SOLVENCY II
DETAILED GUIDANCE FOR QIS5
SEPTEMBER 2010

LLOYD'S

QIS5 DETAILED GUIDANCE

QIS5 is being co-ordinated in the UK by the FSA (www.fsa.gov.uk). The QIS5 spreadsheet was released on 24th August 2010 by CEIOPS (www.ceiops.org). Guidance notes for completion have been released and links to the relevant information are provided in this bulletin.

This document is intended to provide assistance to syndicates in completing the QIS5 spreadsheet submissions and to highlight particular areas of note. The guidance provided here is not exhaustive and agents must refer to the technical specification and other guidance provided by CEIOPS and the FSA. Agents should also refer to the high level guidance issued by Lloyd's in July 2010 for additional details of areas where there have been significant changes from the approach under QIS4.

Background

The Fifth Quantitative Impact Study (QIS5) is being conducted throughout the European Union by CEIOPS (Committee of European Insurance and Occupational Supervisors) between August and November 2010.

The European Commission (EC) states that the QIS5 exercise has the following objectives:

- To provide all stakeholders with detailed information on the quantitative impact on insurers' and reinsurers' solvency balance sheets of the introduction of future level 2 implementing measures under Solvency II compared to the situation under Solvency I;

- To check that the technical specifications laid down in the Annexes to this Call for Advice are aligned with the principles and calibration targets set out in Directive 2009/138/EC;

- To encourage insurers, reinsurers and supervisors to prepare for the introduction of Solvency II and to identify areas where their internal processes, procedures and infrastructure may need to be enhanced; and in particular, to encourage insurers and reinsurers to improve their data collection processes;

- To provide a starting point for an ongoing dialogue between supervisors and insurers and reinsurers in preparation for the new supervisory system.

Previous QIS exercises, especially QIS4, have provided valuable information particularly about potential movements in capital/solvency positions and data requirements. For Lloyd's and the Lloyd's market, QIS5 has the additional benefits of:

- Identifying areas, especially concerning the standard formula, that are potentially impractical, inappropriate or inconsistent for Lloyd's and the Lloyd's market. These items can be prioritised in Lloyd's lobbying and communication strategy for Solvency II;

- Enabling Lloyd's to provide syndicate specific feedback versus peers and the whole market on a range of issues to be tested under QIS5;

- Complying with the FSA Internal Model Approval Process requirements which state that firms wishing to seek internal model approval should take part in QIS4 and all subsequent exercises.

Lloyd's and managing agents' participation in QIS5

Given the importance of the exercise to the market, the completion of QIS5 is **mandatory for all syndicates participating in the Solvency II dry run, including life and RITC syndicates and also those syndicates with business to be written during 2010.** As for the Solvency II dry run process, submissions are required at syndicate level and so special purpose syndicates must also complete QIS5.

As for QIS4, Lloyd's will be making a market level submission to the FSA in respect of QIS5 based on centrally held data as at 31 December 2009. The high level guidance issued in July confirmed that syndicate level QIS5 returns are required to be provided to Lloyd's. Lloyd's will use syndicate submissions for a number of purposes, including:

- To analyse syndicates against peers and the market as a whole.

- To check the validity of central assumptions, ensuring that no syndicate level issues are missed at an aggregate level and to test bases for moving from syndicate to aggregate levels.

- To analyse the impact of Undertaking Specific Parameters (USPs) and geographic diversification on different segments of the Lloyd's market and in aggregate.

QIS5 completion is mandatory for all syndicates participating in the Solvency II dry run to allow Lloyd's to assess fully the potential impact on their individual businesses and on different areas of the market, both in terms of size of syndicates and type of business written.

QIS5 Timelines

QIS5 will run throughout Europe from August – October 2010 for solo entities and for groups until 15 November. Analysis and feedback of results will continue until year-end for Lloyd's and the Lloyd's market.

The key dates for Lloyd's syndicates are shown in the table below:

6 July	Final QIS5 specification released
Mid July	Lloyd's issues high level guidance
August	QIS5 spreadsheet available
Early September	Lloyd's issues detailed guidance
7 / 8 September	Lloyd's holds QIS5 workshops
29 October	Lloyd's submits aggregate results to FSA
29 October	Syndicates submit results to Lloyd's
November	Lloyd's analyses syndicate returns
December	Results / analysis fed back to syndicates

Completion and submission of QIS5 documents

General requirements

As noted above, completion of QIS5 is **mandatory for all syndicates participating in the Solvency II dry run.**

Agents are asked to complete QIS5 at syndicate level on the basis of a 'solo entity'. Where responses to qualitative questionnaires will be identical across multiple syndicates managed by one agent, a single set of qualitative material can be submitted along with confirmation that this is the case.

QIS5 is to be completed as at 31 December 2009. This is to be taken as year-end 2009 where a syndicate may have earlier cut off dates.

Submission of QIS5 responses

Agents should note that completed QIS5 spreadsheets and qualitative questionnaires should be submitted electronically to solvency2@lloyds.com. A hard copy submission is not required. Syndicates should submit their completed QIS5 worksheets **only to Lloyd's and not to the FSA**. This is important to avoid double counting of the Lloyd's market results in the FSA and CEIOPS analyses.

As with all previous QIS exercises, Lloyd's will calculate an aggregate QIS5 submission, based on central data which has the underlying assumption of Lloyd's as a single entity. Lloyd's will submit this to the FSA through the usual procedures. Following analysis by Lloyd's of syndicate-level submissions, details will be provided to the FSA.

The QIS5 return will not require formal managing agent sign-off and is not audited. However, the syndicate data disclosed therein should be consistent with data reported in the year-end annual return (QMA) and solvency reserving data (SRD).

A summary of submission requirements is given in the Submission Requirement Summary Section later in this document.

QIS5 package

The QIS5 package comprises of a main spreadsheet workbook together with additional Excel tools to assist participants with calculations. There are also qualitative questionnaires on solo calculations and internal models which must be completed.

The main workbook is arranged into four sections: input sheets, calculation and results sheets, group sheets and internal model sheets. The later sections of this document provide Lloyd's specific guidance notes for completion.

Internal models

Note that there are input sheets to collect information on the output of internal models. For QIS4, agents were required to approximate results from their ICA models. For QIS5, Lloyd's requires agents to submit results of equivalent internal model runs where they are available (even if draft). If these are not yet available, agents should allocate ICA figures to the internal model sheets.

Qualitative questionnaires

The qualitative questionnaires are arranged into sections that must be completed within the Excel file ("Qualitative questionnaire – Excel") and sections that must be completed within the word files ("Qualitative questionnaire – solo" and "Qualitative questionnaire – internal models"). Note that questions within the word files that are shown in italics should be answered within the Excel file. It is only the other questions (and additional comments for any Excel answer) that should by completed within the word files.

As for other firms within the IMAP process, agents will be expected to complete all relevant parts of QIS5. This includes questionnaires for solo undertakings and internal models, but not the group questionnaire. A number of areas within the internal model qualitative questionnaire should have been considered as part of Lloyd's Solvency II dry run exercise. Where this is the case, agents may choose to provide a mapping to material submitted as part of the dry run exercise.

Better than "best efforts" basis

QIS4 and prior QIS exercises have been completed on a "best efforts" basis. This was partially to recognise the time commitment in completing the exercise and also to consider the emerging nature of the processes. **Syndicates are required to complete QIS5 on as close to a full Solvency II basis as possible**, i.e. aiming at the same standard as a formal regulatory return (e.g. the current FSA return).

Lloyd's will be reviewing QIS5 submissions carefully and any where reasonable effort does not appear to have been made will require a resubmission. Note that, as part of Lloyd's Solvency II dry run, a required resubmission will be treated as a late submission (as for any other regulatory returns) and will feed into syndicate ratings.

The requirement to complete on a full basis is driven by a need to ensure that no items are misrepresented in the analysis, leading to potential issues being "missed" and also to ensure that syndicates are capable of calculating properly items on a Solvency II basis with no gaps existing in data or processes.

Agents should complete on the basis as set out in the QIS5 technical specification to ensure any problems with the required methodology are recognised. Using adjustments or own corrections (other than those set out in CEIOPS errata or Q&A documents) may mask problems with underlying requirements and should be avoided.

Technical provisions under Solvency II are likely to be calculated on a basis very similar to that being tested under QIS5 and so agents should ensure a full calculation can be completed now. Technical provision calculations will also be required, as part of the quantitative element of the Solvency II dry run, as at the 2010 and 2011 year ends (with the possibility of mid-year 2010 and 2011 calculations) and so it is important that agents use the QIS5 exercise to set up the systems and processes that can be used for these valuations.

The Solvency II dry run process for syndicates is split into three elements, qualitative, quantitative and regulatory. The only regulatory requirement currently included within the dry run is the completion of QIS5. Therefore, QIS5 is part of the syndicate dry run process, providing further justification for completion on a "better than best efforts" basis.

Completion of QIS5 on three scenarios

As set out in Lloyd's high level QIS5 guidance, agents will be required to test the impact of geographical diversification (using Lloyd's proposal, included within the final QIS5 technical specification) and the impact of Undertaking Specific Parameters (USPs). Both are expected to have material impacts on the results for syndicates and Lloyd's so it is important that agents attempt to use these as accurately as possible. Agents should note any associated data problems of practicalities that may emerge. This will be particularly useful regarding the approach to calculating USPs.

This will therefore mean **three spreadsheet submissions per syndicate**, set out below: Agents are required to name submissions in accordance with the naming convention also included below, where "SYND" represents an individual syndicate number.

1. with no geographical diversification or USPs (name as "SYND _nogd_nousp.xls")

2. with geographical diversification but not USPs (name as "SYND _gd_nousp.xls")

3. with USPs but no geographical diversification (name as "SYND _nogd_usp.xls")

Each requirement is discussed in more detail in later sections of this document.

Note that calculation of results with no geographical diversification simply involves inserting all input data within the geographical diversification sheet to one geographical region. We strongly advise that agents follow this approach rather than deleting the geographical diversification sheet. This is because some calculations carry through from this sheet for other modules and would require replacement elsewhere.

Currency of submitted information

The QIS5 spreadsheet contains the option to provide information in a number of reporting currencies. For consistency, agents are required to **report all information in Sterling**. If items within the spreadsheets are calculated and converted from alternative bases, the 31st December 2009 period end rates, as set out in Lloyd's Market Bulletin Y4360, should be used. The spreadsheet also contains the option to use either thousands or millions but we require for consistency that agents complete **using thousands only, ie £'000s**.

Capital supporting syndicates

As requested for QIS4, agents should include the funds at Lloyd's (FAL) supporting the syndicate, whether held within or separately from syndicate assets.

FAL amount to be reported
For a syndicate where all of the capital is provided by a member or group of members participating solely on that syndicate, please report the full value of FAL held as at 31 December 2009.

For a syndicate where all of the capital is provided by a member or group of members participating on that syndicate and one or more other syndicates managed by the same managing agent, then please apportion the full value of FAL held at 31 December 2009 between the syndicates concerned pro rata to the 2010 Enhanced Capital Assessment (ECA) of each of the syndicates.

In the case of a syndicate where part of the capital is provided by an 'in house' corporate member and the rest by third party capital:

- The capital in respect of the 'in house' member may be accounted for as above (adjusted where necessary pro rata to the 2010 ECA if that member has one or more other syndicate participations)

- The third party capital may be estimated as the total of the 2010 ECA for that syndicate x the share of the 2010 capacity provided by the third party capital.

- If the 'in house' member provides 75% or more of the syndicate's capacity, Lloyd's will consider it a reasonable proxy to base the split of assets for the total ECA for the syndicate on the FAL held by that

member. Where third party capital is more than 25% of the syndicate, Lloyd's will provide to agents on request an assumed split of assets to be used.

Allocation of FAL within the balance sheet
Please allocate FAL to the underlying asset categories when completing the QIS5 balance sheet.

Recognition of FAL in SCR calculation
Please take into account the value and the composition of FAL within the calculation of the SCR, including recognition of market risk, credit risk and counterparty default risk.

RITC Syndicates

In completion of QIS5, managing agents of RITC syndicates should note the following:

- For technical provisioning, business should be classified in terms of the risk codes originally written to best represent the split of business written at Lloyd's. An indicative mapping of risk codes to QIS5 classes has been provided in the appendix to assist agents and an electronic spreadsheet version of this mapping is also available on request from solvency2@lloyds.com. If agents are unable to obtain the original risk codes then an indicative allocation may be used. As per the current returns, only risk premiums paid or received for RITC business should be classified under the 'TC' risk code.

- The RITC business should be modelled using its original underwriting years of account to best reflect the underwriting year split of the business and appropriately allow for this on a cashflow basis. RITC risk premiums should be allocated to the underwriting years accepting the business. The reporting years, as per the current requirements, will be only the open years of account and include all business closed into these years from RITC arrangements.

Groups

All of the instructions set out here relate to completion in respect of a *syndicate* and agents are only required to complete QIS5 on a "solo" basis. Many sheets in the QIS5 package relate only to groups and do not need to be completed.

Summary of QIS4 results

To highlight the importance of completing the QIS5 exercise as accurately as possible, the following section summarises some key findings of the previous QIS exercise, calculated as at 31st December 2007.

Technical provisions were subject to, on average, a 17% drop compared to held provisions and the standard formula SCR was, on average, 57% higher than ICAs current at the time.

Whilst the impact on technical provisions was consistent across most syndicates, the standard formula SCR increased relative to ICA with increasing size of syndicate, as illustrated on the following graph:

Lloyd's syndicates - Comparison of QIS4 SCR v ICA
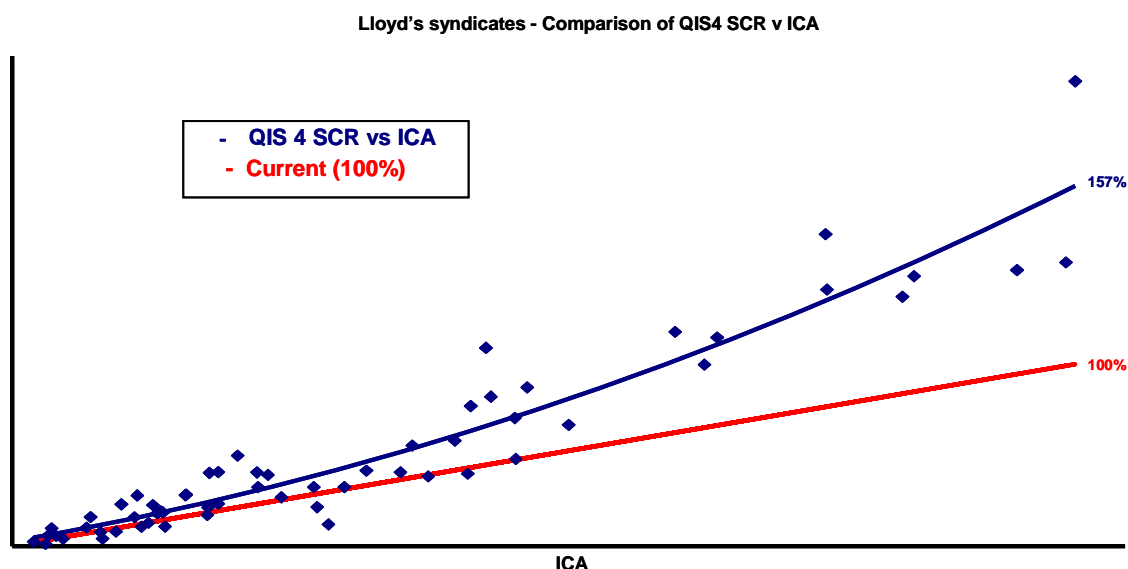
CEIOPS' advice to the EC on level 2 implementing measures increased calibrations across most of the standard formula SCR, in places significantly so. The draft QIS5 technical specifications issued in April included many reductions from CEIOPS' proposals, but overall calibration was still well above observed QIS4 levels. Following further lobbying by the European insurance industry, including Lloyd's, the final QIS5 specifications includes additional reductions, but again, the overall calibration of QIS5 appears stronger than QIS4 and hence overall aggregate capital requirements are expected to be higher than under QIS4.

The impact on technical provisions is harder to gauge due to many moving parts. The move from a best efforts basis may increase amounts as new elements, such as binary events, are introduced. However, technical provisions are sensitive to movements in discount rates and the introduction of a 50% illiquidity premium will offset potential increases to some extent.

Major changes since QIS4

Several changes have been made since the completion of QIS4, many of which are likely to have a significant impact on the results of QIS5 calculations. Syndicates should not assume that processes set up for the QIS4 exercise will still be relevant for QIS5 and should ensure that the published technical specifications are read carefully to understand the changes made. Though not an exhaustive list, syndicates should note in particular the following key changes, discussed in more detail in Lloyd's high level QIS5 guidance:

- Changes in non-life premium and reserve risk factors (including allowance for outwards non-proportional reinsurance)

- Changes in non-life catastrophe risk methodology and factors

- Increase in correlation between underwriting and catastrophe risk elements

- Different methodologies for the derivation of undertaking specific parameters

- Reintroduction of geographical diversification, using a simplified methodology

- Changes to the technical provision risk margin calculation

- Introduction of an illiquidity premium for use with risk-free interest rate term structures for discounting

- Changes to the market risk approach

Market workshops

Lloyd's will run two dedicated QIS5 workshops on 7 and 8 September. The workshops are not designed to teach participants how to complete QIS5. The intention and design will be that all participants are familiar with the QIS5 material and will have started to complete the spreadsheets. The workshops will then aim to focus on common issues and problems working towards potential solutions.

Updates as Lloyd's work develops

Lloyd's will complete QIS5 in parallel to the syndicates. As part of the process, there are areas Lloyd's would like to explore further to identify other solutions available, for example with regard to calculating binary events.

As Lloyd's work progresses, updates on any relevant areas will be made available via the website or the workshops, whichever is more appropriate. Lloyd's will also maintain a QIS5 FAQ log that will also be available via the website.

Links to QIS5 material

Specific links to the QIS5 spreadsheet and qualitative questionnaires to be completed, together with guidance material are included below.

Documents to be completed

The documents to be completed are (per CEIOPS QIS5 web page):

- QIS5 spreadsheet
- Qualitative questionnaire - solo
- Qualitative questionnaire - internal model
- Qualitative questionnaire - Excel

Latest versions of these files can be found on the CEIOPS QIS5 web page:

http://www.ceiops.eu/index.php?option=content&task=view&id=747

Materials to assist with QIS5 completion

Note that CEIOPS has also published a spreadsheet instruction manual and other Excel tools to help with some of the required calculations. Along with additional information on the technical specification, associated covering letter and appendices, these can be accessed via the CEIOPS QIS5 web page at the following address:

http://www.ceiops.eu/index.php?option=content&task=view&id=732

For some areas of the spreadsheet completion, agents may wish to refer to the spreadsheet instruction manual for more detailed guidance. Note however that agents should rely on the QIS5 technical specifications as a primary source.

The FSA have guidance information available on their Solvency II/QIS5 web page which can be accessed here: FSA - Solvency II.

All websites are regularly updated with new material, errata and FAQs and whilst Lloyd's will endeavour to keep agents advised of key updates, agents should ensure they check these pages regularly.

Errors within QIS5 materials

Note that there are some errors within the QIS5 spreadsheet. Some of these are highlighted later within this document. It is likely that there will be an updated version of the spreadsheet released soon, but agents are advised to proceed as far as possible with the QIS5 exercise.

Agents should pay particular attention to the sheets within the current version of the main QIS5 workbook when starting to input data and should ensure that input cells are blank. In a few cases there are numbers already within the input cells which should be deleted before completing the workbook.

Agents should also refer to the errata to the technical specifications and the CEIOPS Q&A documents (which are updated regularly). Note that the technical specification has errors in areas of relevance to syndicate calculations. These are shown in the documents linked below:

Link to Errata to the QIS5 Technical Specifications

Link to Questions and answers document

Contact for queries and additional support

The Solvency II section on Lloyds.com contains a dedicated QIS5 page. This page will contain useful links and news updates relevant to QIS5 throughout the exercise and can be accessed by using the following link:

http://www.lloyds.com/The-Market/Operating-at-Lloyds/Solvency-II/Information-for-managing-agents/Quantitative-Impact-Studies-QIS5

Any generic or syndicate specific issues should first be raised via Solvency2@lloyds.com or via Solvency II account managers. Lloyd's will set up a FAQ process which will be updated with answers of use to other agents.

If agents have any comments or suggestions on either technical or qualitative items or feel there are potentially errors in the QIS5 specifications or spreadsheets then please contact us as soon as is possible. This will enable Lloyd's to provide the most effective service to the market on this topic. Again, this can be done through Solvency2@lloyds.com.

QIS5 SUBMISSION REQUIREMENT SUMMARY

Summary of submission requirements

In summary, Lloyd's requires submission of the following QIS5 sheets, **for each syndicate**, by 29th October:

- Three versions of the main QIS5 spreadsheet on each of the three bases (as listed above) with:
    - clear naming of the basis being tested and syndicate to which results apply:
        1. with no geographical diversification or USPs (name as "SYND_nogd_nousp.xls")
        2. with geographical diversification but not USPs (name as "SYND _gd_nousp.xls")
        3. with USPs but no geographical diversification (name as "SYND _nogd_usp.xls")
    - all worksheet tabs completed, including internal model tabs
    - currency in Sterling, as set as above
    - using the year end exchange rates as set out in the Completion and submission of QIS5 documents section above
    - figures in thousands, as defined in the Completion and submission of QIS5 documents section above
    - data as at 31st December 2009
    - including the full value of FAL held
- Qualitative questionnaire sheets fully completed in respect of solo calculations and internal models

KEY ISSUES FOR COMPLETION OF QIS5

The following sections are intended to provide assistance to syndicates in completing the QIS5 spreadsheet submissions and to highlight key areas. The notes provided here are not exhaustive and **agents must refer to the technical specification and other guidance provided by CEIOPS and the FSA**. Agents should also refer to the high level guidance issued by Lloyd's in July for additional details around the process and for a summary of changes from the QIS4 exercise.

Completion of QIS5 can be split into two main areas, the valuation of assets and liabilities (a major part of which includes technical provisions) and the calculation of the standard formula Solvency Capital Requirement. As highlighted in the high level QIS5 guidance issued by Lloyd's in July 2010, there are a number of issues in both areas that will need to be considered carefully by agents. Some of these are discussed in more detail below:

General issues

Data

The QIS5 specifications require numerous new areas of calculation and some which are not considered part of current practice (for example, assumptions on non-life lapse rates). Additionally, in a number of areas the data requirements are potentially onerous, such as the historic collection of data required to parameterise USPs. In many cases, though the QIS5 spreadsheet makes the calculation work, the QIS5 specifications are needed to fully understand the data input requirements.

It is possible that syndicates will find some required data items difficult to obtain now and so data collection procedures will need to change.

Validation and documentation

Agents will be required to make submissions to Lloyd's as part of the technical provision section of the Solvency II dry run, later in 2010. Agents should ensure that requirements such as validation, documentation and justification of methodologies, assumptions and expert judgement can be adequately provided for the work performed for the QIS5 submission.

Solvency II minimum lines of business

The specified line of business splits used within the QIS5 worksheets are different from Lloyd's risk codes, the FSA Enhanced Capital Requirement (ECR) splits and also those used for QIS4. Agents may use any reasonable basis to allocate business to the CEIOPS lines of business. Lloyd's has provided a risk code mapping in the appendix to assist agents and an electronic spreadsheet version of this mapping is also available on request from solvency2@lloyds.com.

Note, however, that further allocation is needed to ensure that all data is included within the appropriate Solvency II minimum lines of business. Calculation of the SCR requires that non-proportional reinsurance be split out from proportional reinsurance direct business and included in the relevant non-proportional Solvency II class. **It is important for agents to note that the valuation of technical provisions requires agents to split out proportional reinsurance business from direct business and report separately.** Other data sources may be available (such as transaction type flags of direct, non-proportional reinsurance etc) which can help in separating this business.

Agents should consider whether any of their contracts fall within the health (either Similar to Life Techniques, "SLT" or Not Similar to Life Techniques, "Non-SLT") lines of business. For technical provision valuation, non-SLT health liabilities should be allocated into direct and proportional workers' compensation, income protection, and medical expenses non-life lines of business, as well as non-proportional health. For the SCR calculation, such business is treated separately under the SCR Health underwriting risk modules. This is detailed in Section SCR.9.20 of the QIS5 technical specification.

Note that the QIS5 calculation requires liabilities from annuities stemming from non-life contracts to be split out and treated separately, in line with life obligations. This is the case for both technical provisions and inputs required for the standard formula SCR. This is a change from QIS4.

For the valuation of technical provisions within QIS5, agents should perform calculations at a homogeneous risk group level and must discount cashflows at appropriate risk-free interest rate term structures. These requirements may mean agents have to map and allocate lines of business to a lower level and then aggregate up to Solvency II line of business level for input to the QIS5 worksheets. Agents should refer to Lloyd's detailed Technical Provision guidance released in July 2010 for further details.

Balance sheet

Under the QIS5 valuation principles, there are a number of changes to the balance sheet (such as the removal of deferred acquisition costs, or the revised treatment of future cash inflows from future premiums).

The requirements for valuation are detailed within the QIS5 technical provisions under Section 1 – Valuation. Agents should ensure that they are familiar with the requirements and understand what adjustments should be made across assets and liabilities (particularly technical provisions) to avoid double-counting.

Agents should also be aware of the requirement in the QIS5 balance sheet to split assets to a more granular level than under existing requirements.

Own Funds

QIS5 will require agents to classify their own funds into different tiers, as set out in Section 5 – Own Funds of the technical specification. Agents will need to use this section to assist with the classification approach before inputting items to the Valuation and Own Funds tabs within the QIS5 submission spreadsheet.

The classification also includes a requirement to detail the calculated value of expected profits included within future premiums (EPIPF), as discussed below.

Technical Provisions

Calculation of technical provisions under Solvency II will be significantly different from current approaches and agents should be fully aware of the effects that these changes will have on their solvency results and balance sheets. Calculation of technical provisions will be used in completing the QIS5 submission and should be on a basis that complies, as far as is reasonably possible, with existing guidance. This means that technical provisions should take into account all requirements including (but not limited to) the following:

- Movement to a cashflow basis for valuation of both inwards gross and outwards reinsurance provisions

- Removal of any implicit or explicit margins within technical provisions to give a "true best estimate" for solvency purposes, defined as the mean of the full range of possible future outcomes

- Introduction of the valuation of very low probability extreme events including latent claims, referred to as "binary events"

- Removal of the requirements to hold an unearned premium reserve and to allow for other non-monetary items. These are replaced by "premium provisions", valued on a best estimate basis

- The premium provision must also take account of future premium cash inflows. It is important that syndicates are aware of the effects of the corresponding reduction in balance sheet that results from this change. Note that these future cash inflows should reflect premiums with a future due date on contracts defined as existing at the valuation date. They should not include premiums that are due but not yet received. These are not included within Technical Provisions and still fall within insurance recoverables on the balance sheet

- Movement to recognising contracts on a "legal obligation basis". This will mean the inclusion of business currently not valued as part of technical provisions - for example 1st January renewals entered into prior to the balance sheet date

- The basis for recognising existing contracts will also impact reinsurance contracts and their expected cashflows

- Introduction of discounting, leading to increased volatility in reserves. Discounting uses risk-free interest rate term structures (provided with the QIS5 spreadsheets) adjusted by an illiquidity premium

- Introduction of a Risk Margin (or Market Value Margin)

- Reporting of liabilities segmented by Solvency II lines of business, with calculations performed at a homogeneous risk group and currency level (for discounting using appropriate term structures)

- Claims and premium provisions including allocation of all expense cashflows related to running off all liabilities (both those currently allocated and unallocated)

- An allowance for counterparty default in line with requirements

Agents should refer to Lloyd's updated Technical Provision guidance released in July 2010 for further details.

The calculation may be based on current techniques in many cases, but the data and methods will include many new concepts when comparing to current processes. This means there is a danger of underestimating the challenge in calculating technical provisions on a Solvency II basis. The financial impact is significant and understanding the practicalities and ultimate results on this basis is imperative to both Lloyd's and the market.

Expected profit within future premiums

As part of the valuation of technical provisions under Solvency II, the premium provision should include all cash inflows from future premiums on contracts classed as "existing" at the valuation date. These future premiums will be removed from the balance sheet so that the premiums are not double-counted. Note that these future cash inflows should reflect premiums with a future due date on contracts defined as existing at the valuation date. They should not include premiums that are due but not yet received. Premiums due but not yet received are not included within Technical Provisions and still fall within insurance recoverables on the balance sheet.

Where future premiums exceed the associated expected claims, technical provisions will be reduced. To investigate the impact of this, CEIOPS is testing the value of technical provisions assuming a 100% lapse rate in these future premiums, whereby no future cashflows are received.

In addition, agents will need to quantify the value of these future premiums and associated expected claims. The QIS5 technical specifications state in Section 5 – Own Funds that undertakings should classify expected profits included in future premiums as Tier 1. These figures are a required input for the QIS5 submission spreadsheet.

## Simplifications in valuation of technical provisions

Agents should try, where possible, to complete calculations using the standard approach in order to fully test them, However, sections V2.6.1-V2.6.3 of the QIS5 technical specification discuss a number of simplifications that may be used in the calculation of technical provisions. Agents may attempt to use these, as long as the proportionality requirements set out in V2.6 are met (and can be documented as part of the Solvency II dry run Technical Provision element). For non-life insurance, simplifications are suggested to help undertakings with calculation of:

- Outstanding reported claims provisions (set out in Sections TP7.59 -TP7.63)

- Incurred but not reported claims provisions (set out in Sections TP7.70-TP7.73)

- Claims settlement expenses (set out in Sections TP7.77-TP7.79)

- Premium provisions (set out in Sections TP7.83-TP7.88)

- Gross to net reinsurance techniques (set out in Sections TP7.89-TP7.117)

- Counterparty default reinsurance adjustment (set out in Sections TP2.159-TP2.163)

- Risk margin (set out in Sections TP5.32-TP5.74)

Many of these simplifications are built into the helper spreadsheets also provided by CEIOPS on their QIS5 website. Agents should consider whether any of these are applicable and useful.

Standard formula SCR

The risk modules that must be taken into account for the SCR as part of QIS5 are illustrated in the diagram below. The six high-level modules (Market, Health, Default, Life, Non-life and Intangible) are brought together using a correlation matrix to give the BSCR. Adjustments are then made for the operational risk capital requirement and for the risk absorbing effect of technical provisions and deferred taxes to arrive at the overall SCR.
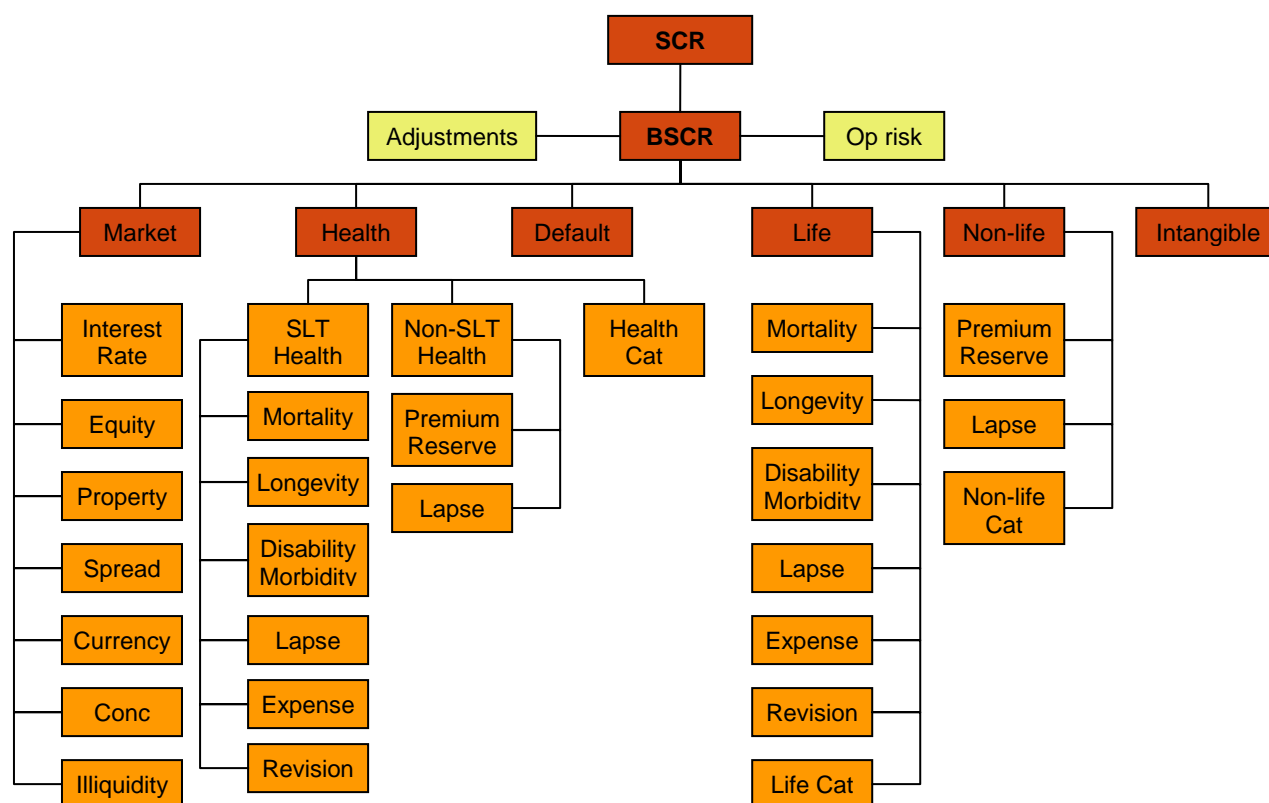
Non-life underwriting risk module

Non-life premium and reserve risk is calculated using volume measures and line of business standard deviation factors, correlated using a line of business correlation matrix. The calculation is subject to a credit for geographical diversification. Non-life premium and reserve risk is combined with non-life catastrophe risk and lapse risk (discussed below) using a correlation matrix.

Adjustment to non-life net premium risk factors for non-proportional reinsurance

Agents have the option to adjust premium risk standard deviation factors to take into account some of the risk-mitigating effect of outward non-proportional reinsurance cover. Details of the calculations are set out in section SCR.9.25-9.26 and Annex N of the QIS5 technical specification. Note that the adjustment factors may only be used where the reinsurance cover:

- Is on a per risk excess of loss basis

- Allows for reinstatements

- Covers all insurance claims that may be incurred by the undertaking within the segment considered

- Meets other requirements for risk mitigation allowance set out in Section SCR.13

Agents should attempt to calculate these adjustment factors to fully assess the impact. CEIOPS has issued an Excel tool that will assist agents in this.

Undertaking Specific parameters (USPs)

As set out above and detailed in the high level QIS5 guidance, agents must test the impact on QIS5 capital requirements of using USPs.

USPs are a means for undertakings to amend the standard formula parameters to reflect an undertaking's own risk profile more suitably. The approach does not apply to all areas of the standard formula. Most significantly, though USPs may be used for non-life premium and reserving risk, they do not apply to catastrophe risk. It is important to note that if an undertaking is using USPs then they should not also apply geographical diversification, to avoid a double count.

The approach involves applying credibility weighting to an undertaking's own history, to arrive at amended factors for the standard formula. A number of methods are suggested by the Technical Specifications and agents should test that whether the methods are workable and note any associated data problems or practicalities that may emerge. Agents should be able to explain and justify their choice of method.

The strict data requirements and specified derivation calculations for USPs are challenging, adding to the importance of testing the practicality of completing USPs under QIS5.

Agents should also consider the guidance on assessment of completeness, accuracy and appropriateness of data within Annex O of the Technical Specifications. Note that Annex O confirms that agents may carry out the estimation on an underwriting year basis, if they do not have historic data on an accident year basis.

CEIOPS has issued an Excel tool that will assist agents in deriving USPs.

Geographical diversification

As detailed in the high level QIS5 guidance, all syndicates will be required to test the impact of including geographical diversification in the calculation and ensure the method is practicable. Lloyd's writes a diverse book of business globally and the diversification effects of writing that business are significant, particularly when considering capital requirements.

QIS4 included an allowance for geographical diversification by splitting both premiums and reserves into 54 separate regions and allowing up to 25% diversification credit in the premium and reserving risk depending on the spread. The number of regions was thought to be too large and some were inappropriate (for example, the US was not split but each European and South American country was separate).

CEIOPS' final advice to the EC recommended removing geographical diversification. Lloyd's therefore produced a revised proposal for geographical diversification's inclusion, with fewer regions (18) and a more appropriate split (for example, the US is split into four regions, whereas South America is split into two and Europe into four). The EC has included Lloyd's proposal in the final QIS5 specification.

Section SCR.9.33 and Annex M of the QIS5 technical specifications set out further details on the methodology, though the QIS5 submission spreadsheets perform this calculation automatically once values are entered into each of the geographic segments.

Agents may use any reasonable basis to allocate business to geographic area. This may include data on location of risk or claim. For multi-region policies spanning more than one of the geographic segments, agents should consider materiality (or whether there would be a dominant region for the risk) and allocate in a reasonable way.

The QIS5 result excluding geographic diversification can be calculated by inputting all data to just one of the geographic area input sections.

Non-life lapse risk

In a risk module not previously included for QIS4, agents must consider the risk associated with policyholder options that may influence the level of obligations. Examples include the following:

- Options to terminate a contract before the end of the previously agreed insurance period

- Options to renew contracts according to previously agreed conditions

The calculation of premium provisions will be based on assumptions about the rates at which these options may be exercised. Non-life lapse risk is the risk that these assumptions are incorrect. Where contracts have no such

options, or the exercise rate of the options has an immaterial effect on the premium provisions, the contracts do not need to be included within the lapse risk calculation. Agents should consider the requirements set out in Section SCR.9.3 of the QIS5 technical specifications and determine whether this risk needs to be considered.

Non-life catastrophe risk

Under QIS4, undertakings were able to use "personalised scenarios" to calculate their non-life catastrophe risk. The personalised scenarios were designed to reflect an undertaking's own catastrophe risk more suitably than alternatives. The alternatives were scenarios specific to Europe and a very simplistic factor method. European specific scenarios were not suitable for Lloyd's or syndicates and hence the choice was either personalised scenario or the factor method. The factor method generated substantially higher (circa 50%) results for Lloyd's in aggregate.

Personalised scenarios have been removed for QIS5 and calculation must follow one of two methods (or a combination of both).

Where possible, Method 1 should be used. Under this method, agents would apply standard (European) scenarios to syndicate exposures. The standard scenarios are detailed in nature/definition and have been formulated by CEIOPS Non-Life Catastrophe Task Force, which included representatives from the industry and Lloyd's. However, these scenarios are not suitable for use with:

- Natural catastrophe exposures outside of the EEA

- Miscellaneous insurance business

- Non-proportional reinsurance business

Given these limitations, Lloyd's would expect that the majority of Lloyd's non-life cat exposures will now be valued under Method 2 when considering the standard formula requirements.

Under Method 2, factors for each Solvency II line of business are applied to the gross written premium affected by a set of specific events as set out in the technical specifications and summarised in the table below.

Method 2 non-life catastrophe events	Lines of business affected
Storm	Fire and property; Motor, other classes
Flood	Fire and property; Motor, other classes
Earthquake	Fire and property; Motor, other classes
Hail	Motor, other classes
Major fires and explosions	Fire and property
Major MAT disaster	MAT
Major motor vehicle liability disaster	Motor vehicle liability
Major third party liability disaster	Third party liability
Credit	Credit
Miscellaneous	Miscellaneous
Non-Proportional RI Property	Non-Proportional RI Property
Non-Proportional RI MAT	Non-Proportional RI MAT
Non-Proportional RI Casualty	Non-Proportional RI Casualty

This is likely to be most challenging for the Fire and Property insurance (and proportional reinsurance) line of business, for which premiums must be split between the amounts relating to the events of Storm, Flood, Earthquake and Major fires and explosions. Splitting premiums in this way may require use of a number of assumptions and additional data. Non-proportional reinsurance classes of business do not require splitting

between events. Note that additional data (such as transaction type flags or assumed splits) will be needed to correctly split data from risk codes to the CEIOPS lines of business listed in the table above. This is discussed in more detail within the Solvency II minimum lines of business section above.

Capital requirements are calculated using the assumption of independence between events, except between the direct insurance/proportional reinsurance and the corresponding non-proportional reinsurance business where an assumption of 100% correlation is used.

Method 2 event factors are applied to gross premium figures. Agents should calculate the netting-down effect of their own reinsurance protection using the same approach as under Method 1. The required methodologies are detailed within the technical specifications in Section SCR.9.4 and in Annex L.3.

Given the change in approach from QIS4 and its significance to Lloyd's, syndicates should pay close attention to this part of the calculations to test:

- Whether the European Standard Scenarios under Method 1 would be applicable in any circumstances

- Whether the formula approach is workable, especially given the requirements to split premiums by peril and apply netting-down factors

Life underwriting risk module

All syndicates taking part in the Solvency II dry run are required to complete QIS5, including life syndicates. This requires the valuation of technical provisions on a Solvency II basis, in line with requirements set out in the technical specifications and discussed within Lloyd's Technical Provision guidance. Agents with business classed as Life under QIS5 will also need to use the life underwriting risk SCR module provided in the QIS5 spreadsheet. This includes a number of risk sub- modules that are specific to life business.

Agents will need to use the details within the technical specification to segment business into the correct Solvency II line of business.

Health underwriting risk module

Agents writing business that is classified as Health under QIS5 should consider whether the underlying business falls into the SLT Health group of classes (in which case it is treated like life business for technical provisions) or Non-SLT Health classes (in which case it is treated like non-life business for technical provisions).

For calculation of the SCR, Health business is treated in separate risk modules from those modules covering non-life business. The premium and reserve risk component for Non-SLT Health is similar to that used within the non-life underwriting risk module. However, agents should note that the Health catastrophe risk module is significantly different from the non-life catastrophe module, offers only a scenario-based approach and covers both Non-SLT and SLT Health risks together. Agents should test the required approach carefully to ensure they are able to complete the scenario calculations.

Intangible asset risk module

If intangible assets are recognised within the QIS5 calculation, their risk must be considered within the SCR as part of a new risk module. These risks are covered using a simple factor applied to the value of intangible assets as set out in the technical specification. This risk is unlikely to be material for syndicates.

Market risk module

Agents should note that the QIS5 technical specifications include errors regarding calculation of the overall market risk capital requirement. The errata to the technical specifications provide a correction. Agents should ensure that they regularly check these documents for updates and other potential errors.

Market risk arises from the level of volatility of market prices of financial instruments. Exposure to market risk is measured by the impact of movements in the level of financial variables through the following risk sub-modules which are correlated using a matrix:

- Interest rate risk;

- Equity risk;

- Property risk;

- Currency risk;

- Spread risk;

- Market risk concentrations;

- Illiquidity premium risk.

Market risk is a significant component of the SCR calculation. Following the recent financial crisis most of the factors and approaches underlying market risk increased significantly (by over 100% in cases) and the correlation between sub-risk groups also increased.

There are also new items to be tested, such as illiquidity premiums, meaning the market risk element is expected to be substantially different from that tested in QIS4. Syndicates should also consider carefully the calculations for currency risk that were relatively large for some syndicates under QIS4.

The QIS5 specification requires undertakings to calculate market risk elements taking into account the loss absorbing capacity of technical provisions, set out in detail in Section SCR.2.2-2.3. The adjustment for loss-absorbency of technical provisions reflects the risk mitigating effect provided by future discretionary benefits that may be reduced to cover unexpected losses. This is not relevant for Lloyd's syndicates. However, as the QIS5 spreadsheet includes cells where such figures would otherwise be entered, the sections below do make reference to loss absorbency to highlight where input is not required.

Lloyd's encourages all syndicates to test the impact and practicality of the new market risk measures to ensure any potential issues will be captured as part of the QIS5 exercise.

Look-through basis
Section SCR.5.4 of the QIS5 technical specification requires agents to assess market risk on a basis accurately reflecting the economic substance of assets. Wherever possible, this must be achieved using a look-through approach to indirect exposures such as collective investment schemes (but excluding participations). Multiple iterations of a look-through approach may be required to ensure all material market risk is being considered.

The QIS5 technical specifications set out alternative approaches if a scheme is not sufficiently transparent to perform a look-through assessment. These are:

- To use the assumption that the scheme invests in accordance of its mandate in a way that would maximise the market risk capital requirement. This would mean, for example, that the scheme invests to the maximum extent in each of the rating categories, starting with the lowest category permitted by the mandate. With multiple combinations possible, agents should assume the proportion of assets in each category that would maximise the overall capital requirement.

- To use the assumption that the scheme is an equity investment and apply the equity risk stresses.

The look-through basis may be difficult to use and agents should carefully consider the additional information that will be required to complete this section of QIS5. Applying the alternative approaches may significantly increase market risk capital requirements.

Interest rate risk
Agents should consider interest rate risk for all assets and liabilities for which the net asset value is sensitive to changes in the term structure or volatility of interest rates. This will include fixed-income investments, financing instruments, policy loans, interest rate derivatives and, especially, the value of technical provisions, which are calculated by discounting future cashflows.

QIS5 sets out a set of stressed interest rate term structures alongside the standard term structures provided. Interest rate risk should be calculated as the combined relative change in all relevant yield curves to which the undertaking is exposed.

CEIOPS has issued an Excel tool for assisting with discounting and interest rate risk calculation for technical provisions.

Equity risk
Agents should consider equity rate risk for all assets and liabilities for which the value is sensitive to the level or volatility of equity prices. Equity risk should be calculated separately for equities listed in regulated markets in member countries of the EEA or OECD (classed as "Global" equities) and for other equities (including those

listed only in emerging markets, non-listed equities, hedge funds and any investment not included elsewhere in the market risk module).

The equity risk capital requirement is determined as the immediate effect on the net value of assets and liabilities of particular negative equity shocks.

Property risk
Agents should consider the impact of an instantaneous decrease in the net value of assets (including those deriving from a look-through approach of collective investment schemes) and liabilities that are sensitive to the level or volatility of market prices of property.

Currency risk
Agents should note that the QIS5 technical specifications include errors regarding calculation of the currency risk capital requirement. The errata to the technical specifications provide a correction. Agents should ensure that they regularly check these documents for updates and other potential errors.

Agents should consider the impact of changes to their net value of assets of the level or volatility of currency exchange rates. This must include currency risk from all possible sources, such as investment portfolios and values of liabilities.

The capital requirement from each currency is calculated from the results of scenarios applying instantaneous changes in the value of a foreign currency against the local currency (defined as that where the undertaking prepares its financial statements).

The total capital requirement is the sum over all relevant foreign currencies. A foreign currency is defined as relevant if the amount of basic own funds depends on the exchange rate between the foreign currency and local currency. For each relevant foreign currency, the position should include any investment in foreign instruments where the currency risk is not hedged.

Spread risk
Spread risk covers the sensitivity in the values of assets, liabilities and financial instruments to changes in the level or volatility of credit spreads over the risk-free interest rate term structure. This will apply particularly to corporate bonds, subordinated debt, hybrid debt, asset-backed securities and the others listed in the technical specifications. Different spread risk scenarios are applied, with reference to different rating categories, for bonds, structured products and credit derivatives.

CEIOPS has issued an Excel tool to assist agents in the calculation of spread risk.

Concentration risk
Concentration risk covers the risk from accumulation of exposures with the same legal group counterparty (and not within geographic area or industry sector etc). This risk is only calculated for assets considered in the equity, spread and property risk sub-modules and not for assets covered under the counterparty default risk module (such as the concentration risk from holding cash at a bank).

Exposures with the same counterparty derived as a result of the look-through approach should be considered here. The concentration risk is calculated as the impact of particular credit rating factors on the excess exposures to a counterparty above particular concentration thresholds. Exposures of an undertaking to a counterparty belonging to the same group may be excluded as long as a number of conditions can be met.

Illiquidity premium risk
Illiquidity premium risk covers the risk of increase in value of technical provisions due to an immediate fall in the illiquidity premium. CEIOPS has issued an Excel tool for assisting with discounting and illiquidity premium risk calculation for technical provisions.

Counterparty default risk module

Counterparty default risk is the risk of possible losses due to unexpected default, or deterioration in the credit standing of the counterparties or debtors in relation to risk mitigating contracts, such as reinsurance, securitisations, derivatives, and receivables from intermediaries, as well as any other credit exposures not covered in the spread risk sub-module.

Counterparty default exposures should take into account the overall exposure to a particular counterparty, irrespective of the legal form of the obligations. Agents should classify each exposure as one of two types:

Type 1 exposures
Type 1 exposures are those that may not be diversified and where counterparties are likely to be rated. Examples include exposures relating to:

- Reinsurance

- Securitisations and derivatives

- Other risk mitigating contracts

- Cash at bank

- Deposits with ceding institutions (if number of independent counterparties does not exceed 15)

- Capital, letters of credit and other commitments received that are called up but unpaid (if number of independent counterparties does not exceed 15)

Default risk for type 1 exposures is calculated as a function of probabilities of default and the loss-given-default for each exposure. Factors applied are dependent on the rating categories for each counterparty. For counterparties belonging to the same group, agents should calculate an overall probability of default based on the average probability weighted by losses-given-default for each counterparty.

Losses-given-default should take into account a number of different factors, detailed in Section SCR.6.3-6.4. These include:

- For reinsurance or special purpose vehicle securitisations: the best estimate of recoverables and risk mitigating effect on underwriting risk and any risk-adjusted collateral in relation to the arrangements

- For derivatives: the market value, the risk mitigating effect on the market risk and any risk-adjusted collateral in relation to the derivative

- For other type 1 exposures, more specific factors must be taken into account as detailed in Section SCR.6.4.

Risk-mitigating effects can be calculated in line with the methodology as described in Section SCR.6 of the QIS5 technical specifications. The loss-given-default should also make allowance for the potential recovery that may still be made in the case of default.

There are a number of simplifications available, described within section SCR.6.7 of the technical specifications, which may be used to calculate the loss-given-default. The simplification for the loss-given-default of non-life reinsurance may be particularly useful for agents if the full calculation is likely to be onerous. Note that the simplifications may only be used under certain conditions, set out in the technical specification.

Type 2 exposures
Type 2 exposures are those that are usually diversified and where counterparties are likely to be unrated. All exposures within the scope of counterparty default and not included under type 1 should be covered within type 2. Examples include:

- Receivables from intermediaries

- Policyholder debtors

- Deposits with ceding institutions (if number of independent counterparties exceeds 15)

- Capital, letters of credit (if number of independent counterparties exceeds 15)

Capital for type 2 exposures should be determined as the result of a default shock scenario. These scenarios apply heavier factors to the receivables from intermediaries that have been due for periods of time longer than 3 months.

The calculation of counterparty default for both types of exposures may take into account techniques employed to mitigate default risk, but this mitigation must be adjusted for the risk of these techniques, as detailed in Section SCR.6.6 of the technical specification.

CEIOPS has provided an Excel tool that will help agents to perform counterparty default risk calculations.

FORMAT OF QIS5 SPREADSHEETS

Main Workbook structure

The workbook is divided into three sections:

- Data and Information (grey)
- Input forms (light blue)
- Calculation and Results sheets (dark blue)
- Group Sheets (orange)
- Agent's own Internal Model or ICA Results (purple)

A dataset sheet (summary of the inputs) is provided at the end of the workbook.

Within the data input sheets generally light blue cells relate to user inputs, orange cells represent fixed content or calculations and yellow cells are calculations. Within the calculation sheets input data is light blue, yellow cells relate to outputs from the dataset tab, orange cells are calculations and purple cells give the main results from that sheet.

In certain cases the workbook also includes references to the technical specification if further clarification on inputs or calculations is required.

Linked references

CEIOPS has provided a version of the technical specification that can be linked from these references within the main QIS5 workbook. To enable this feature, agents must download the linked word version of the technical specification, named "Adapted Technical Specifications linked to spreadsheet Solo" from the Spreadsheets and IT tools webpage:

http://www.ceiops.eu/index.php?option=content&task=view&id=747

Agents should then set cell E42 of the P.Index sheet of the main QIS5 workbook to where this linked work document is saved.

Issues to note when completing the QIS5 sheets

Agents should ensure, before starting to complete the standard QIS5 spreadsheets, that the input areas are blank and do not contain any other figures.

Historic versions of the QIS5 spreadsheets may contain errors and agents should ensure that they are using the most recent versions of the QIS5 spreadsheets.

Excel tools to assist with calculation

The QIS5 package contains a number of Excel tools which can be used to separately calculate certain inputs which are needed for the main workbook. Please note that the outputs from the helper tabs need to be input manually into the main workbook and do not automatically feed through. Please see below for more details.

Qualitative questionnaires

In addition, qualitative questionnaires on solo calculations and internal models are provided for completion by agents. Please see below for more detail.

MAIN QIS5 WORKBOOK

P. Index

This sheet provides an overview of the sheet structure and colour coding along with hyperlinks to the various sheets which follow. For certain entries in the 'Participant' sheet (covered below), agents may be able to delete certain sheets. For example, agents are able to delete the orange 'Group' sheets where solo submissions are made.

G. Group coverage

This sheet relates to groups and will not be required for syndicate-level submissions.

I. Participant

This sheet is provided for agents to complete in order to provide summary information about their business and the form of the QIS5 submission. Agents are also required to provide the details of 2 contact persons for QIS5.

1. Participant information

Description	Please enter
Participant	Syndicate number
Participant Short Name	Syndicate number
Legal form of the participant	'Syndicate'
Reporting basis	'Legal entity'
Type of reported insurance data	'Non-life' or 'Life'
Assets include investment in participations or related entities?	No
Non-life or health business is pursued in more than one geographical area (defined in TS annex M)?	Yes*
Reporting includes ring fenced funds components?	No
Reporting includes internal model information?	Yes
Reporting reference year	'2009'
Year End used	31/12/2009
Reporting currency used	'United Kingdom Pounds'
Reporting unit used	'Thousands' **
Country	'United Kingdom'
First level EEA Supervisor	Please leave blank
Local registration number	Please leave blank
Participant is part of a group	'No

* Or 'no', if business is pursued in one geographical area

** Please complete in £000s for submission to Lloyd's

*** Or 'yes', if a group submission is being made.

2. Contact information

Finally please provide 2 names, position and a telephone number and email address for each as a point of contact for any queries relating to the submission.

I. Valuation

1. Balance sheet - Assets

'Current bases', 'Solvency I valuation principles' and 'QIS5 valuation principles'

The table below provides guidance on where some of the entries required for completing the balance sheet section are available from the current QMA forms. **Note that the guidance may not necessarily hold in all cases and some rows will require agents to split the amounts within the current QMA forms into a number of sub-elements (for example, Bonds in line 2 of QMA2 will need to be split between 3 types of bonds for completion of QIS5).**

Please complete using the same figures for all bases except for 'reinsurance recoverable' where the QIS5 reserving methodology must be used in the 'QIS5 valuation principles' column. Note that under QIS5 valuation principles there is no deferred acquisition cost balance in the balance sheet. Under the cashflow recognition basis of Solvency II, these items instead fall into the calculation of premium provisions. This is described further in the valuation and technical provision sections of the QIS5 Technical Specification.

In respect of syndicate assets, each line must be consistent with the numbers reported in QMA2 column A, as set out in the table below:

Description	QMA2 column A
Goodwill	-
Other intangible assets	-
Property, plant & equipment held for own use	-
Investments (other than assets held for unit linked funds)	
Property (other than own use)	-
Participations	-
Equities/other shares (other than participations) - Listed	1
Equities/other shares (other than participations) - Unlisted	1
Bonds – Government and multilateral banks	2
Bonds – Corporate (asset backed securities)	2
Bonds – Corporate (other)	2
Structured notes	7
Investment funds**	3
Derivatives	7
Futures	7
Call Options	7
Put Options	7
Swaps	7
Forwards	7
Long term bank deposits	5+6+24
Other investments	7
Asset held for unit-linked funds	-
Cash deposits to cedants	9
Mortgages and loans made	
Uncollateralized loans made	4
Collateralized loans made (other than loans on policies)	4
Loans on policies	-
Reinsurance recoverable	
Reinsurance share of TP – non-life excluding health*	13
Reinsurance share of TP – health similar to non-life*	13
Reinsurance share of TP - health similar to life*	13
Reinsurance share of TP – life excluding health and unit-linked*	13
Reinsurance share of TP – life unit-linked*	-
Other reinsurance recoverables	15+19
SPV recoverables	-

Intermediate recoverables	14+18
Insurance recoverables (excl. Intermediaries) ***	14+18
Deferred acquisition costs	28
Receivables (trade, not insurance)	16+20
Pension benefits surplus	-
Deferred tax assets	-
Deductible temporary differences	-
The carry forward of unused tax losses and unused tax credits	-
Cannot be realised in a reasonable time frame	-
Cash and cash equivalents	23
Short term bank deposits	5+6+24
Amounts due in respect of called but unpaid capital	-
Any other assets, not elsewhere shown	25+27+29
Total assets*	31

* In the 'QIS5 valuation principles' column these lines, related to the reinsurance recoverable, must equal the best estimate of the QIS5 reinsurance recoverable (excluding the risk margin and allowing for counterparty default adjustment). The total will accordingly be modified.

** As discussed in the Key Issues section, investments held in collective investment funds should have a look-through approach basis applied. Underlying assets should be assessed and reported instead.

*** As mentioned above, in terms of premiums insurance recoverables under a QIS5 basis will only include premiums that are due but not yet received. All other future premiums from existing business should be included within the premium provisions.

In the QIS5 valuation principles column, the following lines should be left blank

- Goodwill
- Other intangible assets
- Property, plant & equipment held for own use
- Property (other than own use)
- Participations
- Loans on policies
- Reinsurance share of TP – life unit-linked
- SPV recoverables
- Pension benefit surplus
- Deferred tax assets
- Amounts due in respect of called but unpaid capital

Investments (other than assets held for unit-linked funds)
Classification of investments in Solvency II is different from that in the QMA. Agents will need to need to provide investments information as detailed in the QIS5 spreadsheet.

Short term and Long term bank deposits
In the QMA, there is no split between short term and long term bank deposits. Agents will need to split into short and long term bank deposits balances included in; deposit in credit institution(line 5), overseas deposits as investments (line 6) and overseas deposits as other assets (line 24).

Derivatives – Futures, Call Options, Put Options, Swaps and Forwards
As there is no split into types of derivatives within the QMA, agents will need to perform this split for QIS5.

Reinsurance

Reinsurance recoverables must be split as required in the spreadsheet. These splits do not currently exist within the QMA forms.

2. Balance sheet - Liabilities

'Current bases', 'Solvency I valuation principles' and 'QIS5 valuation principles'

Please complete using the same figures for all bases except for 'best estimate' and 'risk margin' where the QIS5 methodology must be used in the 'QIS5 valuation principles' column. Note that Lloyd's would expect that under QIS5 valuation principles, all technical provisions would be calculated as the sum of a best estimate and a risk margin, with no technical provisions calculated as a whole.

Each line must agree to the QMA (note the reversal of sign) as follows:

Description	QMA2 column C (reverse sign)
Gross technical provisions – non-life (excluding health)*	
TP calculated as a whole (Best estimate + Risk margin)	36
Best Estimate	-
Risk margin	-
Gross technical provisions – health (similar to non-life)*	
TP calculated as a whole (Best estimate + Risk margin)	36
Best Estimate	
Risk margin	
Gross technical provisions – health (similar to life)*	
TP calculated as a whole (Best estimate + Risk margin)	36
Best Estimate	
Risk margin	
Gross technical provisions – life (excl health and unit linked)*	
TP calculated as a whole (Best estimate + Risk margin)	36
Best Estimate	
Risk margin	
Cash deposits from reinsurers	38
(Re)insurance accounts payable	39+40+45+46
Derivatives	49
Deferred tax liabilities	-
Provisions other than technical provisions	37
Amounts owed to credit institutions	42+48
Financial liabilities other than amounts owed to credit institutions	41+47
Payables (trade, not insurance)	-
Pension benefit obligations	-
Uncalled investments	-
Contingent liabilities	-
Any other liabilities (excluding subordinated liabilities), not elsewhere shown	43+49+51
Total liabilities	52-32

* In the 'QIS5 valuation principles' column please report the best estimate and risk margin separately.

In the QIS5 valuation principles column, the following lines should be left blank:

- TP calculated as a whole (Best Estimates + Risk Margin)
- Deferred tax liabilities
- Pension benefit obligations

- Uncalled investments
- Contingent liabilities

3. Information on own funds

Information on own funds is split between basic own funds and ancillary own funds. In the case of syndicates, basic own funds only relate to the excess of assets over liabilities i.e. members' balances. This amount can be obtained from QMA205 column A, line 11. Syndicate ancillary funds are made up of letters of credit/bank guarantees.

Where information has to be split between tiers in columns J-L, agents should refer to the details of own funds classification within the QIS5 technical specification to ensure assets are being classified correctly.

4. Information on valuation methods applied to determine the Solvency II balance sheet

Agents should enter details of the methods used for the calculations specified.

5. Intragroup assets and liabilities, for undertakings belonging to a group

This section relates only to groups and does not need to be completed for a syndicate-level return.

I. Assets

Note that, in addition to the information required for this spreadsheet tab, other inputs required for Market risk capital requirements are needed in the SF.SCR_G tab.

Totals in the balance sheet of the Valuation tab should be consistent with the more detailed figures entered in this tab.

1. Information on bonds

Agents should provide information on their exposure to government borrowing, split by country, and exposure to the ECB, multilateral development banks or other international organisations. This information should be entered in the currency of the spreadsheet (required to be Sterling).

2. Information on currency risk exposures

Agents should enter, in the currency of the spreadsheet (required to be Sterling), details of their assets and liabilities exposed to currency risk, split by currency shown.

3. Information on spreads

Agents should enter details of their asset values and a calculated weighted average duration, grouped by rating category. This should be provided separately for the following:

- Standard bonds, as covered by technical specification Section SCR.5.83
- Covered bonds
- Non-EEA sovereign bonds, issued in domestic currency
- Structured credit

Agents may use the relevant helper tab released by CEIOPS to assist in calculating these inputs.

4. Information on the concentration of assets used for market risk concentration calculation

See Section SCR.5.10 for details of the assets that are used for the market risk concentration calculation. These include assets considered within the equity, spread and property risk models but exclude those covered by the counterparty default module. Agents should provide the sum of concentration and numbers of exposures for each category. Agents may use the relevant helper tab released by CEIOPS to assist in calculating these inputs.5. Information on counterparty default risk

Agents should provide the required information separately for type 1 and type 2 exposures, and by sub-category within each type of exposure.

Details of the approach for deriving losses-given-default and loss distribution variance for type 1 exposures are set out within Sections SCR.6.3-6.4 of the technical specification.

Agents may use the relevant helper tab released by CEIOPS to assist in calculating these inputs.

Agents should note that for type 2 exposures, receivables from intermediaries that are past due for more than 3 months must also be shown separately.

I. Participations

Where assets do not include investments in participations or related entities, this sheet can be left blank.

I. Own funds items details

On the version of the spreadsheet released on 24/08/2010 this sheet contained some test data which should be removed before Agents attempt to complete this for their submission.

This sheet summarises the other paid in capital instruments from the valuation sheet and requests additional details.

As discussed in the Valuation and Own Funds section of the technical specification, QIS5 will test the impact of Solvency II "fully implemented" as well as an initial implementation position using grandfathering of capital instruments. Section 5 of the technical specifications and Annex Q set out the grandfathering criteria.

This sheet requires agents to enter further details on these instruments in the section labelled "3. Detailed list of other capital elements" to allow testing of both bases. Agents should refer to the relevant section of the technical specification.

I. Current situation

This sheet requires agents to enter the current Solvency position and technical provisions according to the Solvency I and current bases.

Totals in the balance sheet of the Valuation tab should be consistent with the more detailed figures entered in this tab.

1 Current solvency I position

Please leave blank, except where the current 'MCR' is known for that syndicate i.e. in the case where a single member or group of members which support that syndicate only, in which case the MCR at 31.12.2009 for that/those members should be reported.

2 Provisions valuated according to current accounting bases - totals

This summary section is self-calculating from the inputs provided in section 3.

3 Detailed information on technical provisions valued according to current basis

In respect of syndicate liabilities, each line must be consistent with the numbers reported in the QMA forms (note the reversal of sign), as detailed in the table below. The details below must be separated by line of business, as shown in the QIS5 spreadsheet.

Gross provisions

Description	QMA reference (reverse sign)
Unit linked	-
Provision for unearned premium	QMA205 line 5
Life assurance provision	QMA205 lines 1+2+3+4
Claims outstanding provisions	QMA205 lines 1+2+3
Provision for bonuses and rebates	-
Equalisation provision	-
Other technical provisions	QMA205 lines 6+4
Thereof: provisions for unexpired risk	QMA205 line 4

Net provisions

Description	QMA reference (reverse sign)
Unit linked	
Provision for unearned premium	QMA205 line 5 + QMA201 line 24
Life assurance provision	QMA205 lines 1+2+3+4 +QMA201 lines 21+22+23
Claims outstanding provisions	QMA205 lines 1+2+3 QMA201 lines 21+22
Provision for bonuses and rebates	-
Equalisation provision	
Other technical provisions	QMA205 lines 6+4 + QMA201 lines 23+25
Thereof: provisions for unexpired risk	QMA205 line 4 + QMA201 line 23

Note that the Health section of this sheet reflects the current line of business basis, using the "Health" and "Accident" segmentation. Within the I.QIS5 Insurance Obligations sheet, agents are required to show the allocation of these current basis liabilities to the QIS5 Health lines of business (SLT, Workers' Compensation, Income Protection and Medical Expenses).

I. Premiums

1. Premiums by line of business and volume measure for underwriting risk

Please complete as set out on the spreadsheet.

Agents may use any reasonable basis to allocate business to the CEIOPS lines of business. The appendix to this document contains a suggested mapping of each risk code to a line of business. Note, however, that further allocation may be needed to ensure that any non-proportional business (such as facultative non-proportional business within a Direct and Fac risk code) is included within the correct QIS5 line of business. Other data sources may be available (such as "transaction type" flags of direct, non-proportional etc) which will help in separating this business. For the premium information entered in this sheet, the direct and proportional QIS5 classes are combined.

Note that technical provisions established for annuities from non-life contracts, estimated using life techniques, should be reported under life insurance in the "Annuities stemming from non-life insurance contracts section".

The requirements for health are to allocate the premiums according to whether the business is similar to non-life or life insurance. Items similar to non-life insurance include the health QIS5 classes of medical expenses, income protection, workers' compensations and non-proportional health reinsurance. The health lines similar to

life insurance include annuities stemming from non-life insurance. All reinsurance for health business similar to life insurance falls under accepted reinsurance.

For Syndicates writing life business, please complete the premiums information in accordance with the QIS5 technical specifications and guidance. Lloyd's expects that almost all life business will fall into the "Other life insurance (death)", and "accepted reinsurance (death)" classes, with potentially some from SLT Health mapping to the "(Disability/Morbidity)" classes.

Premium information is required for both gross and ceded amounts both written and earned by QIS5 class of business.

Next year's expected net written and earned premiums are currently populated from the geographical diversification sheet (more details on this sheet can be found below).

Next year's net premium expectations are used as part of the volume measure in the SCR calculation. Note that at the valuation date of 31st December 2009, premiums relating to existing contracts that are unincepted will be included within the valuation of technical provisions. Entering the expected premium for 2010 in this sheet then implicitly assumes that the unincepted premiums that would be included in the balance sheet at 31st December 2010 are equivalent to those unincepted premiums now treated as part of the technical provisions.

The P_{lob}^{PP} relates to the present value of net premiums from existing contracts which are expected to be earned after the following year, i.e. 2011 onwards. The term is brought through from the geographical diversification sheet and used in the premium volume measures for the SCR calculation. This term is only relevant for contracts with significant expected earnings after 24 months from the underwriting year and hence is expected to be immaterial in most cases. The technical specifications state that for annual contracts with no renewal options the term will be zero.

Total premiums should be consistent with the numbers reported in QMA1 column A (note the reversal of sign) as set out below:

Description	QMA1 column A
Total gross written	3
Total gross earned	3+6
Total ceded written	4 (reverse sign)
Total ceded earned	4+7 (reverse sign)

2. Premiums and expenses information needed for SCR and MCR calculations

Last 12 months
Most inputs within this first section, regarding the last 12 months to 31.12.2009, are automatically calculated from the information previously entered. Details of the annual expenses incurred in respect of unit-linked life insurance will not be required for non-life syndicates.

Previous 12 months
For the 12 months up to year ending 2008 Syndicates are also required to provide their total gross earned premium. This is used in the operational risk calculation component of the SCR.

I. QIS5 insurance obligations

This sheet may contain errors in the version released on 24/8/2010, highlighted within the text below. Our interpretation of this sheet is based on our understanding of the requirements.

This sheet is used to gather technical provision data for non-life, health and life obligations as well as the calculation of the risk margin, expected profits in future premiums (EPIFP) and the value of the illiquidity premium. Section 4 also requires some further information used to calculate the MCR and SCR not collected in the above inputs.

Totals in the balance sheet of the Valuation tab should be consistent with the more detailed figures entered in this tab

1. Allocation of Health to the QIS5 segmentation

This section is used to allocate the current solvency basis health technical provisions (Direct and proportional reinsurance Health and Accident classes and the non-proportional Health class) into the following classes under QIS5:

- − Health similar to life ("SLT Life")
- − Medical expenses
- − Income protection
- − Workers' compensation

The current basis technical provisions here relate to provisions for unearned premium, life assurance, claims outstanding, bonuses and rebates, equalisation and those for unexpired risk.

Note that the descriptions of business within the Health lines of business are different from those in QIS4. See the detailed descriptions of Health business within the QIS5 technical specifications to ensure business is being allocated correctly.

2. Segmented calculation of the best estimate and recoverables (before risk margin)

On the workbook released on 24/08/2010, this section may appear to be titled "Motor vehicle liability insurance". Additionally, there is a mistake where the total for non-life claims outstanding (row 20) is used as a reserve risk volume measure for medical expenses in the SF.SCR_G sheet. All health classes are shifted up by one row such that the measure for 'Non-proportional health reinsurance' is being ignored. We would suggest agents complete the forms to the best of their ability until an updated sheet is issued.

This section splits out the life and non-life technical provisions into gross and estimated reinsurance recoverables, net of expected default losses. Please note that amounts in section 2 should be the discounted best estimate only and should not include risk margins. Agents should enter "true" best estimate figures here (i.e. estimates that contains no margins for prudence or optimism).

Agents should enter a premium provision on a cashflow basis rather than simply entering a UPR. This provision should include the value of expected claims and premium cashflows relating to business classed as "existing", but not incepted at the valuation date. Further discussion of this business can be found in Lloyd's technical provision guidance. Note that classification of Own Funds will require assessment of the amounts relating to future profits within these premium cashflows. Section 5 – Own Funds of the technical specification sets out further details of these Expected Profits Included in Future Premiums (EPIFP). The assessment requires calculation of the value of technical provisions assuming a lapse rate of 100% on the future premiums.

For the technical provisions, non-life business is split into direct and proportional as per the 12 QIS5 classes (i.e. 24 classes of business) and the 4 non-proportional classes.

Health business is to be split here according to whether the business is similar to life or non-life as per the other sections and sheets.

Life business is split into the 17 classes as per the technical specifications. Lloyd's expects that almost all life business will fall into the "Other life insurance (death)", and "accepted reinsurance (death)" classes, with potentially some from SLT Health mapping to the "(Disability/Morbidity)" classes.

Note that technical provisions established for annuities from non-life contracts, estimated using life techniques, should be reported under life insurance in the "Annuities stemming from non-life insurance contracts section". This is a change from QIS4.

Non-life 'technical provisions as a whole' are not expected to be widely used in the derivation of technical provisions for non-life insurance business. These apply where the cashflows underpinning insurance contracts can be reliably replicated using market instruments with an observable value, with no need to calculate the risk margin separately for these technical provisions.

The 'Total' gross best estimate technical provisions here are the sum of the premium and claim reserves. These should be calculated in accordance with the QIS5 technical specifications and allocated to the QIS5 classes of business. Agents may use any reasonable basis to allocate business to the CEIOPS lines of business. Appendix 1 contains a suggested mapping of each risk code to a line of business. Note, however, that further allocation may be needed to ensure that any non-proportional business (such as facultative non-proportional

business within a Direct and Facultative risk code) is included within the correct QIS5 line of business. Agents will also need to split out proportional reinsurance business from direct business and report separately. Other data sources may be available (such as "transaction type" flags of direct, non-proportional etc) which can help in separating this business.

Similarly, the best estimate recoverables are split by premium and claims provisions. These are also required to be split by reinsurance type. Again, these should be calculated in line with the QIS5 technical specifications.

For life insurance, there is no requirement to split technical provisions by premium and claim reserves. Again, these should be calculated in line with the technical specifications.

As discussed in the key issues section of this document, this section should include all elements that are required under a Solvency II technical provision valuation. Agents should refer to the updated Technical Provisions guidance issued by Lloyd's in July. Lloyd's will be reviewing methodologies etc as part of Solvency II dry run later in the year.

3. (a) Risk margin, (b) technical provisions, (c) underwriting risks volume measures, (d) expected profits in future premiums (EPIFP)

The risk margin for QIS5 is again split by life and non-life elements. For the non-life risk margin direct and proportional classes are combined to form 12 classes with a further 4 non-proportional classes. The majority of this section uses data already entered in other sections of the workbook such as technical provisions and volume measures.

For all QIS5 classes of business the risk margin is to be calculated in accordance with the technical guidance. The methodology described therein is to calculate the risk margin for the entire business as a whole (therefore allowing for diversification between classes) then to allocate this to each QIS5 class such that the sum of the classes risk margin totals the overall margin. Agents are also required to input the methodology used to derive the risk margins. The options listed are based on the simplifications described in section TP. 5.32 of the technical guidance. Lloyd's would expect the majority of agents to use method 3 of the risk margin simplifications.

Note that the risk margin is to be calculated and entered net of reinsurance.

An Excel tool has been provided by CEIOPS to assist agents with calculating the risk margin.

To test the impact of allowing future premium cashflows on existing policies, this section also requires agents to calculate the assumed level of expected profit in future premiums (EPIFP). Agents should input the best estimate of technical provisions assuming a 100% lapse rate on future business, meaning no future cashflows are received. This approach applies equally to life and non-life business. Please refer to the Technical Specifications Section Own Funds – 2.4 for further details of the scenario to be applied.

4. "(a) expected profits in future premiums (EPIFP) and (b) illiquidity premium information"

This section splits the technical provisions into illiquidity premium buckets as per V.2.3 in the technical specifications. This section is largely self calculating for non-life insurance syndicates as all technical provisions are allocated to the 50% bucket. The input into the 50% bucket should be the best estimate technical provisions excluding any risk margins. Similar to the risk margin calculations in section 3, business is to be split into direct and proportional classes (12 classes overall) and non-proportional classes (4 classes). The sheet also requires an estimate of the duration of each of the liabilities in years.

For life syndicates the allocation of best estimate technical provisions to buckets should be based on the same classifications as per V.2.3 in the technical specifications along with the liabilities' durations, where value of technical provisions is derived under transitional measure assumptions these should also be split out. We expect all life business at Lloyd's to be allocated to the 50% bucket.

5. Other information needed for the SCR and MCR

On the workbook released on 24/08/2010 this section may be titled as Section 4.

This section requires additional information for calculation of the MCR within the "SF.MCR_G" sheet. For contracts without profit participation clauses the sheet requires technical provisions and capital at risk to be

entered into the relevant life and non-life business cells. These details should be reported on a discounted best estimate basis.

I. Geographical diversification

Note that in the workbook released on 24/08/2010 there is an error in cells M13:M28. We suggest agents complete the forms to the best of their ability until an updated sheet is issued.

The geographical diversification sheet is to be used to derive diversification credit applied in the SCR calculation for the submission requiring this to be calculated. This requires several different inputs split by the 18 QIS5 geographical areas. Agents may use any reasonable basis to allocate business to geographic area. The total for each line of business must agree to the relevant amount in section 1 (premiums by line of business).

Lloyd's requires 3 scenarios by agents each requiring a slightly different working of the geographical diversification sheet:

- Scenario 1: with no geographical diversification or USPs – in this instance please allocate all entries in the Geographical Diversification sheet to one region to remove the benefit given for geographical diversification.

- Scenario 2: with geographical diversification but not USPs – here, please split out the requested information into the 18 geographical regions.

- Scenario 3: with USPs but no geographical diversification (geographic diversification cannot be used alongside USPs) – agents should allocate all the inputs in this sheet into one geographical region (as per scenario 1 above) to remove geographical diversification.

1. Totals and calculation of diversified volume measures for the non-life and Health non-SLT underwriting risks modellings

This section is entirely self-calculated from the inputs below, it provides a summary of the inputs split by non-life QIS5 class of business and the geographical split required under QIS5.

2. Net written premium and forthcoming premiums, net claims outstandings by geographical areas

The inputs required for each of the 18 geographical areas are for non-life business (excluding health classes) and health classes similar to non-life only. Direct and Proportional lines are grouped here into one set of 12 QIS5 classes of business.

Net written premiums and claims outstanding (net PCO) relate to the 2009 reporting year. Next year's expected net written and earned premiums by geographical region; agents should take this from their latest approved business forecast (SBF) for 2010. As discussed above for the premium input sheet, P_{lob}^{PP} relates to the present value of net premiums of existing contracts which are expected to be earned after the following year (i.e. beyond year ending 2010). The above inputs are passed to other sheets and used to derive premium and reserve risk volume measures and diversification benefits for the SCR calculation.

Credit and Suretyship lines of business are given no geographical diversification credit for QIS5 purposes.

Standard Formula Sheets

SF.SCR_G

This sheet is broken down into modules and sub-modules that cover the Solvency Capital Requirements (SCR) and the calculation of the various capital charges. For most of the modules, the impact of a prescribed scenario on the net asset value needs to be calculated, thereby considering a possible impact on both sides of the balance sheet. It should be noted that for each scenario, only the value of the assets and liabilities sensitive to the specific scenario should be included.

As per the guidance, agents should assume that the risk margin stays the same when calculating the impact of a scenario on the net asset value.

The adjustment for loss-absorbency of technical provisions reflects the risk mitigating effect provided by future discretionary benefits that may be reduced to cover unexpected losses. This is not relevant for Lloyd's syndicates. However, as the spreadsheet includes cells where such figures would otherwise be entered, the sections below do keep references to highlight where input is not required. Where loss-absorbency of technical provisions is not applicable, both gross (of profit sharing) and net (of profit sharing) scenario results should be the same.

The following describes each module and sub-module and its required inputs including references to the QIS5 technical specifications where appropriate.

QIS5 standard formula components

This section summarises in column H which of the sub-modules within each of the modules below has a SCR calculated. Agents are required to indicate which approach has been taken in the calculation of the sub-modules by selecting one of the options in column J. Please refer to the SCR QIS5 Standard formula components section of the QIS5 Manual for further description of these options.

1. Solvency Capital Requirement and Basic Solvency Capital Requirement under the standard formula

No input is required here. However agents must indicate if certain risks are not applicable.

2. Adjustment for the loss absorbing effect of technical provisions and deferred taxes

Adjustments are calculated separately for the loss absorbing effect of technical provisions and deferred taxes. This section uses two approaches (the equivalent scenario and a modular approach) to calculate the adjustment for loss absorbency of technical provisions and deferred taxes.

However, loss-absorbing effects would not impact business written at Lloyd's.

3. Operational risk

No input is required here.

4. Intangible asset risk

No input is required here.

5. Market risk

As described in the Valuation and Key Issues sections above, agents are expected to apply a look-through basis when considering the assets underlying collective investment funds.

The first sub-module of this section requires agents to enter a capital requirement that allows for market risk exposure to related undertakings excluded from the group, not applicable for solo submissions.

Agents are required to indicate if any of the sub-modules of the market risk are not applicable.

For all sub-modules of market risk, agents are required to enter details of their assets and liabilities both before and after application of a market risk shock. These shocks are summarised in the Key Issues section earlier in this document and set out in detail within the technical specifications. CEIOPS has also released a number of Excel tools to assist undertakings with calculation of the shocked values.

As discussed in the spreadsheet manual, only the value of the assets and liabilities sensitive to the specific scenario should be included in the initial and post-scenario input cells.

"Gross" and "net" in the sections below relate to the stressed values of net assets both gross and net of the loss absorbing capacity of technical provisions. Loss absorbing capacity of technical provisions relates to the risk mitigating effect given by future discretionary benefits and would not have an impact for Lloyd's business. Gross and net figures here would be the same.

Interest rate risk

For interest rate risk, agents are required to input the stressed scenario valuations of gross and net assets and liabilities.

For equity risk, section SCR.5.6 of the technical specification provides details on how this should be completed. Agents should note that the top half of this section (Assets and liabilities referred in point (i) paragraph 1 Art 304) concerns the 'duration based approach' for life companies and can be ignored for agents not using this approach

CEIOPS has issued a discounting tool that will assist agents with the calculation of the technical provisions under the stressed conditions.

Property risk
For the property risk sub-module agents are required to enter the gross and net assets and liabilities values after applying the property shock. Section SCR.5.7 of the technical specifications and page 39 of the QIS5 manual provides guidance on which investments should be treated as property and the calculation steps to determine the shocked values.

Spread risk
For guidance on the spread risk sub-module please refer to section SCR.5.9 of the technical specifications and page 40 of the QIS5 manual. The technical specifications allow for simplified calculations for the spread risk on bonds. Agents should also note that the counterparty default risk associated with a risk-mitigating transaction (including reinsurance) should be addressed in the counterparty default risk module rather than in the spread risk sub-module. A spread risk Helper tab has been issued that can be used to determine the inputs for this sub-module.

Currency risk
For the currency risk sub-module agents are required to enter the gross and net assets and liabilities values after applying the currency shocks. For each currency, the greater impact of either a rise or fall against the local currency is taken and summed together. The Key Issues section above, and Section SCR.5.8 of the technical specifications provide guidance on which assets and liabilities should be considered under currency risk as well as the calculation steps in order to calculate the shocked values. Agents should note that the size of the currency shock is lower for some currencies pegged to the euro as described in the technical specifications. Page 40 of the QIS5 manual gives further notes.

Lloyd's recommends that agents undertake the currency risk calculation at least at the same level of granularity as is used for technical provisions. This should be at a significant currency level, which would generally include currencies from the following list: GBP, USD, CAD, EUR, JPY, and an "Other" group. For significant currencies, agents should calculate the currency shock results separately, as described above. For immaterial currencies, agents may wish to group currencies into an "Other" bucket and apply currency shocks together.

Concentration risk
For the concentration risk sub-module, assets in equity risk, spread risk and property risk are considered. It excludes assets already covered in the counterparty risk module.

Section SCR.5.10 in the technical specifications provide guidance on how the net asset values after the shock should be calculated with further notes on page 41 of the QIS5 manual. A spread risk Helper tab has been issued that can be used to determine the inputs of this sub-module. Please note that not all investments need to be listed in this Helper tab, but only those that exceed a certain threshold as detailed in the technical specifications.

Illiquidity premium risk
For guidance on the illiquidity risk section please refer to section SCR.5.11 of the technical specifications and Annex K. The discounting tool can be used to assist agents with the calculation of the technical provisions under this scenario.

6. Counterparty default risk

Agents are required to calculate and enter here the counterparty default risk capital requirement for both types of exposures as discussed earlier in this guidance. In conjunction with section SCR.6 of the technical specifications, a counterparty default risk Excel tool has been issued by CEIOPS to help agents calculate the inputs required for this section.

7. Life underwriting risk

The majority of the elements in this section are calculated automatically, pulling in information from earlier sheets. Agents will need to enter the results of the values of assets and liabilities of various shocks.

For further guidance please refer to section SCR.5.7 of the technical specifications and pages 42-44 of the spreadsheet instruction manual.

8. Health underwriting risk

Most of the inputs and calculations in this section are similar to those for life and non-life sections with revised parameters and stresses.

For SLT Health liabilities, the majority of the elements in this section are calculated automatically, pulling in information from earlier sheets. Agents will need to enter the results of the values of assets and liabilities of various shocks.

For non-SLT Health liabilities, agents are required to enter figures similar to those required for non-life underwriting risk, described below. In particular, agents are able to input USPs and use geographical diversification. Agents should use the details within the technical specifications to calculate the non-SLT Health catastrophe risk element using the prescribed scenarios and effect of reinsurance mitigation. Note that the reported USPs used should already include the credibility weighting (i.e. already be the relevant weighted average of the own historic volatility and the standard market-wide parameter).

For further guidance please refer to section SCR.5.8 of the technical specifications. CEIOPS has issued Excel based Helper tabs to assist agents with the Health Catastrophe Risk in this sheet.

9. Non-life underwriting risk

The majority of the elements in this section are calculated automatically, pulling in information from earlier sheets. However, agents will need to input figures for USPs (if calculating QIS5 on the basis including these) and for adjustments to premium risk factors in respect of non-proportional reinsurance. These are discussed in more detail earlier in this document.

If USPs are used then agents must indicate this is the case and enter the USPs in this section both for premium and reserve risk. For guidance please refer to section SCR.5.9 of the technical specifications. Note that the reported USPs used should already include the credibility weighting (i.e. already be the relevant weighted average of the own historic volatility and the standard market-wide parameter).

An Excel tool has been released by CEIOPS which will assist agents in calculation of these factors.

Non-life lapse risk parameters should be completed as set out in section SCR.9.38 of the technical specification and detailed in the Key Issues section of this document.

For non-life catastrophe risk method 2, agents should enter details of mitigation and written premiums affected by each peril listed. This is discussed in more detail in the Key Issues section of this document and in section SCR.9.169-9.179 of the QIS5 technical specification. As noted above, Lloyd's does not expect many syndicates will be able to use the non-life catastrophe method 1 scenarios given their limitations.

SF.RFF

This sheet contains a number of test data inputs and a hard-coded value (cell J28) in the version released on 24/8/2010. Agents should remove this to ensure there is no impact on their SCR calculations.

The approach to be taken when calculating the SCR in the presence of ring-fenced funds is dealt with in sections SCR.11 of the technical guidance. These primarily relate to life business where there is an element of profit sharing or participation (i.e. with profits business) on the ring fenced funds, it is therefore not anticipated that Syndicates would complete this sheet. The technical specifications state that there is no need to ring fence insurance and reinsurance funds separately. However, the specifications do recognise that in certain circumstances ring-fenced funds may arise in non-life arrangements.

SF.MCR_G

This largely computational sheet derives the minimum capital requirement based on the QIS5 parameters as set out in the technical specifications. The calculation is carried out separately for life (tables 1.1, 2.3 and 2.4) and non-life business (tables 1.2, 2.1 and 2.2).

Section 1 Tables

Each table in this section applies caps and floors to the MCR (calculated in the tables in section 2 below) based on the derived SCR from the standard formula or the internal model/ICA outputs. The composite notional life/non-life sections of these calculations should not be taken into account for the calculation of the MCR.

As per the guidance the floor is set at 25% of the SCR and the cap set at 45%.

Agents must also enter the value of the absolute floor to be applied as per MCR.7 of the technical specifications (and as per Article 129(d) of the Solvency II framework directive). For non-life syndicates this is €2.2m unless motor vehicle liability, aircraft liability, marine liability, general liability or credit and suretyship are written in which case the floor increases to €3.2m. For life syndicates the absolute floor is €3.2m. Syndicates should undertake this section for information, but please note that this calculation is for reference only.

Section 2 Tables

Table 2.1 is an automatic calculation based on the inputs from the QIS5 Insurance Obligations and Premiums sheets. It applies a linear formula to the technical provisions and premiums based on percentages of technical provisions and premiums defined in MCR.4 of the technical specification.

Table 2.3 applies the linear formula for life syndicates based on the high level splits of the business as entered in section 5 of the QIS5 Insurance Obligations sheet (*on the workbook version released 24/08/2010 this may appear as section 4)*. Again, this is another automatic calculation.

Tables 2.2 and 2.4 are for composite insurers, where the calculation of the MCR requires life and non-life linear factors. It is therefore not anticipated that any syndicates would complete these sections for their QIS5 submissions.

IM. Internal Model Results

Agents should enter the results of a syndicate's internal model calculation in this section, using reasonable approximations to split the total result into the QIS5 required categories.

A reasonable approach for this section would be to use, as a starting point, the output of the 2010 ICA exercise. Agents may adapt their internal models to be more consistent with the Solvency II basis and to provide the results of this exercise in this section if they wish to.

As part of this sheet, agents should enter the risk measure, confidence level and time horizon used within their internal model. For those using their 2010 ICA as a basis for their internal model results, this should be 99.5% VaR with one year of new business and all risks considered to ultimate. If this is the case, we suggest entering "1 year" into the time horizon cell.

CEIOPS has provided a manual to assist with completion of the internal model sheets.

IM. Internal Model Parameters

Please enter equivalent parameters from your internal model. Again, reasonable approximations may need to be made in order to convert parameters to fit in with the QIS5 framework.

CEIOPS has provided a manual to assist with completion of the internal model sheets.

IM. "Blank" Sheet Results and IM. "Blank" Model Parameters

If agents wish to present internal model results using a different structure from that set out in the previous two worksheet tabs, they may do so here. The QIS5 spreadsheet instruction manual may be needed to provide further guidance.

O. Overview

This sheet is entirely self calculating from the inputs elsewhere in the workbook. It provides an overall summary of the output of the modelling along with some graphical output.

The sheet is split into 4 main sections as below.

Participant information

This section gives some high level information on the Syndicate and the reporting level from the 'Participant' questionnaire sheet.

Summary of results (concise balance sheet, technical provisions and capital)

This section gives a brief overview of the balance sheet under each basis (QIS5, Solvency I and any Equivalent Scenarios) entered in the sheet.

It then summarises the net and gross premiums and technical provisions under the current basis as entered in the 'Current Situation' sheet, and the QIS5 provisions. QIS5 provisions are split into the best estimate plus the risk margin calculated using the standard formula and the internal model results. Some high level diagnostics relating to the change in results under QIS5 are also given for information.

Next, this sheet shows the solvency and capital positions under Solvency I and QIS5 positions along with the surplus under both (i.e. Assets – Liabilities – Regulatory Capital). Again, some high level diagnostics are given for the available and required solvency as a percentage of premiums and technical provisions under the different bases.

The graphs in this section show the capital positions for the MCR and SCR split into the QIS5 tiering of own funds.

Specification solvency position

The first part of this section shows the regulatory solvency position (MCR and SCR using both the standard formula and internal model) split by the tiers of own funds. For the SCR it also shows this composition as the BSCR plus the adjustments for operational risk capital requirements and for the risk absorbing effect of profit sharing arrangements and deferred taxes.

The next table shows how the BSCR according to the standard formula splits into the various risk components of the SCR, this data is derived from the SF.SCR_G sheet. It also shows how the diversification credit is allocated within modules and between the modules.

Technical Provisions

The final section of this sheet first shows how the technical provisions have been allocated across the illiquidity premium buckets, for syndicates this would almost always be 50%. The second section compares the technical provisions under the current basis and QIS5. The QIS5 technical provisions are split between the risk margins and the best estimates.

G.Group OFS, G.Group NCP, G.Group Overview, G.Group Details on Aggregation

Sheets relate only to groups and are not needed for syndicate-level submissions.

D. Dataset

This sheet contains a summary of all the data input for the QIS5 exercise. In most cases, no input is required on this sheet.

0. Language and QIS5.Lang.EN

These sheets allow users to select different languages for their QIS5 spreadsheets. The release on 24/8/2010 is only available in English.

EXCEL HELPER TABS AND SIMPLIFICATION TOOLS

The QIS5 package contains a number of Excel tools to assist agents in calculating certain components of their QIS5 submission. **Please note that the outputs from the helper tabs need to be input manually into the main workbook in order to feed into the results and do not automatically feed through**. Each of the tools is discussed below.

Risk Margin

This Excel tool assists agents in deriving their risk margin using the cost of capital approach. It also contains simplifications in the approach to be used if the proportionality criteria can be met. The sheet can be linked to the D.Dataset sheet in the QIS5 Spreadsheet by copying the sheets into the main QIS5 spreadsheet. Doing this will automatically populate the figures in the orange cells of this helper tab.

Full Calculation of the RM

This 'Full calculation of the RM' tab performs the full cost of capital calculation by deriving the present value of the required elements of the SCR for time t=0 and subsequent years. Under the future SCRs calculation agents should input the adjustment for the loss absorbing capacity of technical provisions and operational risk elements., Under the future BSCRs calculation input the unavoidable market risk, counterparty default risk and life, health and non-life underwriting risk elements. Agents must input the currency in cell C82 to select the appropriate yield curve used in discounting. The risk margin includes no illiquidity premium adjustment in the discount factors.

In addition to the guidance given in section V.2.5 of the technical specifications, note the following points:

- For non-life insurance business the risk margin should be attached to the overall best estimate and not split between premiums provisions and provisions for claims outstanding. (TP.5.20)

- For non-life insurance obligations and short-term and mid-term life insurance obligations the unavoidable market risk can be considered to be nil. (TP.5.18)

- For the capital requirement for counterparty default risk agents should only take into account the risk for ceded reinsurance in the risk margin. (TP.5.19.)

There are 5 levels of simplifications for projecting the future SCRs. Agents should read the technical specifications (TP.5.32.) when selecting the choice of method for projecting the future SCRs.

Simplifications for future SCRs

This sheet applies simplification 2 as described in section TP.5.32 of the technical specifications. It uses approximations for individual or sub-risks within the RM calculation to calculate future SCRs.

The simplification for the calculation of future default counterparty risk in the full calculation runs off the counterparty default risk in line with the future ceded best estimate technical provisions in future years. This approach can only be used to calculate the default risk associated with reinsurance and no other counterparties. This is calculated for the portfolio in its entirety.

The simplification for the calculation of future life underwriting risk in the full calculation applies to life syndicates only. This uses simplified calculations for the underwriting risk components of the SCR and a factor based approach to derive the capital charges for these. The life underwriting risk component is then derived using a prescribed correlation matrix.

The simplification for the calculation of future non-life underwriting risk in the full calculation section derives the future capital charge for non-life underwriting risk based on the claims and premiums provisions and volatility (either prescribed or from the agent's derived USP) for the non-life classes of business and the catastrophe risk. It is implicitly assumed that the volatility is constant in future years. Some further simplifications may be applied if the premium provisions are small compared to the claims provisions. Please see TP.5.63 to TP.5.66 for further guidance.

Simplification for the calculation of future health underwriting risk in the full calculation aggregates the life and non-life health sections below. It applies similar techniques to the methods described above for life and non-life underwriting risk.

The simplification for the calculation of future operational risk in the full calculation applies a proportional method based on gross earned premiums and technical provisions. This implicitly uses the assumption that the operational risk runs off in line with these amounts. Similar to counterparty default risk, this is calculated on a whole account level (with a split for life and non-life elements).

The simplification for the calculation of future adjustment for the loss-absorbing capacity of TPs in the full calculation applies a derived adjustment to the potentially loss absorbent technical provisions and runs the adjustment off in line with the run-off of the technical provisions.

Finally, the simplification for the calculation of the overall unavoidable market risk in the full calculation does not apply to non-life and medium term life undertakings. For longer-term life business it applies the formula prescribed in TP.5.71 based on the inputs of the net best estimate technical provisions, modified duration of the undertaking, longest duration of available market instruments and the absolute decrease of risk-free rate for this duration. This should be calculated for each modelled currency separately.

Simplifications for overall RM

Calculations in this sheet are based in the context of simplifications 3, 4 and 5 as described in section TP.5.32 of the technical specifications. Lloyd's expects that many agents will use method 3 of the simplifications.

The first section deals with simplification 3 where the overriding assumption is that future SCRs are proportional to the best estimate technical provisions for the relevant future year. In this sheet, unavoidable market risk can be ignored as detailed above. Capital requirements for counterparty default risks needs to be split between type 1 and type 2 exposures as detailed in section SCR.6 of the technical specifications. Agents are also required to enter the projection of the future net Best Estimates (discounted) and select the relevant yield curve (GBP).

The next section deals with simplification 4 where the estimate of future SCRs is calculated in a single step. Inputs here are similar to the first part of that in simplification 3.

The final section sets the calculation for simplification 5. This method should only be used if the syndicate's business is restricted to one line of business or if the business outside of one line of business is not material. It applies a prescribed factor to the net best estimates in order to derive the risk margin.

Allocation of the RM to LoBs

This sheet allocates the overall risk margin to the different lines of business as required by the QIS5 technical specification. It does this using a proportional method based on an SCR calculation by line of business under the assumption that the other lines do not exist. The allocation is then based on the sum of all the individually calculated SCRs. Agents are required to input the earned gross premiums for the previous 12 months (i.e. year ended 2008) to derive their operational risk adjustment for each class. Again counterparty default should be split into type 1 and type 2 exposures. Non-SLT Health and Non-life lapse cat risk charges by line of business are also required. Life syndicates will require similar inputs linked to the risk charges for the SCR calculation. Technical provisions for operational risk are automatically linked in from the QIS5 spreadsheet (if the risk margin sheets are merged with the main QIS5 spreadsheet).

Spread risk

This Excel tool is for use in determining spread risk for bonds and structured credits in the market risk module.

The spread risk module outputs in rows 6 and 8 give the capital requirements for spread risk, including and excluding the loss absorbing capacity of technical provisions for bonds and structured credit products.

Additionally, the orange outputs in rows 11 to 31 can be used to provide inputs for the I.Assets tab of the main QIS5 spreadsheet.

For bonds (SCR.5.81), agents must input the rating class, modified duration and market value. There is also an input to indicate whether the bond is a covered bond or a non-EEA sovereign bond issued in domestic currency, with default value "No".

For structured credit products (SCR.5.91),agents must input the rating class, modified duration and market value, along with the attachment point, detachment point, tenure, and rating distribution asset pool (percentage split by rating class).

Concentration risk

This sheet assists agents in determining concentration risk (SCR.5.10). Agents must input total assets, counterparty, type of exposure (from a drop-down list), rating class, the solvency ratio (if unrated), and total exposure.

Counterparty risk

This sheet assists with calculation of counterparty default risk (SCR.6).

CDR

Output from this tab in row 12 gives Total SCR_{def}. For input to the SF.SCR_G tab of the main QIS5 spreadsheet, agents should use the SCR_{def} for exposures type 1 and 2 separately, given in row 11.

For Type 1 exposures, agents should input the reporting currency and, for each exposure the counterparty name, rating, recoverables in actual currency and specify the currency. Agents should input whether the contract is a risk mitigating contract and whether the exposure is in relation to a derivative. Agents should specify whether the exposure is in respect of reinsurance and more than 60% is tied up for collateralisation. In column J an estimation of the risk mitigation effect for underwriting market risk should be input, unless the simplification is used (select in column L). Column K is an input indicator to show whether the exposure is in respect of non-life reinsurance. The collateral market value should be entered in column O and, if the simplification is not used (select in column R), input the collateral market risk in column P. If the collateral is held by a custodian this should be selected in column Q.

For Type 2 exposures, enter the exposure amounts in reporting currency of those over-due by more than 3 months in cell D10 and all other exposures in D9.

Health Cat Risk

This workbook assists agents with calculation of health catastrophe risk (SCR.8.5). Note that there is no factor-based approach for health risk as for non-life.

HCAT.__

Agents should create a new tab "H.CAT*country*" for each country and specify the country selection in row 7. Input the total sum insured by product type, "Ep", for each of the standardised scenarios, Arena, Concentration and Pandemic. Input results (rows 8 to 10) into SF.SCR_G 8.95.

Health CAT SCR result

Overall results are then calculated taking risk mitigation into account under the three scenarios, input in row 9.

Natural Catastrophe Risk

Lloyd's expects that most agents would be unable to use this sheet, given the limitations listed earlier in this document, and would instead need to calculate figures under catastrophe method 2 as set out in the SF.SCR_G tab of the main QIS5 spreadsheet.

Input sheet

Agents should input gross figures under the non-life catastrophe standard scenarios windstorm, flood, hail and earthquake for each country and zone with exposure.

NATCAT_SCR_FINAL

This sheet contains the final CAT risk charge net of risk mitigation, with user inputs for each of windstorm, flood, earthquake, hail and subsidence.

Man Made Cat Risk

Lloyd's expects that most agents would be unable to use this sheet, given the limitations listed earlier in this document and would instead need to calculate figures under catastrophe method 2 as set out in the SF.SCR_G tab of the main QIS5 spreadsheet.

Man made SCR calculation

Inputs are required here for mitigation effects across fire, motor, aviation, liability and terrorism.

Fire calculation

This tab outputs $GrossCAT_{fire}$ using one of two options:

1. Input to cell C6 the value of P (SCR.9.106) - the sum insured of the largest known concentration of exposures under the Fire and Other Damage line of business in a 150 meter radius. Output in cell C11.
2. User input the maximum loss of largest single risk (LSR) across all sublines in H6, along with the sum insured under residential, commercial and industry in row 10.

Motor calculation

Agents should input exposure in vehicle years and also the highest sum insured offered for each country where there is exposure. Once entered press "Calculate" in cell K3 to output the Motor Cat charge.

Marine Scenario 1

The tab calculates Gross and Net Marine Scenario 1 CAT charges. Marine Scenario 1 involves a collision, detailed in SCR.9.130.

User input Gross and Net exposure for tanker hull, cruise ship hull, marine liability and liability oil pollution.

Marine Scenario 2

The tab calculates Gross and Net Marine Scenario 2 CAT charges. Marine Scenario 2 involves loss of major platform/ complex, detailed in SCR.9.130.

Agents should input gross and net exposures by subclass for the largest offshore complex accumulations.

Credit and Surety

On the tab "Main Sheet" users should input the assumptions for Scenario 5 (current scenario) and Scenario 10 (worst case scenario) in rows 8 to 13. The credit CAT charge net Scenario 5 is output in cell B5.

Other inputs are pulled in from the scenario specific sheets, requiring user inputs of Cat individual maximum loss single and group exposures (default the largest 3 of each). Cat recession inputs are also required for each scenario under: group exposure; gross earned premium; fixed costs; reinsurance premium; reinsured loss amount; and commission. Inputs are also required for reinsurance program details of the largest 3 single, group and cat recession exposures for the reinsurance premium, reinsured amount and reinstatement premium to give the net amounts.

Aviation

This tab calculates the Gross and net Aviation CAT charge, row 4. Inputs are required for the whole account protection reinsurance protection (WAP), and also for each insured the undertaking share of hull and liability, columns E and G respectively.

Agents should also input the combined reinsurance and reinstatement amounts for each insured, hull and liability together in column I.

Liability

Tab calculates $GrossCAT_{liability}$ in cell C4 (SCR.9.156). This requires user input of gross written premium for E&O, D&O, General TPL and Employer's Liability in row 8.

Terrorism

Calculates GrossCAT$_{Terrorism}$ (row 12) by one of two options.

Under option 1, user input P, cell C9 (SCR.9.159) – the sum insured of the largest known concentration of exposures under the Fire and Other Damage line of business in a 300 meter radius.

Under option 2, user input Q, cell G9 (SCR.9.165) – the largest 5 sums insured under the Fire and Other Damage line of business, insured in a capital city.

Non-life Best Estimate

Agents should have their own approach for calculation of the best estimate and will not require this sheet.

This workbook provides a tool for agents to analyse their best estimate technical provisions. The sheet uses paid chainladder methods along with yield curves and their stresses to analyse the premium and claims provisions. A more detailed explanation of the sheet workings is provided by CEIOPS.

Discounting Tool

This tool, based on the defined cashflows in column B and the currency of the cashflows, provides the details of the discounted best estimate amounts based on the spot rates (and their stresses) and illiquidity premiums of the cashflows. It also allows agents to enter equivalent scenario stresses to model the cashflows under a different set of stressed parameters.

Adjustment for non-proportional reinsurance

This Excel tool assists with calculation of the non-proportional reinsurance adjustment for the premium risk standard deviation. This gives agents the option to adjust premium risk standard deviation factors to take into account some of the risk-mitigating effect of outward non-proportional reinsurance cover. The calculation details can be found in section SCR. 9.25 – 9.26.

The helper tab requires agents to input, by line of business, the gross premium volume, the number of years used for the estimation, the gross average cost per claim and number of claims over a period of n years, any limit of cover and also the standard deviation of the gross cost per claim.

Undertaking Specific parameters

This Excel tool will assist agents in deriving their USPs, and includes 3 methods, for premium and reserve risk. Refer to SCR.10 for detail on the calculations and assumptions in these methods.

The input tab needs to be completed separately for each line of business, with the volume calculation from the current year input in cell B11 as a general input for all three methods.

Premium risk

Inputs specific to methods 1 and 2 are input from row 22 down, to include the earned premium by accident year and the ultimate after one accident year.

Method 2 requires the "Run solver" button to be pressed.

Inputs specific to method 3 are input from row 77. These inputs consist of: the earned premiums (inflation adjusted); the number of claims; the total amount of claims (inflation adjusted); and the sum of the squares of these amounts, all by accident year. Input the earliest accident year in cell A77.

Reserve risk

The best estimate for clams outstanding is a user input for all 3 methods in cell B108.

Inputs specific for method 1 are input from row 113. Calendar years are input with their corresponding volume measures and best estimates for outstanding claims and incremental paid claims.

A net cumulative payments triangle should be input from row 173 for use with methods 2 and 3.

Simplification for technical provisions

The sheets in this workbook allow agents to follow simplified approaches to some of the calculations within the main QIS5 workbook. Please note however, the criteria in which the simplified approaches can be used.

Agents are also required to first attempt the full calculation to test how practical the calculations are.

Non-life TP simplifications

TP.2.159 - TP.2.163 – Reinsurance Counterparty Default

This simplification may be applied if the overall adjustment is expected to be less than 5% (indicated in the 'Applicable?' column). It is therefore only applicable where counterparties are considered of good credit quality.

The simplification requires, for each counterparty, a given credit rating (A, AA, AAA, BB, BBB or Other), the best estimate of recoverables and the duration of the liabilities from that counterparty. The recovery rate and probability of default for each credit rating are prescribed. It then uses the defined formula based on the above to derive an adjustment for the counterparty default risk.

Other simplifications

The following simplifications are included for completeness only and Lloyd's expects all agents to have their own methods for calculation and should have no need for these simplifications.

TP.7.59 -TP.7.63 – Outstanding Reported Claims Provisions

This tab uses a frequency-severity approach to derive an estimate for the outstanding claims provision. It uses the average number and size of reported claims and deducts the paid to date to give an estimate of the outstanding claims.

The method is an allowable simplification when the size of claims incurred in a year has a small variance, or the number of claims incurred in a year is big enough to allow the average cost to be representative, however, sufficient data needs to exist to be able to estimate these averages reliably and demonstrate the small variance.

A second simplification is given in the technical specifications based on a case-by-case approach. This may be suitable for agents where the number of risks is small and there is sufficient detailed information to estimate the outstanding case reserves. Written documentation around the approach should also be produced as described in TP. 7.66 of the technical specifications.

Both the above approaches require a separate estimate of Incurred but not reported (IBNR) reserves.

TP.7.70-TP.7.73 - Incurred But Not Reported Claims Provision

This sheet estimates an IBNR provision based on the average cost and number of IBNR claims from prior years adjusted for inflation. This simplification requires sufficient data and history to be able to estimate the averages for the prescribed formula.

The technical specifications provide a further simplification based on a percentage of the outstanding claims provision. This should only be applied where a full IBNR analysis cannot be conducted and simplification 1 is not appropriate.

TP.7.83-TP.7.88 - Expected claims ratio based simplification

This sheet applies the second simplification for the premium provision based on the combined ratio for each line of business. Agents are also required to complete estimates of present value of future premiums, acquisition costs and the unearned premium provision. If UPR is based on the total premium (without deducting acquisition costs) the 'commission rate' in the formula should be set at nil.

QUALITATIVE QUESTIONNAIRES

Four questionnaires have been released by CEIOPS for QIS5 submission:

- Qualitative questionnaire – solo

- Qualitative questionnaire – groups

- Qualitative questionnaire – internal models

- Qualitative questionnaire – Excel

Agents are expected to complete the solo, internal models and Excel questionnaires.

The qualitative questionnaires are arranged into sections that must be completed within the Excel file ("Qualitative questionnaire - Excel") and sections that must be completed within the word files.

Note that questions within the word files that are shown in italics should be answered within the Excel file. It is only the other questions (and additional comments for any Excel answer) that should by completed within the word files. Where covered by the Excel file, the question numbers within word map to questions in the Excel sheet.

As for other firms within the IMAP process, Agents will be expected to complete all relevant parts of QIS5. This includes questionnaires for solo undertakings and internal models, but not the group questionnaire. A number of areas within the internal model qualitative questionnaire should have been considered as part of Lloyd's Solvency II dry run exercise. Where this is the case, and material has already been provided to Lloyd's, a mapping will need to be provided to the dry run submission.

SOLVENCY II

LLOYD'S RISK CODE MAPPINGS FOR QIS5

LLOYD'S RISK CODE	CEIOPS QIS5 LINE OF BUSINESS
1	Marine, aviation and transport
2	Marine, aviation and transport
3	Marine, aviation and transport
4	Marine, aviation and transport
5	Marine, aviation and transport
6	Marine, aviation and transport
7	Marine, aviation and transport
8	Marine, aviation and transport
9	Marine, aviation and transport
1E	Marine, aviation and transport
1T	Income protection
2E	Marine, aviation and transport
2T	Marine, aviation and transport
3E	Fire and other damage
3T	Marine, aviation and transport
4E	General liability
4T	Credit and suretyship
5T	Motor vehicle liability
6T	Fire and other damage
7T	General liability
8T	Marine, aviation and transport
AG	Fire and other damage
AO	Marine, aviation and transport
AP	Marine, aviation and transport
AR	Non-proportional marine, aviation and transport
AW	Marine, aviation and transport
AX	Non-proportional marine, aviation and transport
B	Marine, aviation and transport
B2	Fire and other damage
B3	Fire and other damage
B4	Fire and other damage
B5	Fire and other damage
BB	General liability

LLOYD'S RISK CODE	CEIOPS QIS5 LINE OF BUSINESS
BD	Fire and other damage
BS	Credit and suretyship
CA	Fire and other damage
CF	Credit and suretyship
CN	Non-proportional casualty (other than health)
CP	Credit and suretyship
CR	Credit and suretyship
CT	Marine, aviation and transport
CX	Marine, aviation and transport
D2	General liability
D3	General liability
D4	General liability
D5	General liability
DC	Fire and other damage
DM	General liability
DO	General liability
DX	Non-proportional health
E2	General liability
E3	General liability
E4	General liability
E5	General liability
E6	General liability
E7	General liability
E8	General liability
E9	General liability
EA	General liability
EB	General liability
EF	Fire and other damage
EG	Marine, aviation and transport
EH	Marine, aviation and transport
ET	Marine, aviation and transport
EW	Marine, aviation and transport
F	Fire and other damage
F2	General liability

LLOYD'S RISK CODE	CEIOPS QIS5 LINE OF BUSINESS
F3	General liability
FA	Fire and other damage
FC	Marine, aviation and transport
FG	Credit and suretyship
FM	Credit and suretyship
FR	Fire and other damage
FS	Credit and suretyship
G	Marine, aviation and transport
GC	Marine, aviation and transport
GH	General liability
GM	General liability
GN	General liability
GP	General liability
GS	Fire and other damage
GT	Non-proportional casualty (other than health)
GX	Non-proportional marine, aviation and transport
H	Marine, aviation and transport
H2	Marine, aviation and transport
H3	Marine, aviation and transport
HA	Fire and other damage
HP	Fire and other damage
HX	Non-proportional marine, aviation and transport
JB	Fire and other damage
K	Income protection
KA	Income protection
KC	Income protection
KD	Income protection
KG	Income protection
KK	Income protection
KL	Non-proportional health
KM	Medical expenses
KS	Income protection
KT	Assistance
KX	Non-proportional health

LLOYD'S RISK CODE	CEIOPS QIS5 LINE OF BUSINESS
L	Marine, aviation and transport
L2	Marine, aviation and transport
L3	Marine, aviation and transport
LE	Legal expenses
LJ	Miscellaneous non-life insurance
LX	Non-proportional marine, aviation and transport
M2	Motor, other classes
M3	Motor, other classes
M4	Motor, other classes
M5	Motor vehicle liability
M6	Motor vehicle liability
M7	Motor vehicle liability
MA	Motor, other classes
MB	Motor vehicle liability
MC	Motor vehicle liability
MD	Motor, other classes
ME	Motor vehicle liability
MF	Motor vehicle liability
MG	Motor, other classes
MH	Motor vehicle liability
MI	Motor vehicle liability
MK	Motor, other classes
ML	Motor vehicle liability
MM	Motor, other classes
MN	Motor vehicle liability
MP	Motor, other classes
N	Fire and other damage
NA	General liability
NB	Fire and other damage
NC	General liability
NL	General liability
NP	Fire and other damage
NX	Non-proportional property
O	Marine, aviation and transport

LLOYD'S RISK CODE	CEIOPS QIS5 LINE OF BUSINESS
OX	Non-proportional marine, aviation and transport
P	Credit and suretyship
P2	Fire and other damage
P3	Fire and other damage
P4	Fire and other damage
P5	Fire and other damage
P6	Fire and other damage
P7	Fire and other damage
PB	Credit and suretyship
PC	Credit and suretyship
PD	Fire and other damage
PE	Credit and suretyship
PF	Credit and suretyship
PG	Fire and other damage
PI	General liability
PL	General liability
PM	General liability
PN	Credit and suretyship
PO	Credit and suretyship
PP	Credit and suretyship
PQ	Assistance
PR	Credit and suretyship
PS	Credit and suretyship
PU	Credit and suretyship
PW	Credit and suretyship
PX	Marine, aviation and transport
PZ	Credit and suretyship
Q	Marine, aviation and transport
QL	Marine, aviation and transport
QX	Non-proportional marine, aviation and transport
RX	Non-proportional marine, aviation and transport
SB	Non-proportional casualty (other than health)
SC	Marine, aviation and transport
SL	Marine, aviation and transport

LLOYD'S RISK CODE	CEIOPS QIS5 LINE OF BUSINESS
SO	Marine, aviation and transport
SR	Non-proportional marine, aviation and transport
SX	Marine, aviation and transport
T	Marine, aviation and transport
TC	Miscellaneous non-life insurance
TE	Fire and other damage
TO	Fire and other damage
TR	Fire and other damage
TS	Marine, aviation and transport
TU	Fire and other damage
TX	Non-proportional marine, aviation and transport
UA	General liability
UC	General liability
V	Marine, aviation and transport
VL	Marine, aviation and transport
VX	Non-proportional marine, aviation and transport
W	Marine, aviation and transport
W2	Workers' compensation
W3	Workers' compensation
W4	Workers' compensation
WA	Credit and suretyship
WB	Marine, aviation and transport
WC	Workers' compensation
WL	Fire and other damage
WS	Non-proportional casualty (other than health)
WX	Non-proportional marine, aviation and transport
X1	Non-proportional marine, aviation and transport
X2	Non-proportional marine, aviation and transport
X3	Non-proportional property
X4	Non-proportional casualty (other than health)
X5	Non-proportional marine, aviation and transport
XA	Non-proportional property
XC	Non-proportional property
XD	Non-proportional casualty (other than health)

LLOYD'S RISK CODE	CEIOPS QIS5 LINE OF BUSINESS
XE	Non-proportional marine, aviation and transport
XJ	Non-proportional property
XL	Non-proportional casualty (other than health)
XM	Non-proportional casualty (other than health)
XP	Non-proportional property
XR	Non-proportional property
XT	Non-proportional marine, aviation and transport
XU	Non-proportional property
XX	Non-proportional property
XY	Non-proportional marine, aviation and transport
XZ	Non-proportional marine, aviation and transport
Y1	Non-proportional marine, aviation and transport
Y2	Non-proportional marine, aviation and transport
Y3	Non-proportional marine, aviation and transport
Y4	Non-proportional marine, aviation and transport
Y5	Non-proportional marine, aviation and transport
Y6	Non-proportional marine, aviation and transport
Y7	Non-proportional marine, aviation and transport
Y8	Non-proportional marine, aviation and transport
Y9	Non-proportional marine, aviation and transport
ZX	Marine, aviation and transport