



**ISLE OF MAN
FINANCIAL SERVICES AUTHORITY**

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DRAFT INSTRUCTIONS FOR COMPLETING THE 1 in 10 HELPER SHEETS AND TEMPLATE

**IN RESPECT OF THE QIS4 TECHNICAL
SPECIFICATION FOR NON-LIFE INSURERS**

1. Introduction

- 1.1.1. These are the instructions for using the Microsoft Excel helper sheets and templates that relate to the technical specification for our Quantitative Impact Study (QIS4) for 1 in 10 non-life insurers. The helper sheets are provided to aid the insurer in their calculation of capital charges for certain risks in the templates. In all cases, the results produced by the helper sheets should still be checked and understood by the insurer.

2. Formatting

2.1. Key

- 2.1.1. The cells and tabs in the helper tabs and results template follow the same colour coding key:

Input Cell
Formula Cell
Input into/from another workbook

- 2.1.2. The sections in this document follow the same principle; yellow sections require inputs and blue sections are for information only.
- 2.1.3. Paragraphs highlighted in green correspond to the input into the results template from the helper workbooks. Copy the data across carefully.

2.2. Index Tabs

- 2.2.1. In each template there is an index tab which provides a brief summary of the workbook.
- 2.2.2. No input is required for this tab.
- 2.2.3. Column F shows which tabs have been completed and which tabs are incomplete. In the submission templates there should be no 'Incompletes' showing in any of the Index tabs.

3. Workbooks to be completed

- 3.1.1. The following workbooks should be completed and returned to the IOM FSA as part of the QIS4 non-life submission:
- QIS4_NL_1in10 Template
 - Interest Rate Helper Workbook
 - Counterparty Default Risk Helper Workbook
 - Concentration Risk helper Workbook

4. Interest Rate Helper ‘QIS4_NL_Interest_Rate_Risk_Helper.xlsm’

Aids the insurer in its calculation of the interest rate risk capital requirement and may be used to calculate the impact of the interest rate shocks using normal cash flow discounting techniques. The sheet estimates the impact on Best Estimate Provisions (BEP) and asset values under all eight of the directional interest rate risk shock scenarios, i.e. interest rates upwards and downwards under a 1 in 10 year, 1 in 50 year, 1 in 100 year and a 1 in 200 year scenario. For the purpose of this document only the 1 in 10 year scenario is relevant.

4.1. Capital

- 4.1.1. Summarises results from all the individual lines of business affected by each of the interest rate risk upwards and downwards scenarios for a 1 in 10 year, 1 in 50 year, 1 in 100 year and a 1 in 200 year shock.
- 4.1.2. No input is required for this tab.
- 4.1.3. All other tabs need to be completed before using the output from this tab.
- 4.1.4. Copy the base values of assets and technical provisions in cells F77 to H77 into the corresponding cells D7 to F7 of the ‘Market Risk Inputs’ tab of the QIS4_NL_1in10 template.
- 4.1.5. Copy the stressed values of assets and technical provisions in cells F91 to H93 into the corresponding cells D11 to F12 of ‘Market Risk Inputs’ tab of the QIS4_NL_1in10 template.

4.2. Initial Input

- 4.2.1. Input the reporting currency used by the participating insurer in cell D5.
- 4.2.2. The grid reflects the lines of business and assets that will be affected by interest rate shocks. Rows 11 to 65 represent the lines of business, row 67 represents the assets and the columns B to BR represent the relevant currencies for the liabilities and assets.
- 4.2.3. Select ‘Y’ in the cells in the grid that are applicable. For example, if you have a liability exposure in line of business 2 in currencies GBP, EUR and USD only, then cells D13, F13 and AB13 should be set to “Y” and the remaining cells in row 13 should remain as “N”.
- 4.2.4. If you have selected “Y” for a currency, select “Y” in the asset row 67.
- 4.2.5. Run the macro by clicking on the yellow box at the bottom of the page (rows 70 to 72). Rerun the macro whenever a change has been made thereafter.
- 4.2.6. The macro will create the necessary “Input – LoB X” and “LoB X” tabs for each line of business you are exposed to.
- 4.2.7. Use the results of the checks in column BX as a check that the required data has been entered.

4.3. Input – LoB X

- 4.3.1. The macro above will create up to 28 ‘Input - LoB_X’ tabs, one for each line of business selected in the ‘Initial Input’ tab. Each tab will need completing separately for that line of business.
- 4.3.2. Populate all applicable cells for currency Z in line of business X.
- 4.3.3. For ‘Technical provisions’ in row 10 enter the sum of the undiscounted liability cash flows (excluding the risk margin) for each applicable currency. Note: the value entered should be in the **currency** to which the column relates.

For example, if the participant is exposed to line of business 2 in currencies GBP, EUR and USD only, cells D10, H10 and AB10 of “Input – LoB 2” should be populated with separate undiscounted liability totals in £ amounts, € amounts and \$ amounts respectively.
- 4.3.4. For ‘Term structure’ in rows 14 to 63 enter the run off of the undiscounted cash flows over time by allocate a proportion (%) of the cash flow applicable to each year.

For example, if the participants total undiscounted liability cash flow in GBP is expected to occur equally throughout the first 5 years, then the input required would be 20% in each of the cells D14, D15, D16, D17 and D18.
- 4.3.5. Use the results of the check in row 4 as a check that the required data has been entered.

4.4. LoB X

- 4.4.1. Uses the input from the “Input – LoB X” tab to produce a term structure of cash flows along with discounted present values and capital requirements for each applicable currency.
- 4.4.2. No input is required in this tab.
- 4.4.3. Use the results of the check in cell E4 as a check that tab has all the data it needs.

4.5. Input – Assets

- 4.5.1. This tabs collates the asset data required to calculate the capital charge for a particular line of business.
- 4.5.2. Populate all applicable cells for currency Z.
- 4.5.3. For ‘Assets’ in row 10 enter the sum of the undiscounted asset cash flows for each applicable currency. **Note: the value entered should be in the currency to which the column relates.**

For example, if the participant’s assets are denominated in currencies GBP, EUR and USD only, cells D10, H10 and AB10 of “Input – Assets” should be populated with separate undiscounted asset totals in £ amounts, € amounts and \$ amounts respectively.

- 4.5.4. For 'Term structure' in rows 14 to 63 enter the run off of the undiscounted cash flows over time by allocate a proportion (%) of the cash flow applicable to each year.

For example, if the participants total undiscounted asset cash flow in GBP is expected to occur equally throughout the first 5 years, then the input required would be 20% in each of the cells D14, D15, D16, D17 and D18.

- 4.5.5. Use the results of the check in row 4 as a check that the required data has been entered.

4.6. Assets

- 4.6.1. Uses the input from the "Input – Assets" tab to produce a term structure of asset cash flows along with discounted present values and capital requirements for each applicable currency.
- 4.6.2. No input is required in this tab.
- 4.6.3. Use the results of the check in cell E4 as a check that tab has all the data it needs.

4.7. Factors

- 4.7.1. Calculation of the discount factors to be applied under the nine different scenarios for every currency. These are based on the yield curves provided by the European Insurance and Occupational Pensions Authority (EIOPA) as at 31st December 2016.
- 4.7.2. No input is required in this tab.

4.8. Stress

- 4.8.1. Lists the stress values defined in paragraph 2.6.5.8 of TS17-08(200) for the interest rate risk upwards and downwards shocks for the 1 in 10 year, 1 in 50 year, 1 in 100 year and 1 in 200 year scenarios.
- 4.8.2. No input is required in this tab.

5. Counterparty default risk helper tab 1 in 10

QIS4_NL_Counterparty_Default_Risk_Helper_1in10.xlsm

Aids the insurer in their calculation of the counterparty default risk capital requirement by listing all exposures to counterparty default risk under the different types of the risk and then calculating the capital requirement, i.e. bonds and securitisations shall be listed and the capital requirement under a 1 in 10 year scenario will be produced

5.1. Input Counterparties

- 5.1.1. Lists the type 1 counterparties you are exposed to, and confirms whether or not the simplified risk mitigation approach is used.

- 5.1.2. In cell E5 select “Yes” if you are using the simplified risk mitigation approach described in TS 2.7.8. You will need to seek approval from the FSA before using the simplified approach.
- 5.1.3. Insert the names of the type 1 counterparties in cells C15:C54.
- 5.1.4. Select “Yes” in in column E for each row that you have entered a counterparty.
- 5.1.5. Run the macro by clicking on the button in cell K14.
- 5.1.6. For each counterparty entered the macro will generate a “Type 1 Single CP_x” tab and a “RM-Single CP 10_x” tab.
- 5.1.7. The macro can generate up to a maximum of 40 pairs of these worksheets depending on the number of counterparties input in the cell range C15:E54. Contact the FSA if you require more counterparty inputs.

5.2. Type 1 Exposures

- 5.2.1. Calculates the loss-given-default for all Type 1 exposures under the counterparty default risk shock scenario.
- 5.2.2. For each counterparty enter its Credit Quality Step. See the “Mapping” tab or TS Appendix 2 for mapping of credit ratings from Standard & Poor’s, Fitch, Moody’s and AM Best rating agencies to the credit quality steps.
- 5.2.3. Use the results of the check in column L as a check that the required data has been entered.

5.3. Type 1 Single CP_x

- 5.3.1. Calculates the loss-given-default for all Type 1 exposures under the counterparty default risk shock scenario, for that specific counterparty.
- 5.3.2. For ‘Contract reference’ enter the name of specific counterparty contract, or group of contracts of similar characteristics that counterparty. For QIS4 include Group Loans as a counterparty.
- 5.3.3. For ‘exposure type’ enter the category that the counterparty exposure will fall into from the dropdown list. For Group Loans select ‘Other’ not ‘Loans’.
- 5.3.4. For ‘Recoverable’ enter the best estimate of recoverables from the Type 1 exposure, plus any other debtors arising out of the exposure, defined in TS 2.7.4.3.
- 5.3.5. For ‘RM & >60% tied up?’ enter “Y” if the exposure is to a reinsurance/securitisation contract and if the counterparty has tied up an amount for collateralisation commitments (both on and off balance sheet) greater than 60% of the assets on its balance sheet, otherwise select “N”. See paragraph TS 2.7.4.4.
- 5.3.6. For ‘Market Value’ enter the market value of the contract or group of contracts.

- 5.3.7. For 'Collateral Market Value' enter the risk adjusted value of collateral in relation to the exposure, otherwise set to zero. See paragraph TS 2.7.4.3.
- 5.3.8. For 'Collateral accounted for?' select "Y" when, in the case of insolvency of the counterparty, the determination of the participant's insolvency estate in excess of the collateral takes into account that the participant receives collateral, and "N" otherwise. See paragraphs TS 2.7.4.3 to 2.7.4.5.
- 5.3.9. For 'Loan', if the exposure is to a mortgage loan, enter the value of the mortgage loan, and set equal to zero otherwise. See paragraph TS 2.7.4.6. Group loans should be allocated to other not loan.
- 5.3.10. For 'Mortgage', if the exposure is to a mortgage loan, enter the risk-adjusted value of the mortgage in relation to that particular exposure, and set equal to zero otherwise. See paragraphs TS 2.7.4.6 to TS 2.7.4.10.
- 5.3.11. For 'LGD (column W)' input the loss given default for exposures from contracts other than reinsurance, securitisation, derivatives and mortgage loans, as set out in TS 2.7.5. This should include Group loans.
- 5.3.12. Use the results of the check in column AF as a check that the required data has been entered.

5.4. RM - Single CP 10_x

- 5.4.1. Calculates the counterparty's risk mitigation impact as described in TS 2.7.4.3.
- 5.4.2. The tab will need to be populated unless the FSA has agreed the use of the 'Simplified RM' tab.
- 5.4.3. For ' $P_{hyp} - P_{without}$ ' input the value of reinsurance premium paid to counterparty exposure for each line of business in E22:E37.
- 5.4.4. Recoverables – input the value of recoverables from counterparty exposure for each line of business in G22:G37.
- 5.4.5. Use the results of the check in column P as a check that the required data has been entered.

5.5. RM - CP Totals

- 5.5.1. Calculates the total risk mitigation impact from all the "RM – Single CP 10_x" worksheets.
- 5.5.2. No input is required on this tab.
- 5.5.3. Use the results of the check in cell J53 as a check that the required data has been entered in previous tabs.

5.6. Simplified RM

- 5.6.1. Calculates the total risk mitigation impact based on the simplified approach described in TS 2.7.8. As mentioned previously the participant will require FSA's approval to use the simplified approach.

- 5.6.2. The risk mitigation for each counterparty will automatically feed into the corresponding “Type 1 Single CP_x” worksheet assuming FSA has approved the use of the simplified approach.
- 5.6.3. Input the hypothetical capital requirement for the underwriting risk of insurer assuming there are no reinsurance arrangements or securitisations (risk mitigating contracts) in place in cell K9.
- 5.6.4. Input the capital requirements for the underwriting risk of each counterparty allowing for risk mitigation in cell K11.
- 5.6.5. Input the recoverables from each counterparty in column E.
- 5.6.6. Use the results of the check in column N as a check that the required data has been entered.

5.7. Capital Requirement

- 5.7.1. Calculates the overall capital requirement for counterparty default risk.
- 5.7.2. Note: since the capital requirement for Type 2 exposures is based on the loss given default due over a certain amount of time (more than or less than 3 months), the total Type 2 exposures for these durations must be input.
- 5.7.3. For Type 2: ‘LGD_{receivables > 3 months}’ enter the total loss given default on all receivables from intermediaries, which have been due for more than 3 months, see TS 2.7.6.1.
- 5.7.4. For Type 2: ‘LGD_{receivables ≤ 3 months}’ enter the total loss given default on all receivables from intermediaries which have been due for less than or equal to 3 months, see paragraph TS 2.7.6.1.
- 5.7.5. Copy the results in the *SCR_{default, 1}* cell (E36) to cell D19 of the Counterparty Default risk tab in the QIS4_NL_1in10 template.
- 5.7.6. Copy the results in the *SCR_{default, 2}* cell (E37) to cell D20 of the Counterparty Default risk tab in the QIS4_NL_1in10 template.

5.8. Mapping

- 5.8.1. Contains data for the Credit Quality Step Mapping i.e. the conversion from CQS to credit ratings allocated by agencies Standard & Poor’s, Fitch, Moody’s and AM Best.
- 5.8.2. No input is required on this tab.

5.9. Data

- 5.9.1. Provides a brief description of the types of contacts that will be categorised as Type 1 or Type 2 counterparty default exposures to the participating (re)insurer.
- 5.9.2. No input is required on this tab.

6. Concentration risk helper tab - 1 in 10 year

QIS4_NL_Concentration_Risk_Helper_1in10.xlsx

Aids the insurer, if necessary, in their calculation of the capital requirement arising from concentration risk. Concentration risk will arise when the participant's exposure to an asset exceeds the maximum threshold specified by the FSA, a capital charge will be applied to the exposure exceeding the maximum threshold.

6.1. Concentration_Risk

- 6.1.1. Calculates the capital requirement arising from exposure to default when the value of your assets exceeds the exposure threshold specified by the FSA, also known as the excess exposure.
- 6.1.2. For 'Total Assets' (cell G5) input the total value of assets that will be considered for concentration risk as described in TS 2.6.10.
- 6.1.3. For 'Name of the counterparty / group' enter the counterparty that gives insurer exposure to concentration market risk as per TS 2.6.10.
- 6.1.4. For 'Type of exposure' select the type of exposure to concentration market risk as described in TS 2.6.10.
- 6.1.5. For 'CQS' select the credit quality step applicable to type of exposure. Note the CQS will be "unrated" for unrated credit & financial institutions and unrated (re)insurers meeting requirements of TS 2.6.10.9.
- 6.1.6. For 'SCR Coverage' enter the Solvency Capital Requirement (SCR) coverage ratio. This only applies to unrated credit & financial institutions and unrated (re)insurers meeting requirements of TS 2.6.10.9.
- 6.1.7. For 'Value of exposure' enter the total market value of exposure to single name or group counterparty.
- 6.1.8. Copy cell G7 'SCR_Concentration' to cell D28 of the 'Market Risk Inputs' tab of the QIS4_NL_1in10 template.
- 6.1.9. Use the results of the check in column AB as a check that the required data has been entered.

7. 1 in 10 year results template 'QIS4_NL_1in10'

Aggregates the solvency capital requirements from all market and non-market risk modules and submodules for each line of business under each currency that the insurer is exposed to so as to calculate the total solvency capital coverage for the participating insurer.

7.1. Participant Information

7.1.1. Complete the QIS4 information, Insurer information, Contact information and Comments sections as follows:

- Date of submission – Date when the QIS template is submitted to the FSA.
- Financial year end used – input 2016/17 financial year-end.
- Reporting currency – select from drop down box.
- Exchange rate – input exchange rate if reporting currency is not UK Pound, otherwise input “1”.
- Reporting unit used – select from drop down box.
- Licensee Name – input name of participating (re)insurer.
- Licensee Short name – input short name of participating (re)insurer.
- Is business in run-off? – select from drop down box.
- Contact Name – input name of employee completing the template.
- Email Address – input email address of contact person.
- Phone Number – input telephone number of contact person.
- Comments – input any comments you may have on the template

7.2. EBS - Assets

7.2.1. Calculates the value of the assets in the economic balance sheet (EBS) used to determine the solvency capital coverage.

7.2.2. Input the value of assets on an accounting basis and on a regulatory (EBS) basis. For a 1 in 10 insurer the regulatory basis assets can be equal to accounting basis assets if this information is not available for unquoted assets.

7.2.3. For ‘Fixed Assets’ input asset values for fixed assets such as property and machinery. Goodwill is not an admissible asset under the regulatory basis and should be excluded.

7.2.4. For ‘Investments’ input the value of the assets split using the results of your look-through exercise, between equities, bonds, investment funds and derivative contracts used for hedging purposes.

7.2.5. For ‘Mortgages and Loans’ enter the value of any collateralised and uncollateralised loans.

7.2.6. For ‘Reinsurance recoverables’ enter the value of any recoverables from the reinsurer(s). This should include the reinsurer’s(s’) share of the premium and claims reserves.

7.2.7. For ‘Other assets’ enter any other assets that are not covered in the above asset classes.

7.2.8. Use the results of the check in column K as a check that the required data has been entered.

7.3. EBS – Direct TPs

- 7.3.1. Calculates the value of the technical provisions in the economic balance sheet (EBS) used to determine the solvency capital coverage.
- 7.3.2. Only enter the technical provisions relating to directly written non-life underwriting and health business – lines of business (LOB's) 1 to 12 as described in TS 1.3.2.
- 7.3.3. Input the values on an accounting basis and on a regulatory (EBS) basis. If the insurer is using accounting provisions instead of the EBS (best estimate plus risk margin) technical provisions as per the technical specification (permitted provided the accounting provisions are not lower than the provisions on an EBS basis as described in TS 1.3.1.4) then the two columns will be identical .
- 7.3.4. If using the EBS basis to report regulatory provisions this will need to be updated for each confidence level to reflect the fact there will be a different risk margin for each confidence level as described in paragraph 1.3 of TS Appendix 1.
- 7.3.5. For 'Premium reserves' input reserves gross of reinsurance reserves for LOB's 1 to 12.
- 7.3.6. For 'Claims reserves' input reserves gross of reinsurance reserves for LOB's 1 to 12.
- 7.3.7. For 'Risk margin' input risk margin for LOB's 1 to 12 on a regulatory basis.
- 7.3.8. For 'Reinsurance recoverables (on regulatory basis)' input best estimate of amounts recoverable from reinsurance contracts and SPVS in respect of claims outstanding for each LOB, provided that these meet the requirements of TS2.12.
- 7.3.9. Use the results of the check in column M as a check that the required data has been entered.

7.4. EBS – Reins TPs

- 7.4.1. Calculates the value of the technical provisions for reinsurance accepted in the economic balance sheet (EBS) used to determine the solvency capital coverage.
- 7.4.2. LOB's 13 to 24 represent proportional reinsurance accepted for all non-life underwriting and health business as described in TS 1.3.2.
- 7.4.3. LOB's 25 to 28 represent non-proportional reinsurance accepted as described in TS 1.3.2.
- 7.4.4. Input the values on an accounting basis and on a regulatory (EBS) basis. If the insurer is using accounting provisions instead of the EBS (best estimate plus risk margin) technical provisions as per the technical specification (permitted provided the accounting provisions are not lower than the provisions on an EBS basis as described in TS 1.3.1.4) then the two columns will be identical.

- 7.4.5. If using the EBS basis to report regulatory provisions then a separate template will need to be saved for each confidence level to reflect the fact there will be a different risk margin for each confidence level as described in paragraph 1.3 of TS Appendix 1.
- 7.4.6. For 'Premium reserves' input reserves gross of reinsurance reserves for LOB's 13 to 28.
- 7.4.7. For 'Claims reserves' input reserves gross of reinsurance reserves for LOB's 13 to 28.
- 7.4.8. For 'Risk margin' input risk margin for LOB's 13 to 28 on a regulatory basis.
- 7.4.9. For 'Reinsurance recoverables (on regulatory basis)' input best estimate of amounts recoverable from reinsurance contracts and SPVS in respect of claims outstanding for each LOB, provided that these meet the requirements of TS2.12.
- 7.4.10. Use the results of the check in column M as a check that the required data has been entered.

7.5. EBS – Other Liab

- 7.5.1. Calculates the value of other liabilities in the economic balance sheet (EBS) not included in the "EBS - Direct TPs" and "EBS - Reins TPs" worksheets.
- 7.5.2. Input the value on an accounting basis and on a regulatory (EBS) basis.
- 7.5.3. Input all the liabilities that fall into any of the categories listed.
- 7.5.4. Use the results of the check in column I as a check that the required data has been entered.

7.6. EBS Capital

- 7.6.1. Calculates the value of the capital resources in the economic balance sheet.
- 7.6.2. Check that the total capital resources in cell D35 reconciles to the net assets calculated in the "EBS –Other Liab" worksheet (see the check in cell D40).
- 7.6.3. Input capital resources on an accounting basis only as the capital resources on a regulatory basis will feed through from the "Own Funds" worksheet.
- 7.6.4. Use the results of the check in column I as a check that the required data has been entered.

7.7. Own Funds

- 7.7.1. This primary aim of this worksheet is to calculate the following:
- Basic Own Funds
 - Adjustments to Basic Own Funds (BOF), and
 - Total eligible own funds to meet the SCR
- 7.7.2. The participant can also provide the value of ancillary own funds, where applicable, but this is purely for information.

7.7.3. Input the following:

- Ordinary Share Capital (net of own shares)
- Initial Fund (less item of the same type held)
- Share Premium Account
- Retained earnings including profits from the year net of foreseeable dividends
- Other reserves from accounting balance sheet
- Reconciliation reserve
- Surplus funds
- Expected profit in future premiums (EPIFP)
- Preference shares
- Subordinated liabilities
- Subordinated mutual member accounts
- Other items not specified elsewhere

7.7.4. Where adjustments are required to BOF for deductions and/or change of tier, enter the relevant values in the appropriate cells.

7.7.5. Input the following ancillary own funds:

- Unpaid share capital or initial fund that has not been paid up
- Letters of credit and guarantees held in trust
- Other items currently eligible to meet requirements under current solvency regime.

7.7.6. Use the results of the check in column M as a check that the required data has been entered.

7.8. Market Risk Inputs

7.8.1. Calculates the interest rate risk SCR, currency risk SCR and concentration risk SCR.

7.8.2. For 'Interest Rate Risk' input the following from the 'Capital' sheet of the interest rate helper workbook (see section 4 above):

- **Base assets and liabilities: copy cells F77 and H77 from the helper tab into cells D7 and F7 of this template.**
- **Interest rate up stress: copy cells F91 and H91 from the helper tab to cells D11 and F11 in this template.**
- **Interest rate down stress: copy cells F93 and H93 from the helper tab to cells D12 and F12 in this template.**

7.8.3. For 'currency risk SCR' input the value of unstressed assets and liabilities exposed to the currency risk exposure as described in TS 2.6.8.

7.8.4. For 'concentration risk SCR' input the concentration risk SCR from the Concentration Risk Helper tab (see Section 6 above). I.e. enter cell G7 from the helper tab into cell D28 of this template.

- 7.8.5. Use the results of the check in column R as a check that the required data has been entered.

7.9. Credit Spread Risk

- 7.9.1. Calculates the capital requirement arising from the exposure to credit spread risks arising from bonds and loans except for gilts and uncollateralised loans made to group/related parties.
- 7.9.2. For 'Bonds and loans with credit ratings' input the proportion of the total assets that fall into each CQS in column E and the duration of those assets in column I.
- 7.9.3. For 'Bonds and loans without credit ratings' input the proportion of the total assets that are unrated or don't have a CQS in column E and the duration of those assets in column I.
- 7.9.4. See the table in B124:F133 of the "Data" worksheet for full descriptions of the CQS.
- 7.9.5. Use the results of the check in column M as a check that the required data has been entered.

7.10. Counterparty Default Risk

- 7.10.1. Calculates the total capital requirement arising from the exposure to counterparty default risks arising from type 1 and type 2 assets. See TS 2.7 for more details.
- 7.10.2. Input the following from the Counterparty Default risk helper tab (see section 5 above):
- For 'SCR_{default, 1}' copy cell E36 from the helper tab into cell D19 of this template.
 - For 'SCR_{default, 2}' copy cell E37 from the helper tab into cell D20 of this template.
- 7.10.3. Use the results of the check in column K as a check that the required data has been entered.

7.11. Premium and Reserve Risk

- 7.11.1. Calculates the premium and reserve volume measures that arises from all non-life underwriting lines of business.
- 7.11.2. Input the following in cell range G7:X18:
- 'P_s' – input the premiums to be earned by the (re)insurer for each LOB, s, during the following 12 months. Premiums should be net, with deduction of premiums for reinsurance & SPVs.
 - 'P_(last,s)' – input the premiums earned by the (re)insurer for each LOB, s, during the last 12 months. Premiums should be net, with deduction of

premiums for reinsurance & SPVs. However, if following TS 2.8.4.7 enter 0 instead.

- 'FP_(existing,s)' input the expected present value of premiums to be earned by the (re)insurer for each LOB, s, after the following 12 months for existing contracts. Premiums should be net, with deduction of premiums for reinsurance & SPVs.
- 'FP_(future,s)' enter the expected present value of net premiums to be earned for each LOB, s, for contracts where the initial recognition date falls in the following 12 months (excluding premiums to be earned during the 12 months after the initial recognition date).
- 'Number of aggregate caps' enter the number of aggregate caps affecting the LOB's. This will create that number of input rows below row 22 of the worksheet for the corresponding LOB. The minimum that can be input is "0" and the maximum that can be input is "60". Contact the FSA if you need more caps.

7.11.3. For lines of business which have aggregate caps applying to current, future or historic tranches of business, each block of liabilities which is subject to an aggregate cap should be entered in the appropriate row below row 22, including the relevant volume measures and caps.

7.11.4. As well as the relevant premium volume measures, the following inputs will be required for each tranche subject to an aggregate cap:

- 'Max exposure from V_(prem)' input the maximum exposure (the aggregate cap) to claims from the premiums in column Q of the worksheet for the contract(s) to which this cap applies (will only apply to tranches for which there are non-zero premium measures).
- 'Claim reserve' enter the reserve (the relevant part of the total reserve in the in Q7:Q18 for that line of business) for the contract(s) to which this aggregate cap applies.
- 'Max exposure from in-force' enter the maximum amount of claims that could result from the contract(s) subject to this aggregate cap. This should be net of any claims which have already been paid.

7.11.5. Where necessary, aggregate caps should be split across lines of business on a best endeavours basis.

7.11.6. Use the results of the check in AA7:AA18 as a check that the required data has been entered.

7.12. Div

7.12.1. Updates the impact of geographical diversification on the premium and reserve volume measures by LOB.

7.12.2. The following are the only LOB's that will benefit from geographical diversification:

- Motor Vehicle Liability & Proportional Reinsurance
- Other Motor & Proportional Reinsurance.
- Marine, Aviation & Transport (MAT) & Proportional Reinsurance
- Fire & Other Damage to Property & Proportional Reinsurance.
- General Liability & Proportional Reinsurance.
- Legal Expenses & Proportional Reinsurance
- Assistance & Proportional Reinsurance.
- Miscellaneous Financial Loss & Proportional Reinsurance.

7.12.3. If the business is written in different geographical regions then the volume measures in the “Premium and Reserve Risk” worksheet should be allocated to the relevant regions 1 to 19. See TS Appendix 6 for a full description of these regions.

7.12.4. $V(\text{prem},j,s)$ input the premium volume measure for LOB written in region (j).

7.12.5. $V(\text{res},j,s)$ input the reserve volume measure for LOB written in region (j).

7.12.6. Ensure that $V_{(\text{prem},s)}$ and $V_{(\text{res},s)}$ for each LOB reconciles with corresponding values in the “Premium and Reserve Risk” worksheet.

7.12.7. Use the results of the check in column AU as a check that the required data has been entered.

7.13. Lapse Risk

7.13.1. Calculates the solvency capital requirement that will result from a lapse stress having an adverse impact on balance own funds (BOF) as per TS 2.8.5.

7.13.2. Only enter profitable LOBs/contracts (with an expected loss ratio, on the assumptions used in setting the premium reserves, of less than 100%) where a lapse shock will result in the expected profits not arising. Note that where the accounting provisions are currently being used and these are set equal to 100% of the unearned premium the lapse shock is not required as the expected loss ratio will not be less than 100%.

7.13.3. For ‘Profitable Grouping’ enter the grouping at the most granular level necessary to ensure that profitable contracts are not offset by unprofitable ones.

7.13.4. For ‘Line of Business’, select the appropriate LOB from the drop down box.

7.13.5. For ‘2017 Pipeline Premiums’ input the premiums which are in respect of exposures not yet on the balance sheet at the valuation date but which the company is contractually obliged to accept in future.

7.13.6. For ‘Ultimate Loss Ratio’ input an estimate of the loss ratio for the grouping in question (on the basis of the assumptions used in the premium reserves element of the technical provisions).

7.13.7. For ‘Claims Expense Ratio’ input any allowance for expenses if not already included in the ultimate loss ratio.

7.13.8. Use the results of the check in column T as a check that the required data has been entered.

7.14. Health_Prem & Reserve Risk

7.14.1. Calculates the premium and reserve volume measures that will arise from all the non SLT health underwriting lines of business.

7.14.2. Input the following in the table in the cell range B5:Y11:

- 'P_s' enter the premiums to be earned by the (re)insurer for each LOB, s, during the following 12 months. Premiums should be net, with deduction of premiums for reinsurance & SPVs.
- 'P_(last,s)' enter the premiums earned by the (re)insurer for each LOB, s, during the last 12 months. Premiums should be net, with deduction of premiums for reinsurance & SPVs. However, if following TS 2.8.4.7 input 0 instead.
- 'FP_(existing,s)' enter the expected present value of premiums to be earned by the (re)insurer for each LOB, s, after the following 12 months for existing contracts. Premiums should be net, with deduction of premiums for reinsurance & SPVs.
- 'FP_(future,s)' enter the expected present value of net premiums to be earned for each LOB, s, for contracts where the initial recognition date falls in the following 12 months (excluding premiums to be earned during the 12 months after the initial recognition date).
- 'Number of aggregate caps' enter the number of aggregate caps affecting the LOB's. This will create that number of input rows below row 16 of the worksheet for the corresponding LOB. The minimum that can be input is "0" and the maximum that can be input is "60". Contact the FSA if you need more caps.

7.14.3. For lines of business which have aggregate caps applying to current, future or historic tranches of business, each block of liabilities which is subject to an aggregate cap should be entered in the appropriate row below row 16, including the relevant volume measures and caps.

7.14.4. As well as the relevant premium volume measures, the following inputs will be required for each tranche subject to an aggregate cap:

- 'Max exposure from V_(prem)' input the maximum exposure (the aggregate cap) to claims from the premiums in column O of the worksheet for the contract(s) to which this cap applies (will only apply to tranches for which there are non-zero premium measures).
- 'Claim reserve' enter the reserve (the relevant part of the total reserve in the in Q7:Q10 for that line of business) for the contract(s) to which this aggregate cap applies.

- ‘Max exposure from in-force’ enter the maximum amount of claims that could result from the contract(s) subject to this aggregate cap. This should be net of any claims which have already been paid.

7.14.5. Use the results of the check in AA7:AA10 as a check that the required data has been entered.

7.15. Health_DIV

7.15.1. Updates the impact of geographical diversification on the premium and reserve volume measures by LOB.

7.15.2. The following are the only LOB’s that will benefit from geographical diversification:

- Medical expense & Proportional Reinsurance
- Income Protection & Proportional Reinsurance.
- Workers' compensation & Proportional Reinsurance

7.15.3. If the business is written in different geographical regions then the volume measures in the “Premium and Reserve Risk” worksheet will need to be allocated into the relevant regions 1 to 19. See TS Appendix 6 for a full description of these regions.

7.15.4. For ‘ $V_{(prem,j,s)}$ ’ input the premium volume measure for LOB (s) written in region (j).

7.15.5. For ‘ $V_{(res,j,s)}$ ’ input the reserve volume measure for LOB (s) written in region (j).

7.15.6. Ensure that $V_{(prem,s)}$ and $V_{(res,s)}$ for each LOB reconciles with the corresponding values in the “Health_Prem & Reserve Risk” worksheet.

7.15.7. Use the results of the check in column AU as a check that the required data has been entered.

7.16. Health_Lapse Risk

7.16.1. Calculates the solvency capital requirement that will result from a lapse stress having an adverse impact on balance own funds (BOF) as described in TS 2.9.4.21 to 2.9.4.23.

7.16.2. Only enter profitable LOBs/contracts (with an expected loss ratio, on the assumptions used in setting the premium reserves, of less than 100%) where a lapse shock will result in the expected profits not arising. Note that where the accounting provisions are currently being used and these are set equal to 100% of the unearned premium the lapse shock is not required as the expected loss ratio will not be less than 100%.

7.16.3. For ‘Profitable Grouping’ the grouping should be at the most granular level necessary to ensure that profitable contracts are not offset by unprofitable ones.

7.16.4. For ‘Line of Business’ select appropriate LOB from the drop down box.

- 7.16.5. For '2017 Pipeline Premiums' input the premiums which are in respect of exposures not yet on the balance sheet at the valuation date but which the company is contractually obliged to accept in future.
- 7.16.6. For 'Ultimate Loss Ratio' input an estimate of the loss ratio for the grouping in question (on the basis of the assumptions used in the premium reserves element of the technical provisions).
- 7.16.7. For 'Claims Expense Ratio' input any allowance for expenses if not already included in the ultimate loss ratio.
- 7.16.8. Use the results of the check in column T as a check that the required data has been entered.

7.17. Market Risk

- 7.17.1. Calculates the market risk SCR arising from: interest rate risk, equity risk, property risk, foreign exchange risk, credit spread risk and concentration risk.
- 7.17.2. No input is required in this tab.
- 7.17.3. Use the results of the check in column S as a check that the required data has been entered.

7.18. Non-Life Underwriting Risk

- 7.18.1. Calculates the non-life underwriting risk SCR arising from premium & reserve risk and lapse risk.
- 7.18.2. For 'SCR_{non-life_stop_loss}' input any aggregation limit to the non-life underwriting risk if there is an overriding stop loss program in place.
- 7.18.3. Use the results of the check in column R as a check that the required data has been entered.

7.19. Non-SLT Health Risk

- 7.19.1. Calculates the non-SLT health underwriting risk SCR arising from health premium & reserve risk and health lapse risk.
- 7.19.2. For 'SCR_{health_stop_loss}' input any aggregation limit to the health underwriting risk if there is an overriding stop loss program in place.
- 7.19.3. Use the results of the check in column Q as a check that the required data has been entered.

7.20. SCR Summary

- 7.20.1. Calculates the total SCR arising from market risk, default risk, health risk and non-life risk.
- 7.20.2. The regulatory capital resources will then be used to determine the level of the solvency coverage (SCR) ratio.
- 7.20.3. No input is required in this tab.

7.20.4. The main outputs from the worksheet are:

- **Solvency Capital Requirement (SCR)**
- **Regulatory capital resources to meet SCR**
- **SCR Ratio**

7.20.5. Use the results of the check in column G as a check that the required data has been entered.

7.21. Data

7.21.1. Includes, currency code mapping, correlation matrices, credit quality steps mapping table, various calibrations for market and non-market risk capital charges and mapping tables for non-life and non SLT health LOBs.

7.21.2. No input is required in this tab.

7.22. SCR Structure

7.22.1. Shows the structure chart of the solvency capital requirement modules (e.g. "Market"), sub-modules (e.g. "Interest rate") and adjustments to the SCR (e.g. "Op")

7.22.2. No input is required in this tab.