – e.g. premium risk down due to greater RI means greater RI credit risk • How has experience been responded to? • What model developments have been responded to and why? • Are risks contributing greater than under independence

Lloyd's expects syndicates to provide commentary on how the model represents the risk profile, with reference to recent experience and any emerging features of the risk profile. Movements will not be accepted by virtue of being the consequence of input updates and must be analysed in full to ensure they are clearly understood for both one-year and ultimate capital.

In addition to high-level considerations Lloyd's considers the analysis and documentation provided by the agent in detail and reviews the provided information. In order to make our review more transparent, Lloyd's will also run a number of minimum tests which flag areas to question automatically with the syndicate. If any of the tests are failed Lloyd's will query these areas and would require robust justification to support the model output. Please note that the reverse does not hold, i.e. passing the minimum test does not necessarily mean that Lloyd's has no further questions on the area in question, as these only constitute a baseline. The following tests will be run:

- Volatility: Gross and net loss ratios should be greater than 100% for the standalone premium risk for each modelled class of business, i.e. each class should make a loss at a 1 in 200 return period;
- Diversification: Contributions from premium risk by modelled class of business to the 99.5th percentile of insurance risk should be greater than the mean premium risk for the class. This test is designed to ensure that a minimum level of correlation is applied between all classes for insurance risk;
- Diversification: Contributions from reserve risk by modelled class of business to the 99.5th percentile of insurance risk should be greater than the mean reserve risk for the class. This test is designed to ensure that a minimum level of correlation is applied between all classes for insurance risk;
- Diversification: Lloyd's does not prescribe the use of any particular dependency structure but does require consideration to be made of the potential for dependency affects to be greater within the tail of distributions. The impact of any tail drivers on capital should be considered as part of representing their appropriateness, rather than relying solely on their presence in the modelling.
- Impact of reinsurance: The level of reinsurance credit risk modelled should be considered in the context of the materiality of reinsurance to the SCR. The relatively binary nature of reinsurance default means that this risk can appear low (especially on a one-year basis) and/or well diversified. It is expected that any limitations associated with modelling this risk (e.g. including exhaustion) are clearly understood and quantified and stress/scenario tests are used to validate the level of risk.
- Contributions to capital from all risk types should be positive (with the possible exception of market risk under certain circumstances as discussed above);
- Loss given default in the reinsurance credit risk modelling should be at least 50%.