IFRS 17 Subledger Solution Blueprint

GMM Technical Specification Design Document v3.16

For approval

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1. Introduction & Overview

1.1 Purpose

This technical design specification document details the end-to-end workings of an IFRS 17 solution that calculates and outputs financial disclosures that meet IFRS 17 GMM measurement and reporting requirements, based on insurer specific (re)insurance financial data inputs.

1.2 Scope

This following will be described in this document as it relates to IFRS 17 measurement and reporting:

- *Setup*
- *Inputs (various data input sets, insurance and reinsurance respectively)*
- *Data Checks*
- *Calculation/workings (various calculation steps, insurance and reinsurance respectively)*
- *Posting (subledger and Trial Balance)*
- *Disclosures*

This will be done for the following measurement models under IFRS 17 as part of the larger technical specification blueprint set of documents:

- *General Measurement Model (GMM)*
- *Premium Allocation Approach (PAA)*
- *Variable Fee Approach (VFA)*

This document contains items relating to the GMM only.

2. IFRS 17 Subledger Solution Overview

This section provides a high level overview of the Setup, Inputs, Data Checks, Calculation sheets, Posting and Disclosures and how these flow in the IFRS 17 measurement and reporting.

Setup

This part of the model requires the user to set up various elements relating to methodology choices and reporting of the IFRS 17 financial disclosures. This is done mostly via drop down selections. These choices will influence some of the calculations and methodologies applied by the solution.

Inputs

These input datasets require the insurer (user) to input various pieces of information relating to (re)insurance contracts that are necessary to perform the measurement and reporting calculations under IFRS 17. The solution will thus need to have a data upload capability (for these inputs and in these formats) that is streamlined with the actuarial and finance functions of the insurer.

The data inputs differ depending on the measurement model used.

The first set of inputs described relate to insurance contracts. These input datasets require the insurer (user) to input various pieces of information relating to insurance contracts that are necessary to perform the measurement and reporting calculations under IFRS 17.

<u>Under the GMM</u>:

The first of these input modules relates to general information about the Groups of Insurance Contracts (GICs). This input module is called I_Groups (the concept of GICs is explained in more detail later in the document).

The next set of inputs relates to insurance contracts that are recognised within the current reporting period. This involves the following modules:

- I_NEW_GEN, which contains general information about the newly recognised GICs/GICs with new contracts recognised in the period
- I_NEW_CFs, which contains the asset/liability cash flow projections relating to premiums, claims, acquisition expenses the investment component at initial measurement of these contracts.

The modules that follow contain inputs for all GICs with an asset or liability over the reporting period (i.e. all in-force policies over the year):

- I_IF_FCFs contains the asset/liability cash flow projections (premiums, claims, acquisition expenses and investment component) at subsequent measurement/at the reporting date.
- I_IF_GEN contains the actual cash flows over the reporting period (premiums, claims, acquisition expenses and investment component) relating to the GICs.

Finally, the I_IF_Patterns input module allows the user to specify the patterns for running off the Contractual Service Margin (CSM), Acquisition Expenses and Pre-recognition Cash Flow Asset, per GIC.

Data Checks

Data checks to assess the completeness and adequacy of the above inputs are performed. Each of the records in each input Dataset are assessed to ensure that there are no blank fields and that all inputs correspond to the permissible values/are in the permissible range of inputs.

Note that these data checks are focused on completeness and appropriate formatting of the data inputs and don't necessarily assess accuracy or reasonability of data/cash flow inputs.

The calculations should not be performed if there are any data input errors since IFRS 17 compliant disclosures are highly dependent on the accuracy and completeness of data inputs.

Calculation sheets

These modules perform all the required calculations (as per the IFRS 17 standard) for the reporting and measurement of insurance and reinsurance contracts, based on the above specified input data set.
Once the above data has been input and all data checks pass, the solution will proceed to this calculation part of the overall process. The outcome of the calculation is the detailed IFRS 17 Statement of Comprehensive income and Statement of Financial Position line item values to be used in the IFRS 17 disclosures.

The calculation steps differ depending on the measurement model chosen. Each of the calculation steps associated with each of the measurement models will be described in detail.

<u>Under the GMM:</u>

The first calculation steps in this process relate to initial measurement of newly recognised contracts in the reporting period. These are performed in the I_IN_Disc, I_IN_Calc and I_IN_Pre_FX.

The next calculation steps in this process relate to subsequent measurement as at the reporting date of all in-force contracts over the year. These are performed in I_SUB_Disc1, I_SUB_Disc2, I_SUB_Calc and I_FX.

The next calculation steps perform the aggregation of calculated values per GIC/GRC at the level of granularity required for IFRS 17 compliant disclosures.

Posting

The result of the calculations is the set of the various IFRS 17 account balances and movements over the reporting period that are required for IFRS 17 disclosures.

The calculated opening and closing (re)insurance asset/liability values (affecting the Statement of Financial Position) are posted to the IFRS 17 trial balance. The calculated movements in the various components of the (re)insurance assets/liabilities over the reporting period (affecting the Statement of Comprehensive Income) are posted to the IFRS 17 subledger. These balances and movements are associated with various account codes which represent accounts that are required to form part of the insurer's finance systems under IFRS 17.

The CSM (Contractual Service Margin) and PRCF (Pre-recognition Cash Flow) run-offs are also posted from the calculations, since these form part of the IFRS 17 disclosure requirements.

Disclosures

This part of the solution converts the outputs of the posting exercise (i.e. the IFRS 17 Subledger and Trial Balance) into IFRS 17 minimum compliant disclosures at the required level of granularity, for each of the measurement models. This is performed separately for the disclosure of insurance contracts (I_Disclosures) and the disclosure of reinsurance contracts (R_Disclosures).

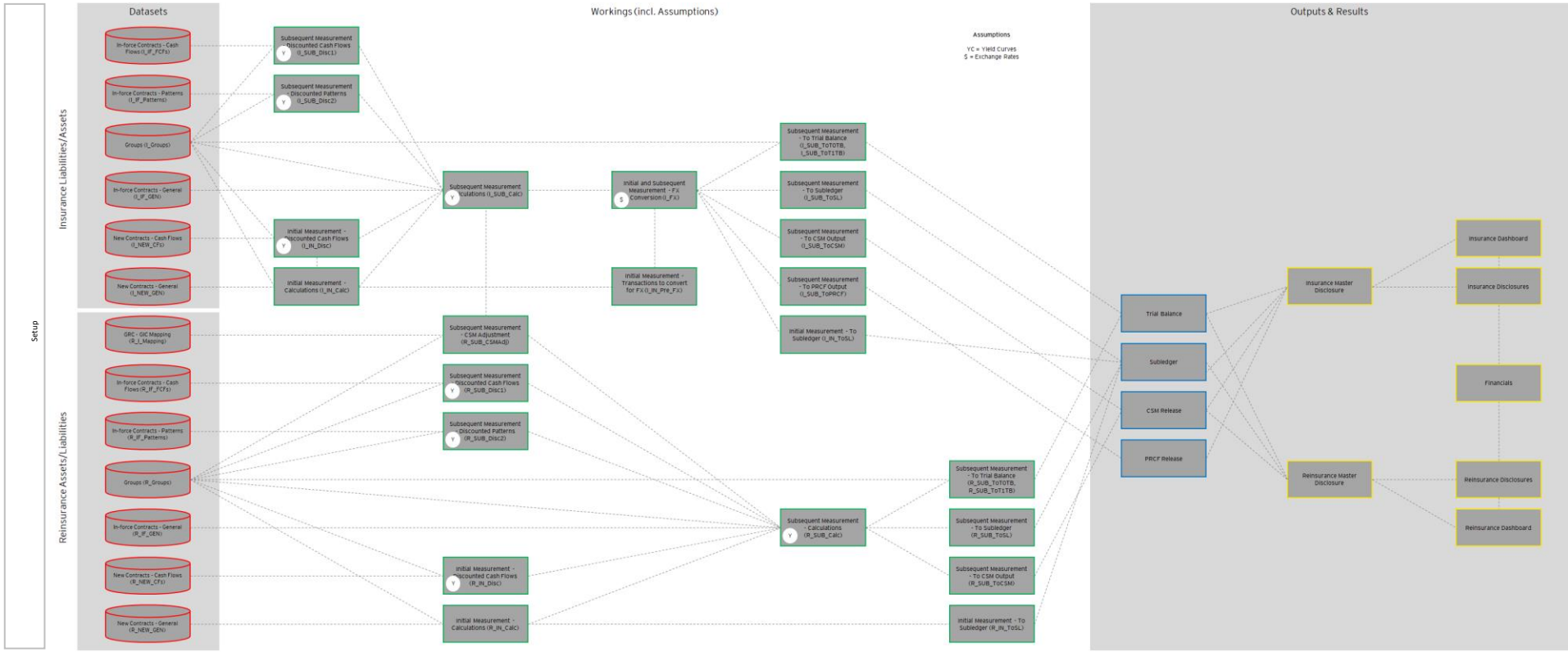
The disclosures may be viewed in total or per reporting segment (as chosen by the insurer), which is the level of reporting granularity required by IFRS 17.

2.1 Solution Design Diagram

This section will contain the comprehensive solution design diagram visually indicating the start-to-end calculation process.

2.1.1 General Measurement Model (GMM)

The diagram below shows the current solution design diagram for the GMM calculation process.



2.2 Solution Description

Detailed description of structure and workings of each component (sheet) of the measurement as in the examples below. We will make it clear which parts are inputs required from the user, which are calculations, etc.

2.2.1 Setup

User Setup

This section requires a number of inputs from the user.

This part of the process allows the user to specify the general setup of the calculation being performed. The user will either be required to:

- select an option from a drop-down list for each setup field
- Type in a valid input for relevant setup fields

The selected setup will influence certain areas of the calculation methodology, and the formulas in the calculations/workings section of the solution must allow appropriately for the chosen setup based on the user inputs. The chosen setup is thus insurer/situation specific and the workings of the solution (described in detail further on) must incorporate the inputs from this setup to ensure that the IFRS 17 calculations are performed in line with insurer requirements and policy.

It is mandatory that the user complete this setup as detailed below.

The table below details the setup fields, including a description of the field and the valid user inputs:

Setup Field	Description	Input Type and Max Field Length	Permissible Inputs
General Setup			
Reporting Date – Previous	Allows user to input the previous financial reporting date	Date	A date prior to Reporting Date – Current in the format YYYY/MM/DD. Input is mandatory (Alert user if blank or if input type is incorrect). Date format used must be consistent throughout solution
Reporting Date – Current	Allows user to input the current financial reporting date	Date	A date that is later than Reporting Date – Previous in the format YYYY/MM/DD. Input is mandatory (Alert user if blank or if input type is incorrect).
Reporting Currency	Allows user to input currency of reported financial results	String	A permissible currency abbreviation chosen from a dropdown list only. See appendix for list of all permissible Currency Code choices.

Setup Field	Description	Input Type and Max Field Length	Permissible Inputs
			Input is mandatory (Alert user if blank).
Calculation Scope			
Insurance Contracts	Allows user to specify if insurance contracts must be valued in the IFRS 17 financial statement calculation being performed.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Reinsurance Contracts	Allows user to specify if reinsurance contracts must be valued in the IFRS 17 financial statement calculation being performed.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Insurance new business	Allows user to specify if new business insurance contracts must be valued in the IFRS 17 financial statement calculation being performed.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Reinsurance new business	Allows user to specify if new business reinsurance contracts must be valued in the IFRS 17 financial statement calculation being performed.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Will foreign currency exchange rates be required to convert the results to the reporting currency?	Allows user to specify if foreign currency exchange rates will be valued in the IFRS 17 financial statement calculation being performed.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Are there any cash flows that vary based on the returns on any financial underlying items? i.e. Linked cashflows	Allows user to specify if any Linked cashflows need to be included in the calculation.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Are there cash flows that are dependent on financial assumptions? e.g. inflation, exchange rates	Allows user to specify if any Linked cashflows need to be included in the calculation.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Were there newly recognised loss components for onerous insurance groups recognised in the reporting period, that were covered by a GRC?		String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Are there GICs that are being measured using an external model (PAA/VFA),		String	{Yes; No} only from a dropdown list

Setup Field	Description	Input Type and Max Field Length	Permissible Inputs
and where a GRC loss recovery component is being measured in this model?			Input is mandatory (Alert user if blank).
Other Dropdown Options (also applicable to equivalent reinsurance items)			
Where to recognise the effect of changes in interest rates and other financial assumptions?	User specific methodology decision on whether effect of changes in interest rates and other financial assumptions should be disclosed in Profit and Loss or Other Comprehensive Income.	String	{P/L; OCI} only from a dropdown list Input is mandatory (Alert user if blank).
Disaggregate change in the risk adjustment between insurance service result and insurance finance result?	User specific methodology decision on whether calculations should disaggregate change in the risk adjustment between insurance service result and insurance finance result	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Use simplification for the setting of the RA (% of ABS(PVFCF)) relating to claims and other expenses)?	User specific methodology decision on whether the calculation should apply this risk adjustment simplification or not.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
GMM Specific Setup Options			
Discount coverage units used for the release of the CSM?	User specific methodology decision on whether the CSM coverage units must be discounted in the calculation.	String	{Yes; No} only from a dropdown list Input is mandatory (Alert user if blank).
Apply discounting when calculating the amortisation of acquisition cash flows?	User specific methodology decision on relating to discounting of acquisition cashflows and which yield curve is to be used in the calculation.	String	{Yes – LIYC; Yes – Current; No} only from a dropdown list Input is mandatory (Alert user if blank).
Discount amortisation pattern?	User specific methodology decision on whether the amortization pattern must be discounted and which yield curve is to be used in the calculation.	String	{Yes – LIYC; Yes – Current; No} only from a dropdown list Input is mandatory (Alert user if blank).
Insurance Reporting Segment (Setup_I_Reporting_Segments)			
GMM Reporting Segments			
Insurance Reporting Segments	Allows user to input the list of insurance GMM reporting segments based on granularity of financial reporting required. User is then able to see financial reporting at the level of	String Length: 256 characters	Total (default input included in solution); [segment 1]; [segment 2]; etc. where the user is able to specify the names of their chosen insurance reporting segments (indicated with []).

Setup Field	Description	Input Type and Max Field Length	Permissible Inputs
	the chosen reporting segments.		Alert user if input type is incorrect. User must be able to input as many reporting segments as required.
Reinsurance Reporting Segment (Setup_R_Reporting_Segments)			
GMM Reporting Segments			
Reinsurance Reporting Segments	Allows user to input the list of reinsurance GMM reporting segments based on granularity of financial reporting required. User is then able to see financial reporting at the level of the chosen reporting segments.	String Length: 256 characters	Total (default input included in solution); [RI segment 1]; [RI segment 2]; etc. where the user is able to specify the names of their chosen reinsurance reporting segments (indicated with []). Alert user if input type is incorrect. User must be able to input as many reporting segments as required.

2.2.2 Inputs

This section describes the remaining user inputs required. These inputs relate specifically to the data and assumptions required for the IFRS 17 calculations to be performed by the model.

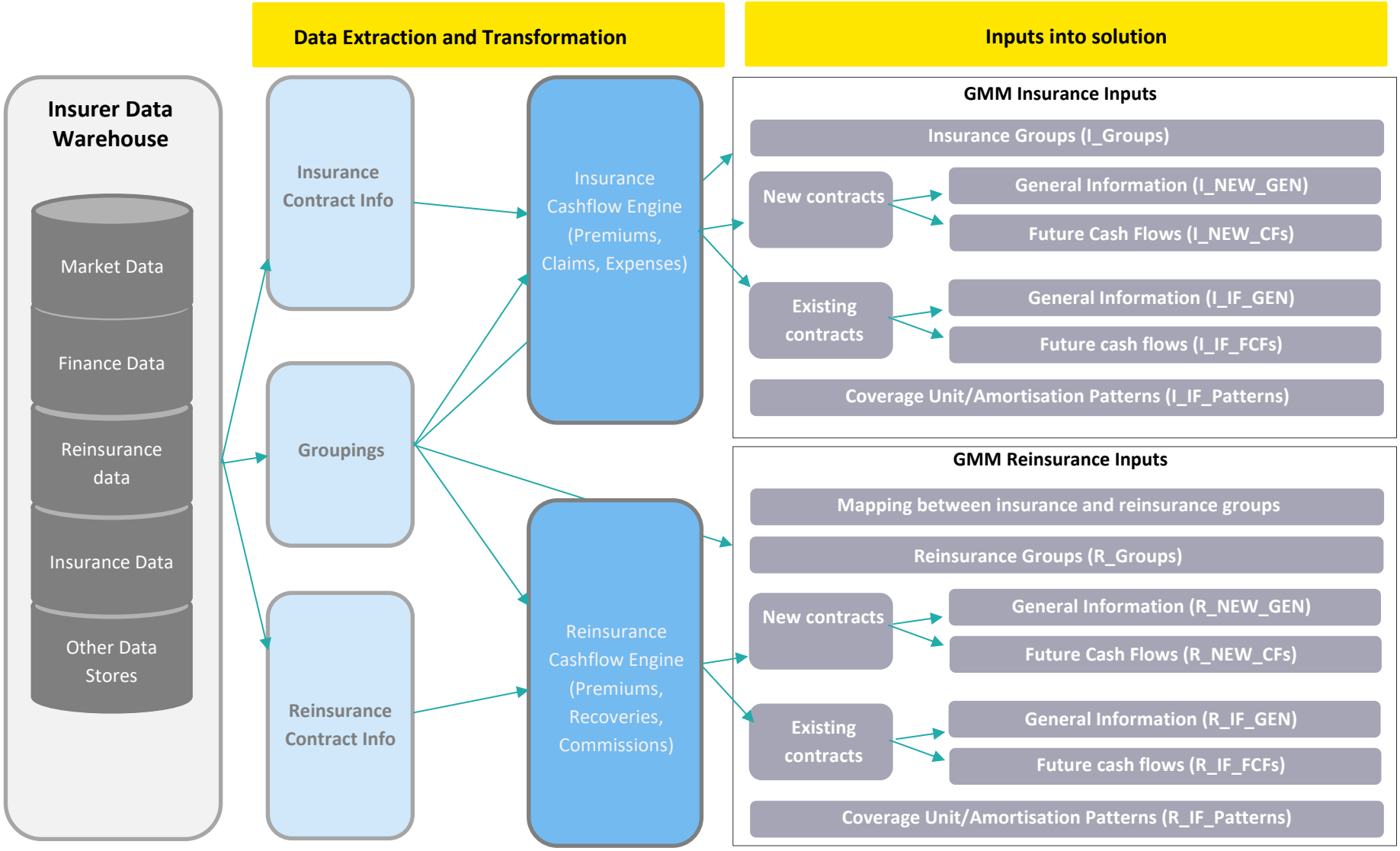
This solution will need to have an upload capability as some of the inputs may contain potentially hundreds of thousands of data input items that the insurer will need to input after extracting and transforming the relevant items from their data warehouse. This may be discussed here. The data input format and considerations will be covered as an appendix.

In a similar format to the setup description above, this section will include sub-sections for the input components/sheets, a description in words of the sheet as well as a table describing the inputs fields.

Any potential enhancements may be noted as well e.g. Separating claims and expense cashflow inputs.

The following architecture diagram corresponds to the datasets section of the solution design diagram displayed earlier.

IFRS 17 data flow Architecture



Yield Curves

This component contains input fields for the spot yield curves (at various dates and for various currencies). Yield curve inputs are specific to the insurer's chosen policy and methodology regarding the definition of yield curves used for IFRS 17 measurement and reporting. We anticipate that yield curves used by insurers will be consistent across the industry. Note that the table below requires spot rates as opposed to forward rates, since the calculations are centered around the use of spot rates. If the user possesses yield curve data in the form of forward rates, these should first be converted to spot rates before being input in this table. This also requires that the related forward yield curves are stored externally to create the relevant locked-in and current spot rates.

The insurer must be able to list/input as many yield curves as necessary (e.g. maximum 500 unique yield curves). The inputs are detailed in the table below:

Input Field	Description	Input Type and Max Field Length	Permissible Inputs/Formula
Yield curve link	The unique date-currency combination indicator for each yield curve	String	For each yield curve input, this is the concatenation of the "Date of Yield Curve" input and "Currency" input, separated by an underscore. As a formula: [Date of Yield Curve]_[Currency]
Linked / Unlinked	The unique date-currency combination indicator for each yield curve	String	Indicator variable
Remaining Coverage/Incurred Claims	The unique date-currency combination indicator for each yield curve	String	Indicator variable
Group Code	The unique date-currency combination indicator for each yield curve	String	Group Code
Date of Yield Curve	The date of the yield curve	Date	Date of the yield curve as YYYY/MM/DD (or chosen date format for the solution) Must contain an entry for each "Locked-in Yield Curve" date input in I_Groups and R_Groups as well as for the "Reporting Date – Current" and "Reporting Date – Previous" (in the Setup sheet).
Currency	The yield curve currency	String	Must correspond to the permissible Currency Codes
Duration *i* (separate column for each *i* *=1,2,…, 1200).*	The annualized monthly yield curve spot-rate at duration *i*	Percentage	Any percentage (within a reasonable range for the given yield curve date, currency and duration).

Input Field	Description	Input Type and Max Field Length	Permissible Inputs/Formula
			i can be maximum 1200 (100 years) Input is mandatory (alert user if blank).

An alternative to this is to allow the user to choose whether to input yield curves as spot rates or forward rates. If the user chooses to provide forward rates, these will need to be in the form of annualized monthly forward rates, which will then need to be converted into a spot rate table like the one above for use in the calculations.

The input table for forward rates will look the same as the table above.

The table below explains how to convert these forward rates into spot rates (in the required format). Note that this table is similar to the one above, with the exception being that the spot rates at each duration *i* are calculated via referencing the forward rates that have been input, as opposed to being input directly themselves. This table then becomes the "Yield Curves" Input that is referenced in the calculations.

Field	Description	Calculation Field Type	Formula
Yield curve link	The unique date-currency combination indicator for each yield curve	String	Reference [Yield curve link] from Forward Rate input table
Date of Yield Curve	The date of the yield curve	Date	Reference [Date of Yield Curve] from Forward Rate input table
Currency	The yield curve currency	String	Reference [Currency] from Forward Rate input table
Duration 1_{spot}	The annualized monthly yield curve spot-rate at duration 1 (same as the forward rate at duration 1)	Percentage	[Duration 1_{fwd}] (i.e. reference the forward rate input for Duration 1 in the Forward Rate input table]
Duration 2_{spot}	The annualized monthly yield curve spot-rate at duration 2	Percentage	**(** **(** **(1 + [Duration 1_{spot}])** $^{\text{(DateDiff1 – [Date of Yield Curve]) / 365.25}}$ *** (1 +** [Duration 2_{fwd}]**)** $^{\text{(DateDiff2 – DateDiff1) / 365.25}}$ **)** $^{\text{365.25 / (DateDiff2 – [Date of Yield Curve])}}$ **) - 1**
…	…	…	…
Duration i_{spot}	Generalised formula for the annualized monthly yield curve spot-rate at duration *i* > 1	Percentage	**(** **(** **(1 + [Duration $(i\text{-}1)_{spot}$])** $^{\text{(DateDiff(}i\text{-1) – [Date of Yield Curve]) / 365.25}}$ *** (1 +** [Duration i_{fwd}]**)** $^{\text{(DateDiff}i\text{ – DateDiff(}i\text{-1)) / 365.25}}$ **)** $^{\text{365.25 / (DateDiff}i\text{ – [Date of Yield Curve])}}$ **) - 1**

Note that DateDiff*i* represents the date that is exactly *i* months after [Date of Yield Curve] for the given record. Note also that differences in dates are calculated in days.

Exchange Rates

This component contains input fields for the exchange rates (at various dates) for various currencies relative to the reference currency (as input in the "Setup" section).

The insurer must be able to input as many currencies as necessary. The inputs are detailed in the table below:

Input Field	Description	Input Type and Max Field Length	Permissible Inputs/Formula
Reporting Dates	The date corresponding to the exchange rate used	Date	Date of the exchange rate as YYYY/MM/DD (or chosen date format for the solution) Must have all dates corresponding to the locked-in FX Dates in "I_Groups" and "R_Groups" as well as the "Reporting Date – Current" and "Reporting Date – Previous" (in the Setup sheet).
Currency *i* (separate column for each *i =1,2,…).*	The Currency Codes for currencies relevant to the insurer's operations and cashflow projections (chosen by the user from one of the Currency Codes). The user is then able to input the exchange rate of currency *i* relative to the reporting currency, for the given reporting date. E.g. The user will input "X" as the exchange rate for currency *i* to represent an exchange rate of X of currency *i* for 1 unit of the reporting currency.	Heading: String Input: Number	Currency *i* must be chosen by the user from one of the Currency Codes (via a dropdown selection). Exchange rate must be >0 Input is mandatory (alert user if blank).

Each dataset below needs to have a unique sequential identifier per record

2.2.2.1 General Measurement Model (GMM) Insurance Inputs

Insurance Groups (I_Groups)

This dataset contains the relevant details for all groups of insurance contracts (GICs) that will undergo measurement under IFRS 17 in the model. The user must be able to provide inputs for various descriptive fields relating to the GICs.

This will require that the GICs (which are insurer specific) are predefined for the given reporting period. Insurance contracts that share similar characteristics can be aggregated into the same group. IFRS 17 specifies how an insurer should determine the GICs (i.e. the level of aggregation of insurance contracts) used for IFRS reporting and measurement.

The process of defining the level of aggregation under IFRS17 can be split into three phases:

1. **Portfolios**
   Contracts which have similar risks and are managed together need to be allocated to the same IFRS 17 portfolio.
2. **Groups**
   Portfolios of insurance contracts should be segmented, based on the level of profitability at initial recognition, into a minimum of three groups of contracts: (1) onerous contracts, (2) contracts which do not have significant possibility to become onerous ("resilient" contracts) and (3) "other" contracts.
3. **Cohorts**
   Since contracts which were issued more than a year apart cannot be grouped together under IFRS17, groups should be further segmented based on the date on which the underlying policies were issued. A current contract/policy may not necessarily constitute an IFRS 17 insurance contract/policy as an insurer may prefer to split a contract into its constituent covers where each cover is its own IFRS 17 contract.

IFRS 17.14 states that "an entity shall identify portfolios of insurance contracts. A portfolio comprises contracts subject to similar risks and managed together".

IFRS17.BC124(a) explains that contracts in the same portfolio should have cash flows responding similarly in amount and timing to changes in key assumptions, meaning that losses on insurance contracts for one type of insurance risk would not be offset by gains on insurance contracts for a different type of risk, and would provide useful information about the performance of contracts insuring different types of risk. Furthermore, IFRS17.14 specifies that contracts within a product line would be expected to have similar risks. Contracts in different product lines would not be expected to have similar risks and would be in different portfolios.

Deciding the level at which "managed together" should be considered (e.g. corporate level, operating segment level, management reporting level, product level etc.) will be a matter of judgement as this is not defined in the standard.

IFRS 17 also requires that contracts are grouped based on an insurer's expectations of profitability at contract inception. *IFRS 17.16* says that an entity shall divide a portfolio of insurance contracts issued into a minimum of:
(a) a group of contracts that are onerous at initial recognition, if any;
(b) a group of contracts that at initial recognition have no significant possibility of becoming onerous subsequently, if any; and
(c) a group of the remaining contracts in the portfolio, if any.

IFRS 8 is a starting point for reporting segments (level of reporting) and should be refined as the business gains an understanding of their data volumes and granularity and level at which business decisions are made. This could be different from the measurement level as IFRS 17 is materially different to IFRS 4.

The insurer's data systems must thus be able to link each policy, premium debtor and claim records to its IFRS 17 GIC.

The required inputs are detailed in the table below:

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
GIC Code	The unique identifier of the Group of Insurance Contracts (GIC) which is an outcome of the level of aggregation decisions	String Length: 256 characters	Each GIC Code entry must be unique At least one input is required.
Portfolio	The unique identifier of the IFRS 17 portfolio to which the GIC is assigned	String Length: 256 characters	No restrictions Input is mandatory.
Cohort	The unique identifier of the cohort of the GIC, such as the year, quarter or month, etc. which the GIC relates to.	String Length: 256 characters	No restrictions Input is mandatory.
Recognition Date	The date at which the GIC is recognised	Date	(…, Current Reporting Date] i.e. any date up to and including the current reporting date. Input is mandatory.
Locked-in Yield Curve (YC) Date	The date to be used in selecting the locked-in yield curve that applies to the GIC	Date	[Recognition Date, Current Reporting Date] i.e. any date between (and including) the recognition date and current reporting date. The date must be found as an input in “Date of Yield Curve” column in the “Yield Curves” input. Input is mandatory.
Locked-in YC to discount Coverage Units and Amortisation Pattern	The yield curve (unlinked or linked) to be used to discount coverage units and amortization pattern (if applicable)	String Length: 256 characters	No restrictions Input is not required if ‘Option_DiscountCUs?’ and ‘Option_DiscountAcqCFs’ = ‘No’
Currency	The GIC's currency	String	Must correspond to the permissible Currency Codes Input is mandatory.
Reporting Segment	The unique identifier of the reporting segment to which the GIC is assigned	String	No restrictions (but values must be found in the “Insurance Reporting Segment” inputs in the Setup sheet)
Risk Adjustment as % of ABS(PVFCF)	The RA as a % of the PVFCF relating to claims and other expenses. ABS(PVFCF) refers to the absolute value of the Present Value of Future Cashflows Flows.	Percentage	>=0 Decimals allowed. Not required if simplification is not used.
AverageFX_group	The average exchange rate for cashflows incurred / accrued from the reporting currency	Number	Real number > 0

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	to the currency of the GIC Code		
Transition Method	The transition method used for the GIC Code as per IFRS 17 *par 114*.	String	{Full Retrospective; Modified Retrospective; Fair Value; Default; N/A} only from a drop-down list. Input is mandatory.

New Insurance Contracts – General (I_NEW_GEN)

This input dataset contains the relevant details for all new insurance contracts recognised over the reporting period (aggregated into GICs). This input table should allow for the inclusion of a separate record for each GIC code for which there are new contracts recognised within the current reporting period.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting Date	Date	Must be the same as the "Reporting Date – Current" input in "Setup" sheet.
GIC Code	The unique identifier of the new Groups of Insurance Contracts (GICs) created in the reporting period.	String Length: 256 characters	Each GIC Code entry must be unique and must be found in the "I_IF_GEN" and "I_Groups" inputs. At least one input is required.
Issued/Acquired	Indicates whether the GIC was issued or acquired by the insurer	String	{Issued; Acquired} only from a drop-down list.
Pre-recognition Cashflows	Aggregate cash flows (paid)/received prior to the recognition of the new insurance contracts	Number	Any real number. Cash outflows are entered as negative values, cash inflows are entered as positive values. Input is mandatory.
Initial RA	The initial risk adjustment set for the new insurance contracts.	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF)) relating to claims and other expenses)?" is set to **"No"** (by the user) in the Setup sheet: User is required to input any real number >=0. If the "Use simplification for the setting of the RA (% of ABS(PVFCF)) relating to claims and other

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
			expenses)?" is set to **"Yes"** (by the user) in the Setup sheet: No user input is required for this field.

New Insurance Contracts – Cash Flows (I_NEW_CFs)

This dataset contains the initial and future undiscounted cash flows for all new insurance contracts recognised during the reporting period (aggregated into GICs) and the timing of these cashflows relative to the date at which the contracts are recognised (which is assumed to be the Locked-in YC Date as reflected in I_Groups).

A single line (row) of cashflow inputs under the various columns (premiums, claims, etc.) must be associated with only one GIC code at a time.

For all cash flows, a **positive value is a receipt** and a **negative value is an outflow**.

These cashflow projections and aggregations will need to be performed outside of this solution, as they are used an input into this solution for performing calculations specific to IFRS 17 reporting and measurement. The solution will thus need to have a data upload capability (for this input and in this format) that is streamlined with the actuarial outputs of an insurer's IFRS 17 cash flow projections.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting date	Date	Current reporting date This must correspond to the "Reporting Date – Current" input in the Setup sheet. Input is mandatory.
GIC Code	The unique identifier of the GIC	String Length: 256 characters	No restrictions (but values must be found in I_Groups, I_NEW_GEN and I_IF_GEN) Each line containing cash flows must have the corresponding GIC code input. The same GIC code may appear in multiple different input rows. Input is mandatory.
Delay (in Years)	The delay (in years) between the date at which the group of contracts is recognised (which is assumed to be the *Locked-in YC Date* as reflected in *I_Groups*) and the date of the cash flows	Number	Real number >=0

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Premium CFs (Unlinked)(Current Service)	Initial and future premium cash flows over the lifetime of the new contracts recognised within the given GIC, but only relating to service provided during the reporting period in which the contracts are recognised	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked) (Future Service)	Initial and future premium cash flows over the lifetime of the new contracts recognised within the given GIC, but only relating to service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked) (Current Service)	Initial and future acquisition expense cash flows over the lifetime of the new contracts recognised within the given GIC, only relating to service provided during the reporting period in which the contracts are recognized This includes commission and other upfront directly attributable expenses (insurer specific).	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked) (Future Service)	Initial and future acquisition expense cash flows over the lifetime of the new contracts recognised within the given GIC, only relating to service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Unlinked)	(Non-distinct) Investment component cash flows over the lifetime of the new contracts recognised within the relevant GIC IFRS 17 defines an investment component as: *The amounts that an insurance contract requires the entity to repay to a policyholder even if an insured event does not occur.* This means that the entity repays this amount to a policyholder in all circumstances, regardless of whether the insured event occurs.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked) (Incurred in Current Reporting Period)	Future claim cash flows over the lifetime of the new contracts recognised within the relevant GIC relating to claims that are expected to be incurred during the reporting	Number	No restrictions, any real number Input is mandatory, user must input "0" if no

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	period in which the contracts are recognized Claims and Other Expenses may also be allowed for as separate inputs if that level of granularity is required. Claims and Other Expenses are usually grouped together for operational efficiency and allowances can be made for differences in timing between claims and expense cashflows.		cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked) (Incurred in Future Reporting Periods)	Future claim cash flows over the lifetime of the new contracts recognised within the relevant GIC relating to claims that are expected to be incurred in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Linked)(Current Service)	Initial and future premium cash flows over the lifetime of the new contracts recognised within the given GIC, but only relating to service provided during the reporting period in which the contracts are recognised	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Linked) (Future Service)	Initial and future premium cash flows over the lifetime of the new contracts recognised within the given GIC, but only relating to service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked) (Current Service)	Initial and future acquisition expense cash flows over the lifetime of the new contracts recognised within the given GIC, only relating to service provided during the reporting period in which the contracts are recognized This includes commission and other upfront directly attributable expenses (insurer specific).	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked) (Future Service)	Initial and future acquisition expense cash flows over the lifetime of the new contracts recognised within the given GIC, only relating to service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Investment Component CFs (Linked)	(Non-distinct) Investment component cash flows over the lifetime of the new contracts recognised within the relevant GIC IFRS 17 defines an investment component as: *The amounts that an insurance contract requires the entity to repay to a policyholder even if an insured event does not occur.* This means that the entity repays this amount to a policyholder in all circumstances, regardless of whether the insured event occurs.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked) (Incurred in Current Reporting Period)	Future claim cash flows over the lifetime of the new contracts recognised within the relevant GIC relating to claims that are expected to be incurred during the reporting period in which the contracts are recognized Claims and Other Expenses may also be allowed for as separate inputs if that level of granularity is required. Claims and Other Expenses are usually grouped together for operational efficiency and allowances can be made for differences in timing between claims and expense cashflows.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked) (Incurred in Future Reporting Periods)	Future claim cash flows over the lifetime of the new contracts recognised within the relevant GIC relating to claims that are expected to be incurred in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

In-force Insurance Contracts – Cash Flows (I_IF_FCFs)

This dataset contains future undiscounted cash flows for all insurance contracts for which an insurance asset/liability is held at any point over the reporting period (aggregated into GICs) and the timing of these cashflows relative to the current reporting date.

A single line (row) of cashflow inputs under the various columns (premiums, claims, etc.) must be associated with only one GIC code at a time.

For all cash flows, a **positive value is a receipt** and a **negative value is an outflow**. All cash flows are input in the GIC's currency. Cash flows relating to past/current service are input based on the latest/most updated assumptions relating to the future expected exchange rates. Cash flows relating to next/future service are input for both updated assumptions relating to the future expected exchange rates as well as the previous periods

exchange rate assumptions (i.e. one set of cash flows based on updated exchange rate assumptions and one set based on the previous periods exchange rate assumptions).

As with the inputs in I_NEW_CFs, these cashflow projections and aggregations will need to be performed outside of this solution, as they are used an input into this solution for performing calculations specific to IFRS 17 reporting and measurement. The solution will thus need to have a data upload capability (for this input and in this format) that is streamlined with the actuarial outputs of an insurer's IFRS 17 cash flow projections.

Note that all the inputs for I_IF_FCFs relating to the immediately preceding reporting period (i.e. reporting date and associated cash flows) must also remain in this input module as this is required to perform calculations relating to the current period's measurement and disclosure.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The reporting date	Date	[Previous reporting date, current reporting date] i.e. a date between and including the "Reporting Date – Previous" and "Reporting Date – Current" in the Setup sheet. Input is mandatory.
GIC Code	The unique identifier of the GIC	String Length: 256 characters	No restrictions (but values must be found in the I_Groups sheet) Each line containing cash flows must have the corresponding GIC code input. The same GIC code may appear in multiple different input rows. Input is mandatory.
Delay (in Years)	The delay (in years) between the current reporting date and the date of the cash flows	Number	Real number >=0
Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Future premium cash flows relating to the given GIC relating to service provided during past and current reporting periods, at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Past Service) - Prev FX	Future premium cash flows relating to the given GIC relating to service provided during past and current reporting periods, **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Past Service) - Current FX	Future premium cash flows relating to the given GIC relating to service provided during past	Number	No restrictions, any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	and current reporting periods, **after** updating exchange rate assumptions		Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Future premium cash flows relating to the given GIC relating to service to be provided in the next reporting period only (typically this would be one year for annual reporting), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Service in Next Reporting Period) - Prev FX	Future premium cash flows relating to the given GIC relating to service to be provided in the next reporting period only (typically this would be one year for annual reporting), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Service in Next Reporting Period) - Current FX	Future premium cash flows relating to the given GIC relating to service to be provided in the next reporting period only (typically this would be one year for annual reporting), **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Future premium cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the current or next reporting period), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Future Service) - Prev FX	Future premium cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the current or next reporting period), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Future Service) - Current FX	Future premium cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the current or next reporting period), **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Past	Future acquisition expense cash flows relating to the given GIC	Number	No restrictions, any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Service)(Locked-in Financial Assumptions)(Current Discretion)	relating to service provided during past and current reporting periods, at locked-in financial assumptions and current discretion.		Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Past Service) - Prev FX	Future acquisition expense cash flows relating to the given GIC relating to service provided during past and current reporting periods, **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Past Service) - Current FX	Future acquisition expense cash flows relating to the given GIC relating to service provided during past and current reporting periods, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the next reporting period, at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) - Prev FX	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the next reporting period, **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) - Current FX	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the next reporting period, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the next reporting period), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Future Service) - Prev FX	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the next reporting	Number	No restrictions, any real number Input is mandatory, user must input "0" if no

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	period), **prior** to updating exchange rate assumptions		cashflow for this column at the given delay.
Acquisition Expense CFs (Unlinked)(Future Service) - Current FX	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the next reporting period), **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Unlinked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)	Investment component cash flows relating to the given GIC (excluding those that are payable at the current reporting date), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Unlinked)(Payable in Future) - Prev FX	Investment component cash flows relating to the given GIC (excluding those that are payable at the current reporting date), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Unlinked)(Payable in Future) - Current FX	Investment component cash flows relating to the given GIC (excluding those that are payable at the current reporting date), **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Periods) - Prev FX	Future claim cash flows relating to the given GIC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period), **prior** to updating exchange rate assumptions. These claims cash flows relate to past service.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Periods) - Current FX	Future claim cash flows relating to the given GIC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period), **after** updating exchange rate assumptions. These claims cash flows relate to past service.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs	Future claim cash flows relating to the given GIC relating to claims	Number	No restrictions, any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
(Unlinked)(Incurred in Current Reporting Period) - Prev FX	that have been incurred in the current reporting period, **prior** to updating exchange rate assumptions.		Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) - Current FX	Future claim cash flows relating to the given GIC relating to claims that have been incurred in the current reporting period, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in (only) the next reporting period, at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) - Prev FX	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in (only) the next reporting period, **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) - Current FX	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in (only) the next reporting period, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in future reporting periods (excluding those that are expected to be incurred in the next reporting period), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) - Prev FX	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in future reporting periods (excluding those that are expected to be incurred in the next reporting period), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) - Current FX	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in future reporting periods (excluding those that are expected to be incurred in the next reporting period), **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Future premium cash flows relating to the given GIC relating to service provided during past and current reporting periods, at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Past Service) - Prev FX	Future premium cash flows relating to the given GIC relating to service provided during past and current reporting periods, **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Past Service) - Current FX	Future premium cash flows relating to the given GIC relating to service provided during past and current reporting periods, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Future premium cash flows relating to the given GIC relating to service to be provided in the next reporting period only (typically this would be one year for annual reporting), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Service in Next Reporting Period) - Prev FX	Future premium cash flows relating to the given GIC relating to service to be provided in the next reporting period only (typically this would be one year for annual reporting), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Service in Next Reporting Period) - Current FX	Future premium cash flows relating to the given GIC relating to service to be provided in the next reporting period only (typically this would be one year for annual reporting), **after**	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	updating exchange rate assumptions		
Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Future premium cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the current or next reporting period), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Future Service) - Prev FX	Future premium cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the current or next reporting period), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Future Service) - Current FX	Future premium cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the current or next reporting period), **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Future acquisition expense cash flows relating to the given GIC relating to service provided during past and current reporting periods, at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked)(Past Service) - Prev FX	Future acquisition expense cash flows relating to the given GIC relating to service provided during past and current reporting periods, **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked)(Past Service) - Current FX	Future acquisition expense cash flows relating to the given GIC relating to service provided during past and current reporting periods, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the next reporting period, at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Acquisition Expense CFs (Linked)(Service in Next Reporting Period) - Prev FX	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the next reporting period, **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked)(Service in Next Reporting Period) - Current FX	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the next reporting period, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the next reporting period), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked)(Future Service) - Prev FX	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the next reporting period), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Acquisition Expense CFs (Linked)(Future Service) - Current FX	Future acquisition expense cash flows relating to the given GIC relating to service to be provided in the future reporting periods (not including the next reporting period), **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Linked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)	Investment component cash flows relating to the given GIC (excluding those that are payable at the current reporting date), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Linked)(Payable in Future) - Prev FX	Investment component cash flows relating to the given GIC (excluding those that are payable at the current reporting date), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Linked)(Payable in Future) - Current FX	Investment component cash flows relating to the given GIC (excluding those that are payable	Number	No restrictions, any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	at the current reporting date), **after** updating exchange rate assumptions		Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Periods) - Prev FX	Future claim cash flows relating to the given GIC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period), **prior** to updating exchange rate assumptions. These claims cash flows relate to past service.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Periods) - Current FX	Future claim cash flows relating to the given GIC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period), **after** updating exchange rate assumptions. These claims cash flows relate to past service.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) - Prev FX	Future claim cash flows relating to the given GIC relating to claims that have been incurred in the current reporting period, **prior** to updating exchange rate assumptions.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) - Current FX	Future claim cash flows relating to the given GIC relating to claims that have been incurred in the current reporting period, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in (only) the next reporting period, at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) - Prev FX	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in (only) the next reporting period, **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
			cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) - Current FX	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in (only) the next reporting period, **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in future reporting periods (excluding those that are expected to be incurred in the next reporting period), at locked-in financial assumptions and current discretion.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) - Prev FX	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in future reporting periods (excluding those that are expected to be incurred in the next reporting period), **prior** to updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) - Current FX	Future claim cash flows relating to the given GIC relating to claims that are expected to be incurred in future reporting periods (excluding those that are expected to be incurred in the next reporting period), **after** updating exchange rate assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

In-force Insurance Contracts – General (I_IF_GEN)

This dataset contains the relevant actual cash flow, risk adjustment (if the simplification is not used) and opening balance information for all insurance contracts for which an insurance asset/liability is held at any point over the reporting period (aggregated into GICs). This will include the details of both new contracts over the reporting period and contracts for which any component of the LRC/LIC is non-zero at the start of the reporting period.

Actual **receipts in the reporting period should be recorded as a positive value** and actual **payments in the reporting period should be recorded as a negative value**. These cash flows will be obtained from the finance systems of the insurer, with finance system cash flows being allocated/mapped to the appropriate GICs to which they relate.

The solution will thus need to have a data upload capability (for this input and in this format) that is streamlined with the outputs of an insurer's IFRS 17 finance systems (to obtain actual cash flow information) as

well as the relevant closing balances from the previous reporting period (as these form the opening balances of the current reporting period).

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting date	Date	Must be the same as the "Reporting Date – Current" input in "Setup" sheet. Input is mandatory.
GIC Code	The unique identifier of the GIC	String Length: 256 characters	No restrictions (but values must be found in the I_Groups sheet) Input is mandatory. Each GIC should only occur once as all information associated with a GIC is populated in the rest of the input columns.
Premium Receipts (Past/Current Service)	Aggregate premium receipts collected (or payments made in the case of refunds) during the current reporting period in respect of service provided during past/the current reporting period/s	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow.
Premium Receipts (Future Service)	Aggregate premium receipts collected (or payments made in the case of refunds) during the current reporting period in respect of service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow.
Acquisition Expense Payments (Past/Current Service)	Aggregate acquisition expense payments made (or receipts collected in the case of refunds) during the current reporting period in respect of service provided during past/the current reporting period/s	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow.
Acquisition Expense Payments (Future Service)	Aggregate acquisition expense payments made (or receipts collected in the case of refunds) during the current reporting period in respect of service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow.
Investment Component (IC) Payments	Aggregate investment component payments made (or receipts collected in the case of refunds) during the current reporting period	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow.
Claim and Other Expense Payments (Incurred in Prior Reporting Periods)	Aggregate claim payments made (or receipts collected in the case of salvages etc.) during the current reporting period in respect of	Number	No restrictions, any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	claims incurred in past reporting periods		Input is mandatory, user must input “0” if no cashflow.
Claims and Other Expense Payments (Incurred in Current Reporting Period)	Aggregate claim payments made (or receipts collected in the case of salvages etc.) during the current reporting period in respect of claims incurred in the current reporting period	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow.
Opening LRC – RA (Risk Adjustment)	The opening risk adjustment for the liability for remaining coverage (across both profit and loss components)	Number	If the “Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?” is set to “No” in the Setup, then the user must input A real number >=0. Otherwise no input is required.
Release in LRC - RA for Expected Claims and Other Expenses Incurred	The release in the risk adjustment for the liability for remaining coverage (across both profit and loss components) in respect of expected claims and other expenses	Number	If the “Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?” is set to “No” in the Setup, then the user must input A real number <=0. Otherwise no input is required.
Closing LRC - RA	The closing risk adjustment for the liability for remaining coverage (across both profit and loss components)	Number	If the “Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?” is set to “No” in the Setup, then the user must input A real number >=0. Otherwise no input is required.
Opening LRC – CSM (Contractual Service Margin)	The opening contractual service margin for the liability for remaining coverage	Number	A real number >=0 (but must be 0 if opening LRC – Loss – PVFCF is > 0 and opening LRC – Loss – RA is > 0) Input is mandatory.
Opening LRC - Loss - PVFCF	The opening present value of future CFs for the loss component of the liability for remaining coverage	Number	A real number >=0 (but must be 0 if Opening LRC - CSM > 0)

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Opening LRC - Loss - RA	The opening risk adjustment for the loss component of the liability for remaining coverage	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input a real number >=0 (but must be 0 if Opening LRC - CSM > 0) Otherwise no input is required.
Opening LIC - RA	The opening risk adjustment for the liability for incurred claims	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input A real number >=0. Otherwise no input is required.
Closing LIC - RA	The closing risk adjustment for the liability for incurred claims	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input A real number >=0. Otherwise no input is required.
Closing LIC - RA (New Claims and Other Expenses Incurred)	The increase in the risk adjustment for the liability for incurred claims in respect of new claims and other expenses incurred during the reporting period	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input A real number >=0. Otherwise no input is required.
Opening LIC – IC	The opening liability for incurred claims in respect of unpaid investment components	Number	No restrictions, any real number. Input is mandatory, user must input "0" if not applicable.
New LIC - IC (Investment	The increase in the liability for incurred claims for investment	Number	No restrictions, any real number.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Components Becoming Payable)	components that become payable during the reporting period (including those that are actually paid during the reporting period)		Input is mandatory, user must input “0” if not applicable.
Actual less Expected Return on LRC IC	The actual return on the investment component, less the expected return on the investment component (before the investment component is transferred to the LIC)	Number	No restrictions, any real number. Input is mandatory, user must input “0” if not applicable.
Closing LIC - IC	The closing liability for incurred claims in respect of unpaid investment components	Number	No restrictions, any real number. Input is mandatory, user must input “0” if not applicable.
Opening LRC - PRCF	The opening liability for remaining coverage in respect of pre-recognition cash flows (as this is expected to be an asset, this will be negative in most cases)	Number	No restrictions, any real number. Input is mandatory, user must input “0” if not applicable.
Pre-recognition Cash Flow (PRCF) Payments	Pre-recognition cash flow payments made (or receipts collected) during the reporting period	Number	No restrictions, any real number. Input is mandatory, user must input “0” if not applicable.
Impairment of PRCF Asset	The new impairment that should be applied to the liability/(asset) for pre-recognition cash flows	Number	No restrictions, any real number. Input is mandatory, user must input “0” if not applicable.
Reversal of Impairment of PRCF Asset	The new reversal of impairment that should be applied to the liability/(asset) for pre-recognition cash flows	Number	No restrictions, any real number. Input is mandatory, user must input “0” if not applicable.
Opening Cumulative Acquisition Expense Payments	The opening cumulative acquisition expense payments made (across all prior reporting periods)	Number	No restrictions
Opening Notional DAC	The opening notional deferred acquisition cost (DAC)	Number	No restrictions, any real number. Input is mandatory, user must input “0” if not applicable.

In-force Insurance Contracts – Patterns (I_IF_Patterns)

This dataset contains the required patterns relating to all groups of insurance contracts for which an insurance asset/liability is held at any point over the reporting period. These patterns are used to run off the LRC Contractual Service Margin (CSM), Acquisition Expenses and Pre-recognition Cash Flows by allocating these exposures to the current and future reporting periods to which they relate, for the insurance services provided.

The user input fields are as follows:

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting Date	Date	Must be the same as the "Reporting Date – Current" input in "Setup" sheet.
GIC Code	The unique identifier of the new Groups of Insurance Contracts (GICs) created in the reporting period.	String Length: 256 characters	Each GIC Code entry must be found in the "I_Groups" inputs. The same GIC code can be input multiple times for allocation to multiple reporting periods.
Reporting Period (0 = current)	The reporting period (0 = current reporting period, 1 = next reporting period etc.) to which coverage is allocated.	Number	Whole number >= 0
Coverage Unit (Undiscounted)	The coverage units (undiscounted) relating to the relevant reporting period (used in determining the release of the CSM). IFRS 17 introduces the concept of 'coverage units' for determining how an insurer allocates to different reporting periods the expected profit for providing insurance contract services (that is, the contractual service margin). The notion of 'coverage units' is thus used as a proxy for the amount of benefits provided. The user is required to input coverage units for each reporting period *t* in such a way that the opening CSM for a GIC would be allocated to future reporting periods as follows: - Reporting period *0* = CSM * CU_0 / $SUM_{all\ t}$ (CU_t) - Reporting period *1* = CSM * CU_1 / $SUM_{all\ t}$ (CU_t) - … Where CU_t is the coverage units allocated to reporting period *t* and	Number	Real number in the interval: [0,1]

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	t = 0, …, n (the last period to which coverage units are allocated)		
Amortisation Pattern (Undiscounted)	The amortisation pattern (undiscounted) relating to the relevant reporting period (used in determining the amortisation of acquisition expenses) These are input in a similar format to coverage units (described above).	Number	Real number in the interval [0,1]
PRCF Asset Run-off Pattern	The pattern depicting the expected timing of when assets for insurance acquisition cash flows will be derecognised and included in the measurement of the group of insurance contracts to which they are allocated. These are input in a similar format to coverage units (described above).	Number	Real number in the interval [0,1]

2.2.2.2 _General Measurement Model (GMM) Reinsurance Inputs

Reinsurance Groups (R_Groups)

This dataset contains the relevant details for all groups of reinsurance contracts (GRCs) that will undergo measurement under IFRS 17 in the model. The user must be able to provide inputs for various descriptive fields relating to the GRCs.

Note that the last two fields reference information from the “Exchange Rates – Average” input module.

Similar to insurance contracts, this will require that the GRCs (which are insurer specific) are predefined for the given reporting period. Reinsurance contracts that share similar characteristics can be aggregated into the same group. IFRS 17 specifies how an insurer should determine the GRCs (i.e. the level of aggregation of reinsurance contracts) used for IFRS reporting and measurement.

The process of defining the level of aggregation under IFRS17 can be split into three phases:

1. **Portfolios**
   Reinsurance contracts which have similar risks and are managed together need to be allocated to the same IFRS 17 portfolio (similar considerations to insurance contracts).
2. **Groups**
   Portfolios of reinsurance contracts should be segmented, based on the level of profitability at initial recognition, into a minimum of three groups of contracts: (1) contracts with a net gain expected at initial recognition, (2) contracts which do not have significant possibility to have a gain and (3) “other” contracts.

3. **Cohorts**
   Since contracts which were issued more than a year apart cannot be grouped together under IFRS17. A current reinsurance contract/policy may not necessarily constitute an IFRS 17 reinsurance contract/policy as an insurer may prefer to split a contract into its constituent covers where multiple risks are covered.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
GRC Code	The unique identifier of the Group of Reinsurance Contracts (GRC) which is an outcome of the level of aggregation decisions	String Length: 256 characters	Each GRC Code entry must be unique At least one input is required.
Portfolio	The unique identifier of the IFRS 17 portfolio to which the GRC is assigned	String Length: 256 characters	No restrictions Input is mandatory.
Cohort	The unique identifier of the cohort of the GRC, such as the year, quarter or month, etc. which the GRC relates to.	String Length: 256 characters	No restrictions Input is mandatory.
Recognition Date	The date at which the GRC is recognised	Date	(…, Current Reporting Date] i.e. any date up to and including the current reporting date. Input is mandatory.
Locked-in Yield Curve (YC) Date	The date to be used in selecting the locked-in yield curve that applies to the GRC	Date	[Recognition Date, Current Reporting Date] i.e. any date between (and including) the recognition date and current reporting date. The date must be found as an input in “Date of Yield Curve” column in the “Yield Curves” input. Input is mandatory.
Currency	The GRC's currency	String Length: 256 characters	Must correspond to the permissible Currency Codes Input is mandatory.
Reporting Segment	The unique identifier of the reporting segment to which the GRC is assigned	String Length: 256 characters	No restrictions (but values must be found in the “Reinsurance Reporting Segment” inputs in the Setup sheet)
Risk Adjustment as % of ABS(PVFCF)	The RA as a % of the PVFCF relating to claims and other	Percentage	>=0

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	expenses. ABS(PVFCF) refers to the absolute value of the Present Value of Future Cashflows Flows.		Decimals allowed. Not required if the RA simplification is not used (as input in Setup)
Retroactive Cover?	Whether the GRC provides retroactive cover (i.e. cover to claims that have already incurred in the past)	String	{Yes; No} only from a drop-down list. Input is mandatory.
Ceding %	The proportion/percentage of cover provided by the GRC	Percentage	Any percentage between 0% and 100%. For proportional reinsurance this will be based on the cession %. For non-proportional reinsurance this will need to be approximated e.g. approximated based on recoveries received for that GRC divided by the gross claims paid allocated to the GRC
AverageFX_group	The average exchange rate for cashflows occurring / accruing within the group from the reporting currency to the currency of the GRC code	Number	Real Number > 0

Reinsurance to Insurance Contracts – Mapping (R_I_Mapping)

This input dataset contains the group of insurance contracts that map to each group of reinsurance contracts. There should be a separate row for each unique pair.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
GRC Code	The unique identifier of the Group of Reinsurance Contracts (GRC)	String	Must be found in R_Groups
GIC Code	The unique identifier of the Group of Insurance Contracts (GIC)	String	No restrictions, but must be found in I_Groups if [GIC Measurement model] is GMM
SUB-GRC Group	Unique identifier of the GRC-GIC combination based on reinsurance coverage of insurance groups	String	**[GRC Code]**&**[GIC Code]**
GIC Measurement model	The measurement model used for the given GIC	String	{PAA; GMM; VFA} from a dropdown only

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Portion of Group Cover by Reinsurance	The portion of the Group of insurance contracts covered by the reinsurance GIC. This is where an onerous group of insurance contracts includes both onerous contracts covered by the reinsurance contracts held, and onerous contracts not covered by the reinsurance contracts held. This will require a means of allocating the changes in fulfilment cash flows of an onerous group of underlying contracts between covered and uncovered contracts	Percentage	Percentage between 0% and 100% Input is mandatory.
Non-onerous/Onerous (Initial Recognition)	The indicator of whether the GIC is onerous or not at initial recognition	String	{Onerous; Non-onerous} from a drop down list only Input is mandatory.
Locked-in YC Date	The Locked-in Yield Curve Date for the GIC	Date	Any date within a reasonable range and must correspond to the Locked-in YC Date input in I_Groups for GMM and VFA GICs. Input is mandatory.
Currency	The currency associated with the GIC	String	Must correspond to the permissible Currency Codes Input is mandatory.

New Reinsurance Contracts – General (R_NEW_GEN)

This input dataset contains the relevant details for all new reinsurance contracts recognised over the reporting period (aggregated into GRCs). This input table should allow for the inclusion of a separate record for each GRC code for which there are new contracts recognised within the current reporting period.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting Date	Date	Must be the same as the "Reporting Date – Current" input in "Setup" sheet.
GRC Code	The unique identifier of the GRC	String Length: 256 characters	Each GRC Code entry must be unique and must be found in the "R_IF_GEN" and "R_Groups" inputs.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
			At least one input is required.
Purchased/Acquired	Whether the GRC was purchased/acquired	String	{Purchased; Acquired} only from a drop-down list.
Pre-recognition CFs	Aggregate cash flows (paid)/received prior to the recognition of the new reinsurance contracts	Number	Any real number. Cash outflows are entered as negative values, cash inflows are entered as positive values. Input is mandatory.
Initial RA	The initial risk adjustment set for the new reinsurance contracts	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF)) relating to claims and other expenses)?" is set to **"No"** (by the user) in the Setup sheet: User is required to input any real number >=0. If the "Use simplification for the setting of the RA (% of ABS(PVFCF)) relating to claims and other expenses)?" is set to **"Yes"** (by the user) in the Setup sheet: No user input is required for this field.

New Reinsurance Contracts – Cash Flows (R_NEW_CFs)

This dataset contains the initial and future undiscounted cash flows for all new reinsurance contracts recognised during the reporting period (aggregated into GRCs) and the timing of these cashflows relative to the date at which the contracts are recognised (which is assumed to be the Locked-in YC Date as reflected in R_Groups).

A single line (row) of cashflow inputs under the various columns (premiums, claims, etc.) must be associated with only one GIC code at a time.

For all cash flows, a **positive value is an outflow** and a **negative value is a receipt**.

These cashflow projections and aggregations will need to be performed outside of this solution, as they are used an input into this solution for performing calculations specific to IFRS 17 reporting and measurement. The solution will thus need to have a data upload capability (for this input and in this format) that is streamlined with the actuarial outputs of an insurer's IFRS 17 cash flow projections.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting date	Date	Current reporting date This must correspond to the "Reporting Date – Current" input in the Setup sheet. Input is mandatory.
GRC Code	The unique identifier of the GRC	String	No restrictions (but values must be found in R_Groups, R_NEW_GEN and R_IF_GEN) Each line containing cash flows must have the corresponding GRC code input. The same GRC code may appear in multiple different input rows. Input is mandatory.
Delay (in Years)	The delay (in years) between the date at which the group of contracts is recognised (which is assumed to be the *Locked-in YC Date* as reflected in *R_Groups*) and the date of the cash flows	Number	Real number >=0
Premium CFs (Unlinked)(Current Service)	Initial and future premium cash flows (incl. flat commissions) over the lifetime of the new contracts recognised within the relevant GRC relating to service provided during the reporting period in which the contracts are recognised	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Future Service)	Initial and future premium cash flows (incl. flat commissions) over the lifetime of the new contracts recognised within the relevant GRC relating to service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Unlinked)	Investment component cash flows over the lifetime of the new contracts recognised within the relevant GRC	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)	Future recoveries cash flows (incl. claims-related commissions) over the lifetime of the new contracts recognised within the relevant GRC relating to claims that are expected to be incurred during the reporting	Number	No restrictions, any real number Input is mandatory, user must input "0" if no

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	period in which the contracts are recognised		cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)	Future recoveries cash flows (incl. claims-related commissions) over the lifetime of the new contracts recognised within the relevant GRC relating to claims that are expected to be incurred in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Current Service)	Initial and future premium cash flows (incl. flat commissions) over the lifetime of the new contracts recognised within the relevant GRC relating to service provided during the reporting period in which the contracts are recognised	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Future Service)	Initial and future premium cash flows (incl. flat commissions) over the lifetime of the new contracts recognised within the relevant GRC relating to service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Linked)	Investment component cash flows over the lifetime of the new contracts recognised within the relevant GRC	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)	Future recoveries cash flows (incl. claims-related commissions) over the lifetime of the new contracts recognised within the relevant GRC relating to claims that are expected to be incurred during the reporting period in which the contracts are recognised	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)	Future recoveries cash flows (incl. claims-related commissions) over the lifetime of the new contracts recognised within the relevant GRC relating to claims that are expected to be incurred in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

New Reinsurance Contracts – Loss Recovery (R_NEW_LR)

This input dataset contains the relevant details of the newly recognised loss component for onerous insurance groups recognised in the reporting period, mapped to the relevant GRC under which it is covered.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
GRC Code	The GRC code relating to	String	No restrictions but must appear in R_Groups
GIC Code	The GIC code corresponding to newly recognised insurance contracts that have a loss component created at initial recognition	String	No restrictions
SUB-GRC Group	Unique identifier of the GRC-GIC combination based on reinsurance coverage of insurance groups	String	**[GRC Code]**&**[GIC Code]**
GIC New LRC - Loss - PVFCF	The PVFCF component of the newly recognised loss component for the GIC	Number	Real number >= 0
GIC New LRC - Loss - RA	The Risk adjustment component of the newly recognised loss component for the GIC	Number	Real Number >= 0

Reinsurance Contracts – New Insurance Cash Flows (R_I_NEW_CFs)

This dataset contains the undiscounted cash flows relating to newly recognised insurance GICs that are covered under the relevant reinsurance contracts (GRCs). This also allows for the inputting of covered cash flows relating to GICs that were not calculated under the same measurement model for insurance.

These cash flows could equal the cash flows currently projected for the reinsurance GRC. However, if the cohort or group is not closed (i.e. new risk is expected to attach to the treaty in future) then there is expected to be a difference due to the projections of future new business that need to be included in the GRC cash flow projection, that would not be included in the GIC cash flow projection.

Note that each new line of inputs represents a cash flow at a different delay. GICs and GRCs may thus be repeated in this input table as they are associated with each cash flow input.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting Date	Date	Must be the same as the "Reporting Date – Current" input in "Setup" sheet.
GIC Code	The GIC Code relating to the given cash flow	String Max length: 256 characters	No restrictions
GRC Code	The reinsurance GRC under which the gross cash flows are covered.	String	Must be found in R_Groups
Treaty covered Claim and Other CFs (Unlinked)(Incurred in Current Reporting Period)	Treaty covered future claim cash flows over the lifetime of the new contracts recognised within the relevant GIC relating to claims that are expected to be incurred during the reporting period in which the contracts are recognized (claims outflows entered as positive)	Number	Any real number
Treaty covered Claim and Other CFs	Treaty covered future claim cash flows over the lifetime of the new	Number	Any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
(Unlinked)(Incurred in Future Reporting Periods)	contracts recognised within the relevant GIC relating to claims that are expected to be incurred during future reporting periods (claims outflows entered as positive)		
Treaty covered Claim and Other CFs (Linked)(Incurred in Current Reporting Period)	Treaty covered future claim cash flows over the lifetime of the new contracts recognised within the relevant GIC relating to claims that are expected to be incurred during the reporting period in which the contracts are recognized (claims outflows entered as positive)	Number	Any real number
Treaty covered Claim and Other CFs (Linked)(Incurred in Future Reporting Periods)	Treaty covered future claim cash flows over the lifetime of the new contracts recognised within the relevant GIC relating to claims that are expected to be incurred during future reporting periods (claims outflows entered as positive)	Number	Any real number
Delay (in Years)	The delay of the given cash flow from the GIC's recognition date.	Number	Real Number >= 0

In-force Reinsurance Contracts – General (R_IF_GEN)

This dataset contains the relevant actual cash flow, risk adjustment (if the simplification is not used) and opening balance information for all reinsurance contracts for which a reinsurance asset/liability is held at any point over the reporting period (aggregated into GRCs). This will include the details of both new contracts over the reporting period and contracts for which any component of the ARC/ARIC is non-zero at the start of the reporting period.

Actual **receipts in the reporting period should be recorded as a negative value** and actual **payments in the reporting period should be recorded as a positive value**. These cash flows will be obtained from the finance systems of the insurer, with finance system cash flows being allocated/mapped to the appropriate GRCs to which they relate.

The solution will thus need to have a data upload capability (for this input and in this format) that is streamlined with the outputs of an insurer's IFRS 17 finance systems (to obtain actual cash flow information) as well as the relevant closing balances from the previous reporting period (as these form the opening balances of the current reporting period).

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting date	Date	Must be the same as the "Reporting Date – Current" input in "Setup" sheet. Input is mandatory.
GRC Code	The unique identifier of the GRC	String Length: 256 characters	No restrictions (but values must be found in the R_Groups sheet)

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
			Input is mandatory. Each GRC should only occur once as all information associated with a GRC is populated in the rest of the input columns.
Premium Payments (Past/Current Service)	Aggregate premium payments made (or receipts collected in the case of refunds/flat commission etc.) during the current reporting period in respect of service provided during past/the current reporting period/s	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow.
Premium Payments (Future Service)	Aggregate premium payments made (or receipts collected in the case of refunds/flat commission etc.) during the current reporting period in respect of service to be provided in future reporting periods	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow.
Investment Component Receipts	Aggregate investment component receipts collected (or payments made in the case of refunds) during the current reporting period	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow.
Recoveries Receipts (On Claims Incurred in Prior Reporting Periods)	Aggregate recoveries receipts collected (or payments made in the case of salvages etc.)(incl. claims-related commissions) during the current reporting period in respect of claims incurred in past reporting periods	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow.
Recoveries Receipts (On Claims Incurred in Current Reporting Period)	Aggregate recoveries receipts collected (or payments made in the case of salvages etc.)(incl. claims-related commissions) during the current reporting period in respect of claims incurred in the current reporting period	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow.
Opening ARC - RA	The opening risk adjustment for the asset for remaining coverage	Number	If the “Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?” is set to “No” in the Setup, then the user must input A real number <=0. Otherwise no input is required.
Release in ARC - RA for Recoveries on	The release in the risk adjustment for the asset for remaining	Number	If the “Use simplification for the setting of the RA (% of

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Expected Claims and Other Expenses Incurred	coverage in respect of recoveries on expected claims and other expenses		ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input A real number >=0. Otherwise no input is required.
Closing ARC - RA	The closing risk adjustment for the asset for remaining coverage	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input A real number <=0. Otherwise no input is required.
Loss Recovery (Opening)	The opening loss recovery-component	Number	Any real number <=0. Input is mandatory, user must input "0" if no cashflow.
Opening ARC - CSM	The opening contractual service margin for the asset for remaining coverage (excluding the loss-recovery component)	Number	No restrictions, any real number Input is mandatory, user must input "0" if none.
Opening ARIC - RA	The opening risk adjustment for the amounts recoverable on incurred claims	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input A real number <=0. Otherwise no input is required.
Closing ARIC - RA	The closing risk adjustment for the amounts recoverable on incurred claims	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input A real number <=0. Otherwise no input is required.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Closing ARIC - RA (Recoveries on New Claims and Other Expenses Incurred)	The increase in the risk adjustment for the amounts recoverable on incurred claims in respect of recoveries on new claims and other expenses incurred during the reporting period	Number	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup, then the user must input A real number <=0. Otherwise no input is required.
Opening ARIC - IC	The opening amounts recoverable on incurred claims in respect of uncollected investment components	Number	No restrictions, any real number Input is mandatory, user must input "0" if none.
New ARIC - IC (Investment Components Becoming Receivable)	The increase in the amounts recoverable on incurred claims for investment components that become receivable during the reporting period (including those that are actually received during the reporting period)	Number	No restrictions, any real number Input is mandatory, user must input "0" if none.
Closing ARIC - IC	The closing amounts recoverable on incurred claims in respect of unreceived investment components	Number	No restrictions, any real number Input is mandatory, user must input "0" if none.
Opening ARC - PRCF	The opening asset for remaining coverage in respect of pre-recognition cash flows (as this is expected to be a liability, this will be negative in most cases)	Number	No restrictions, any real number Input is mandatory, user must input "0" if none.
Pre-recognition CF Receipts	Pre-recognition cash flow receipts collected (or payments made) during the reporting period	Number	No restrictions, any real number Input is mandatory, user must input "0" if none.
Impairment of PRCF Liability	Impairment of PRCF Liability over the reporting period	Number	No restrictions, any real number Input is mandatory, user must input "0" if none.
Reversal of Impairment of PRCF Liability	Reversal of Impairment of PRCF Liability over the reporting period	Number	No restrictions, any real number Input is mandatory, user must input "0" if none.

In-force Reinsurance Contracts – General Loss-Recovery (R_IF_GEN_LR)

This dataset contains the relevant cash flow information in respect of groups of insurance contracts (GICs) where a loss recovery component is being measured, which were measured using an alternate measurement

model other than the GMM (i.e. PAA or VFA). These GICs will need to be covered by the relevant GRC being measured.

If the GIC's are being measured using an external model then the relevant cashflow information required will need to be linked from the relevant data fields. If the relevant field is not available from the GIC's measurement model this must be entered with a zero. The "Permissable Inputs" section below highlights whether the field is required for PAA or VFA or both.

The solution will thus need to have a capability to link outputs from other measurement models automatically into the inputs for the measurement of the Loss-Recovery component under GMM. Hence this will need to be streamlined with the outputs of an insurer's IFRS 17 finance systems (to obtain actual cash flow information) as well as the relevant closing balances from the previous reporting period (as these form the opening balances of the current reporting period).

A single line (row) of cashflow inputs under the various columns (premiums, claims, etc.) must be associated with only one GIC code at a time.

For all cash flows, a positive value is an outflow and a negative value is an inflow.

These already performed cashflow aggregations are an input into this solution for performing calculations specific to IFRS 17 reporting and measurement.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
GRC Code	The unique identifier of the GRC	String Length: 256 characters	No restrictions (but values must be found in the R_Groups sheet) Input is mandatory. Each GRC should only occur once (as all information associated with a GRC is populated in the rest of the input columns).
GIC Code	The GIC code corresponding to newly recognised insurance contracts were either onerous at initial recognition or became onerous at subsequent measurement.	String Length: 256 characters	No restrictions
GRC Sub-code	Unique identifier of the GRC-GIC combination based on reinsurance coverage of insurance groups	String	**[GRC Code]**&**[GIC Code]**
GIC Measurement model	Selection of underlying GIC measurement model	String Length: 256 characters	{PAA; VFA} from a dropdown only If the underlying GIC model is internal (i.e. GMM) then no input is required

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Non-onerous/Onerous (Opening)	Indicator which determines whether the underlying GIC was onerous at the previous reporting date.	String Length: 256 characters	{Onerous; Non-Onerous} from a dropdown only If the underlying GIC model is internal then no input is required. If the underlying model is VFA then this can be linked from the field [Non-onerous/Onerous (Opening)] in I_SUB_Calc If the underlying model is PAA then if an input is required in the field [Opening Loss Component] in I_CO_IF then the GIC is onerous.
Non-onerous/Onerous (After Non FX change in FCF)	Indicator which determines whether the underlying GIC is onerous at the current reporting date	String Length: 256 characters	{Onerous; Non-Onerous} from a dropdown only If the underlying GIC model is internal then no input is required If the underlying model is VFA then this can be linked from the field [Non-onerous/Onerous (After Non FX change in FCF)] in I_SUB_Calc If the underlying model is PAA then if [Closing LRC – Loss Component] in LRC_1 is different from 0 then this GIC is Onerous at current reporting date
Opening LRC - Loss - PVFCF	The opening present value of future CFs for the loss component of the liability of remaining coverage	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Opening LRC - Loss - PV of Unlinked Outflows (excl. Acq Exp CFs)] in I_SUB_Calc

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
			If the underlying model is PAA then this can be linked from the field [LRC - Loss Component] from IL_Opening
New LRC - Loss - PVFCF	Isolated contribution of present value of future claims and expense cash flows that make up the loss component of the LRC if the GIC is onerous	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [New LRC - Loss - PV of Unlinked Outflows (excl. Acq Exp CFs)] in I_SUB_Calc If the underlying model is PAA then this can be linked from the field [Change in LRC - Loss Component - Actuals FX] in LRC_2
LRC - Loss - PVFCF - Post Roll Forward	Isolating the LRC - Loss - PVFCF - Post Roll Forward (including effect of changes in interest rates)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [LRC - Loss - PVFCF (Claims (Unlinked)) - Post Roll Forward] in I_SUB_Calc If the underlying model is PAA then input a 0.
Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)	Isolation of removal of claims and expenses incurred in the current period that relate to the LRC Loss component	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Effect on LRC - Loss - PV of Unlinked

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
			Outflows (excl. Acq Exp CFs) of Removal of Expected Claims and Other Expenses Incurred (Unlinked)(Current)] in I_SUB_Calc If the underlying model is PAA then this can be linked from the field [Release of LRC - Loss Component - Actuals FX] in LRC_2
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX	Isolation of effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Effect on LRC - Loss - PV of Unlinked Outflows (excl. Acq Exp CFs) of Change in Variable Fee - Non FX] in I_SUB_Calc If the underlying model is PAA then input a 0.
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX	Isolation of effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Effect on LRC - Loss - PV of Unlinked Outflows (excl. Acq Exp CFs) of Change in Variable Fee - FX] in I_SUB_Calc If the underlying model is PAA then input a 0.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)	Isolating effect on LRC - Loss - PVFCF of Changes in Interest Rates (i.e. change from locked in rates to current rates when calculating the LRC – Loss PVFCF at subsequent measurement)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be lined from the field [Effect on LRC - Loss - PV of Changes in Interest Rates] If the underlying model is PAA then input a 0.
Closing LRC - Loss - PVFCF	Closing LRC – Loss Component PVFCF for the GIC	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Closing LRC - Loss - PV of Unlinked Outflows (excl. Acq Exp CFs)] in I_SUB_Calc If the underlying model is PAA then this can be linked from the filed [LRC – Loss Component] from IL_Closing
Opening LRC - Loss - RA	Opening LRC RA attributed to the loss component for the GIC	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Opening LRC – Loss - RA] in I_SUB_Calc If the underlying model is PAA then input a 0.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
New LRC - Loss - RA	Isolates the contribution of the risk adjustment that makes up the Loss Component of the LRC if the GIC is onerous	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [New LRC – Loss - RA] in I_SUB_Calc If the underlying model is PAA then input a 0.
LRC - Loss - RA - Post Roll Forward	LRC - Loss - RA - Post Roll Forward (including effect of changes in interest rates) for the GIC	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [LRC – Loss – RA - Post Roll Forward] in I_SUB_Calc If the underlying model is PAA then input a 0.
Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)	Isolates the effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) for the GIC	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Unlinked)(Current)] in I_SUB_Calc If the underlying model is PAA then input a 0.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX	Isolates the effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX for the GIC	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Effect on LRC - Loss - RA of Change in Variable Fee - Non FX] in I_SUB_Calc If the underlying model is PAA then input a 0.
Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX	Isolates the effect on LRC - Loss - RA of Total Experience Variance (Future) - FX for the GIC	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Effect on LRC - Loss - RA of Change in Variable Fee - FX] in I_SUB_Calc If the underlying model is PAA then input a 0.
Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)	Isolating effect on LRC - Loss - RA of Changes in Interest Rates (i.e. change from locked in rates to current rates when calculating the LRC – Loss RA at subsequent measurement)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow. If the underlying model is VFA then this can be linked from the field [Effect on LRC - Loss - RA of Changes in Interest Rates] If the underlying model is PAA then input a 0.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Closing LRC - Loss - RA	Closing LRC – Loss Component – RA for the GIC	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow. If the underlying model is VFA then this can be linked from the field [Closing LRC - Loss - RA] in I_SUB_Calc If the underlying model is PAA then input a 0.
Total Change in FCF (Future) Non FX	Total Experience Variance relating to all future cash flows (inflows and outflows) as well as the risk adjustment that affect the CSM (prior to release)	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow. If the underlying model is VFA then this can be linked from the field [Total Change in FCF (Future)(Change in FCF (Unlinked)(Future) + Change in FCF (Linked))] in I_SUB_Calc If the underlying model is PAA then input a 0.
Effect on LRC - CSM of Total Experience Variance (Future) – Non FX	Impact on CSM as a result of created of experience variance being unfavourable (i.e. larger than opening CSM) or the CSM created by the experience variance being favourable to the extent it exceeds the opening loss component.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow. If the underlying model is VFA then this can be linked from the field [Effect on LRC - CSM of Change in Variable Fee (Post Risk Mitigation)] in I_SUB_Calc If the underlying model is PAA then input a 0.

In-force Reinsurance Contracts – Cash Flows (R_IF_FCFs)

This dataset contains future undiscounted cash flows for all reinsurance contracts for which a reinsurance asset/liability is held at any point over the reporting period (aggregated into GICs) and the timing of these cashflows relative to the current reporting date.

A single line (row) of cashflow inputs under the various columns (premiums, claims, etc.) must be associated with only one GRC code at a time.

For all cash flows, a **positive value is an outflow** and a **negative value is a receipt**.

As with the inputs in R_NEW_CFs, these cashflow projections and aggregations will need to be performed outside of this solution, as they are used an input into this solution for performing calculations specific to IFRS 17 reporting and measurement. The solution will thus need to have a data upload capability (for this input and in this format) that is streamlined with the actuarial outputs of an insurer's IFRS 17 cash flow projections.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting date	Date	[Previous reporting date, current reporting date] i.e. a date between and including the "Reporting Date – Previous" and "Reporting Date – Current" in the Setup sheet. Input is mandatory.
GRC Code	The unique identifier of the GRC	String Length: 256 characters	No restrictions (but values must be found in the R_Groups sheet) Each line containing cash flows must have the corresponding GRC code input. The same GRC code may appear in multiple different input rows. Input is mandatory.
Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service provided during past and current reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Past Service) - Prev FX	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service provided during past and current reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Past Service) - Current FX	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to	Number	No restrictions, any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	service provided during past and current reporting periods		Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Future premium (incl. flat commissions) cash flows on previous exchange rates relating to the relevant GRC relating to service to be provided in the next reporting period	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Service in Next Reporting Period) – Prev FX	Future premium (incl. flat commissions) cash flows on previous exchange rates relating to the relevant GRC relating to service to be provided in the next reporting period	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Service in Next Reporting Period) - Current FX	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service to be provided in the next reporting period	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Future premium (incl. flat commissions) cash flows on previous exchange rates relating to the relevant GRC relating to service to be provided in the future reporting periods (not including the next reporting period)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Future Service) – Prev FX	Future premium (incl. flat commissions) cash flows on previous exchange rates relating to the relevant GRC relating to service to be provided in the future reporting periods (not including the next reporting period)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Unlinked)(Future Service) - Current FX	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service to be provided in the future reporting periods (not including the next reporting period)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Investment Component CFs (Unlinked)(Receivable in Future)(Locked-in	Investment component cash flows on previous exchange rates relating to the relevant GRC (excl.	Number	No restrictions, any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Financial Assumptions)(Current Discretion)	those that are payable at the current reporting date)		Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Unlinked)(Receivable in Future) – Prev FX	Investment component cash flows on previous exchange rates relating to the relevant GRC (excl. those that are payable at the current reporting date)	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Investment Component CFs (Unlinked)(Receivable in Future) – Current FX	Investment component cash flows on current exchange rates relating to the relevant GRC (excl. those that are payable at the current reporting date)	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in the next reporting period	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period)	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Prev FX	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period) **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Prev FX	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in the next reporting period **prior** to	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	updating non-performance risk assumptions		
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Prev FX	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period) **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period) **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in the next reporting period **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period) **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period) **after** updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that have been incurred in the current reporting period **after** updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in the next reporting period **after** updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Unlinked) (On Claims Incurred in Future Reporting Periods)(Current NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period) **after** updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service provided during past and current reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Past Service) - Prev FX	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service provided during past and current reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Past Service) - Current FX	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service provided during past and current reporting periods	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial	Future premium (incl. flat commissions) cash flows on previous exchange rates relating to the relevant GRC relating to	Number	No restrictions, any real number Input is mandatory, user must input "0" if no

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Assumptions)(Current Discretion)	service to be provided in the next reporting period		cashflow for this column at the given delay.
Premium CFs (Linked)(Service in Next Reporting Period) – Prev FX	Future premium (incl. flat commissions) cash flows on previous exchange rates relating to the relevant GRC relating to service to be provided in the next reporting period	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Linked)(Service in Next Reporting Period) - Current FX	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service to be provided in the next reporting period	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Future premium (incl. flat commissions) cash flows on previous exchange rates relating to the relevant GRC relating to service to be provided in the future reporting periods (not including the next reporting period)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Linked)(Future Service) – Prev FX	Future premium (incl. flat commissions) cash flows on previous exchange rates relating to the relevant GRC relating to service to be provided in the future reporting periods (not including the next reporting period)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Premium CFs (Linked)(Future Service) - Current FX	Future premium (incl. flat commissions) cash flows on current exchange rates relating to the relevant GRC relating to service to be provided in the future reporting periods (not including the next reporting period)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Investment Component CFs (Linked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)	Investment component cash flows on previous exchange rates relating to the relevant GRC (excl. those that are payable at the current reporting date)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Investment Component CFs (Linked)(Receivable in Future) – Prev FX	Investment component cash flows on previous exchange rates relating to the relevant GRC (excl. those that are payable at the current reporting date)	Number	No restrictions, any real number Input is mandatory, user must input “0” if no

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
			cashflow for this column at the given delay.
Investment Component CFs (Linked)(Receivable in Future) – Current FX	Investment component cash flows on current exchange rates relating to the relevant GRC (excl. those that are payable at the current reporting date)	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in the next reporting period	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period)	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Prev FX	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period) **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Prev FX	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in the next reporting period **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Prev FX	Future recoveries (incl. claims-related commission) cash flows on previous exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in future reporting periods (excl. those that are expected to be incurred in the	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	next reporting period) **prior** to updating non-performance risk assumptions		
Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period) **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in the next reporting period **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period) **prior** to updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that have been incurred in prior reporting periods (excl. those that are incurred in the current reporting period) **after** updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that have been incurred in the current reporting period **after** updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked)(On Claims Incurred in Next	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating	Number	No restrictions, any real number

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Period)(Current NP Risk) – Current FX	to the relevant GRC relating to claims that are expected to be incurred in the next reporting period **after** updating non-performance risk assumptions		Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Recoveries CFs (Linked) (On Claims Incurred in Future Reporting Periods)(Current NP Risk) – Current FX	Future recoveries (incl. claims-related commission) cash flows on current exchange rates relating to the relevant GRC relating to claims that are expected to be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period) **after** updating non-performance risk assumptions	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Delay (in Years)	The delay (in years) between the current reporting date and the date of the cash flows	Number	Real number >=0

In-force Reinsurance Contracts – Patterns (R_IF_Patterns)

This dataset contains the required patterns relating to all groups of reinsurance contracts for which an insurance asset/liability is held at any point over the reporting period. These patterns are used to run off the ARC Contractual Service Margin (CSM), by allocating these exposures to the current and future reporting periods to which they relate, for the reinsurance services provided.

The user input fields are as follows:

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting Date	Date	Must be the same as the "Reporting Date – Current" input in "Setup" sheet.
GRC Code	The unique identifier of the new Groups of Reinsurance Contracts (GRCs) created in the reporting period.	String Length: 256 characters	Each GIC Code entry must be found in the "R_Groups" inputs. The same GRC code can be input multiple times for allocation to multiple reporting periods.
Reporting Period (0 = current)	The reporting period (0 = current reporting period, 1 = next reporting period etc.) to which coverage is allocated.	Number	Whole number >= 0
Coverage Unit (Undiscounted)	The coverage units (undiscounted) relating to the relevant reporting period (used in determining the release of the CSM).	Number	Real number >= 0

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
	IFRS 17 introduces the concept of 'coverage units' for determining how an insurer allocates to different reporting periods the expected cost/gain of entering into reinsurance contracts (that is, the contractual service margin). The notion of 'coverage units' is thus used as a proxy for the reinsurance services provided. The user is required to input coverage units for each reporting period *t* in such a way that the opening CSM for a GRC would be allocated to future reporting periods as follows: - Reporting period *0* = CSM * CU_0 / $SUM_{all\ t}$ (CU_t) - Reporting period *1* = CSM * CU_1 / $SUM_{all\ t}$ (CU_t) - … Where CU_t is the coverage units allocated to reporting period *t* and t = 0, …, n (the last period to which coverage units are allocated)		

In-force Reinsurance Contracts – Cash Flows from underlying insurance contracts (R_I_IF_FCFs)

This dataset contains future undiscounted treaty covered claims in respect of all reinsurance contracts for the underlying GIC for which a reinsurance asset/liability is held at any point over the reporting period (aggregated into GICs) and the timing of these cashflows relative to the current reporting date.

A single line (row) of cashflow inputs under the various columns (claims and other cashflows covered by the treaty) must be associated with only one GRC code at a time.

For all cash flows, a **positive value is an outflow** and a **negative value is a receipt**.

As with the inputs in R_NEW_CFs, these cashflow projections and aggregations will need to be performed outside of this solution, as they are used an input into this solution for performing calculations specific to IFRS 17 reporting and measurement. The solution will thus need to have a data upload capability (for this input and in this format) that is streamlined with the actuarial outputs of an insurer's IFRS 17 cash flow projections.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Reporting Date	The current reporting date	Date	[Previous reporting date, current reporting date] i.e. a date between and including the "Reporting Date – Previous" and

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
			"Reporting Date – Current" in the Setup sheet. Input is mandatory.
GIC Code	The unique identifier of the underling GIC code	String Length: 256 characters	No restrictions (but values must be found in R_I_Mapping) Each line containing cash flows must have the corresponding GIC code input. The same GIC code may appear in multiple different input rows. Input is mandatory.
GRC Code	The unique identifier of the GRC	String Length: 256 characters	No restrictions (but values must be found in the R_Groups sheet) Each line containing cash flows must have the corresponding GRC code input. The same GRC code may appear in multiple different input rows. Input is mandatory.
Treaty covered Claim and Other CFs (Unlinked) (Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Claims and other cashflows (incl. claims-related commission) covered by the reinsurance treating relating to the relevant GRC relating to claims that have been incurred in the next reporting periods.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Treaty covered Claim and Other CFs (Unlinked) (Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Claims and other cashflows (incl. claims-related commission) covered by the reinsurance treating relating to the relevant GRC relating to claims that have will be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period).	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.
Treaty covered Claim and Other CFs (Linked) (Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP	Claims and other cashflows (incl. claims-related commission) covered by the reinsurance treating relating to the relevant GRC relating to claims that have been incurred in the next reporting periods.	Number	No restrictions, any real number Input is mandatory, user must input "0" if no cashflow for this column at the given delay.

Input Field	Description	Input Type and Max Field Length	Permissible Inputs
Risk)(Current Discretion)			
Treaty covered Claim and Other CFs (Linked) (Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Claims and other cashflows (incl. claims-related commission) covered by the reinsurance treating relating to the relevant GRC relating to claims that have will be incurred in future reporting periods (excl. those that are expected to be incurred in the next reporting period).	Number	No restrictions, any real number Input is mandatory, user must input “0” if no cashflow for this column at the given delay.
Delay (in Years)	The delay (in years) between the current reporting date and the date of the cash flows	Number	Real number >=0

2.2.3 Data Checks

After the user has completed filling in the above IFRS 17 input information, the user is required to run this section of the model which performs data checks to assess the completeness and adequacy of the above inputs. In general, the solution should assess each of the records in each input Dataset to ensure that there are no blank fields and that all inputs correspond to the permissible values/are in the permissible range of inputs.

The calculations should not be performed if there are any data input errors since IFRS 17 compliant disclosures are highly dependent on the accuracy and completeness of data inputs.

The default check for each field is that there are no blank records in that field. The table below describes the suggested additional data checks that are performed for each Field in the various Datasets.

2.2.3.1 General Measurement Model (GMM) Data Checks - Insurance

Dataset	Field	Data Check Performed
Insurance Inputs Data Checks		
Inputs_I_Groups	GIC Code	All records in Inputs_I_Groups[GIC Code] are unique
Inputs_I_Goups	GIC Code	No blank records found in Inputs_I_Groups[GIC Code]
Inputs_I_Groups	Portfolio	No blank records found in Inputs_I_Groups[Portfolio]
Inputs_I_Groups	Cohort	No blank records found in Inputs_I_Groups[Cohort]
Inputs_I_Groups	Recognition Date	All records in Inputs_I_Groups[Recognition Date] are within the expected date range
Inputs_I_Groups	Locked-in YC Date	All records in Inputs_I_Groups[Locked-in YC Date] are within the range implied by other fields in this dataset
Inputs_I_Groups	Locked-in YC Date	All records in Inputs_I_Groups[Locked-in YC Date] are within the expected date range
Inputs_I_Groups	Currency	No blank records found in Inputs_I_Groups[Currency]
Inputs_I_Groups	FX Impact from	All records in Inputs_I_Groups[FX Impact from] are 'Locked-in' or 'Opening'
Inputs_I_Groups	Locked-in YC Date	All records in Inputs_I_Groups[Locked-in YC Date] are found in YieldCurves[Date \ Duration (Months)]
Inputs_I_Groups	Reporting Segment	All records in Inputs_I_Groups[Reporting Segment] are found in Setup_I_Reporting_Segments[Reporting Segment]
Inputs_I_Groups	RA % of ABS(PVFCF)	All records in Inputs_I_Groups[RA % of ABS(PVFCF)] are within the permissible range of values
Inputs_I_Groups	Transition method	All records in Inputs_I_Groups[Transition method] are ‘Full Retrospective’, ‘Modified Retrospective’, ‘Fair Value’, ‘Default’ or ‘N/A’

Dataset	Field	Data Check Performed
Inputs_I_NEW_GEN	Reporting Date	All records in Inputs_I_NEW_GEN[Reporting Date] are within the expected date range
Inputs_I_NEW_GEN	GIC Code	All records in Inputs_I_NEW_GEN[GIC Code] are found in Inputs_I_IF_GEN[GIC Code]
Inputs_I_NEW_GEN	GIC Code	All records in Inputs_I_NEW_GEN[GIC Code] are unique
Inputs_I_NEW_GEN	Issued/Acquired	All records in Inputs_I_NEW_GEN[Issued/Acquired] are 'Issued' or 'Acquired'
Inputs_I_NEW_GEN	Pre-recognition CFs	All records in Inputs_I_NEW_GEN[Pre-recognition CFs] are within the permissible range of values
Inputs_I_NEW_GEN	Initial RA	All records in Inputs_I_NEW_GEN[Initial RA] are within the permissible range of values
Inputs_I_NEW_CFs	Reporting Date	All records in Inputs_I_NEW_CFs[Reporting Date] are within the expected date range
Inputs_I_NEW_CFs	GIC Code	All records in Inputs_I_NEW_CFs[GIC Code] are found in Inputs_I_IF_GEN[GIC Code]
Inputs_I_NEW_CFs	Premium CFs (Current Service)	All records in Inputs_I_NEW_CFs[Premium CFs (Current Service)] are within the permissible range of values
Inputs_I_NEW_CFs	Premium CFs (Future Service)	All records in Inputs_I_NEW_CFs[Premium CFs (Current Service)] are within the permissible range of values
Inputs_I_NEW_CFs	Acquisition Expense CFs (Current Service)	All records in Inputs_I_NEW_CFs[Acquisition Expense CFs (Current Service)] are within the permissible range of values
Inputs_I_NEW_CFs	Acquisition Expense CFs (Future Service)	All records in Inputs_I_NEW_CFs[Acquisition Expense CFs (Future Service)] are within the permissible range of values
Inputs_I_NEW_CFs	Investment Component CFs	All records in Inputs_I_NEW_CFs[Investment Component CFs] are within the permissible range of values
Inputs_I_NEW_CFs	Claim and Other Expense CFs (Incurred in Current Reporting Period)	All records in Inputs_I_NEW_CFs[Claim and Other Expense CFs (Incurred in Current Reporting Period)] are within the permissible range of values
Inputs_I_NEW_CFs	Claim and Other Expense CFs (Incurred in Future Reporting Periods)	All records in Inputs_I_NEW_CFs[Claim and Other Expense CFs (Incurred in Future Reporting Periods)] are within the permissible range of values
Inputs_I_NEW_CFs	Delay (in Years)	All records in Inputs_I_NEW_CFs[Delay (in Years)] are within the permissible range of values
Inputs_I_IF_GEN	Reporting Date	All records in Inputs_I_IF_GEN[Reporting Date] are within the expected date range
Inputs_I_IF_GEN	GIC Code	All records in Inputs_I_IF_GEN[GIC Code] are

Dataset	Field	Data Check Performed
		found in Inputs_I_Groups[GIC Code]
Inputs_I_IF_GEN	GIC Code	All records in Inputs_I_IF_GEN[GIC Code] are unique
Inputs_I_IF_GEN	Premium Receipts (Past/Current Service)	All records in Inputs_I_IF_GEN[Premium Receipts (Past/Current Service)] are within the permissible range of values
Inputs_I_IF_GEN	Premium Receipts (Future Service)	All records in Inputs_I_IF_GEN[Premium Receipts (Future Service)] are within the permissible range of values
Inputs_I_IF_GEN	Acquisition Expense Payments (Past/Current Service)	All records in Inputs_I_IF_GEN[Acquisition Expense Payments (Past/Current Service)] are within the permissible range of values
Inputs_I_IF_GEN	Acquisition Expense Payments (Future Service)	All records in Inputs_I_IF_GEN[Acquisition Expense Payments (Future Service)] are within the permissible range of values
Inputs_I_IF_GEN	Investment Component Payments	All records in Inputs_I_IF_GEN[Investment Component Payments] are within the permissible range of values
Inputs_I_IF_GEN	Claim and Other Expense Payments (Incurred in Prior Reporting Periods)	All records in Inputs_I_IF_GEN[Claim and Other Expense Payments (Incurred in Prior Reporting Periods)] are within the permissible range of values
Inputs_I_IF_GEN	Claim and Other Expense Payments (Incurred in Current Reporting Period)	All records in Inputs_I_IF_GEN[Claim and Other Expense Payments (Incurred in Current Reporting Period)] are within the permissible range of values
Inputs_I_IF_GEN	Opening LRC - RA	All records in Inputs_I_IF_GEN[Opening LRC - RA] are within the permissible range of values
Inputs_I_IF_GEN	Release in LRC - RA for Expected Claims and Other Expenses Incurred	All records in Inputs_I_IF_GEN[Release in LRC - RA for Expected Claims and Other Expenses Incurred] are within the permissible range of values
Inputs_I_IF_GEN	Closing LRC - RA	All records in Inputs_I_IF_GEN[Closing LRC - RA] are within the permissible range of values
Inputs_I_IF_GEN	Opening LRC - CSM	All records in Inputs_I_IF_GEN[Opening LRC - CSM] are within the permissible range of values
Inputs_I_IF_GEN	Opening LRC - Loss - PVFCF	All records in Inputs_I_IF_GEN[Opening LRC - Loss - PVFCF] are within the permissible range of values
Inputs_I_IF_GEN	Opening LRC - Loss - RA	All records in Inputs_I_IF_GEN[Opening LRC - Loss - RA] are within the permissible range of values
Inputs_I_IF_GEN	Opening LRC - CSM	All pairs of records in Inputs_I_IF_GEN[Opening LRC - CSM] and

Dataset	Field	Data Check Performed
		Inputs_I_IF_GEN[Opening LRC - Loss - PVFCF] have been checked and at least one of each pair has a value of 0
Inputs_I_IF_GEN	Opening LRC - CSM	All pairs of records in Inputs_I_IF_GEN[Opening LRC - CSM] and Inputs_I_IF_GEN[Opening LRC - Loss - RA] have been checked and at least one of each pair has a value of 0
Inputs_I_IF_GEN	Opening LIC - RA	All records in Inputs_I_IF_GEN[Opening LIC - RA] are within the permissible range of values
Inputs_I_IF_GEN	Closing LIC - RA	All records in Inputs_I_IF_GEN[Closing LIC - RA] are within the permissible range of values
Inputs_I_IF_GEN	Closing LIC - RA (New Claims and Other Expenses Incurred)	All records in Inputs_I_IF_GEN[Closing LIC - RA (New Claims and Other Expenses Incurred)] are within the permissible range of values
Inputs_I_IF_GEN	Opening LIC - IC	All records in Inputs_I_IF_GEN[Opening LIC - IC] are within the permissible range of values
Inputs_I_IF_GEN	New LIC - IC (Investment Components Becoming Payable)	All records in Inputs_I_IF_GEN[New LIC - IC (Investment Components Becoming Payable)] are within the permissible range of values
Inputs_I_IF_GEN	Actual less Expected Return on LRC IC	All records in Inputs_I_IF_GEN[Actual less Expected Return on LRC IC] are within the permissible range of values
Inputs_I_IF_GEN	Closing LIC - IC	All records in Inputs_I_IF_GEN[Closing LIC - IC] are within the permissible range of values
Inputs_I_IF_GEN	Opening LRC - PRCF	All records in Inputs_I_IF_GEN[Opening LRC - PRCF] are within the permissible range of values
Inputs_I_IF_GEN	Pre-recognition CF Payments	All records in Inputs_I_IF_GEN[Pre-recognition CF Payments] are within the permissible range of values
Inputs_I_IF_GEN	Impairment of PRCF Asset	All records in Inputs_I_IF_GEN[Impairment of PRCF Asset] are within the permissible range of values
Inputs_I_IF_GEN	Reversal of Impairment of PRCF Asset	All records in Inputs_I_IF_GEN[Reversal of Impairment of PRCF Asset] are within the permissible range of values
Inputs_I_IF_GEN	Opening Notional DAC	All records in Inputs_I_IF_GEN[Opening Notional DAC] are within the permissible range of values
Inputs_I_IF_FCFs	Reporting Date	All records in Inputs_I_IF_FCFs[Reporting Date] are within the expected date range
Inputs_I_IF_FCFs	GIC Code	All records in Inputs_I_IF_FCFs[GIC Code] are found in Inputs_I_Groups[GIC Code]

Dataset	Field	Data Check Performed
Inputs_I_IF_FCFs	Premium CFs (Past Service)	All records in Inputs_I_IF_FCFs[Premium CFs (Past Service)] are within the permissible range of values
Inputs_I_IF_FCFs	Premium CFs (Service in Next Reporting Period) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Premium CFs (Service in Next Reporting Period)) - Prev FX] are within the permissible range of values
Inputs_I_IF_FCFs	Premium CFs (Service in Next Reporting Period) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Premium CFs (Service in Next Reporting Period) - Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Premium CFs (Future Service) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Premium CFs (Future Service) - Prev FX] are within the permissible range of values
Inputs_I_IF_FCFs	Premium CFs (Future Service) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Premium CFs (Future Service) - Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Acquisition Expense CFs (Past Service)	All records in Inputs_I_IF_FCFs[Acquisition Expense CFs (Past Service)] are within the permissible range of values
Inputs_I_IF_FCFs	Acquisition Expense CFs (Service in Next Reporting Period) - Current FX (Check to be performed for both	All records in Inputs_I_IF_FCFs[Acquisition Expense CFs (Service in Next Reporting Period) - Current FX] are within the permissible range of values

Dataset	Field	Data Check Performed
	Prev FX and Current FX input fields)	
Inputs_I_IF_FCFs	Acquisition Expense CFs (Future Service) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Acquisition Expense CFs (Future Service) - Prev FX] are within the permissible range of values
Inputs_I_IF_FCFs	Acquisition Expense CFs (Future Service) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Acquisition Expense CFs (Future Service) - Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Investment Component CFs (Payable in Future) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Investment Component CFs (Payable in Future) - Prev FX] are within the permissible range of values
Inputs_I_IF_FCFs	Investment Component CFs (Payable in Future) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Investment Component CFs (Payable in Future) - Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Acquisition Expense CFs (Service in Next Reporting Period) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Acquisition Expense CFs (Service in Next Reporting Period) - Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Claim and Other Expense CFs (Incurred in Prior	All records in Inputs_I_IF_FCFs[Claim and Other Expense CFs (Incurred in Prior Reporting Periods) – Prev FX] are within the

Dataset	Field	Data Check Performed
	Reporting Periods) – Prev FX	permissible range of values
Inputs_I_IF_FCFs	Claim and Other Expense CFs (Incurred in Prior Reporting Periods) – Current FX	All records in Inputs_I_IF_FCFs[Claim and Other Expense CFs (Incurred in Prior Reporting Periods) – Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Claim and Other Expense CFs (Incurred in Current Reporting Period) – Prev FX	All records in Inputs_I_IF_FCFs[Claim and Other Expense CFs (Incurred in Current Reporting Period) – Prev FX] are within the permissible range of values
Inputs_I_IF_FCFs	Claim and Other Expense CFs (Incurred in Current Reporting Period) – Current FX	All records in Inputs_I_IF_FCFs[Claim and Other Expense CFs (Incurred in Current Reporting Period) – Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Claim and Other Expense CFs (Incurred in Next Reporting Period) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Claim and Other Expense CFs (Incurred in Next Reporting Period) - Prev FX] are within the permissible range of values
Inputs_I_IF_FCFs	Claim and Other Expense CFs (Incurred in Next Reporting Period) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Claim and Other Expense CFs (Incurred in Next Reporting Period) - Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Claim and Other Expense CFs (Incurred in Future Reporting Periods) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_I_IF_FCFs[Claim and Other Expense CFs (Incurred in Future Reporting Periods) - Prev FX] are within the permissible range of values
Inputs_I_IF_FCFs	Claim and Other	All records in Inputs_I_IF_FCFs[Claim and

Dataset	Field	Data Check Performed
	Expense CFs (Incurred in Future Reporting Periods) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	Other Expense CFs (Incurred in Future Reporting Periods) - Current FX] are within the permissible range of values
Inputs_I_IF_FCFs	Delay (in Years)	All records in Inputs_I_IF_FCFs[Delay (in Years)] are within the permissible range of values
Inputs_I_IF_Patterns	Reporting Date	All records in Inputs_I_IF_Patterns[Reporting Date] are within the expected date range
Inputs_I_IF_Patterns	GIC Code	All records in Inputs_I_IF_Patterns[GIC Code] are found in Inputs_I_Groups[GIC Code]
Inputs_I_IF_Patterns	Coverage Unit (Undiscounted)	All records in Inputs_I_IF_Patterns[Coverage Unit (Undiscounted)] are within the permissible range of values
Inputs_I_IF_Patterns	Amortisation Pattern (Undiscounted)	All records in Inputs_I_IF_Patterns[Amortisation Pattern (Undiscounted)] are within the permissible range of values
Inputs_I_IF_Patterns	PRCF Asset Run-off Pattern	All records in Inputs_I_IF_Patterns[PRCF Asset Run-off Pattern] are within the permissible range of values
Inputs_I_IF_Patterns	Reporting Period (0 = current)	All records in Inputs_I_IF_Patterns[Reporting Period (0 = current)] are within the permissible range of values

2.2.3.2 General Measurement Model (GMM) Data Checks - Reinsurance

Dataset	Field	Data Check Performed
Inputs_R_Groups	GRC Code	No blank records found in Inputs_R_Groups[GRC Code]
Inputs_R_Groups	GRC Code	All records in Inputs_R_Groups[GRC Code] are unique
Inputs_R_Groups	Portfolio	No blank records found in Inputs_R_Groups[Portfolio]
Inputs_R_Groups	Cohort	No blank records found in Inputs_R_Groups[Cohort]
Inputs_R_Groups	Recognition Date	All records in Inputs_R_Groups[Recognition Date] are within the expected date range
Inputs_R_Groups	Locked-in YC Date	All records in Inputs_R_Groups[Locked-in YC Date] are within the range implied by other fields in this dataset
Inputs_R_Groups	Locked-in YC Date	All records in Inputs_R_Groups[Locked-in

Dataset	Field	Data Check Performed
		YC Date] are within the expected date range
Inputs_R_Groups	Locked-in YC Date	All records in Inputs_R_Groups[Locked-in YC Date] are found in YieldCurves[Date \ Duration (Months)]
Inputs_R_Groups	Currency	No blank records found in Inputs_R_Groups[Currency]
Inputs_R_Groups	Locked-in FX Date	All records in Inputs_R_Groups[Locked-in FX Date] are within the range implied by other fields in this dataset
Inputs_R_Groups	Locked-in FX Date	All records in Inputs_R_Groups[Locked-in FX Date] are within the expected date range
Inputs_R_Groups	Locked-in FX Date	All records in Inputs_R_Groups[Locked-in FX Date] are found in YieldCurves[Date \ Duration (Months)]
Inputs_R_Groups	FX Impact from	All records in Inputs_R_Groups[FX Impact from] are 'Locked-in', ‘Average’ or 'Opening'
Inputs_R_Groups	Reporting Segment	All records in Inputs_R_Groups[Reporting Segment] are found in Setup_R_Reporting_Segments[Reporting Segment]
Inputs_R_Groups	RA % of ABS(PVFCF)	All records in Inputs_R_Groups[RA % of ABS(PVFCF)] are within the permissible range of values
Inputs_R_Groups	Retroactive Cover?	All records in Inputs_R_Groups[Retroactive Cover?] are 'Yes' or 'No'
Inputs_R_Groups	Ceding %	All records in Inputs_R_Groups[Ceding %] are within the permissible range of values
Inputs_R_Groups	Ceding %	No blank records found in Inputs_R_Groups[Ceding %]
Inputs_R_I_Mapping	GRC Code	All records in Inputs_R_I_Mapping[GRC Code] are found in Inputs_R_Groups[GRC Code]
Inputs_R_I_Mapping	GRC Code	No blank records found in Inputs_R_I_Mapping[GRC Code]
Inputs_R_I_Mapping	GIC Code	No blank records found in Inputs_R_I_Mapping[GRC Code]
Inputs_R_I_Mapping	Sub-GRC Group	No blank records found in Inputs_R_I_Mapping[Sub-GRC Group]
Inputs_R_I_Mapping	Sub-GRC Group	All records in Inputs_R_I_Mapping[Sub-GRC Group] are unique
Inputs_R_I_Mapping	GIC Measurement model	All records in Inputs_R_I_Mapping[GIC Measurement model] are ‘GMM, ‘PAA’ or ‘VFA’
Inputs_R_I_Mapping	Portion of Group Cover by Reinsurance	All records in Inputs_R_I_Mapping[Portion of Group Cover by Reinsurance] are within the permissible range of values
Inputs_R_I_Mapping	Non-	All records in Inputs_R_I_Mapping[Non-

Dataset	Field	Data Check Performed
	onerous/Onerous (Initial Recognition)	onerous/Onerous (Initial Recognition)] are 'Onerous' or 'Non-onerous'
Inputs_R_I_Mapping	Locked-in YC Date	All records in Inputs_R_I_Mapping[Locked-in YC Date] are within the range implied by other fields in this dataset
Inputs_R_I_Mapping	Locked-in YC Date	All records in Inputs_R_I_Mapping[Locked-in YC Date] are within the expected date range
Inputs_R_I_Mapping	Locked-in YC Date	All records in Inputs_R_I_Mapping[Locked-in YC Date] are found in YieldCurves[Date \ Duration (Months)]
Inputs_R_I_Mapping	Currency	No blank records found in Inputs_R_I_Mapping[Currency]
Inputs_R_NEW_GEN	Reporting Date	All records in Inputs_R_NEW_GEN[Reporting Date] are within the expected date range
Inputs_R_NEW_GEN	GRC Code	All records in Inputs_R_NEW_GEN[GRC Code] are found in Inputs_R_IF_GEN[GRC Code]
Inputs_R_NEW_GEN	GRC Code	All records in Inputs_R_NEW_GEN[GRC Code] are unique
Inputs_R_NEW_GEN	Purchased/Acquired	All records in Inputs_R_NEW_GEN[Purchased/Acquired] are 'Purchased' or 'Acquired'
Inputs_R_NEW_GEN	Pre-recognition CFs	All records in Inputs_R_NEW_GEN[Pre-recognition CFs] are within the permissible range of values
Inputs_R_NEW_GEN	Initial RA	All records in Inputs_R_NEW_GEN[Initial RA] are within the permissible range of values
Inputs_R_NEW_CFs	Reporting Date	All records in Inputs_R_NEW_CFs[Reporting Date] are within the expected date range
Inputs_R_NEW_CFs	GRC Code	All records in Inputs_R_NEW_CFs[GRC Code] are found in Inputs_R_IF_GEN[GRC Code]
Inputs_R_NEW_CFs	Premium CFs (Current Service)	All records in Inputs_R_NEW_CFs[Premium CFs (Current Service)] are within the permissible range of values
Inputs_R_NEW_CFs	Premium CFs (Future Service)	All records in Inputs_R_NEW_CFs[Premium CFs (Future Service)] are within the permissible range of values
Inputs_R_NEW_CFs	Investment Component CFs	All records in Inputs_R_NEW_CFs[Investment Component CFs] are within the permissible range of values
Inputs_R_NEW_CFs	Recoveries CFs (On Claims Incurred in Current Reporting	All records in Inputs_R_NEW_CFs[Recoveries CFs (On Claims Incurred in Current Reporting

Dataset	Field	Data Check Performed
	Period)	Period)] are within the permissible range of values
Inputs_R_NEW_CFs	Recoveries CFs (On Claims Incurred in Future Reporting Periods)	All records in Inputs_R_NEW_CFs[Recoveries CFs (On Claims Incurred in Future Reporting Periods)] are within the permissible range of values
Inputs_R_NEW_CFs	Delay (in Years)	All records in Inputs_R_NEW_CFs[Delay (in Years)] are within the permissible range of values
Inputs_R_NEW_LR	GRC Code	No blank records found in Inputs_R_NEW_LR[GRC Code]
Inputs_R_NEW_LR	GIC Code	No blank records found in Inputs_R_NEW_LR[GIC Code]
Inputs_R_NEW_LR	Sub-GRC Group	No blank records found in Inputs_R_NEW_LR[Sub-GRC Group]
Inputs_R_NEW_LR	GIC New LRC - Loss - PVFCF	All records in Inputs_R_NEW_LR[GIC New LRC - Loss - PVFCF] are within the permissible range of values
Inputs_R_NEW_LR	GIC New LRC - Loss - RA	All records in Inputs_R_NEW_LR[GIC New LRC - Loss - RA] are within the permissible range of values
Inputs_R_I_NEW_CFs	GRC Code	
Inputs_R_I_NEW_CFs	Reporting Date	All records in Inputs_R_I_NEW_CFs[Reporting Date] are within the expected date range
Inputs_R_I_NEW_CFs	GIC Code	No blank records found in Inputs_R_I_NEW_CFs[GIC Code]
Inputs_R_I_NEW_CFs	GRC Code	No blank records found in Inputs_R_I_NEW_CFs[GRC Code]
Inputs_R_I_NEW_CFs	Treaty covered Claim and Other CFs (Incurred in Current Reporting Period)	All records in Inputs_R_I_NEW_CFs[Treaty covered Claim and Other CFs (Incurred in Current Reporting Period)] are within the permissible range of values
Inputs_R_I_NEW_CFs	Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)	All records in Inputs_R_I_NEW_CFs[Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)] are within the permissible range of values
Inputs_R_I_NEW_CFs	Delay (in Years)	All records in Inputs_R_I_NEW_CFs[Delay (in Years)] are within the permissible range of values
Inputs_R_IF_GEN	Reporting Date	All records in Inputs_R_IF_GEN[Reporting Date] are within the expected date range
Inputs_R_IF_GEN	GRC Code	All records in Inputs_R_IF_GEN[GRC Code] are found in Inputs_R_Groups[GRC Code]
Inputs_R_IF_GEN	GRC Code	All records in Inputs_R_IF_GEN[GRC Code] are unique
Inputs_R_IF_GEN	Premium Payments	All records in Inputs_R_IF_GEN[Premium

Dataset	Field	Data Check Performed
	(Past/Current Service)	Payments (Past/Current Service)] are within the permissible range of values
Inputs_R_IF_GEN	Premium Payments (Future Service)	All records in Inputs_R_IF_GEN[Premium Payments (Future Service)] are within the permissible range of values
Inputs_R_IF_GEN	Investment Component Receipts	All records in Inputs_R_IF_GEN[Investment Component Receipts] are within the permissible range of values
Inputs_R_IF_GEN	Recoveries Receipts (On Claims Incurred in Prior Reporting Periods)	All records in Inputs_R_IF_GEN[Recoveries Receipts (On Claims Incurred in Prior Reporting Periods)] are within the permissible range of values
Inputs_R_IF_GEN	Recoveries Receipts (On Claims Incurred in Current Reporting Period)	All records in Inputs_R_IF_GEN[Recoveries Receipts (On Claims Incurred in Current Reporting Period)] are within the permissible range of values
Inputs_R_IF_GEN	Opening ARC - RA	All records in Inputs_R_IF_GEN[Opening ARC - RA] are within the permissible range of values
Inputs_R_IF_GEN	Release in ARC - RA for Recoveries on Expected Claims and Other Expenses Incurred	All records in Inputs_R_IF_GEN[Release in ARC - RA for Recoveries on Expected Claims and Other Expenses Incurred] are within the permissible range of values
Inputs_R_IF_GEN	Closing ARC - RA	All records in Inputs_R_IF_GEN[Closing ARC - RA] are within the permissible range of values
Inputs_R_IF_GEN	Opening ARC - CSM	All records in Inputs_R_IF_GEN[Opening ARC - CSM - Non-loss-recovery] are within the permissible range of values
Inputs_R_IF_GEN	Loss Recovery (Opening)	All records in Inputs_R_IF_GEN[Opening ARIC - RA] are within the permissible range of values
Inputs_R_IF_GEN	Opening ARIC - RA	All records in Inputs_R_IF_GEN[Opening ARIC - RA] are within the permissible range of values
Inputs_R_IF_GEN	Closing ARIC - RA	All records in Inputs_R_IF_GEN[Closing ARIC - RA] are within the permissible range of values
Inputs_R_IF_GEN	Closing ARIC - RA (Recoveries on New Claims and Other Expenses Incurred)	All records in Inputs_R_IF_GEN[Closing ARIC - RA (Recoveries on New Claims and Other Expenses Incurred)] are within the permissible range of values
Inputs_R_IF_GEN	Opening ARIC - IC	All records in Inputs_R_IF_GEN[Opening ARIC - IC] are within the permissible range of values
Inputs_R_IF_GEN	New ARIC - IC (Investment	All records in Inputs_R_IF_GEN[New ARIC - IC (Investment Components Becoming

Dataset	Field	Data Check Performed
	Components Becoming Receivable)	Receivable)] are within the permissible range of values
Inputs_R_IF_GEN	Closing ARIC - IC	All records in Inputs_R_IF_GEN[Closing ARIC - IC] are within the permissible range of values
Inputs_R_IF_GEN	Opening ARC - PRCF	All records in Inputs_R_IF_GEN[Opening ARC - PRCF] are within the permissible range of values
Inputs_R_IF_GEN	Pre-recognition CF Receipts	All records in Inputs_R_IF_GEN[Pre-recognition CF Receipts] are within the permissible range of values
Inputs_R_IF_GEN	Impairment of PRCF Liability	All records in Inputs_R_IF_GEN[Impairment of PRCF Asset] are within the permissible range of values
Inputs_R_IF_GEN	Reversal of Impairment of PRCF Liability	All records in Inputs_R_IF_GEN[Reversal of Impairment of PRCF Asset] are within the permissible range of values
Inputs_R_IF_GEN_LR	GRC Code	No blank records found in Inputs_R_IF_GEN_LR[GRC Code]
Inputs_R_IF_GEN_LR	GIC Code	No blank records found in Inputs_R_IF_GEN_LR[GIC Code]
Inputs_R_IF_GEN_LR	GRC Sub-code	No blank records found in Inputs_R_IF_GEN_LR[GRC Sub-Code]
Inputs_R_IF_GEN_LR	GIC Measurement model	All records in Inputs_R_IF_GEN_LR[GIC Measurement model] are 'GMM, 'PAA' or 'VFA'
Inputs_R_IF_GEN_LR	Reporting date	All records in Inputs_R_IF_GEN_LR[Reporting Date] are within the expected date range
Inputs_R_IF_GEN_LR	Non-onerous/Onerous (Opening)	All records in Inputs_R_IF_GEN_LR[Non-onerous/Onerous (Opening)] are 'Onerous' or 'Non-onerous'
Inputs_R_IF_GEN_LR	Non-onerous/Onerous (After Non FX change in FCF)	All records in Inputs_R_IF_GEN_LR[Non-onerous/Onerous (After Non FX change in FCF)] are 'Onerous' or 'Non-onerous'
Inputs_R_IF_GEN_LR	Opening LRC - Loss - PVFCF	All records in Inputs_R_IF_GEN_LR[Opening LRC - Loss - PVFCF] are within the permissible range of values
Inputs_R_IF_GEN_LR	New LRC - Loss – PVFCF	All records in Inputs_R_IF_GEN_LR[New LRC - Loss – PVFCF] are within the permissible range of values
Inputs_R_IF_GEN_LR	LRC - Loss - PVFCF - Post Roll Forward	All records in Inputs_R_IF_GEN_LR[LRC - Loss - PVFCF - Post Roll Forward] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - PVFCF of Removal of	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Removal of

Dataset	Field	Data Check Performed
	Expected Claims and Other Expenses Incurred (Current)	Expected Claims and Other Expenses Incurred (Current)] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	LRC - Loss - PVFCF - Post Total Experience Variance (Future)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Closing LRC - Loss - PVFCF	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Opening LRC - Loss - RA	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	New LRC - Loss - RA	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	LRC - Loss - RA - Post Roll Forward	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values

Dataset	Field	Data Check Performed
Inputs_R_IF_GEN_LR	LRC - Loss - RA - Post Total Experience Variance (Future)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Closing LRC - Loss - RA	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Total Change in FCF (Future)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - CSM of Total Experience Variance (Future)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	Effect on LRC - Loss - FCF of Total Experience Variance (Future)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_GEN_LR	LRC - Loss - FCF - Post Total Experience Variance (Future)	All records in Inputs_R_IF_GEN_LR[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] are within the permissible range of values
Inputs_R_IF_FCFs	Reporting Date	All records in Inputs_R_IF_FCFs[Reporting Date] are within the expected date range
Inputs_R_IF_FCFs	GRC Code	All records in Inputs_R_IF_FCFs[GRC Code] are found in Inputs_R_Groups[GRC Code]
Inputs_R_IF_FCFs	Premium CFs (Past Service) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Premium CFs (Past Service) - Prev FX] are within the permissible range of values
Inputs_R_IF_FCFs	Premium CFs (Service in Next Reporting Period) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Premium CFs (Service in Next Reporting Period) - Prev FX] are within the permissible range of values
Inputs_R_IF_FCFs	Premium CFs (Future	All records in Inputs_R_IF_FCFs[Premium

Dataset	Field	Data Check Performed
	Service) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	CFs (Future Service) - Prev FX] are within the permissible range of values
Inputs_R_IF_FCFs	Premium CFs (Past Service)	All records in Inputs_R_IF_FCFs[Premium CFs (Past Service)] are within the permissible range of values
Inputs_R_IF_FCFs	Premium CFs (Service in Next Reporting Period) - Current FX	All records in Inputs_R_IF_FCFs[Premium CFs (Service in Next Reporting Period) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Premium CFs (Future Service) - Current FX	All records in Inputs_R_IF_FCFs[Premium CFs (Future Service) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Investment Component CFs (Receivable in Future) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Investment Component CFs (Receivable in Future) - Prev FX] are within the permissible range of values
Inputs_R_IF_FCFs	Investment Component CFs (Receivable in Future) – Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Investment Component CFs (Receivable in Future) – Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) - Prev FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Current Reporting Period)(Previous NP	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Current Reporting Period)(Previous NP Risk) - Prev FX] are within the permissible range of

Dataset	Field	Data Check Performed
	Risk) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Next Reporting Period)(Previous NP Risk) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Next Reporting Period)(Previous NP Risk) - Prev FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk) - Prev FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk) - Prev FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Current Reporting Periods)(Previous NP Risk) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Current Reporting Periods)(Previous NP Risk) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Next Reporting

Dataset	Field	Data Check Performed
	Next Reporting Periods)(Previous NP Risk) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	Periods)(Previous NP Risk) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Current Reporting Periods)(Current NP Risk) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Current Reporting Periods)(Current NP Risk) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Next Reporting Periods)(Current NP Risk) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Next Reporting Periods)(Current NP Risk) - Current FX] are within the permissible range of values

Dataset	Field	Data Check Performed
Inputs_R_IF_FCFs	Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk) - Current FX (Check to be performed for both Prev FX and Current FX input fields)	All records in Inputs_R_IF_FCFs[Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk) - Current FX] are within the permissible range of values
Inputs_R_IF_FCFs	Delay (in Years)	All records in Inputs_R_IF_FCFs[Delay (in Years)] are within the permissible range of values
Inputs_R_IF_Patterns	Reporting Date	All records in Inputs_R_IF_Patterns[Reporting Date] are within the expected date range
Inputs_R_IF_Patterns	GRC Code	All records in Inputs_R_IF_Patterns[GRC Code] are found in Inputs_R_Groups[GRC Code]
Inputs_R_IF_Patterns	Coverage Unit (Undiscounted)	All records in Inputs_R_IF_Patterns[Coverage Unit (Undiscounted)] are within the permissible range of values
Inputs_R_IF_Patterns	Reporting Period (0 = current)	All records in Inputs_R_IF_Patterns[Reporting Period (0 = current)] are within the permissible range of values
Inputs_R_I_IF_FCFs	Reporting Date	All records in Inputs_R_I_IF_FCFs[Reporting Date] are within the expected date range
Inputs_R_I_IF_FCFs	GRC Code	All records in Inputs_I_IF_FCFs_RI[GRC Code] are found in Inputs_R_Groups[GRC Code]
Inputs_R_I_IF_FCFs	GIC Code	No blank records found in Inputs_R_I_IF_FCFs[GIC Code]
Inputs_R_I_IF_FCFs	GRC Code	No blank records found in Inputs_R_I_IF_FCFs [GRC Code]
Inputs_R_I_IF_FCFs	Treaty covered Claim and Other CFs (Incurred in Prior Reporting Periods)	All records in Inputs_R_I_IF_FCFs[Treaty covered Claim and Other CFs (Incurred in Prior Reporting Periods)] are within the permissible range of values
Inputs_R_I_IF_FCFs	Treaty covered Claim and Other CFs (Incurred in Current Reporting Period)	All records in Inputs_R_I_IF_FCFs[Treaty covered Claim and Other CFs (Incurred in Current Reporting Period)] are within the permissible range of values
Inputs_R_I_IF_FCFs	Treaty covered Claim and Other CFs (Incurred in Next Reporting Period)	All records in Inputs_R_I_IF_FCFs[Treaty covered Claim and Other CFs (Incurred in Next Reporting Period)] are within the permissible range of values

Dataset	Field	Data Check Performed
Inputs_R_I_IF_FCFs	Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)	All records in Inputs_R_I_IF_FCFs[Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)] are within the permissible range of values
Inputs_R_I_IF_FCFs	Delay (in Years)	All records in Inputs_R_I_IF_FCFs[Delay (in Years)] are within the permissible range of values

2.2.4 Calculations/Workings

Per calculation component/sheet, we will have a description of what it does as well as the step by step calculation. Each step will have a description, type and formula.

Once all the data checks have passed, the calculations relating to IFRS 17 measurement and reporting begin. No user actions/inputs are required in these calculation components. The descriptions below explain the solution's calculation engine.

The descriptions below will first cover calculations relating to measurement of insurance contracts at initial recognition, and thereafter calculations relating to subsequent measurement.

2.2.4.1 GMM Insurance Calculations

Initial Measurement Calculations

Insurance Contracts Initial Measurement – Discounted Cash Flows (I_IN_Disc)

This component of the calculation discounts the future cash flows required for the initial measurement of the liability for remaining coverage. Data from the Input components of the model that relate to new insurance contracts will be referenced (such as the cash flows and the relevant GIC related information). Calculations relating to the discounting of these cash flows are also performed.

Each input line (row) in I_NEW_CFs is referenced consecutively, starting with the first input. The discounting is thus also performed for each line (row) of cash flows input in I_NEW_CFs.

The table below explains the four steps relating to these discounting calculations at initial measurement.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GIC and cash flow inputs			
Reporting Date	Reporting date associated with the row of cash flow inputs sourced from I_NEW_CFs.	Date	[Reporting Date] Each reporting date is referenced consecutively starting with the first input in I_NEW_CFs.
GIC Code	GIC Code associated with the row of cash flow inputs sourced from I_NEW_CFs.	String	[GIC Code] Each GIC Code is referenced consecutively starting with the first input in I_NEW_CFs.
Locked-in YC Date	Locked in YC date associated with the given GIC Code,	Date	[Locked in YC Date] for the given GIC Code, referenced from the input in I_Groups.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	sourced from I_Groups		
Currency	Currency associated with the given GIC Code, sourced from I_Groups	String	[Currency] for the given GIC Code, referenced from the input in I_Groups.
Premium CFs (Unlinked)(Service in Current Reporting Period)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: [Premium CFs (Unlinked) (Current Service)] column in I_NEW_CFs.
Premium CFs (Unlinked) (Future Service)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: [Premium CFs (Unlinked) (Future Service)] column in I_NEW_CFs.
Acquisition Expense CFs (Unlinked) (Service in Current Reporting Period)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: [Acquisition Expense CFs (Unlinked) (Current Service)] column in I_NEW_CFs.
Acquisition Expense CFs (Unlinked) (Future Service)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: [Acquisition Expense CFs (Unlinked) (Future Service)] column in I_NEW_CFs.
Investment Component CFs (Unlinked)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: [Investment Component CFs (Unlinked)] column in I_NEW_CFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Claim and Other Expense CFs (Unlinked) (Incurred in Current Reporting Period)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: [Claim and Other Expense CFs (Unlinked) (Incurred in Current Reporting Period)] column in I_NEW_CFs.
Claim and Other Expense CFs (Unlinked) (Incurred in Future Reporting Periods)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: [Claim and Other Expense CFs (Unlinked) (Incurred in Future Reporting Period)] column in I_NEW_CFs.
Premium CFs (Linked)(Service in Current Reporting Period)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” or Scope_LinkedCashflows = “No” Then output: 0 Otherwise: [Premium CFs (Linked) (Current Service)] column in I_NEW_CFs.
Premium CFs (Linked) (Future Service)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” or Scope_LinkedCashflows = “No” Then output: 0 Otherwise: [Premium CFs (Linked) (Future Service)] column in I_NEW_CFs.
Acquisition Expense CFs (Linked) (Service in Current Reporting Period)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” or Scope_LinkedCashflows = “No” Then output: 0 Otherwise: [Acquisition Expense CFs (Linked) (Current Service)] column in I_NEW_CFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Acquisition Expense CFs (Linked) (Future Service)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” or Scope_LinkedCashflows = “No” Then output: 0 Otherwise: [Acquisition Expense CFs (Linked) (Future Service)] column in I_NEW_CFs.
Investment Component CFs (Linked)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” or Scope_LinkedCashflows = “No” Then output: 0 Otherwise: [Investment Component CFs (Linked)] column in I_NEW_CFs.
Claim and Other Expense CFs (Linked) (Incurred in Current Reporting Period)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” or Scope_LinkedCashflows = “No” Then output: 0 Otherwise: [Claim and Other Expense CFs (Linked) (Incurred in Current Reporting Period)] column in I_NEW_CFs.
Claim and Other Expense CFs (Linked) (Incurred in Future Reporting Periods)	Input cash flows sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” or Scope_LinkedCashflows = “No” Then output: 0 Otherwise: [Claim and Other Expense CFs (Linked) (Incurred in Future Reporting Period)] column in I_NEW_CFs.
Delay (in Years)	Sourced from corresponding input column in I_NEW_CFs (for the given row of cash flow inputs)	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: [Delay (in Years)] column in I_NEW_CFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 2: Referencing appropriate discount rates for each row of cash flows			
Spot Rate (Unlinked)(Locked-in Date, Delay) *Referenced as "i1" in formulas for ease of reading*	Spot rate for the given Locked-in YC date and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Insurance new business indicator = "No" or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked_Remaining Coverage_[Group Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places.
Spot Rate (Unlinked)(Locked-in Date, min[Delay, Reporting Date - Locked-in Date]) *Referenced as "i2" in formulas for ease of understanding*	Spot rate for the given Locked-in YC date and alternate Delay, as input in the "Yield Curves" input sheet.	Percentage	If Insurance new business indicator = "No" Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked_Remaining Coverage_[Group Code]** At duration: **Roundup(MIN([Delay (in Years)]; ([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that **[Reporting Date]-[Locked-in YC Date]** represents the difference in days between the two dates.
Spot Rate (Linked)(Locked-in Date, Delay) *Referenced as "i3" in formulas for ease of reading*	Spot rate for the given Locked-in YC date and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Insurance new business indicator = "No" Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Linked_Remaining Coverage_[Group Code]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places.
Spot Rate (Linked)(Locked-in Date, min[Delay, Reporting Date - Locked-in Date]) *Referenced as "i4" in formulas for ease of understanding*	Spot rate for the given Locked-in YC date and alternate Delay, as input in the "Yield Curves" input sheet.	Percentage	If Insurance new business indicator = "No" Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Linked_Remaining Coverage_[Group Code]** At duration: **Roundup(MIN([Delay (in Years)]; ([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that **[Reporting Date]-[Locked-in YC Date]** represents the difference in days between the two dates.
Step 3: Discounting of various cash flows – Present value at recognition date			
Discounted Premium CFs (Current Service)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Premium CFs (Unlinked)(Service in Current Reporting Period)] * (1 + i1)** $^{(-[\text{Delay (in Years)}])}$ **+** **[Premium CFs (Linked)(Service in Current Reporting Period)] * (1 + i3)** $^{(-[\text{Delay (in Years)}])}$
Discounted Premium CFs (Future Service)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Premium CFs (Unlinked)(Future Service)] * (1 + i1)** $^{(-[\text{Delay (in Years)}])}$ **+** **[Premium CFs (Linked)(Future Service)] * (1 + i3)** $^{(-[\text{Delay (in Years)}])}$
Acquisition Expense CFs (Linked)(Service in Current Reporting Period)	Present Value of the cash flow as at the Recognition date	Number	**[Acquisition Expense CFs (Unlinked)(Service in Current Reporting Period)] * (1 + i1)** $^{(-[\text{Delay (in Years)}])}$ **+** **[Acquisition Expense CFs (Linked)(Service in Current Reporting Period)] * (1 + i3)** $^{(-[\text{Delay (in Years)}])}$
Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Acquisition Expense CFs (Unlinked)(Future Service)] * (1 + i1)** $^{(-[\text{Delay (in Years)}])}$ **+** **[Acquisition Expense CFs (Linked)(Future Service)] * (1 + i3)** $^{(-[\text{Delay (in Years)}])}$

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Discounted Investment Component CFs (Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Investment Component CFs (Unlinked)] * (1 + i1) (-[Delay (in Years)])** **+** **[Investment Component CFs (Linked)] * (1 + i3) (-[Delay (in Years)])**
Discounted Non-claim CFs (Locked-in YC, Locked-in Date)	Sum of previous 5 items to obtain the total present value of the Non-Claim cash flows (relating to initial measurement)	Number	**[Discounted Premium CFs (Current Service)(Locked-in YC, Locked-in Date)] + [Discounted Premium CFs (Future Service)(Locked-in YC, Locked-in Date)] + [Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Locked-in Date)] + [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Locked-in Date)] + [Discounted Investment Component CFs (Locked-in YC, Locked-in Date)]**
Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period)] * (1 + i1) (-[Delay (in Years)])** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period)] * (1 + i3) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Period)] * (1 + i1) (-[Delay (in Years)])** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Period)] * (1 + i3) (-[Delay (in Years)])**
Discounted Claim CFs (Locked-in YC, Locked-in Date)	Sum of previous 2 items to obtain total present value of the claim and expense cash flows (relating to initial measurement)	Number	**[Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Locked-in YC, Locked-in Date)] + [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, Locked-in Date)]**
Step 4: Discounting of various cash flows – Present value at reporting date			
Discounted Premium CFs (Current Service)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: **[Premium CFs (Unlinked)(Service in Current Reporting Period)] * (1 + i1) (-[Delay (in Years)]) ∗** **(1 + i2) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Premium CFs (Linked)(Service in Current Reporting Period)] * (1 + i3) (-[Delay (in Years)]) ∗ (1 + i4) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Discounted Premium CFs (Future Service)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: **[Premium CFs (Unlinked)(Future Service)] * (1 + i1)** (-[Delay (in Years)]) * **(1 + i2)** MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2)) **+** **[Premium CFs (Linked)(Future Service)] * (1 + i3)** (-[Delay (in Years)]) * **(1 + i4)** MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))
Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: **[Acquisition Expense CFs (Unlinked)(Service in Current Reporting Period)] * (1 + i1)** (-[Delay (in Years)]) * **(1 + i2)** MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2)) **+** **[Acquisition Expense CFs (Linked)(Service in Current Reporting Period)] * (1 + i3)** (-[Delay (in Years)]) * **(1 + i4)** MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))
Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: **[Acquisition Expense CFs (Unlinked)(Future Service)] * (1 + i1)** (-[Delay (in Years)]) * **(1 + i2)** MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2)) **+** **[Acquisition Expense CFs (Linked)(Future Service)] * (1 + i3)** (-[Delay (in Years)]) * **(1 + i4)** MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))
Discounted Investment Component CFs	Present Value of the cash flow as at the Reporting date (or	Number	If Insurance new business indicator = "No" Then output: 0

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
(Locked-in YC, Reporting Date)	cash flow date if before the reporting date)		Otherwise: **[Investment Component CFs (Unlinked)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Investment Component CFs (Linked)] * (1 + i3) (-[Delay (in Years)]) * (1 + i4) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**
Discounted Non-claim CFs (Locked-in YC, Reporting Date)	Sum of previous 5 items to obtain the total discounted Non-Claim cash flows (reporting date)	Number	**[Discounted Premium CFs (Current Service)(Locked-in YC, Reporting Date)] + [Discounted Premium CFs (Future Service)(Locked-in YC, Reporting Date)] + [Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Reporting Date)] + [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Reporting Date)] + [Discounted Investment Component CFs (Locked-in YC, Reporting Date)]**
Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: **[Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period)] * (1 + i3) (-[Delay (in Years)]) * (1 + i4) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**
Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: **[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) MIN(Delay (in Years), Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods)] * (1 + i3) $^{(-[\text{Delay (in Years)}])}$ **∗ (1 + i4)** **MIN(Delay (in Years), Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**
Discounted Claim CFs (Locked-in YC, Reporting Date)	Sum of previous 2 items to obtain total discounted claim and expense cash flows (reporting date)	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: **[Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Locked-in YC, Reporting Date)] + [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)]**

Insurance Contracts Initial Measurement – Calculations (I_IN_Calc)

This component of the calculation performs the remaining calculation steps required for the initial measurement of the Liability For Remaining Coverage (LRC) for new contracts recognised within the reporting period.

In particular, the calculation aims to determine the Contractual Service Margin (CSM) or Loss Component associated with each of the GICs containing new insurance contracts, based on the expected future (now discounted) premiums, claims & expense, acquisition expense and Investment Component cash flows associated with these GICs.

The cash flows are aggregated per GIC Code to perform these calculations.

The following components of the model are referenced to perform the calculations in I_IN_Calc:
- I_Groups
- I_NEW_GEN
- I_IN_Disc

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing GIC Codes and related information			
GIC Code	GIC Code associated with the row of cash flow inputs sourced from I_NEW_GEN.	String	[GIC Code] This is sourced from I_NEW_GEN. Each GIC Code is referenced consecutively starting with the first input in I_NEW_GEN and only appears once.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Issued/Acquired	Issued/Acquired indicator for each GIC Code sourced from I_NEW_GEN	String	[Issued/Acquired] This is sourced from I_NEW_GEN.
Pre-recognition CFs	Pre-recognition CFs for the GIC sourced from I_NEW_GEN	Number	If Insurance new business indicator = "No" Then output: 0 Otherwise: [Pre-recognition CFs] This is sourced from I_NEW_GEN.
Step 2: Aggregating Discounted Cash Flows per GIC Code			
New LRC - Premium CFs (Current Service)	The aggregated value relating to the relevant GIC Code as at the locked-in YC date, sourced from I_IN_Disc	Number	<u>Step 1</u> Find the sum of [Discounted Premium CFs (Current Service)(Locked-in YC, Locked-in Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_IN_Calc) <u>Step 2</u> Multiply above by -1
New LRC - Premium CFs (Future Service)	The aggregated value relating to the relevant GIC Code as at the locked-in YC date, sourced from I_IN_Disc	Number	<u>Step 1</u> Find the sum of [Discounted Premium CFs (Future Service)(Locked-in YC, Locked-in Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_IN_Calc) <u>Step 2</u>

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Multiply above by -1
New LRC - Premium CFs	Sum of previous 2 items to obtain the total premium cash flows for each GIC Code	Number	**[New LRC - Premium CFs (Current Service)]+[New LRC - Premium CFs (Future Service)]**
New LRC - Acquisition Expense CFs (Current Service)	The aggregated value relating to the relevant GIC Code as at the locked-in YC date, sourced from I_IN_Disc	Number	<u>Step 1</u> Find the sum of [Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Locked-in Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_IN_Calc) <u>Step 2</u> Multiply above by -1
New LRC - Acquisition Expense CFs (Future Service)	The aggregated value relating to the relevant GIC Code as at the locked-in YC date, sourced from I_IN_Disc	Number	<u>Step 1</u> Fine the sum of [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Locked-in Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_IN_Calc) <u>Step 2</u> Multiply above by -1
New LRC - Acquisition Expense CFs	Sum of previous 2 items to obtain the total acquisition expense cash flows for each GIC Code	Number	**[New LRC - Acquisition Expense CFs (Current Service)]+[New LRC - Acquisition Expense CFs (Future Service)]**
New LRC - Investment Component CFs	The aggregated value relating to the relevant GIC Code as at the locked-in YC date, sourced from I_IN_Disc	Number	<u>Step 1</u> Find the sum of

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Discounted Investment Component CFs (Locked-in YC, Locked-in Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_IN_Calc) <u>Step 2</u> Multiply above by -1
New LRC - Claim and Other Expense CFs (Incurred in Current Reporting Period)	The aggregated value relating to the relevant GIC Code as at locked-in YC date (sourced from I_IN_Disc)	Number	<u>Step 1</u> Find the sum of [Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Locked-in YC, Locked-in Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_IN_Calc) <u>Step 2</u> Multiply above by -1
New LRC - Claim and Other Expense CFs (Incurred in Future Reporting Periods)	The aggregated value relating to the relevant GIC Code as at locked-in YC date (sourced from I_IN_Disc)	Number	<u>Step 1</u> Find the sum of [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Period)(Locked-in YC, Locked-in Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(given GIC Code in I_IN_Calc) <u>Step 2</u> Multiply above by -1
New LRC - Claim and Other Expense CFs	Sum of previous 2 items to obtain the total claim and other expense cash flows for each GIC Code	Number	**[New LRC - Claim and Other Expense CFs (Incurred in Current Reporting Period)] + [New LRC - Claim and Other Expense CFs (Incurred in Future Reporting Periods)]**
Step 3: Aggregating Inflows and Outflows per GIC Code			
New LRC - Total Outflows	The aggregated present value of all outflows relating to the GIC Code (excluding the risk adjustment)	Number	**[New LRC - Acquisition Expense CFs] + [New LRC - Investment Component CFs] + [New LRC - Claim and Other Expense CFs]**
New LRC - PVFCF	The aggregated present value of all fulfilment cash flows (inflows and outflows) relating to the GIC Code (excluding the risk adjustment)	Number	**[New LRC - Premium CFs] + [New LRC - Total Outflows]**
Step 4: Determining the Risk Adjustment per GIC Code			
RA % of ABS(PVFCF Claims)	The risk adjustment percentage for the GIC sourced from I_Groups if the risk adjustment simplification is used (as specified in the Setup)	Percentage	If Insurance new business indicator = “No” Then output: 0 Otherwise: If the “Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?” is set to “Yes” in the Setup: Reference [RA % of ABS(PVFCF)] for the GIC Code from I_Groups If the “Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?” is set to “No” in the Setup: Output **“N/A”**.
New LRC - RA	The LRC risk adjustment sourced from I_NEW_GEN if simplification is not used and set to a percentage of the absolute value of LRC - Claim	Number	If [RA % of ABS(PVFCF Claims)] = “N/A” Then:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	and Other Expense CFs if simplification is used		Reference [Initial RA] for the GIC Code from I_NEW_GEN Otherwise: **ABS([New LRC - Claim and Other Expense CFs]) * [RA % of ABS(PVFCF Claims)]**
New LRC - FCF	The aggregated present value of all fulfilment cash flows (inflows and outflows) relating to the GIC Code, including the risk adjustment	Number	**[New LRC - PVFCF] + [New LRC - RA]**
Step 5: Summarising components of the LRC			
Non-onerous/Onerous	This field indicates whether the GIC is onerous or not at initial recognition based on whether the LRC fulfilment cash flows (FCFs) net of pre-recognition cash flows is greater than or less than zero.	String	If [New LRC - FCF] - [Pre-recognition CFs] > 0 Then Output **"Onerous"** Otherwise Output **"Non-onerous"**
New LRC - CSM	Contains the Contractual Service Margin (CSM) of the GIC (if non-onerous).	Number	If [Non-onerous/Onerous] = "Onerous" Then **-[Pre-recognition CFs]** Otherwise **-[New LRC - FCF]**
New LRC - Loss - PVFCF	This isolates the contribution of the present value of future claim and expense cash flows that make up the Loss Component of the LRC if the GIC is onerous	Number	If [Non-onerous/Onerous] = "Non-onerous" Then Output **0** Otherwise **([New LRC - FCF] - [Pre-recognition CFs]) * ([New LRC - Claim and Other Expense CFs] / ([New LRC - Claim and Other Expense CFs] + [New LRC - RA]))**
New LRC - Loss - RA	This isolates the contribution of the risk adjustment that makes up the Loss Component of the LRC if the GIC is onerous	Number	If [Non-onerous/Onerous] = "Non-onerous" Then Output **0** Otherwise **([New LRC - FCF] - [Pre-recognition CFs]) * ([New LRC - RA] / ([New LRC -**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Claim and Other Expense CFs] + [New LRC - RA]))
New LRC - Profit - PVFCF (Claims)	This isolates the present value of future claim and expense cash flows that make up the LRC excluding its loss component	Number	**[New LRC - Claim and Other Expense CFs] - [New LRC - Loss - PVFCF]**
New LRC - Profit - RA	This isolates the risk adjustment that makes up the LRC excluding its loss component	Number	**[New LRC - RA] - [New LRC - Loss - RA]**

Insurance Contracts Initial Measurement – Pre Foreign Exchange Conversion (I_IN_Pre_FX)

This component of the calculation extracts all items from I_IN_Calc that require currency conversion at a later stage of the IFRS 17 measurement calculations. This is broken down into cash flows relating to contracts that are divided into one of four categories:

- “issued” or “acquired” and “Onerous” or “Non-onerous”.

The I_IN_Calc component of the model is referenced throughout this component of the calculation.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing GIC Codes			
GIC Code	GIC Code associated with the row of cash flow inputs sourced from I_IN_Calc.	String	[GIC Code] This is sourced from I_IN_Calc. Each GIC Code is referenced consecutively starting with the first GIC Code in I_IN_Calc and only appears once.
Step 2: Isolating cash flows for “Issued” contracts that are Non-onerous			
Transfer of Pre-recognition CFs (Issued, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[Pre-recognition CFs]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise Output **0**
New LRC - Profit - Premium CFs (Issued, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Premium CFs] Otherwise Output **0**
New LRC - Profit - Acquisition Expense CFs (Issued, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Acquisition Expense CFs] Otherwise Output **0**
New LRC - Profit - Investment Component CFs (Issued, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Investment Component CFs] Otherwise Output **0**
New LRC - Profit - Claim and Other Expense CFs (Issued, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Profit - PVFCF (Claims)] Otherwise Output **0**
New LRC - Profit - RA (Issued, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Reference I_IN_Calc[New LRC - Profit - RA] Otherwise Output **0**
New LRC - Profit - CSM (Issued, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - CSM] Otherwise Output **0**
Step 3: Isolating cash flows for “Issued” contracts that are Onerous			
Transfer of Pre-recognition CFs (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[Pre-recognition CFs] Otherwise Output **0**
New LRC - Profit - Premium CFs (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Premium CFs] Otherwise Output **0**
New LRC - Profit - Acquisition Expense CFs (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Acquisition Expense CFs] Otherwise Output **0**
New LRC - Profit - Investment Component CFs (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Investment Component CFs] Otherwise Output **0**
New LRC - Profit - Claim and Other Expense CFs (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Profit - PVFCF (Claims)] Otherwise Output **0**
New LRC - Profit - RA (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Profit - RA] Otherwise Output **0**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
New LRC - Profit - CSM (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - CSM] Otherwise Output **0**
New LRC - Loss - PVFCF (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Loss - PVFCF] Otherwise Output **0**
New LRC - Loss - RA (Issued, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Issued" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Issued"

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Loss - RA] Otherwise Output **0**
Step 4: Isolating cash flows for “Acquired” contracts that are Non-onerous			
Transfer of Pre-recognition CFs (Acquired, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired" AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[Pre-recognition CFs] Otherwise Output **0**
New LRC - Profit - Premium CFs (Acquired, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Premium CFs]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise Output **0**
New LRC - Profit - Acquisition Expense CFs (Acquired, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Acquisition Expense CFs] Otherwise Output **0**
New LRC - Profit - Investment Component CFs (Acquired, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Investment Component CFs] Otherwise Output **0**
New LRC - Profit - Claim and Other Expense CFs (Acquired, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Profit - PVFCF (Claims)] Otherwise Output **0**
New LRC - Profit - RA (Acquired, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then Reference I_IN_Calc[New LRC - Profit - RA] Otherwise Output **0**
New LRC - Profit - CSM (Acquired, Non-onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Non-onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Non-onerous" Then

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Reference I_IN_Calc[New LRC - CSM] Otherwise Output **0**
Step 5: Isolating cash flows for “Acquired” contracts that are Onerous			
Transfer of Pre-recognition CFs (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[Pre-recognition CFs] Otherwise Output **0**
New LRC - Profit - Premium CFs (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Premium CFs] Otherwise Output **0**
New LRC - Profit - Acquisition Expense CFs (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Acquisition Expense CFs] Otherwise Output **0**
New LRC - Profit - Investment Component CFs (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Investment Component CFs] Otherwise Output **0**
New LRC - Profit - Claim and Other Expense CFs (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Profit - PVFCF (Claims)] Otherwise Output **0**
New LRC - Profit - RA (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Profit - RA] Otherwise Output **0**
New LRC - Profit - CSM (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired " AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - CSM] Otherwise Output **0**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
New LRC - Loss - PVFCF (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Loss - PVFCF] Otherwise Output **0**
New LRC - Loss - RA (Acquired, Onerous)	Sourced from I_IN_Calc (if GIC is marked as "Acquired" and "Onerous")	Number	If Insurance new business indicator = “No” Then output: 0 Otherwise: If I_IN_Calc[Issued/Acquired] = "Acquired" AND I_IN_Calc[Non-onerous/Onerous] = "Onerous" Then Reference I_IN_Calc[New LRC - Loss - RA] Otherwise Output **0**

GIC Code	Transfer of Pre-recognition CFs (Issued, Non-onerous)	New LRC - Profit - Premium CFs (Issued, Non-onerous)	New LRC - Profit - CSM (Issued, Non-onerous)	Transfer of Pre-recognition CFs (Issued, Onerous)	New LRC - Loss - PVFCF (Issued, Onerous)	New LRC - Loss - RA (Issued, Onerous)	Transfer of Pre-recognition CFs (Acquired, Non-onerous)	New LRC - Profit - CSM (Acquired, Non-onerous)	Transfer of Pre-recognition CFs (Acquired, Onerous)
P12018	-	-	-	-	-	-	(100.00)	160.45	-
P22018	-	-	-	(50.00)	126.78	6.34	-	-	-
P42018	(100.00)	(50 891.37)	979.00	-	-	-	-	-	-
P52018	-	(100.00)	-	-	-	-	-	-	-
P62018	-	-	-	-	4.76	0.24	-	-	-

The above screenshot demonstrates how the cash flows per GIC are isolated and placed in mutually exclusive “buckets” based on whether they are Issued/Acquired and Onerous/Non-onerous.

Subsequent Measurement Calculations

Insurance Contracts Subsequent Measurement – Discounted Cash Flows (I_Sub_Disc1)

This component of the calculation discounts the future cash flows required for the subsequent measurement of the insurance liabilities/assets. This relates to both newly recognised insurance contracts as well as insurance contracts recognised in previous periods where an insurance liability/asset is still held at the reporting date.

Data from the Input components of the model that relate to subsequent measurement of insurance contracts will be referenced (such as the cash flows and the relevant GIC related information). Calculations relating to the discounting of these cash flows are also performed.

Each input line (row) in I_IF_FCFs is referenced consecutively, starting with the first input. The discounting is thus also performed for each line (row) of cash flows input in I_IF_FCFs.

Note that for steps where the field is not appended with "Prev FX" or "Current FX", this implies that all the calculation fields in that step use only previous exchange rates or only current exchange rates. The exception is Step 4, for which the field names do indicate that all values are based on Current FX values.

The table below explains the seven steps relating to these discounting calculations at subsequent measurement.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GIC and cash flow inputs			
Reporting Date	Reporting date associated with the row of cash flow inputs sourced from I_IF_FCFs.	Date	[Reporting Date] Each reporting date is referenced consecutively starting with the first input in I_IF_FCFs.
GIC Code	GIC Code associated with the row of cash flow inputs sourced from I_IF_CFs.	String	[GIC Code] Each GIC Code is referenced consecutively starting with the first input in I_IF_FCFs.
Locked-in YC Date	Locked in YC date associated with the given GIC Code, sourced from I_Groups	Date	[Locked in YC Date] for the given GIC Code, referenced from the input in I_Groups.
Currency	Currency associated with the given GIC Code, sourced from I_Groups	String	[Currency] for the given GIC Code, referenced from the input in I_Groups.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Premium CFs (Unlinked)(Past Service) – Current FX] column in I_IF_FCFs. Otherwise output: [Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Premium CFs (Unlinked)(Past Service) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Premium CFs (Unlinked)(Past Service) – Current FX] column in I_IF_FCFs. Otherwise output: [Premium CFs (Unlinked)(Past Service) – Prev FX] column in I_IF_FCFs.
Premium CFs (Unlinked)(Past Service) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Premium CFs (Unlinked)(Past Service) – Current FX] column in I_IF_FCFs.
Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] column in I_IF_FCFs. Otherwise output: [Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Premium CFs (Unlinked)(Service in Next Reporting Period) – Prev FX	Input cash flows sourced from corresponding input	Number	If Scope_LockedInAssumptions = "No" Then output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	column in I_IF_FCFs (for the given row of cash flow inputs)		[Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] column in I_IF_FCFs. Otherwise output: [Premium CFs (Unlinked)(Service in Next Reporting Period) – Prev FX] column in I_IF_FCFs.
Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] column in I_IF_FCFs.
Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = “No” Then output: [Premium CFs (Unlinked)(Future Service) – Current FX] column in I_IF_CFs. Otherwise output: [Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_CFs.
Premium CFs (Unlinked) (Future Service) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = “No” Then output: [Premium CFs (Unlinked)(Future Service) – Current FX] column in I_IF_CFs. Otherwise output: [Premium CFs (Unlinked) (Future Service) – Prev FX] column in I_IF_CFs.
Premium CFs (Unlinked)(Future Service) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of	Number	[Premium CFs (Unlinked)(Future Service) – Current FX] column in I_IF_CFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	cash flow inputs)		
Acquisition Expense CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = “No” Then output: [Acquisition Expense CFs (Unlinked)(Past Service) – Current FX] column in I_IF_FCFs. Otherwise output: [Acquisition Expense CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Acquisition Expense CFs (Unlinked)(Past Service) - Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = “No” Then output: [Acquisition Expense CFs (Unlinked)(Past Service) – Current FX] column in I_IF_FCFs. Otherwise output: [Acquisition Expense CFs (Unlinked)(Past Service) – Prev FX] column in I_IF_FCFs.
Acquisition Expense CFs (Unlinked)(Past Service) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Acquisition Expense CFs (Unlinked)(Past Service) – Current FX] column in I_IF_FCFs.
Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = “No” Then output: [Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Current FX] column in I_IF_FCFs. Otherwise output: [Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			column in I_IF_FCFs.
Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Current FX] column in I_IF_FCFs. Otherwise output: [Acquisition Expense CFs (Unlinked) (Service in Next Reporting Period) – Prev FX] column in I_IF_FCFs.
Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Current FX] column in I_IF_FCFs.
Acquisition Expense CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Acquisition Expense CFs (Unlinked)(Future Service) – Current FX] column in I_IF_FCFs. Otherwise output: [Acquisition Expense CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Acquisition Expense CFs (Unlinked)(Future Service) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Acquisition Expense CFs (Unlinked)(Future Service) – Current FX] column in I_IF_FCFs. Otherwise output: [Acquisition Expense CFs (Unlinked)(Future Service) – Prev FX] column in I_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Acquisition Expense CFs (Unlinked)(Future Service) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Acquisition Expense CFs (Unlinked)(Future Service) – Current FX] column in I_IF_FCFs.
Investment Component CFs (Unlinked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Investment Component CFs (Unlinked)(Payable in Future) – Current FX] column in I_IF_FCFs. Otherwise output: [Investment Component CFs (Unlinked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Investment Component CFs (Unlinked)(Payable in Future) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Investment Component CFs (Unlinked)(Payable in Future) – Current FX] column in I_IF_FCFs. Otherwise output: [Investment Component CFs (Unlinked)(Payable in Future) – Prev FX] column in I_IF_FCFs.
Investment Component CFs (Unlinked)(Payable in Future) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Investment Component CFs (Unlinked)(Payable in Future) – Current FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred	Input cash flows sourced from correspondin	Number	If Scope_LockedInAssumptions = "No" Then output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
in Prior Reporting Periods) – Prev FX	g input column in I_IF_FCFs (for the given row of cash flow inputs)		[Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Periods) – Current FX] column in I_IF_FCFs. Otherwise output: [Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Periods) – Prev FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Periods) – Current FX	Input cash flows sourced from correspondin g input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Periods) – Current FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Prev FX	Input cash flows sourced from correspondin g input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = “No” Then output: [Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Current FX] column in I_IF_FCFs. Otherwise output: [Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Prev FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Current FX	Input cash flows sourced from correspondin g input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Current FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from correspondin g input column in I_IF_FCFs (for the given row of	Number	If Scope_LockedInAssumptions = “No” Then output: [Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Current FX] column in I_IF_FCFs. Otherwise output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	cash flow inputs)		[Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Current FX] column in I_IF_FCFs. Otherwise output: [Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Prev FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Current FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions = "No" Then output: [Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Current FX] column in I_IF_FCFs Otherwise output: [Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of	Number	If Scope_LockedInAssumptions = "No" Then output: [Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Current FX] column in I_IF_FCFs Otherwise output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	cash flow inputs)		[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Prev FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Current FX] column in I_IF_FCFs.
Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Premium CFs (Linked)(Past Service) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Past Service) – Prev FX] column in I_IF_FCFs.
Premium CFs (Linked)(Past Service) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Past Service) – Current FX] column in I_IF_FCFs.
Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial	Input cash flows sourced from corresponding input column in	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Assumptions)(Current Discretion)	I_IF_FCFs (for the given row of cash flow inputs)		[Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Premium CFs (Linked)(Service in Next Reporting Period) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Service in Next Reporting Period) – Prev FX] column in I_IF_FCFs.
Premium CFs (Linked)(Service in Next Reporting Period) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Service in Next Reporting Period) – Current FX] column in I_IF_FCFs.
Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_CFs.
Premium CFs (Linked) (Future Service) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked) (Future Service) – Prev FX] column in I_IF_CFs.
Premium CFs (Linked)(Future Service) – Current FX	Input cash flows sourced from correspondin	Number	If Scope_LinkedCashflows="No" Then output: 0

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	g input column in I_IF_FCFs (for the given row of cash flow inputs)		Otherwise output: [Premium CFs (Linked)(Future Service) – Current FX] column in I_IF_CFs.
Acquisition Expense CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Acquisition Expense CFs (Linked)(Past Service) - Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked)(Past Service) – Prev FX] column in I_IF_FCFs.
Acquisition Expense CFs (Linked)(Past Service) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked)(Past Service) – Current FX] column in I_IF_FCFs.
Acquisition Expense CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Acquisition Expense CFs (Linked)(Service	Input cash flows	Number	If Scope_LinkedCashflows="No"

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
in Next Reporting Period) – Prev FX	sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)		Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked) (Service in Next Reporting Period) – Prev FX] column in I_IF_FCFs.
Acquisition Expense CFs (Linked)(Service in Next Reporting Period) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked)(Service in Next Reporting Period) – Current FX] column in I_IF_FCFs.
Acquisition Expense CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Acquisition Expense CFs (Linked)(Future Service) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked)(Future Service) – Prev FX] column in I_IF_FCFs.
Acquisition Expense CFs (Linked)(Future Service) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Acquisition Expense CFs (Linked)(Future Service) – Current FX] column in I_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Investment Component CFs (Linked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Investment Component CFs (Linked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Investment Component CFs (Linked)(Payable in Future) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Investment Component CFs (Linked)(Payable in Future) – Prev FX] column in I_IF_FCFs.
Investment Component CFs (Linked)(Payable in Future) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Investment Component CFs (Linked)(Payable in Future) – Current FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Periods) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Periods) – Prev FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Periods) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Periods) – Current FX] column in I_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	cash flow inputs)		
Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Prev FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Current FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) – Prev FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	(for the given row of cash flow inputs)		[Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) – Current FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) – Prev FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) – Prev FX] column in I_IF_FCFs.
Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) – Current FX	Input cash flows sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) – Current FX] column in I_IF_FCFs.
Delay (in Years)	Sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Delay (in Years)] column in I_IF_CFs.
Step 2: Referencing appropriate discount rates for each row of cash flows			
Spot Rate (Unlinked) (Remaining Coverage)(Previous	Spot rate for the Previous Reporting date YC and Delay, as	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[ReportingDate_Previous]_[Currency]_Unlinked_Remaining Coverage_[GIC Code]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Reporting Date, Delay) *Referenced as "i1" in formulas for ease of reading*	input in the "Yield Curves" input sheet.		At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup
Spot Rate (Unlinked) (Remaining Coverage)(Current Reporting Date, Delay) *Referenced as "i2" in formulas for ease of reading*	Spot rate for the Current Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date – Current]_[Currency] _Unlinked_Remaining Coverage_[GIC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Unlinked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date) + Delay) *Referenced as "i3" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+[Delay (in Years)]) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Unlinked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date)) *Referenced as "i4" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Unlinked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date) + min[Delay, Reporting Period]) *Referenced as "i5" in formulas for ease of understanding*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency] _Unlinked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+MIN([Delay (in Years)]; ([Reporting Date - Current]-[Reporting Date – Previous])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup and that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Unlinked) (Incurred Claims)(Previous Reporting Date, Delay) *Referenced as "i6" in formulas for ease of reading*	Spot rate for the Previous Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[ReportingDate_Previous]_[Currency]_Unlinked_Incurred Claims_[GIC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup
Spot Rate (Unlinked) (Incurred Claims)(Current Reporting Date, Delay) *Referenced as "i7" in formulas for ease of reading*	Spot rate for the Current Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date – Current]_[Currency] _Unlinked_Incurred Claims _[GIC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Linked) (Remaining Coverage)(Previous Reporting Date, Delay) *Referenced as "i8" in formulas for ease of reading*	Spot rate for the Previous Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[ReportingDate_Previous]_[Currency]_Linked_Remaining Coverage_[GIC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup
Spot Rate (Linked) (Remaining Coverage)(Current Reporting Date, Delay) *Referenced as "i9" in formulas for ease of reading*	Spot rate for the Current Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date – Current]_[Currency] _Linked_Remaining Coverage_[GIC Code]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Linked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date) + Delay) *Referenced as "i10" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Linked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+[Delay (in Years)]) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Linked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date)) *Referenced as "i11" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Linked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Linked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date) + min[Delay, Reporting Period]) *Referenced as "i12" in formulas for ease of understanding*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency]_Linked_Remaining Coverage_[GIC Code]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+MIN([Delay (in Years)]; ([Reporting Date - Current]-[Reporting Date – Previous])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup and that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Linked) (Incurred Claims)(Previous Reporting Date, Delay) *Referenced as "i13" in formulas for ease of reading*	Spot rate for the Previous Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: [**ReportingDate_Previous]_[Currency]_Linked_Incurred Claims_[GIC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup
Spot Rate (Linked) (Incurred Claims)(Current Reporting Date, Delay) *Referenced as "i14" in formulas for ease of reading*	Spot rate for the Current Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date – Current]_[Currency]_Linked_Incurred Claims _[GIC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Step 3: Discounting of various cash flows – Present value at previous reporting date (All current FX values)			
Discounted Premium CFs (Past Service)(Prev YC, t0)	Present Value of the cash flow as at the previous	Number	**[Premium CFs (Unlinked)(Past Service) – Current FX] * (1 + i1)** $^{(-[\text{Delay (in Years)}])}$ **+** **[Premium CFs (Linked)(Past Service) – Current FX] * (1 + i8)** $^{(-[\text{Delay (in Years)}])}$

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	reporting date		
Discounted Premium CFs (Service in Next Reporting Period)(Prev YC, t0)	Present Value of the cash flow as at the previous reporting date	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Service in Next Reporting Period) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Premium CFs (Future Service)(Prev YC, t0)	Present Value of the cash flow as at the previous reporting date	Number	**[Premium CFs (Unlinked)(Future Service) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Future Service) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Acquisition Expense CFs (Past Service)(Prev YC, t0)	Present Value of the cash flow as at the previous reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Past Service) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Acquisition Expense CFs (Linked)(Past Service) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Prev YC, t0)	Present Value of the cash flow as at the previous reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Acquisition Expense CFs (Linked)(Service in Next Reporting Period) – Current FX] * (1 + i11) (-[Delay (in Years)])**
Discounted Acquisition Expense CFs (Future Service)(Prev YC, t0)	Present Value of the cash flow as at the previous reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Future Service) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Acquisition Expense CFs (Linked)(Future Service) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Investment Component CFs (Payable in Future)(Prev YC, t0)	Present Value of the cash flow as at the previous reporting date	Number	**[Investment Component CFs (Unlinked)(Payable in Future) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Investment Component CFs (Linked)(Payable in Future) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Non-claim CFs (Prev YC, t0)	Sum of previous 7 items to obtain the total present value of the Non-Claim cash flows as at the	Number	**Discounted Premium CFs (Past Service)(Prev YC, t0) + Discounted Premium CFs (Service in Next Reporting Period)(Prev YC, t0) + Discounted Premium CFs (Future Service)(Prev YC, t0) + Discounted Acquisition Expense CFs (Past Service)(Prev YC, t0) + Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Prev YC, t0) + Discounted Acquisition Expense CFs (Future Service)(Prev YC, t0) + Discounted Investment Component CFs (Payable in Future)(Prev YC, t0)**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	previous reporting date		
Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Prev YC, t0) – Current FX	Present Value of the cash flow as at the previous reporting date	Number	**Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Period) – Current FX] * (1 + i6) (-[Delay (in Years)])** **+** **Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Period) – Current FX] * (1 + i10) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Prev YC, t0) – Current FX	Present Value of the cash flow as at the previous reporting date	Number	**Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Current FX] * (1 + i6) (-[Delay (in Years)])** **+** **Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Current FX] * (1 + i10) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in the Past)(Prev YC, t0) – Current FX	Sum of previous 2 items to obtain total present value of the claim and expense cash flows incurred in the past as at the previous reporting date	Number	**[Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Prev YC, t0) – Current FX] + [Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Prev YC, t0) – Current FX]**
Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Prev YC, t0) – Prev FX	Present Value of the cash flow as at the previous reporting date	Number	**Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Period) – Prev FX] * (1 + i6) (-[Delay (in Years)])** **+** **Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Period) – Prev FX] * (1 + i10) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Prev YC, t0) – Prev FX	Present Value of the cash flow as at the previous reporting date	Number	**Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Prev FX] * (1 + i6) (-[Delay (in Years)])** **+** **Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Prev FX] * (1 + i10) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in the Past)(Prev YC, t0) – Prev FX	Sum of previous 2 items to obtain total present value of the claim and	Number	**[Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Prev YC, t0) – Prev FX] + [Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Prev YC, t0) – Prev FX]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	expense cash flows incurred in the past as at the previous reporting date		
Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Prev YC, t0)	Present Value of the cash flow as at the previous reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Current FX] * (1 + i6) (-[Delay (in Years)])** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) – Current FX] * (1 + i10) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Prev YC, t0)	Present Value of the cash flow as at the previous reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Current FX] * (1 + i6) (-[Delay (in Years)])** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) – Current FX] * (1 + i10) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in the Future)(Prev YC, t0)	Sum of previous 2 items to obtain total present value of the claim and expense cash flows to be incurred in the future as at the previous reporting date	Number	**[Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Prev YC, t0)] + [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Prev YC, t0)]**
Step 4: Discounting of various cash flows – Present value at current reporting date (At previous FX and current FX values)			
Discounted Premium CFs (Past Service)(Current YC, t0) - Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Premium CFs (Unlinked)(Past Service) – Prev FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Past Service) – Prev FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Premium CFs (Service in Next Reporting Period)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period) – Prev FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Service in Next Reporting Period) – Prev FX] * (1 + i9) (-[Delay (in Years)])**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Discounted Premium CFs (Future Service)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Premium CFs (Unlinked)(Future Service) – Prev FX] * (1 + i2)** (-[Delay (in Years)]) **+** **[Premium CFs (Linked)(Future Service) – Prev FX] * (1 + i9)** (-[Delay (in Years)])
Discounted Acquisition Expense CFs (Past Service)(Current YC, t0) - Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Past Service) – Prev FX] * (1 + i2)** (-[Delay (in Years)]) **+** **[Acquisition Expense CFs (Linked)(Past Service) – Prev FX] * (1 + i9)** (-[Delay (in Years)])
Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Prev FX] * (1 + i2)** (-[Delay (in Years)]) **+** **[Acquisition Expense CFs (Linked)(Service in Next Reporting Period) – Prev FX] * (1 + i9)** (-[Delay (in Years)])
Discounted Acquisition Expense CFs (Future Service)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Future Service) – Prev FX] * (1 + i2)** (-[Delay (in Years)]) **+** **[Acquisition Expense CFs (Linked)(Future Service) – Prev FX] * (1 + i9)** (-[Delay (in Years)])
Discounted Investment Component CFs (Payable in Future)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Investment Component CFs (Unlinked)(Payable in Future) – Prev FX] * (1 + i2)** (-[Delay (in Years)]) **+** **[Investment Component CFs (Linked)(Payable in Future) – Prev FX] * (1 + i9)** (-[Delay (in Years)])
Discounted Non-claim CFs (Current YC, t0) – Prev FX	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	**[Discounted Premium CFs (Past Service)(Current YC, t0) - Prev FX] + [Discounted Premium CFs (Service in Next Reporting Period)(Current YC, t0) – Prev FX] + [Discounted Premium CFs (Future Service)(Current YC, t0) – Prev FX] + [Discounted Acquisition Expense CFs (Past Service)(Current YC, t0) - Prev FX] + [Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Current YC, t0) – Prev FX] + [Discounted Acquisition Expense CFs (Future Service)(Current YC, t0) – Prev FX] + [Discounted Investment Component CFs (Payable in Future)(Current YC, t0) – Prev FX]**
Discounted Premium CFs (Past Service)(Current YC, t0) - Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Premium CFs (Unlinked)(Past Service) – Current FX] * (1 + i2)** (-[Delay (in Years)]) **+** **[Premium CFs (Linked)(Past Service) – Current FX] * (1 + i9)** (-[Delay (in Years)])

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Discounted Premium CFs (Service in Next Reporting Period)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Service in Next Reporting Period) – Current FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Premium CFs (Future Service)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Premium CFs (Unlinked)(Future Service) – Current FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Future Service) – Current FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Acquisition Expense CFs (Past Service)(Current YC, t0) - Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Past Service) – Current FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Acquisition Expense CFs (Linked)(Past Service) – Current FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Current FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Acquisition Expense CFs (Linked)(Service in Next Reporting Period) – Current FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Acquisition Expense CFs (Future Service)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Future Service) – Current FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Acquisition Expense CFs (Linked)(Future Service) – Current FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Investment Component CFs (Payable in Future)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Investment Component CFs (Unlinked)(Payable in Future) – Current FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Investment Component CFs (Linked)(Payable in Future) – Current FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Non-claim CFs (Current YC, t0) – Current FX	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	**[Discounted Premium CFs (Past Service)(Current YC, t0) - Current FX] + [Discounted Premium CFs (Service in Next Reporting Period)(Current YC, t0) – Current FX] + [Discounted Premium CFs (Future Service)(Current YC, t0) – Current FX] + [Discounted Acquisition Expense CFs (Past Service)(Current YC, t0) - Current FX] + [Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Current YC, t0) – Current FX] + [Discounted Acquisition Expense CFs (Future Service)(Current YC, t0) – Current FX] + [Discounted**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Investment Component CFs (Payable in Future)(Current YC, t0) – Current FX]
Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Period) – Current FX] * (1 + i7)** (-[Delay (in Years)]) **+** **Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Period) – Current FX] * (1 + i11)** (-[Delay (in Years)])
Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Current FX] * (1 + i7)** (-[Delay (in Years)]) **+** **Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Current FX] * (1 + i11)** (-[Delay (in Years)])
Discounted Claim and Other Expense CFs (Incurred in the Past)(Current YC, t0) – Current FX	Sum of previous 2 items to obtain total present value of the claim and expense cash flows incurred in the future as at the previous reporting date	Number	**[Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Current YC, t0) – Current FX] + [Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Current YC, t0) – Current FX]**
Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Current YC, t0) –Prev FX	Present Value of the cash flow as at the current reporting date	Number	**Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Period) – Prev FX] * (1 + i7)** (-[Delay (in Years)] **+** **Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Period) – Prev FX] * (1 + i11)** (-[Delay (in Years)])
Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the current reporting date	Number	**Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Prev FX] * (1 + i7)** (-[Delay (in Years)]) **+** **Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Prev FX] * (1 + i11)** (-[Delay (in Years)])
Discounted Claim and Other Expense CFs (Incurred in the Past)(Current YC, t0) – Prev FX	Sum of previous 2 items to obtain total present value of the claim and expense cash	Number	**[Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Current YC, t0) – Prev FX] + [Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Current YC, t0) – Prev FX]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	flows incurred in the future as at the previous reporting date		
Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Prev FX] * (1 + i7) (-[Delay (in Years)])** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) – Prev FX] * (1 + i11) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the current reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Prev FX] * (1 + i7) (-[Delay (in Years)])** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) – Prev FX] * (1 + i11) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in the Future)(Current YC, t0) – Prev FX	Sum of previous 2 items to obtain total present value of the claim and expense cash flows to be incurred in the future as at the current reporting date	Number	**[Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Current YC, t0) – Prev FX] + [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Current YC, t0) – Prev FX]**
Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Current FX] * (1 + i7) (-[Delay (in Years)])** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) – Current FX] * (1 + i11) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Current YC, t0) – Current FX	Present Value of the cash flow as at the current reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Current FX] * (1 + i7) (-[Delay (in Years)])** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) – Current FX] * (1 + i11) (-[Delay (in Years)])**
Discounted Claim and Other Expense CFs (Incurred in the	Sum of previous 2 items to	Number	**[Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Current YC, t0) – Current FX] +**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Future)(Current YC, t0) – Current FX	obtain total present value of the claim and expense cash flows to be incurred in the future as at the current reporting date		**[Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Current YC, t0) – Current FX]**
Step 5: Discounting of cash flows – Present value at record's reporting date (Locked-in YC) (Previous FX and current FX values)			
Discounted Premium CFs (Past Service)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date	Number	**[Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i4) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ + [Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i11) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$**
Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date (Current Exchange Rate assumptions)	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i4) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ + [Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i11) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$**
Discounted Premium CFs (Future Service)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date (Current exchange rate assumptions)	Number	**[Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i4) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ + [Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i11) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$**
Discounted Acquisition Expense CFs (Past Service)(Locked-in YC, t0)	Present Value of the cash flow as at the record's	Number	**[Acquisition Expense CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i4) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ +**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	reporting date		**[Acquisition Expense CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ *** (1 + i11)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$
Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date (Current exchange rate assumptions)	Number	**[Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ *** (1 + i4)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ **+ [Acquisition Expense CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ *** (1 + i11)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$
Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date (Current exchange rate assumptions)	Number	**[Acquisition Expense CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ *** (1 + i4)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ **+ [Acquisition Expense CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ *** (1 + i11)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$
Discounted Investment Component CFs (Payable in Future)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date (Current exchange rate assumptions)	Number	**[Investment Component CFs (Unlinked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ *** (1 + i4)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ **+ [Investment Component CFs (Linked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ *** (1 + i11)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$
Discounted Non-claim CFs (Locked-in YC, t0)	Sum of previous 7 items to obtain the total present value of the Non-Claim cash flows as at the record's reporting date	Number	**[Discounted Premium CFs (Past Service)(Locked-in YC, t0)] + [Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t0) – Current FX] + [Discounted Premium CFs (Future Service)(Locked-in YC, t0)] + [Discounted Acquisition Expense CFs (Past Service)(Locked-in YC, t0)] + [Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Locked-in YC, t0)] + [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, t0)] + [Discounted Investment Component CFs (Payable in Future)(Locked-in YC, t0)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date (Previous exchange rate assumptions)	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i4) $^{([Reporting Date] – [Locked-in YC Date])/365.25}$ + [Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i11) $^{([Reporting Date] – [Locked-in YC Date])/365.25}$**
Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date (Previous exchange rate assumptions)	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i4) $^{([Reporting Date] – [Locked-in YC Date])/365.25}$ + [Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i11) $^{([Reporting Date] – [Locked-in YC Date])/365.25}$**
Discounted Claim and Other Expense CFs (Incurred in the Future)(Locked-in YC, t0)	Sum of previous 2 items to obtain total present value (previous exchange rate assumptions) of the claim and expense cash flows to be incurred in the future as at the record's reporting date	Number	**[Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Locked-in YC, t0)] + [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, t0)]**
Step 6: Discounting of cash flows – Present value at record's next reporting date (Locked-in YC) i.e. rolled forward (All Current FX values)			
Discounted Premium CFs (Past Service)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i5) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ + [Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] ***

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(1 + i10) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i12)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ Rounding is to 2 decimal places
Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i5)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ **+** **[Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i12)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ Rounding is to 2 decimal places
Discounted Premium CFs (Future Service)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i5)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ **+** **[Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i12)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ Rounding is to 2 decimal places
Discounted Acquisition Expense CFs (Past Service)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i5)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ **+** **[Acquisition Expense CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i12)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Rounding is to 2 decimal places
Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i5) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ + [Acquisition Expense CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i12) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$** Rounding is to 2 decimal places
Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Acquisition Expense CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i5) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ + [Acquisition Expense CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i12) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$** Rounding is to 2 decimal places
Discounted Investment Component CFs (Payable in Future)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Investment Component CFs (Unlinked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i5) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ + [Investment Component CFs (Linked)(Payable in Future)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i12) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Rounding is to 2 decimal places
Discounted Non-claim CFs (Locked-in YC, t1)	Sum of previous 7 items to obtain the total present value of the Non-Claim cash flows as at the record's next reporting date	Number	**Discounted Premium CFs (Past Service)(Locked-in YC, t1) + Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t1) + Discounted Premium CFs (Future Service)(Locked-in YC, t1) + Discounted Acquisition Expense CFs (Past Service)(Locked-in YC, t1) + Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Locked-in YC, t1) + Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, t1) + Discounted Investment Component CFs (Payable in Future)(Locked-in YC, t1)**
Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i5) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ + [Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i12) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$** Rounding is to 2 decimal places
Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i5) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ + [Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i12) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$** Rounding is to 2 decimal places
Discounted Claim and Other Expense CFs (Incurred in the Future)(Locked-in YC, t1)	Sum of previous 2 items to obtain total present value of the	Number	**[Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Locked-in YC, t1)] + [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, t1)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	claim and expense cash flows to be incurred in the future as at the record's reporting date		
Step 7: Discounting of cash flows – Present value at next reporting date (Previous YC) (All Current FX values)			
Discounted Premium CFs (Past Service)(Prev YC, t1)	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Premium CFs (Unlinked)(Past Service) – Current FX] * (1 + i1)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0)) **+** **[Premium CFs (Linked)(Past Service) – Current FX] * (1 + i8)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))
Discounted Premium CFs (Service in Next Reporting Period)(Prev YC, t1)	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] * (1 + i1)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0)) **+** **[Premium CFs (Linked)(Service in Next Reporting Period) – Current FX] * (1 + i8)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))
Discounted Premium CFs (Future Service)(Prev YC, t1)	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Premium CFs (Unlinked)(Future Service) – Current FX] * (1 + i1)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0)) **+** **[Premium CFs (Linked)(Future Service) – Current FX] * (1 + i8)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))
Discounted Acquisition Expense CFs (Past Service)(Prev YC, t1)	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Acquisition Expense CFs (Unlinked)(Past Service) – Current FX] * (1 + i1)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0)) **+** **[Acquisition Expense CFs (Linked)(Past Service) – Current FX] * (1 + i8)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))
Discounted Acquisition Expense CFs (Service in Next	Present Value of the cash flow as	Number	**[Acquisition Expense CFs (Unlinked)(Service in Next Reporting Period) – Current FX] * (1 + i1)** -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Reporting Period)(Prev YC, t1)	at the record's next reporting date if no change to the previous yield curve		**+ [Acquisition Expense CFs (Linked)(Service in Next Reporting Period) – Current FX] * (1 + i8) -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))**
Discounted Acquisition Expense CFs (Future Service)(Prev YC, t1)	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Acquisition Expense CFs (Unlinked)(Future Service) – Current FX] * (1 + i1) -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))** **+** **[Acquisition Expense CFs (Linked)(Future Service) – Current FX] * (1 + i8) -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))**
Discounted Investment Component CFs (Payable in Future)(Prev YC, t1)	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Investment Component CFs (Unlinked)(Payable in Future) – Current FX] * (1 + i1) -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))** **+** **[Investment Component CFs (Linked)(Payable in Future) – Current FX] * (1 + i8) -(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))**
Discounted Non-claim CFs (Prev YC, t1)	Sum of previous 7 items to obtain the total present value of the Non-Claim cash flows as at the record's next reporting date if no change to the previous yield curve	Number	**[Discounted Premium CFs (Past Service)(Prev YC, t1)] + [Discounted Premium CFs (Service in Next Reporting Period)(Prev YC, t1)] + [Discounted Premium CFs (Future Service)(Prev YC, t1)] + [Discounted Acquisition Expense CFs (Past Service)(Prev YC, t1)] + [Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Prev YC, t1)] + [Discounted Acquisition Expense CFs (Future Service)(Prev YC, t1)] + [Discounted Investment Component CFs (Payable in Future)(Prev YC, t1)]**
Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Prev YC, t1) – Current FX	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Prior Reporting Periods) – Current FX] * (1 + i6) - (MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))** **+** **[Claim and Other Expense CFs (Linked)(Incurred in Prior Reporting Periods) – Current FX] * (1 + i13) - (MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Prev YC, t1) – Current FX	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Current Reporting Period) – Current FX] * (1 + i6)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))}$ **+ [Claim and Other Expense CFs (Linked)(Incurred in Current Reporting Period) – Current FX] * (1 + i13)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))}$
Discounted Claim and Other Expense CFs (Incurred in the Past)(Prev YC, t1) – Current FX	Sum of previous 2 items to obtain total present value of the claim and expense cash flows incurred in the past as at the record's next reporting date if no change to the previous yield curve	Number	**[Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Prev YC, t1) – Current FX] + [Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Prev YC, t1) – Current FX]**
Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Prev YC, t1)	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Next Reporting Period) – Current FX] * (1 + i1)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))}$ **+ [Claim and Other Expense CFs (Linked)(Incurred in Next Reporting Period) – Current FX] * (1 + i8)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))}$
Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Prev YC, t1)	Present Value of the cash flow as at the record's next reporting date if no change to the previous yield curve	Number	**[Claim and Other Expense CFs (Unlinked)(Incurred in Future Reporting Periods) – Current FX] * (1 + i1)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))}$ **+ [Claim and Other Expense CFs (Linked)(Incurred in Future Reporting Periods) – Current FX] * (1 + i8)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25;0))}$
Discounted Claim and Other Expense CFs (Incurred in the Future)(Prev YC, t1)	Sum of previous 2 items to obtain total	Number	**[Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Prev YC, t1)] + [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Prev YC, t1)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	present value of the claim and expense cash flows to be incurred in the future as at the record's next reporting date if no change to the previous yield curve		

Insurance Contracts Subsequent Measurement – Discounted Patterns (I_Sub_Disc2)

This component of the calculation discounts the coverage units and acquisition expense amortisation patterns required for the subsequent measurement of the insurance liabilities/assets. This relates to both newly recognised insurance contracts as well as insurance contracts recognised in previous periods where an insurance liability/asset is still held at the reporting date.

Data from the Input components of the model that relate to subsequent measurement of insurance contracts will be referenced (such as the patterns and the relevant GIC related information).

Each input line (row) in I_IF_Patterns is referenced consecutively, starting with the first input. The discounting is thus also performed for each line (row) of coverage/amortization units input in I_IF_Patterns.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GIC and pattern inputs			
Reporting Date	Reporting date associated with the row of pattern inputs sourced from I_IF_Patterns.	Date	[Reporting Date] Each reporting date is referenced consecutively starting with the first input in I_IF_Patterns.
GIC Code	GIC Code associated with the row of pattern inputs sourced from I_IF_Patterns.	String	[GIC Code] Each GIC Code is referenced consecutively starting with the first input in I_IF_Patterns.
Locked-in YC Date	Locked in YC date associated with the given GIC Code, sourced from I_Groups	Date	[Locked in YC Date] for the given GIC Code, referenced from the input in I_Groups.
Currency	Currency associated with the given GIC	String	[Currency] for the given GIC Code, referenced from the input in I_Groups.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	Code, sourced from I_Groups		
Coverage Units (Undiscounted)	Coverage units associated with the row of pattern inputs sourced from I_IF_Patterns.	Number	[Coverage Unit (Undiscounted)] for the given GIC code and Reporting Period, referenced consecutively from I_IF_Patterns.
Amortisation Pattern (Undiscounted)	Amortisation pattern associated with the row of pattern inputs sourced from I_IF_Patterns.	Number	[Amortisation Pattern (Undiscounted)] for the given GIC code and Reporting Period, referenced consecutively from I_IF_Patterns.
Reporting Period (0 = current)	Reporting Period associated with the row of pattern inputs sourced from I_IF_Patterns.	Number	[Reporting Period (0 = current)] for the given GIC code and units, referenced consecutively from I_IF_Patterns.
Step 2: Referencing appropriate discount rates for each row of patterns			
Spot Rate (Locked-in Date, (Reporting Date - Locked-in Date) + # Reporting Periods * Reporting Period) *Referenced as "i1" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked/Linked_Remaining Coverage_[GIC code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+ [Reporting Period (0 = current)] * ([Reporting Date - Current]-[Reporting Date – Previous])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup and that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Locked-in Date, (Reporting Date - Locked-in Date)) *Referenced as "i2" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked/Linked_Remaining Coverage_[GIC code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Current	Spot rate for the current reporting date yield curve and given	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date - Current]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Reporting Date, Reporting period) *Referenced as "i3" in formulas for ease of reading*	delay, as input in the "Yield Curves" input sheet.		**_[Currency]_Unlinked/Linked_Remaining Coverage_[GIC code]** At duration: **Roundup([Reporting Period (0 = current)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup.
Step 3: Discounting of patterns (where required)			
Discounted Coverage Units (Locked-in YC, t0)	The discounting of coverage units using the GIC's locked-in yield curve	Number	If the "Discount coverage units used for the release of the CSM?" input is set to "No" in the Setup: Output: **[Coverage Units (Undiscounted)]** Otherwise Output: **[Coverage Units (Undiscounted)] * ((1+i1)** $^{-([\text{Reporting Period (0 = current)}]*\text{ROUND}(([\text{Reporting Date – Current}] - [\text{Reporting Date – Previous}])/365.25)+([\text{Reporting Date}]-[\text{Locked-in YC Date}])/365.25)}$ **) * ((1+i2)** $^{(([\text{Reporting Date}]-[\text{Locked-in YC Date}])/365.25)}$ **)** Rounding is to two decimal places.
Discounted Amortisation Pattern (Locked-in YC, t0)	The discounting of the acquisition expense amortization pattern using the GIC's locked-in yield curve or the current reporting date yield curve as appropriate.	Number	If either the "Apply discounting when calculating the amortisation of acquisition cash flows?" input is set to "No" in the Setup OR the "Discount amortisation pattern?" input is set to "No" in the Setup Output: **[Amortisation Pattern (Undiscounted)]** Else If "Apply discounting when calculating the amortisation of acquisition cash flows?" input is set to "Yes – LIYC" Output: **[Amortisation Pattern (Undiscounted)] * ((1+i1)** $^{-([\text{Reporting Period (0 = current)}]*\text{ROUND}(([\text{Reporting Date – Current}] - [\text{Reporting Date – Previous}])/365.25)+([\text{Reporting Date}]-[\text{Locked-in YC Date}])/365.25)}$ **) * ((1+i2)** $^{(([\text{Reporting Date}]-[\text{Locked-in YC Date}])/365.25)}$ **)** Otherwise If "Apply discounting when calculating the amortisation of acquisition cash flows?" input is set to "Yes" Output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Amortisation Pattern (Undiscounted)] * ((1+i3) $^{-([\text{Reporting Period (0 = current)}])}$ Rounding is to two decimal places.

Insurance Contracts Subsequent Measurement – Calculations (I_Sub_Calc)

This part of the solution performs all other calculations required for the subsequent measurement of the insurance liabilities/assets. Various previous calculation sheets as well as various input sheets are referenced throughout.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GIC information			
GIC Code	GIC Code associated with the row of calculations.	String	[GIC Code] Each GIC Code is referenced consecutively starting with the first input in I_Groups.
Locked-in YC Date	Locked in YC date associated with the given GIC Code, sourced from I_Groups	Date	[Locked in YC Date] for the given GIC Code, referenced from the input in I_Groups.
Currency	Currency associated with the given GIC Code, sourced from I_Groups	String	[Currency] for the given GIC Code, referenced from the input in I_Groups.
RA % of ABS(PVFCF Claims)	The risk adjustment percentage for the GIC	Percentage	If the "Use simplification for the setting of the RA (% of

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	sourced from I_Groups if the risk adjustment simplification is used (as specified in the Setup)		ABS(PVFCF) relating to claims and other expenses)?" is set to "Yes" in the Setup: Reference [RA % of ABS(PVFCF)] for the GIC Code from I_Groups If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup: Output **"N/A"**.
Step 2: Aggregation and roll-forward of various non-claims cash flows per GIC			
Opening LRC - PVFCF (Non-claims)	Aggregated present value relating to the relevant GIC code as at previous reporting date, using previous YC (sourced from I_SUB_Disc1)	Number	<u>Step 1</u> Find the sum of [Discounted Non-claim CFs (Prev YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc) <u>Step 2</u> Multiply above by -1
Opening LRC - PVFCF (Non-claims) - Post Roll Forward (Prev YC)	Aggregated present value relating to the relevant GIC code as at previous reporting date rolled forward, using previous YC (sourced from I_SUB_Disc1)	Number	<u>Step 1</u> Find the sum of [Discounted Non-claim CFs (Prev YC, t1)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Step 2 Multiply above by -1
Opening LRC - PVFCF (Non-claims)(Locked-in YC)	Aggregated present value relating to the relevant GIC code as at previous reporting date, using locked-in YC (sourced from I_SUB_Disc1)	Number	Step 1 Find the sum of [Discounted Non-claim CFs (Locked-in YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Step 2 Multiply above by -1
Opening LRC - PVFCF (Non-claims) - Post Roll Forward (LIYC)	Aggregated present value relating to the relevant GIC code as at previous reporting date rolled forward, using locked-in YC (sourced from I_SUB_Disc1)	Number	Step 1 Find the sum of [Discounted Non-claim CFs (Locked-in YC, t1)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Step 2 Multiply above by -1
Effect on Opening LRC - PVFCF (Non-claims) of Changes in Interest Rates (1/2)	Effect on Opening LRC - PVFCF (Non-claims) of Changes in Interest Rates (LIYC to Previous YC)	Number	**[Opening LRC - PVFCF (Non-claims) - Post Roll Forward (LIYC)] - [Opening LRC - PVFCF (Non-claims) - Post Roll Forward (Prev YC)]**
Interest Accreted on Opening LRC - PVFCF (Non-claims)	Interest Accreted on Opening LRC - PVFCF (Non-claims) based on LIYC.	Number	**[Opening LRC - PVFCF (Non-claims) - Post Roll Forward (Prev YC)] - [Opening LRC - PVFCF (Non-claims)]**
New LRC - PVFCF (Non-claims)	Aggregated present value (for new contracts) relating to the relevant GIC code as at locked-in YC date, using	Number	Step 1 Find the sum of [Discounted Non-claim CFs (Locked-in YC, Locked-in Date)]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	locked-in YC (sourced from I_IN_Disc)		column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc) <u>Step 2</u> Multiply above by -1
New LRC - PVFCF (Non-claims) - Post Roll Forward	Aggregated present value relating to the relevant GIC code as at locked-in YC date rolled forward, using locked-in YC (sourced from I_IN_Disc)	Number	<u>Step 1</u> Find the sum of [Discounted Non-claim CFs (Locked-in YC, Reporting Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc) <u>Step 2</u> Multiply above by -1
Interest Accreted on New LRC - PVFCF (Non-claims)	Interest Accreted on New LRC - PVFCF (Non-claims) based on LIYC.	Number	**[New LRC - PVFCF (Non-claims) - Post Roll Forward] - [New LRC - PVFCF (Non-claims)]**
LRC - PVFCF (Non-claims) - Post Roll Forward	Aggregated present value for old and new contracts relating to the relevant GIC code as at locked-in YC date rolled forward, using locked-in YC	Number	**[Opening LRC - PVFCF (Non-claims) - Post Roll Forward (LIYC)] + [New LRC - PVFCF (Non-claims) - Post Roll Forward] + [Actual less Expected Return on LRC IC]**
Actual less Expected Return on LRC IC	Actual less Expected Return on LRC Investment Component (IC)	Number	[Actual less Expected Return on LRC IC] for the given GIC Code, referenced from the input in I_IF_GEN.
Interest Accreted on LRC - PVFCF (Non-claims)	Total Interest Accreted on New and Old LRC - PVFCF (Non-claims) based on LIYC.	Number	**[Interest Accreted on Opening LRC - PVFCF (Non-claims)] + [Interest Accreted on New LRC - PVFCF (Non-claims)] + [Actual less Expected Return on LRC IC]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 3: Premium Experience Variance (Past/current service)			
Expected Premium (Past/Current)(Opening)	Aggregated value relating to the relevant GIC code as at previous reporting date rolled forward, using locked-in YC (sourced from I_SUB_Disc1)	Number	sum of [Discounted Premium CFs (Past Service)(Locked-in YC, t1)] plus [Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t1)] columns in I_SUB_Disc1, where (for both): 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Expected Premium (Past/Current)(New)	Aggregated value relating to the relevant GIC code as at locked-in YC date rolled forward, using locked-in YC (sourced from I_IN_Disc)	Number	sum of [Discounted Premium CFs (Current Service)(Locked-in YC, Reporting Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Premium Receipts (Past/Current)	Actual premium receipts (relating to past/current service) sourced from I_IF_GEN	Number	Reference [Premium Receipts (Past/Current Service)] for the given GIC Code from I_IF_GEN
Expected Premium (Past/Current)(Closing)	Aggregated present value relating to the relevant GIC code as at current reporting date, using locked-in YC (sourced from I_SUB_Disc1)	Number	sum of [Discounted Premium CFs (Past Service)(Locked-in YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Code] (given GIC Code in I_SUB_Calc)
Premium Experience Variance (Past/Current)	Difference between actual and expected premium receipts in the current reporting period as well as changes to future expected premium receipts, all relating to past/current service.	Number	**-(([Premium Receipts (Past/Current)] + [Expected Premium (Past/Current)(Closing)]) - ([Expected Premium (Past/Current)(Opening)] + [Expected Premium (Past/Current)(New)]))**
LRC - PVFCF (Non-claims) - Post Premium Experience Variances (Past/Current)	Future expected premiums relating to past/current and future service after roll-forward and experience variances to past/current service.	Number	**[LRC - PVFCF (Non-claims) - Post Roll Forward] + [Premium Experience Variance (Past/Current)]**
Step 4: Acquisition Expense Experience Variance (Past/current service)			
Expected Acquisition Expense (Past/Current)(Opening)	Aggregated value relating to the relevant GIC code as at previous reporting date rolled forward, using locked-in YC (sourced from I_SUB_Disc1)	Number	sum of [Discounted Acquisition Expense CFs (Past Service)(Locked-in YC, t1)] plus [Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Locked-in YC, t1)] columns in I_SUB_Disc1, where (for both): 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Expected Acquisition Expense (Past/Current)(New)	Aggregated present value relating to the relevant GIC code as at locked-in YC date rolled forward, using locked-in YC (sourced from I_IN_Disc)	Number	sum of [Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Reporting Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = [GIC Code]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(given GIC Code in I_SUB_Calc)
Acquisition Expense Payments (Past/Current)	Actual acquisition expenses sourced from I_IF_GEN	Number	Reference [Acquisition Expense Payments (Past/Current Service)] for the given GIC Code from I_IF_GEN
Expected Acquisition Expense (Past/Current)(Closing)	Aggregated present value relating to the relevant GIC code as at current reporting date, using locked-in YC (sourced from I_SUB_Disc1)	Number	sum of [Discounted Acquisition Expense CFs (Past Service)(Locked-in YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Acquisition Expense Experience Variance (Past/Current)	Difference between actual and expected acquisition expense payments in the current reporting period as well as changes to future expected acquisition expense payments, all relating to past/current service.	Number	**-(([Acquisition Expense Payments (Past/Current)] + [Expected Acquisition Expense (Past/Current)(Closing)]) - ([Expected Acquisition Expense (Past/Current)(Opening)] + [Expected Acquisition Expense (Past/Current)(New)]))**
LRC - PVFCF (Non-claims) - Post Acquisition Expense Experience Variances (Past/Current)	Future expected premium and acquisition expense payments relating to past/current and future service after roll-forward and experience variances to past/current service.	Number	**[LRC - PVFCF (Non-claims) - Post Premium Experience Variances (Past/Current)] + [Acquisition Expense Experience Variance (Past/Current)]**
Step 5: Non-Claims Experience Variance (Future service)			
Expected Non-claim CFs (Future)(Opening)	Aggregated value relating to the relevant GIC code as at previous reporting date rolled forward, using locked-in YC (sourced from I_SUB_Disc1)	Number	sum of [Discounted Premium CFs (Future Service)(Locked-in YC, t1)] <u>plus</u> [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, t1)] <u>plus</u> [Discounted Investment Component CFs (Payable in Future)(Locked-in YC, t1)]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			columns in I_SUB_Disc1, where (for all of these columns): 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Expected Non-claim CFs (Future)(New)	Aggregated value relating to the relevant GIC code as at locked-in YC date rolled forward, using locked-in YC (sourced from I_IN_Disc)	Number	sum of [Discounted Premium CFs (Future Service)(Locked-in YC, Reporting Date)] <u>plus</u> [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Reporting Date)] <u>plus</u> [Discounted Investment Component CFs (Locked-in YC, Reporting Date)] columns in I_IN_Disc, where (for all of these columns): 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Non-claim Receipts/Payments/Transfers (Future)	Actual cash flows sourced from I_IF_GEN (relating to future service)	Number	Perform the following operation on the following columns referenced from I_IF_GEN, for the given GIC Code: [Premium Receipts (Future Service)] + [Acquisition Expense Payments (Future Service)] - [New LIC - IC (Investment Components Becoming Payable)]
Expected Non-claim CFs (Future)(Closing)	Aggregated value relating to the relevant GIC code as at current reporting date, using locked-in YC (sourced from I_SUB_Disc1)	Number	sum of [Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t0)] <u>plus</u>

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Discounted Premium CFs (Future Service)(Locked-in YC, t0)] plus [Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Locked-in YC, t0)] plus [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, t0)] plus [Discounted Investment Component CFs (Payable in Future)(Locked-in YC, t0)] columns in I_SUB_Disc1, where (for all of these columns): 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on LRC - PVFCF (Non-claims) of Non-claim CFs Experience Variance (Future – Non FX)	Difference between actual and expected non-claims in the current reporting period as well as changes to future expected non-claim cash flows, all relating to future and not attributable to changes in exchange rate assumptions.	Number	**-(([Non-claim Receipts/Payments/Transfers (Future)] + [Expected Non-claim CFs (Future)(Closing)]) - ([Expected Non-claim CFs (Future)(Opening)] + [Expected Non-claim CFs (Future)(New)] - [Actual less Expected Return on LRC IC]))**
LRC - PVFCF (Non-claims) - Post Non-claim CFs Experience Variance (Future)	Future expected non-claim cash flows relating to future service.	Number	**[LRC - PVFCF (Non-claims) - Post Acquisition Expense Experience Variances (Past/Current)] + [Effect on LRC - PVFCF (Non-claims) of Non-claim CFs Experience Variance (Future – Non FX)]**
Step 6: Recon check between rolled-forward cash flows, actual cash flows, experience variances and future expected cash flows			
Premium Receipts	Sourced from I_IF_GEN	Number	Perform the following operation on the following columns referenced from I_IF_GEN, for the given GIC Code:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Premium Receipts (Past/Current Service)] + [Premium Receipts (Future Service)]
Acquisition Expense Payments	Sourced from I_IF_GEN	Number	Perform the following operation on the following columns referenced from I_IF_GEN, for the given GIC Code: [Acquisition Expense Payments (Past/Current Service)] + [Acquisition Expense Payments (Future Service)]
Transfer of Investment Components	Sourced from I_IF_GEN	Number	Reference the following column from I_IF_GEN, for the given GIC Code: [New LIC - IC (Investment Components Becoming Payable)] And multiply by **-1**
LRC - PVFCF (Non-claims) - Post Payments/Receipts/Transfers	Isolating the effect of rolling forward previous (non-claim) cash flows after allowing for experience variances relating to expected future non-claim cash flows	Number	**[LRC - PVFCF (Non-claims) - Post Non-claim CFs Experience Variance (Future)] + [Premium Receipts] + [Acquisition Expense Payments] + [Transfer of Investment Components]**
Closing LRC - PVFCF (Non-claims) – Prev FX	Aggregated present value relating to the relevant GIC code as at current reporting date, using current YC (sourced from I_SUB_Disc1)	Number	**-1 *** Sum of [Discounted Non-claim CFs (Current YC, t0) – Prev FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Closing LRC - PVFCF (Non-claims) – Current FX	Aggregated present value relating to the relevant GIC code as at current reporting date, using current YC (sourced from I_SUB_Disc1)	Number	**-1 *** Sum of [Discounted Non-claim CFs (Current YC, t0) – Current FX] column in I_SUB_Disc1, where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			2. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 3. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on LRC - PVFCF (Non-claims) of Changes in Interest Rates (2/2)	Effect on Closing LRC - PVFCF (Non-claims) of Changes in Interest Rates (LIYC to Current YC)	Number	**[Closing LRC - PVFCF (Non-claims) – Prev FX] - [LRC - PVFCF (Non-claims) - Post Payments/Receipts/Transfers]**
Effect on LRC - PVFCF (Non-claims) of Changes in Interest Rates	Effect on LRC - PVFCF (Non-claims) of Changes in Interest Rates	Number	**[Effect on Opening LRC - PVFCF (Non-claims) of Changes in Interest Rates (1/2)] + [Effect on LRC - PVFCF (Non-claims) of Changes in Interest Rates (2/2)]**
Effect on LRC - PVFCF (Non-claims) of Non-claim CFs Experience Variance (Future - FX)	Effect on LRC - PVFCF (Non-claims) of Non-claim CFs Experience Variance (Future) that relates to updates to exchange rate assumptions)	Number	**[Closing LRC - PVFCF (Non-claims) - Current FX]- [Closing LRC - PVFCF (Non-claims) - Prev FX]**
Step 7: Aggregation and roll-forward of claims cash flows per GIC			
Opening LRC - PVFCF (Claims)	Aggregated present value relating to the relevant GIC code as at previous reporting date, using previous YC (sourced from I_SUB_Disc1)	Number	**-1 *** Sum of [Discounted Claim and Other Expense CFs (Incurred in the Future)(Prev YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) **2.** [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Opening LRC - PVFCF (Claims) - Post Roll Forward (Prev YC)	Aggregated present value relating to the relevant GIC code as at previous reporting date rolled forward, using previous YC (sourced from I_SUB_Disc1)	Number	**-1 *** Sum of [Discounted Claim and Other Expense CFs (Incurred in the Future)(Prev YC, t1)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date –

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Opening LRC - PVFCF (Claims) - Post Roll Forward (LIYC)	Aggregated present value relating to the relevant GIC code as at previous reporting date rolled forward, using locked-in YC (sourced from I_SUB_Disc1)	Number	**-1 *** Sum of [Discounted Claim and Other Expense CFs (Incurred in the Future)(Locked-in YC, t1)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) **2.** [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on Opening LRC - PVFCF (Claims) of Changes in Interest Rates (1/2)	Effect on Opening LRC - PVFCF (Claims) of Changes in Interest Rates (LIYC to Previous YC)	Number	**[Opening LRC - PVFCF (Claims) - Post Roll Forward (LIYC)] - [Opening LRC - PVFCF (Claims) - Post Roll Forward (Prev YC)]**
Interest Accreted on Opening LRC - PVFCF (Claims)	Interest Accreted on Opening LRC - PVFCF (Claims) based on LIYC.	Number	**[Opening LRC - PVFCF (Claims) - Post Roll Forward (Prev YC)] - [Opening LRC - PVFCF (Claims)]**
New LRC - PVFCF (Claims)	Aggregated present value relating to the relevant GIC code as at locked-in YC date, using locked-in YC (sourced from I_IN_Disc)	Number	**-1 *** Sum of [Discounted Claim CFs (Locked-in YC, Locked-in Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) **2.** [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
New LRC - PVFCF (Claims) - Post Roll Forward	Aggregated present value relating to the relevant GIC code as at locked-in YC date rolled forward, using locked-in YC (sourced from I_IN_Disc)	Number	**-1 *** Sum of [Discounted Claim CFs (Locked-in YC, Reporting Date)] column in I_IN_Disc, where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Interest Accreted on New LRC - PVFCF (Claims)	Interest Accreted on New LRC - PVFCF (Claims) based on LIYC.	Number	**[New LRC - PVFCF (Claims) - Post Roll Forward] - [New LRC - PVFCF (Claims)]**
LRC - PVFCF (Claims) - Post Roll Forward	Aggregated present value (opening and new claims) relating to the relevant GIC code as at locked-in YC date rolled forward, using locked-in YC	Number	**[Opening LRC - PVFCF (Claims) - Post Roll Forward (LIYC)] + [New LRC - PVFCF (Claims) - Post Roll Forward]**
Interest Accreted on LRC - PVFCF (Claims)	Interest Accreted on New and opening LRC - PVFCF (Claims) based on LIYC.	Number	**[Interest Accreted on Opening LRC - PVFCF (Claims)] + [Interest Accreted on New LRC - PVFCF (Claims)]**
Step 8: Removal of Expected Claims incurred in current period			
Expected Claim CFs (Current)(Opening)	Aggregated present value of expected claims incurred in the current reporting period (relating to the relevant GIC code) as at previous reporting date rolled forward, using locked-in YC (sourced from I_SUB_Disc1)	Number	Sum of [Discounted Claim and Other Expense CFs (Incurred in Next Reporting Period)(Locked-in YC, t1)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) **2.** [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Expected Claim CFs (Current)(New)	Aggregated present value of expected claims incurred in the current reporting period (relating to the relevant GIC code) as at locked-in YC date rolled forward, using locked-in YC (sourced from I_IN_Disc)	Number	Sum of [Discounted Claim and Other Expense CFs (Incurred in Current Reporting Period)(Locked-in YC, Reporting Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date –

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on LRC - PVFCF (Claims) of Removal of Expected Claims and Other Expenses Incurred (Current)	Aggregated present value of expected claims (new and old contracts) incurred in the current reporting period (relating to the relevant GIC code) as at locked-in YC date rolled forward, using locked-in YC	Number	**[Expected Claim CFs (Current)(Opening)] + [Expected Claim CFs (Current)(New)]**
LRC - PVFCF (Claims) - Post Removal of Expected Claims and Other Expenses Incurred (Current)	Isolating aggregated present value of rolled-forward expected claims (old and new contracts) incurred in the future.	Number	**[LRC - PVFCF (Claims) - Post Roll Forward] + [Effect on LRC - PVFCF (Claims) of Removal of Expected Claims and Other Expenses Incurred (Current)]**
Step 9: Future claims experience variance and changes in interest rates			
Expected Claim CFs (Future)(Opening)	Aggregated present value relating to the relevant GIC code as at previous reporting date rolled forward, using locked-in YC (sourced from I_SUB_Disc1)	Number	Sum of [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, t1)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) **2.** [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Expected Claim CFs (Future)(New)	Aggregated present value relating to the relevant GIC code as at locked-in YC date rolled forward, using locked-in YC (sourced from I_IN_Disc)	Number	Sum of [Discounted Claim and Other Expense CFs (Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)] column in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(given GIC Code in I_SUB_Calc)
Expected Claim CFs (Future)(Closing)	Aggregated present value relating to the relevant GIC code as at current reporting date, using locked-in YC (sourced from I_SUB_Disc1)	Number	Sum of [Discounted Claim and Other Expense CFs (Incurred in the Future)(Locked-in YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) **2.** [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) – Non FX	Impact of change in expectations (from initial to subsequent measurement), excluding changes in exchange rate assumptions, regarding future claims and expense cash flows, relating to future service.	Number	**-([Expected Claim CFs (Future)(Closing) – Prev FX] - ([Expected Claim CFs (Future)(Opening)] + [Expected Claim CFs (Future)(New)]))**
LRC - PVFCF (Claims) - Post Claim CFs Non FX Experience Variances (Future)	Initial expectations of future claims and expenses (rolled forward) plus allowance for Non FX experience variances at subsequent measurement.	Number	**[LRC - PVFCF (Claims) - Post Removal of Expected Claims and Other Expenses Incurred (Current) – Prev FX] + [Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) – Non FX]**
Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) - FX	Impact of change in expectations (from initial to subsequent measurement), from changes in exchange rate assumptions, regarding future claims and expense cash flows, relating to future service.	Number	**[Closing LRC - PVFCF (Claims) - Current FX]- [Closing LRC - PVFCF (Claims) - Prev FX]**
Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) (FX and Non FX)	Impact of change in expectations (from initial to subsequent measurement), from changes in assumptions, regarding future claims and expense cash flows, relating to future service.		**[Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) - FX] + [Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) - Non FX]**
Closing LRC - PVFCF (Claims) – Prev FX	Aggregated present value relating to the relevant GIC	Number	**-1 *** Sum of

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	code as at current reporting date, using current YC and previous exchange rate assumptions (sourced from I_SUB_Disc1)		[Discounted Claim and Other Expense CFs (Incurred in the Future)(Current YC, t0) – Prev FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Closing LRC - PVFCF (Claims) – Current FX	Aggregated present value relating to the relevant GIC code as at current reporting date, using current YC and current exchange rate assumptions (sourced from I_SUB_Disc1)	Number	**-1 *** Sum of [Discounted Claim and Other Expense CFs (Incurred in the Future)(Current YC, t0) – Current FX] column in I_SUB_Disc1, where: 2. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on LRC - PVFCF (Claims) of Changes in Interest Rates (2/2)	Effect on LRC - PVFCF (Claims) of Changes in Interest Rates (LIYC vs current reporting date YC)	Number	**[Closing LRC - PVFCF (Claims) - Prev FX]-[LRC - PVFCF (Claims) - Post Claim CFs Non FX Experience Variances (Future)]**
Effect on LRC - PVFCF (Claims) of Changes in Interest Rates	Effect on LRC - PVFCF (Claims) of Changes in Interest Rates (Previous plus current reporting dates)	Number	**[Effect on Opening LRC - PVFCF (Claims) of Changes in Interest Rates (1/2)] + [Effect on LRC - PVFCF (Claims) of Changes in Interest Rates (2/2)]**
Step 10: LRC Risk Adjustment – roll forward and experience variance			
Opening LRC - RA	Risk adjustment component of the opening LRC	Number	Sourced from [Opening LRC – RA] in I_IF_GEN (for the given GIC Code) if risk adjustment simplification (in Setup) is set to "No" and set to **ABS([Opening LRC - PVFCF (Claims)]) * [RA % of ABS(PVFCF Claims)]** if simplification is set to "Yes"

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on Opening LRC - RA of Changes in Interest Rates (1/2)	Assumed proportionate to corresponding item for claims and expenses if RA is disaggregated	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup: OR **[Opening LRC - PVFCF (Claims) - Post Roll Forward (Prev YC)]** = 0 Output **0** Otherwise Output: **[Effect on Opening LRC - PVFCF (Claims) of Changes in Interest Rates (1/2)] * ([Opening LRC - RA] + [Interest Accreted on Opening LRC - RA]) / [Opening LRC - PVFCF (Claims) - Post Roll Forward (Prev YC)]**
Interest Accreted on Opening LRC - RA	Assumed proportionate to corresponding item for claims and expenses if RA is disaggregated	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup: OR **[Opening LRC - PVFCF (Claims)]** = 0 Output **0** Otherwise Output: **[Interest Accreted on Opening LRC - PVFCF (Claims)]] * [Opening LRC - RA] / [Opening LRC - PVFCF (Claims)]**
New LRC - RA	Sourced from I_IN_Calc	Number	If the given GIC Code is found in I_IN_Calc

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Reference [New LRC – RA] from I_IN_Calc for the given GIC Code Otherwise Output **0**
Interest Accreted on New LRC - RA	Assumed proportionate to corresponding item for claims and expenses if RA is disaggregated	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup: OR **[New LRC - PVFCF (Claims)]** = 0 Output **0** Otherwise Output: **[Interest Accreted on New LRC - PVFCF (Claims)] * [New LRC - RA] / [New LRC - PVFCF (Claims)]**
Interest Accreted on LRC - RA	Interest Accreted on new and previous LRC - RA	Number	**[Interest Accreted on Opening LRC - RA] + [Interest Accreted on New LRC - RA]**
LRC - RA - Post Roll Forward	LRC - RA - Post Roll Forward	Number	**[Opening LRC - RA] + [New LRC - RA] + [Effect on Opening LRC - RA of Changes in Interest Rates (1/2)] + [Interest Accreted on LRC - RA]**
Closing LRC – RA – Current FX	Sourced from I_IF_GEN if simplification is not used and set to ABS([Closing LRC - PVFCF (Claims)]) * [RA % of ABS(PVFCF Claims)] if simplification is used	Number	Sourced from [Closing LRC - RA] in I_IF_GEN (for the given GIC Code) if risk adjustment simplification (in Setup) is set to "No" and set to **ABS([Closing LRC - PVFCF (Claims) - Current FX]) * [RA % of ABS(PVFCF Claims)]** if simplification is set to "Yes"
Effect on LRC - RA of Removal of Expected Claims and Other Expenses Incurred (Current)	Assumed proportionate to corresponding item for claims and expenses (if the RA simplification is not used and this is provided in I_IF_GEN then this is used	Number	If risk adjustment simplification (in Setup) is set to "Yes" OR

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	instead, set to 0 if the denominator is 0)		[Release in LRC - RA for Expected Claims and Other Expenses Incurred] = 0 for the given GIC Code in I_IF_GEN Then If **[LRC - PVFCF (Claims) - Post Roll Forward]** = 0 Output **0** Otherwise Output **[Effect on LRC - PVFCF (Claims) of Removal of Expected Claims and Other Expenses Incurred (Current)] * [LRC - RA - Post Roll Forward]] / ABS([LRC - PVFCF (Claims) - Post Roll Forward])** Otherwise reference [Release in LRC - RA for Expected Claims and Other Expenses Incurred] for the given GIC Code in I_IF_GEN
LRC - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)	LRC - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)	Number	**[LRC - RA - Post Roll Forward] + [Effect on LRC - RA of Removal of Expected Claims and Other Expenses Incurred (Current)]**
Effect on LRC - RA of Claim CFs Experience Variance (Future) (Non FX)	Approximated effect on LRC - RA of Claim CFs Experience Variance (Future) relating to changes other than caused by exchange rate assumptions.	Number	**[Closing LRC - RA (Current FX)]-([LRC - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)]+[Effect on LRC - RA of Claim CFs Experience Variance (Future) (FX)]+[Effect on LRC - RA of Changes in Interest Rates (2/2)])**
Effect on LRC - RA of Claim CFs Experience Variance (Future) (FX)	Approximated effect on LRC - RA of Claim CFs Experience Variance (Future) relating to changes in exchange rate assumptions.	Number	If **[Closing LRC - PVFCF (Claims) - Current FX] = 0 or Option_DisaggregateChangeInRA="No"** Output **0** Otherwise Output

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) - FX]/[Closing LRC - PVFCF (Claims) - Current FX]*[Closing LRC - RA (Current FX)]
LRC - RA - Post Claim CFs Experience Variance (Future) – Non FX	Initial expectations of future claims and expenses (rolled forward and incurred (current) removed) plus allowance for non FX experience variances at subsequent measurement (but before changes in interest rates).	Number	**[LRC - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current) - Prev FX]+[Effect on LRC - RA of Claim CFs Experience Variance (Future) (Non FX)]**
Effect on LRC - RA of Changes in Interest Rates (2/2)	Effect on LRC - RA of Changes in Interest Rates (set to 0 if portion of change in RA is not assigned to insurance finance result or if denominator is 0)	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup: OR **[Closing LRC - PVFCF (Claims) – Current FX]** = 0 Output **0** Otherwise Output: **[Effect on LRC - PVFCF (Claims) of Changes in Interest Rates (2/2)] * [Closing LRC – RA – Current FX] / [Closing LRC - PVFCF (Claims) – Current FX]**
Effect on LRC - RA of Changes in Interest Rates	Effect on LRC - RA of Changes in Interest Rates	Number	**[Effect on Opening LRC - RA of Changes in Interest Rates (1/2)] + [Effect on LRC - RA of Changes in Interest Rates (2/2)]**
Step 11: Separation of LRC Profit and LRC Loss Component movements			
Opening LRC - Loss - PVFCF	Sourced from I_IF_GEN	Number	Reference [Opening LRC - Loss - PVFCF] from I_IF_GEN for the given GIC Code
Opening LRC - Profit - PVFCF (Claims)	Isolating the present value of claims making up the LRC loss component	Number	**[Opening LRC - PVFCF (Claims)] - [Opening LRC - Loss - PVFCF]**
Interest Accreted on Opening LRC - Loss - PVFCF (Prev YC)	Isolating Interest Accreted on Opening LRC - Loss – PVFCF based on previous	Number	If **[Opening LRC - PVFCF (Claims)]** = 0

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	yield curve (set to 0 if denominator is 0)		Output **0** Otherwise Output **[Opening LRC - Loss - PVFCF] * ([Interest Accreted on Opening LRC - PVFCF (Claims)]) / [Opening LRC - PVFCF (Claims)]**
Interest Accreted on Opening LRC - Profit - PVFCF (Claims) (Prev YC)	Isolating Interest Accreted on Opening LRC - Profit – PVFCF based on previous yield curve (set to 0 if denominator is 0)	Number	If **[Opening LRC - PVFCF (Claims)]** = 0 Output **0** Otherwise Output **[Interest Accreted on Opening LRC - PVFCF (Claims)]-[Interest Accreted on Opening LRC - Loss - PVFCF (Prev YC)]**
Effect on Opening LRC - Loss - PVFCF of Changes in Interest Rates (1/2)	Effect on Opening LRC - Loss - PVFCF of Changes in Interest Rates	Number	If **[Opening LRC - PVFCF (Claims)]=0** Then output: **0** Otherwise output: **[Effect on Opening LRC - PVFCF (Claims) of Changes in Interest Rates (1/2)] * [Opening LRC - Loss - PVFCF] / [Opening LRC - PVFCF (Claims)]**
Effect on Opening LRC - Profit - PVFCF of Changes in Interest Rates (1/2)	Effect on Opening LRC - Profit - PVFCF of Changes in Interest Rates	Number	**[Effect on Opening LRC - PVFCF (Claims) of Changes in Interest Rates (1/2)] - [Effect on Opening LRC - Loss - PVFCF of Changes in Interest Rates (1/2)]**
New LRC - Loss - PVFCF	Sourced from I_IN_Calc	Number	If the given GIC Code is in I_IN_Calc Reference [New LRC - Loss - PVFCF] from I_IN_Calc for the given GIC Code Otherwise Output **0**
New LRC - Profit - PVFCF (Claims)	New LRC - Profit - PVFCF (Claims) (LIYC)	Number	**[New LRC - PVFCF (Claims)] - [New LRC - Loss - PVFCF]**
Interest Accreted on New LRC - Loss - PVFCF	Isolating Interest Accreted on New LRC - Loss - PVFCF (set to 0 if denominator is 0)	Number	If **[New LRC - PVFCF (Claims)]** = 0 Output **0**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise Output **[New LRC - Loss - PVFCF] * [Interest Accreted on New LRC - PVFCF (Claims)] / [New LRC - PVFCF (Claims)]**
Interest Accreted on New LRC - Profit - PVFCF (Claims)	Isolating Interest Accreted on New LRC - Profit - PVFCF (set to 0 if denominator is 0)	Number	If **[New LRC - PVFCF (Claims)]** = 0 Output **0** Otherwise Output **[Interest Accreted on New LRC - PVFCF (Claims)]- [Interest Accreted on New LRC - Loss - PVFCF]**
Interest Accreted on LRC - Loss - PVFCF	Isolating Interest Accreted on LRC - Loss – PVFCF (New and Opening LRC)	Number	**[Interest Accreted on Opening LRC - Loss - PVFCF (Prev YC)] + [Interest Accreted on New LRC - Loss - PVFCF]**
Interest Accreted on LRC - Profit - PVFCF (Claims)	Isolating Interest Accreted on LRC - Profit - PVFCF (Claims)	Number	**[Interest Accreted on Opening LRC - Profit - PVFCF (Claims) (Prev YC)] + [Interest Accreted on New LRC - Profit - PVFCF (Claims)]**
LRC - Loss - PVFCF - Post Roll Forward	Isolating the LRC - Loss - PVFCF - Post Roll Forward (including effect of changes in interest rates)	Number	**[Opening LRC - Loss - PVFCF] + [New LRC - Loss - PVFCF] + [Effect on Opening LRC - Loss - PVFCF of Changes in Interest Rates (1/2)] + [Interest Accreted on LRC - Loss - PVFCF]**
LRC - Profit - PVFCF (Claims) - Post Roll Forward	Isolating the LRC - Profit - PVFCF - Post Roll Forward (including effect of changes in interest rates)	Number	**[Opening LRC - Profit – PVFCF (Claims)] + [New LRC - Profit – PVFCF (Claims)] + [Effect on Opening LRC - Profit - PVFCF of Changes in Interest Rates (1/2)] + [Interest Accreted on LRC - Profit – PVFCF (Claims)]**
Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)	Isolating removal of claims and expenses incurred in the current period that relate to the LRC Loss component	Number	If **SUM([LRC - Loss - PVFCF - Post Roll Forward], [LRC - Profit - PVFCF (Claims) - Post Roll Forward])** = 0 Output **0** Otherwise Output **[Effect on LRC - PVFCF (Claims) of Removal of Expected Claims and Other Expenses Incurred**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(Current)] * [LRC - Loss - PVFCF - Post Roll Forward] / SUM([LRC - Loss - PVFCF - Post Roll Forward], [LRC - Profit - PVFCF (Claims) - Post Roll Forward])
Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)	Isolating removal of claims and expenses incurred in the current period that relate to the LRC profit component	Number	If **SUM([LRC - Loss - PVFCF - Post Roll Forward], [LRC - Profit - PVFCF (Claims) - Post Roll Forward])** = 0 Output **0** Otherwise Output **[Effect on LRC - PVFCF (Claims) of Removal of Expected Claims and Other Expenses Incurred (Current)]-[Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)]**
LRC - Loss - PVFCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)	Isolating the LRC - Loss - PVFCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)	Number	**[LRC - Loss - PVFCF - Post Roll Forward] + [Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)]**
LRC - Profit - PVFCF (Claims) - Post Removal of Expected Claims and Other Expenses Incurred (Current)	Isolating the LRC - Profit - PVFCF (Claims) - Post Removal of Expected Claims and Other Expenses Incurred (Current)	Number	**[LRC - Profit - PVFCF (Claims) - Post Roll Forward] + [Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)]**
Opening LRC - Profit - PVFCF	Aggregated present value of all future non claims cash flows as well as claims cash flows relating to non-loss component of the LRC	Number	**[Opening LRC - PVFCF (Non-claims)] + [Opening LRC - Profit - PVFCF (Claims)]**
Interest Accreted on Opening LRC - Profit - PVFCF	Interest Accreted on Opening LRC - Profit - PVFCF	Number	**[Interest Accreted on LRC - PVFCF (Non-claims)] + [Interest Accreted on LRC - Profit - PVFCF (Claims)]**
Step 12: LRC RA movements isolated for LRC - Profit and LRC - Loss			
Opening LRC - Loss - RA	Opening LRC RA attributed to the loss component	Number	Sourced from [Opening LRC - Loss - RA] in I_IF_GEN (for the given GIC Code) if risk adjustment simplification (in Setup) is set to “No” and set to

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			ABS([Opening LRC - Loss - PVFCF]) * [RA % of ABS(PVFCF Claims)] if simplification is set to "Yes"
Opening LRC - Profit - RA	Opening LRC RA attributed to the non-loss component	Number	**[Opening LRC - RA] - [Opening LRC - Loss - RA]**
Effect on Opening LRC - Loss - RA of Changes in Interest Rates (1/2)	Isolating effect on Opening LRC - Loss - RA of Changes in Interest Rates	Number	If **[Opening LRC - RA]** = 0 Output **0** Otherwise Output **[Effect on Opening LRC - RA of Changes in Interest Rates (1/2)] * [Opening LRC - Loss - RA] / [Opening LRC - RA]**
Effect on Opening LRC - Profit - RA of Changes in Interest Rates (1/2)	Isolating effect on Opening LRC - Profit - RA of Changes in Interest Rates	Number	If **[Opening LRC - RA]** = 0 Output **0** Otherwise Output **[Effect on Opening LRC - RA of Changes in Interest Rates (1/2)]-[Effect on Opening LRC - Loss - RA of Changes in Interest Rates (1/2)]**
Interest Accreted on Opening LRC - Loss - RA	Isolating Interest Accreted on Opening LRC - Loss - RA	Number	If **[Opening LRC - RA]** = 0 Output **0** Otherwise Output **[Interest Accreted on Opening LRC - RA] * [Opening LRC - Loss - RA] / [Opening LRC - RA]**
Interest Accreted on Opening LRC - Profit - RA	Isolating Interest Accreted on Opening LRC - Profit - RA	Number	If **[Opening LRC - RA]** = 0 Output **0** Otherwise Output **[Interest Accreted on Opening LRC - RA]-[Interest Accreted on Opening LRC - Loss - RA]**
New LRC - Loss - RA	New LRC RA attributed to the loss component	Number	If the given GIC Code is in I_IN_Calc Reference [New LRC - Loss – RA] from I_IN_Calc for the given GIC Code Otherwise Output **0**
New LRC - Profit - RA	New LRC RA attributed to the non-loss component	Number	**[New LRC - RA] - [New LRC - Loss - RA]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Interest Accreted on New LRC - Loss - RA	Isolating Interest Accreted on New LRC - Loss - RA	Number	If **[New LRC - RA]** = 0 Output **0** Otherwise Output **[Interest Accreted on New LRC - RA] * [New LRC - Loss - RA] / [New LRC - RA]**
Interest Accreted on New LRC - Profit - RA	Isolating Interest Accreted on New LRC - Profit - RA	Number	If **[New LRC - RA]** = 0 Output **0** Otherwise Output **[Interest Accreted on New LRC - RA]-[Interest Accreted on New LRC - Loss - RA]**
Interest Accreted on LRC - Loss - RA	Total interest accreted on LRC – Loss – RA (opening and new LRC)	Number	**[Interest Accreted on Opening LRC - Loss - RA] + [Interest Accreted on New LRC - Loss - RA]**
Interest Accreted on LRC - Profit - RA	Total interest accreted on LRC – Profit – RA (opening and new LRC)	Number	**[Interest Accreted on Opening LRC - Profit - RA] + [Interest Accreted on New LRC - Profit - RA]**
LRC - Loss - RA - Post Roll Forward	LRC - Loss - RA - Post Roll Forward (including effect of changes in interest rates)	Number	**[Opening LRC - Loss - RA] + [New LRC - Loss - RA] + [Effect on Opening LRC - Loss - RA of Changes in Interest Rates (1/2)] + [Interest Accreted on LRC - Loss - RA]**
LRC - Profit - RA - Post Roll Forward	LRC - Profit - RA - Post Roll Forward (including effect of changes in interest rates)	Number	**[Opening LRC - Profit - RA] + [New LRC - Profit - RA] + [Effect on Opening LRC - Profit - RA of Changes in Interest Rates (1/2)] + [Interest Accreted on LRC - Profit - RA]**
Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)	Isolating effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)	Number	If **SUM([LRC - Loss - RA - Post Roll Forward],[LRC - Profit - RA - Post Roll Forward])** = 0 Output **0** Otherwise Output **[Effect on LRC - RA of Removal of Expected Claims and Other Expenses Incurred (Current)] * [LRC - Loss - RA - Post Roll Forward] / SUM([LRC - Loss - RA - Post Roll**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Forward],[LRC - Profit - RA - Post Roll Forward])
Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current)	=[Effect on LRC - RA of Removal of Expected Claims and Other Expenses Incurred (Current)] * [LRC - Profit - RA - Post Roll Forward] / SUM([LRC - Loss - RA - Post Roll Forward],[LRC - Profit - RA - Post Roll Forward]) (set to 0 if denominator is 0)	Number	If **SUM([LRC - Loss - RA - Post Roll Forward],[LRC - Profit - RA - Post Roll Forward])** = 0 Output **0** Otherwise Output **[Effect on LRC - RA of Removal of Expected Claims and Other Expenses Incurred (Current)]-[Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)]**
LRC - Loss - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)	LRC - Loss - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)	Number	**[LRC - Loss - RA - Post Roll Forward] + [Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)]**
LRC - Profit - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)	LRC - Profit - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)	Number	**[LRC - Profit - RA - Post Roll Forward] + [Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current)]**
LRC - Loss - FCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)	LRC - Loss - FCF - Post Removal of Expected Claims and Other Expenses Incurred (Current) (i.e. future claims & expenses plus risk adjustment)	Number	**[LRC - Loss - PVFCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)] + [LRC - Loss - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)]**
Step 13: LRC CSM roll-forward and movements			
Opening LRC - CSM	Sourced from I_IF_GEN	Number	Reference [Opening LRC - CSM] from I_IF_GEN for the given GIC Code
Opening LRC - CSM - Post Roll Forward	Rolled forward opening CSM (LIYC)	Number	If **[Locked-in YC Date]** > **[Reporting Date – Previous]** (input in Setup) Output **0** Otherwise Output **[Opening LRC - CSM] * (1+YC(1))** **- (([Reporting Date – Previous] – [Locked-in YC Date])/365.25)** *****

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(1+ YC(2)) **(([Reporting Date – Current] – [Locked-in YC Date])/365.25)** Where YC(1) is the spot rate referenced From the "Yield curves" sheet, for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked _Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date – Previous] -[Locked-in YC Date])/365.25)*12)** And YC(2) is the spot rate referenced From the "Yield curves" sheet, for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date – Current] -[Locked-in YC Date])/365.25)*12)** Note: Rounding up is to zero decimal places. [Reporting Date – Current] and [Reporting Date – Previous] are inputs in the Setup. Differences in dates are in days
New LRC - CSM	New CSM recognised in the current reporting period for the GIC	Number	If the given GIC Code is in I_IN_Calc Reference [New LRC - CSM] from I_IN_Calc for the given GIC Code Otherwise Output **0**
New LRC - CSM - Post Roll Forward	Rolled forward new CSM (LIYC)	Number	**[New LRC - CSM] * (1+YC(2))** **(([Reporting Date – Current] – [Locked-in YC Date])/365.25)**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Reporting Date – Current] is input in the Setup. YC(2) is as described above. Differences in dates are in days
LRC - CSM - Post Roll Forward	Rolled forward opening and new CSM (LIYC)	Number	**[Opening LRC - CSM - Post Roll Forward] + [New LRC - CSM - Post Roll Forward]**
Interest Accreted on LRC - CSM	Interest Accreted on opening and new LRC - CSM	Number	**[LRC - CSM - Post Roll Forward] - ([Opening LRC - CSM] + [New LRC - CSM])**
Total Change in FCF (Future) Non FX	Experience Variance relating to all future cash flows (inflows and outflows) as well as the risk adjustment that affect the CSM (prior to release), only allowing for non exchange rate experience variances	Number	**[Effect on LRC - PVFCF (Non-claims) of Non-claim CFs Experience Variance (Future - Non FX)] + [Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) - Non FX] + [Effect on LRC - RA of Claim CFs Experience Variance (Future) (Non FX)]**
Non-onerous/Onerous (Opening)	GIC opening Onerousness indicator (before allowing for experience variances relating to all future cash flows) (formula essentially checks if either there is a non-zero loss component or a non-zero CSM)	String	If **[LRC - Loss - FCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)] - [LRC - CSM - Post Roll Forward] < 0** Output **"Non-onerous"** Otherwise Output **"Onerous"**
Non-onerous/Onerous (After Non FX change in FCF)	GIC closing Onerousness indicator after allowing for non exchange rate experience variances relating to future cash flows.	String	If **[LRC - CSM - Post Total Experience Variance (Future)] > 0** Output **"Non-onerous"** Otherwise Output **"Onerous"**
Effect on LRC - CSM of Total Experience Variance (Future) - Non FX	Capped at the maximum of: • the rolled-forward opening CSM (as loss component is created if experience variance is unfavourably larger than opening CSM) • or the CSM created by the experience variance	Number	If **[Non-onerous/Onerous (Opening)]** = "Non-onerous" Output **-MIN([LRC - CSM - Post Roll Forward], [Total Change in FCF (Future) Non FX])**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	being favourable to the extent it exceeds the opening loss component.		Otherwise Output **-MIN(0,[LRC - Loss - FCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)]+[Total Change in FCF (Future) Non FX])**
LRC - CSM - Post Total Experience Variance (Future)	LRC - CSM - Post Total Experience Variance (Future) relating to CSM (hence can't be less than zero)	Number	**[LRC - CSM - Post Roll Forward] + [Effect on LRC - CSM of Total Experience Variance (Future) – Non FX]**
Release in LRC - CSM	Release in LRC – CSM (post experience variances) based on coverage units allocated to current reporting period	Number	If Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 for the given GIC Code and current reporting date **= 0** Output **-[LRC - CSM - Post Total Experience Variance (Future)]** Otherwise perform the following calculation <u>Step 1:</u> Sum the [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 for the given GIC Code and current reporting date, where [Reporting Period (0 = current)] = 0 <u>Step 2:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 for the given GIC Code and current reporting date <u>Step 3:</u> **-[LRC - CSM - Post Total Experience Variance (Future)] * (Step 1 / Step 2)**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Closing LRC - CSM	Closing LRC – CSM post release	Number	**[LRC - CSM - Post Total Experience Variance (Future)] + [Release in LRC - CSM]**
Step 14: LRC Experience Variance – isolating LRC - Profit and LRC - Loss components			
Effect on LRC - Loss - FCF of Total Experience Variance (Future) - Non FX	Isolating effect on LRC - Loss - FCF of Total Experience Variance (Future) - Non FX	Number	**[Effect on LRC - CSM of Total Experience Variance (Future) – Non FX] + [Total Change in FCF (Future) Non FX]**
LRC - Loss - RA - Post Total Experience Variance (Future) - Non FX	LRC - Loss component – RA - Post Total Experience Variance (Future) Non FX	Number	If [**Non-onerous/Onerous (After Non FX change in FCF)**] ="Non-onerous" Or [**Expected Claim CFs (Future)(Closing) - Prev FX**]+[**LRC - RA - Post Claim CFs Experience Variance (Future) - Non FX**])=0 Output **0** Otherwise Output **MIN([LRC - Loss - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)]+[Effect on LRC - RA of Claim CFs Experience Variance (Future) (Non FX)] * (1-(-[Effect on LRC - CSM of Total Experience Variance (Future) - Non FX] / [Total Change in FCF (Future) Non FX])),[LRC - RA - Post Claim CFs Experience Variance (Future) - Non FX])**
Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX	Isolating effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX	Number	**[LRC - Loss - RA - Post Total Experience Variance (Future) - Non FX] - [LRC - Loss - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)]**
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX	Isolating effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX	Number	**[Effect on LRC - Loss - FCF of Total Experience Variance (Future) - Non FX] - [Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX]**
Effect on LRC - Profit - RA of Total Experience Variance (Future) - Non FX	Isolating effect on LRC - Profit - RA of Total	Number	**[Effect on LRC - RA of Claim CFs Experience Variance (Future) (Non FX)] - [Effect**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	Experience Variance (Future) - Non FX		**on LRC - Loss - RA of Total Experience Variance (Future) - Non FX]**
Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - Non FX	Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - Non FX	Number	**[Effect on LRC - PVFCF (Non-claims) of Non-claim CFs Experience Variance (Future - Non FX)] + [Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) - Non FX] -[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX]**
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX	Isolating effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX	Number	If [LRC - PVFCF (Claims) - Post Removal of Expected Claims and Other Expenses Incurred (Current)] = 0 Output **0** Otherwise Output **[Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) - FX]*([LRC - Loss - PVFCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)]+[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX])/[LRC - PVFCF (Claims) - Post Claim CFs Non FX Experience Variances (Future)]**
Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX	Isolating effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX	Number	**[Effect on LRC - PVFCF (Non-claims) of Non-claim CFs Experience Variance (Future - FX)] + [Effect on LRC - PVFCF (Claims) of Claim CFs Experience Variance (Future) - FX] - [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX]**
Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX	Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX	Number	If [LRC - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current) - Prev FX]=0 Output **0**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise Output **[Effect on LRC - RA of Claim CFs Experience Variance (Future) (FX)]*[LRC - Loss - RA - Post Total Experience Variance (Future) - Non FX]/[LRC - RA - Post Claim CFs Experience Variance (Future) - Non FX]**
Effect on LRC - Profit - RA of Total Experience Variance (Future) - FX	Isolating effect on LRC - Profit - RA of Total Experience Variance (Future) - FX	Number	**[Effect on LRC - RA of Claim CFs Experience Variance (Future) (FX)] - [Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX]**
Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)	Isolating effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)	Number	If [LRC - PVFCF (Claims) - Post Removal of Expected Claims and Other Expenses Incurred (Current)] = 0 Output **0** Otherwise Output **[Effect on LRC - PVFCF (Claims) of Changes in Interest Rates (2/2)]*([LRC - Loss - PVFCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)]+[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX])/[LRC - PVFCF (Claims) - Post Claim CFs Non FX Experience Variances (Future)]**
Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)	Isolating effect on LRC - Loss - RA of Changes in Interest Rates (2/2)	Number	If **[LRC - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current) - Prev FX] =0** Output **0** Otherwise Output: **[Effect on LRC - RA of Changes in Interest Rates (2/2)]*[LRC - Loss - RA - Post Total Experience Variance (Future) - Non**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			FX]/[LRC - RA - Post Claim CFs Experience Variance (Future) - Non FX]
Effect on LRC - Profit - PVFCF of Changes in Interest Rates (2/2)	Isolating effect on LRC - Profit - PVFCF (Claims and Non Claims) of Changes in Interest Rates (2/2)	Number	**[Effect on LRC - PVFCF (Non-claims) of Changes in Interest Rates (2/2)]+[Effect on LRC - PVFCF (Claims) of Changes in Interest Rates (2/2)]-[Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)]**
Effect on LRC - Profit - RA of Changes in Interest Rates (2/2)	Isolating Effect on LRC - Profit - RA of Changes in Interest Rates (2/2)	Number	**[Effect on LRC - RA of Changes in Interest Rates (2/2)] - [Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)]**
Step 15: LRC Closing balances			
Closing LRC - Loss - PVFCF	Closing LRC – Loss Component – PVFCF for the GIC	Number	**[LRC - Loss - PVFCF - Post Removal of Expected Claims and Other Expenses Incurred (Current)]]+[@[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX]+[Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)]+[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX]**
Closing LRC - Loss - RA	Closing LRC – Loss Component – RA for the GIC	Number	**[LRC - Loss - RA - Post Removal of Expected Claims and Other Expenses Incurred (Current)]+[Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX]+[Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)]+[Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX]**
Closing LRC - Profit – PVFCF	Closing LRC - Profit – PVFCF for the GIC where LRC - Profit - PVFCF - Post Total Experience Variance (Future) is the rolled forward PVFCF (Non-claims) as at previous reporting date (past/current, next and future), plus claims cash flows (future).	Number	**[Closing LRC - PVFCF (Non-claims) - Current FX] + [Closing LRC - PVFCF (Claims) - Current FX] - [Closing LRC - Loss - PVFCF]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	Actual non-claim cash flows removed in the period then removed to isolate future cash flows only		
Closing LRC - Profit - RA	Closing LRC - Profit – RA for the GIC	Number	**[Closing LRC - RA (Current FX)] - [Closing LRC - Loss - RA]**
Effect on LRC - Loss - PVFCF of Changes in Interest Rates	Effect on LRC - Loss - PVFCF of Changes in Interest Rates	Number	**[Effect on Opening LRC - Loss - PVFCF of Changes in Interest Rates (1/2)] + [Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)]**
Effect on LRC - Loss - RA of Changes in Interest Rates	Effect on LRC - Loss - RA of Changes in Interest Rates	Number	**[Effect on Opening LRC - Loss - RA of Changes in Interest Rates (1/2)]+ [Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)]**
Effect on LRC - Profit - PVFCF of Changes in Interest Rates	Effect on LRC - Profit - PVFCF (Claims and Non- claims) of changes in Interest Rates	Number	**[Effect on Opening LRC - PVFCF (Non-claims) of Changes in Interest Rates (1/2)] + [Effect on LRC - Profit – PVFCF (Claims) of Changes in Interest Rates (1/2)] + [Effect on LRC - Profit - PVFCF of Changes in Interest Rates (2/2)]**
Effect on LRC - Profit - RA of Changes in Interest Rates	Effect on LRC - Profit - RA of Changes in Interest Rates	Number	**[Effect on Opening LRC - Profit - RA of Changes in Interest Rates (1/2)] + [Effect on LRC - Profit - RA of Changes in Interest Rates (2/2)]**
Step 16: Movements in Liability for Incurred Claims (LIC) – Present Value of Future Cash flows			
Opening LIC - PVFCF	Aggregated value relating to the relevant GIC code as at previous reporting date, using previous YC (sourced from I_SUB_Disc1), i.e. claims incurred in previous reporting periods	Number	-1 * Sum of [Discounted Claim and Other Expense CFs (Incurred in the Past)(Prev YC, t0) – Current FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
LIC - PVFCF - Post Roll Forward	Aggregated value relating to the relevant GIC code as at previous reporting date rolled forward, using locked-in YC (sourced from I_SUB_Disc1), i.e. claims incurred in previous reporting periods	Number	-1 * Sum of [Discounted Claim and Other Expense CFs (Incurred in the Past)(Prev YC, t1) – Current FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) **2.** [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Interest Accreted on LIC - PVFCF	Interest Accreted on Opening LIC - PVFCF	Number	**[LIC - PVFCF - Post Roll Forward] - [Opening LIC - PVFCF]**
Claim and Other Expense Payments (Past)	Sourced from I_IF_GEN	Number	Reference [Claim and Other Expense Payments (Incurred in Prior Reporting Periods)] from I_IF_GEN for the given GIC Code
LIC - PVFCF - Post Changes to Claim CFs (Past)	Aggregated value of previously incurred claims only relating to the relevant GIC code as at current reporting date, using locked-in YC (sourced from I_SUB_Disc1)	Number	-1 * Sum of [Discounted Claim and Other Expense CFs (Incurred in Prior Reporting Periods)(Prev YC, t0) – Prev FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) **2.** [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on LIC - PVFCF of Changes to Claims CFs (Past)	Effect on LIC - PVFCF of Changes to Claims CFs (Past), i.e. difference in rolled-forward previously incurred claims and expenses (outstanding at previous reporting date) and related payments in current reporting period to present value at current reporting date of remaining	Number	**([LIC - PVFCF - Post Changes to Claim CFs (Past)] - [Claim and Other Expense Payments (Past)]) - [LIC - PVFCF - Post Roll Forward]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	outstanding previously incurred claims and expenses.		
Claim and Other Expense Payments (Incurred in Current Reporting Period)	Sourced from I_IF_GEN	Number	Reference [Claim and Other Expense Payments (Incurred in Current Reporting Periods)] from I_IF_GEN for the given GIC Code
LIC - PVFCF - Post Addition of New Claims and Other Expenses Incurred (Current)	Aggregated value of all outstanding claims and expenses relating to the relevant GIC code as at current reporting date, using locked-in YC (sourced from I_SUB_Disc1)	Number	-1 * Sum of [Discounted Claim and Other Expense CFs (Incurred in the Past)(Prev YC, t0) – Prev FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current)	Effect on LIC - PVFCF of New Claims and Other Expenses Incurred in the Current reporting period (i.e. claims and expenses paid plus claims and expense reserve raised for newly incurred claims)	Number	**([LIC - PVFCF - Post Addition of New Claims and Other Expenses Incurred (Current)] - [Claim and Other Expense Payments (Incurred in Current Reporting Period)]) - [LIC - PVFCF - Post Changes to Claim CFs (Past)]**
LIC - PVFCF - Post Changes in Interest Rates	Aggregated value relating to the relevant GIC code as at current reporting date, using current YC (sourced from I_SUB_Disc1)	Number	-1 * Sum of [Discounted Claim and Other Expense CFs (Incurred in the Past)(Current YC, t0) – Prev FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Effect on LIC - PVFCF of Changes in Interest Rates	Effect on LIC - PVFCF of Changes in Interest Rates	Number	**[LIC - PVFCF - Post Changes in Interest Rates] - [LIC - PVFCF - Post Addition of**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			New Claims and Other Expenses Incurred (Current)]
Effect on LIC - PVFCF of Change in Exchange Rates	Effect on LIC - PVFCF of Change in Exchange Rates	Number	**[Closing LIC - PVFCF]-[LIC - PVFCF - Post Changes in Interest Rates]**
Claim and Other Expense Payments	Claim and Other Expense Payments (past and current) in the current reporting period	Number	**[Claim and Other Expense Payments (Past)] + [Claim and Other Expense Payments (Incurred in Current Reporting Period)]**
Closing LIC - PVFCF	Aggregated closing LIC relating to the relevant GIC code as at current reporting date, using current YC (sourced from I_SUB_Disc1)	Number	-1 * Sum of [Discounted Claim and Other Expense CFs (Incurred in the Past)(Current YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Step 17: Movements in LIC Risk Adjustment and Investment Component			
Opening LIC - RA	Sourced from I_IF_GEN if simplification is not used and set to ABS([Opening LIC - PVFCF]) * [RA % of ABS(PVFCF Claims)] if simplification is used	Number	If **[RA % of ABS(PVFCF Claims)]]**="N/A" Reference [Opening LIC - RA] from I_IF_GEN for the given GIC Code Otherwise output **ABS([Opening LIC - PVFCF])*[RA % of ABS(PVFCF Claims)]**
Closing LIC - RA	Sourced from I_IF_GEN if simplification is not used and set to ABS([Closing LIC - PVFCF]) * [RA % of ABS(PVFCF Claims)] if simplification is used	Number	If **[RA % of ABS(PVFCF Claims)]]**="N/A" Reference [Closing LIC - RA] from I_IF_GEN for the given GIC Code Otherwise output **ABS([Closing LIC - PVFCF])*[RA % of ABS(PVFCF Claims)]**
Interest Accreted on LIC - RA	[Interest Accreted on LIC - PVFCF] / [Opening LIC - PVFCF] * [Opening LIC - RA] (set to 0 if portion of change	Number	If "Disaggregate change in … finance result?" is set to "No" in the Setup:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	in RA is not assigned to insurance finance result or if denominator is 0)		OR **[Opening LIC - PVFCF]** = 0 Output **0** Otherwise Output: **([Interest Accreted on LIC - PVFCF] / [Opening LIC - PVFCF]) * [Opening LIC - RA]**
Effect on LIC - RA of Changes to Claims CFs (Past)	Calculated based on difference in Closing LIC – RA to rolled-forward Opening LIC – RA and LIC – RA for new claims & expenses incurred	Number	**[Closing LIC - RA] - ([Opening LIC - RA] + [Interest Accreted on LIC - RA] + [Effect on LIC - RA of New Claims and Other Expenses Incurred (Current)] + [Effect on LIC - RA of Changes in Interest Rates]+ [Effect on LIC - RA of Change in Exchange Rates])**
Effect on LIC - RA of New Claims and Other Expenses Incurred (Current)	Effect on LIC - RA of New Claims and Other Expenses Incurred in the Current period that are still outstanding	Number	If risk adjustment simplification (in Setup) is set to “Yes” OR [Closing LIC - RA (New Claims and Other Expenses Incurred)] = 0 for the given GIC Code in I_IF_GEN Then If **[Closing LIC - PVFCF]** = 0 Output **0** Otherwise Output **ABS([Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current)] + [Claim and Other Expense Payments (Incurred in Current Reporting Period)]) * [Closing LIC - RA] / ABS([Closing LIC - PVFCF])** Otherwise reference

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Closing LIC - RA (New Claims and Other Expenses Incurred)] for the given GIC Code in I_IF_GEN
Effect on LIC - RA of Changes in Interest Rates	Effect on LIC - RA of Changes in Interest Rates	Number	If **Option_DisaggregateChangeInRA="No" or [Closing LIC - PVFCF]=0** Output **0** Otherwise output **[Effect on LIC - PVFCF of Changes in Interest Rates]*[Closing LIC - RA]/[Closing LIC - PVFCF]**
Effect on LIC - RA of Change in Exchange Rates	Effect on LIC - RA of Change in Exchange Rates	Number	If **Option_DisaggregateChangeInRA="No" or [Closing LIC - PVFCF]=0** Output **0** Otherwise output **[Effect on LIC - PVFCF of Change in Exchange Rates]*[Closing LIC - RA]/[Closing LIC - PVFCF]**
Opening LIC - IC	Sourced from I_IF_GEN	Number	Reference [Opening LIC - IC] from I_IF_GEN for the given GIC Code
Investment Component Payments	Sourced from I_IF_GEN	Number	Reference [Investment Component Payments] from I_IF_GEN for the given GIC Code
Closing LIC - IC	Sourced from I_IF_GEN	Number	Reference [Closing LIC - IC] from I_IF_GEN for the given GIC Code
Effect on LIC - IC of Changes to IC CFs (Past)	Effect on LIC - IC of Changes to IC CFs (Past)	Number	[Closing LIC - IC] - ([Opening LIC - IC] - [Transfer of Investment Components] + [Investment Component Payments])
Step 18: LRC Pre-recognition cash flow movements			
Opening LRC - PRCF	Opening LRC - PRCF	Number	Reference [Opening LRC - PRCF] from I_IF_GEN for the given GIC Code
Pre-recognition CF Payments	Pre-recognition CF Payments	Number	Reference [Pre-recognition CF Payments] from I_IF_GEN for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Impairment of PRCF Asset	Sourced from I_IF_GEN	Number	Reference [Impairment of PRCF Asset] from I_IF_GEN for the given GIC Code
Reversal of Impairment of PRCF Asset	Sourced from I_IF_GEN	Number	Reference [Reversal of Impairment of PRCF Asset] from I_IF_GEN for the given GIC Code
Transfer of Pre-recognition CFs	Sourced from I_IN_Calc	Number	If the given GIC Code is found in I_IN_Calc Reference [Pre-recognition CFs] from I_IN_Calc for the given GIC Code and multiply by -1 Otherwise Output **0**
Closing LRC - PRCF	Closing LRC – Pre Recognition CFs	Number	**[Opening LRC - PRCF] + [Pre-recognition CF Payments] + [Impairment of PRCF Asset] + [Reversal of Impairment of PRCF Asset] + [Transfer of Pre-recognition CFs]**
Pre-recognition CFs	Sourced from I_NEW_GEN. The pre-recognition CF payments here only relates to new business.	Number	If the given GIC Code is found in I_IN_Calc Reference [Pre-recognition CFs] from I_IN_Calc for the given GIC Code Otherwise Output **0**
Pre-recognition CFs - Post Roll Forward	Aggregated value of PRCFs relating to the relevant GIC code as at initial discount date rolled forward to the current reporting date, using the LIYC	Number	If "Apply discounting … acquisition cash flows?" is set to "No" in the Setup: Output **[Pre-recognition CFs]** Otherwise Output: **[Pre-recognition CFs] * (1 + i1)** **([Reporting Date – Current] - [Locked-in YC Date])/365.25** Where i1 is the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked /Linked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			– Current] - [Locked-in YC Date])/365.25) * 12) Rounding up is to zero decimal places Differences between dates are in days.
Accretion on Pre-recognition CFs (LIYC)	Accretion on Pre-recognition CFs (LIYC)	Number	**[Pre-recognition CFs - Post Roll Forward] - [Pre-recognition CFs]**
Step 19: Acquisition Expense Calculations			
Opening Notional DAC	Opening Notional DAC for the GIC Code	Number	Reference [Opening Notional DAC] from I_IF_GEN for the given GIC Code and multiply by -1
Accretion factor on Opening NDAC	Accretion factor for the period based on the LIYC if discounting is allowed for in the NDAC (if Option to Discount Acquisition CFs = "No" accretion factor will be 1 - no accretion will be applied)	Number	If **[Opening Notional DAC]** = 0 Output **0** Otherwise If “Apply discounting … acquisition cash flows?” is set to “No” in the Setup Output **1** Otherwise If “Apply discounting … acquisition cash flows?” is set to “Yes - LIYC” in the Setup Output **(1 + i1)** **([Reporting Date – Current] - [Locked-in YC Date])/365.25)** ∗ **(1 + i2)** **- ([Reporting Date – Previous] - [Locked-in YC Date])/365.25)** Otherwise Output (1 + i3) **([Reporting Date – Current] - [Reporting Date - Previous])/365.25)** Where i1 is the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked/Linked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date – Current] - [Locked-in YC Date])/365.25) * 12)**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			And where i2 is the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked/Linked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date – Previous] - [Locked-in YC Date])/365.25) * 12)** And where i3 is the spot rate for yield curve link: **[Reporting Date - Previous]_[Currency] _Unlinked/Linked_Remaining Coverage_[GIC Code]** At duration: **Roundup((([Reporting Date – Current] - [Reporting Date - Previous])/365.25) * 12)**
Accretion on Opening NDAC		Number	**([Accretion factor on Opening NDAC] - 1) * [Opening Notional DAC]**
New Future Acquisition Expense Payments (LIYC)	Aggregated value relating to the relevant GIC code of acquisition expense cash flows expected as at initial discount date reflected as at the initial discount date, using the LIYC (if Option to Discount Acquisition CFs = "No" then no accretion will be applied - only undiscounted values will be summed)	Number	If "Apply discounting … acquisition cash flows?" is set to "No" in the Setup Sum the [Acquisition Expense CFs (Service in Current Reporting Period)] plus [Acquisition Expense CFs (Future Service)] columns in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Otherwise Sum the [Discounted Acquisition Expense CFs (Current

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Service)(Locked-in YC, Locked-in Date)] plus [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Locked-in Date)] columns in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
New Future Acquisition Expense Payments rolled forward (LIYC)	Aggregated value relating to the relevant GIC code of acquisition expense cash flows expected as at initial discount date rolled forward to the current reporting date, using the LIYC (if Option to Discount Acquisition CFs = "No" then no accretion will be applied - only undiscounted values will be summed)	Number	If "Apply discounting … acquisition cash flows?" is set to "No" in the Setup Sum the [Acquisition Expense CFs (Service in Current Reporting Period)] plus [Acquisition Expense CFs (Future Service)] columns in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Otherwise Sum the [Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Reporting Date)] plus [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Reporting Date)] columns in I_IN_Disc, where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Accretion on New Future Acquisition Expense Payments	Accretion on New Future Acquisition Expense Payments (LIYC)	Number	**[New Future Acquisition Expense Payments rolled forward (LIYC)] - [New Future Acquisition Expense Payments (LIYC)]**
Expected Closing Future Acquisition Expense Payments (Prev YC)	Aggregated present value relating to the relevant GIC code of acquisition expense cash flows (current and future service) expected as at initial recognition date reflected as at the current reporting date, using the LIYC if given GIC is new and using the Previous YC if not (if Option to Discount Acquisition CFs = "No" then no accretion will be applied - only undiscounted values will be summed)	Number	If "Apply discounting … acquisition cash flows?" is set to "No" in the Setup Then Sum the [Acquisition Expense CFs (Service in Current Reporting Period)] plus [Acquisition Expense CFs (Future Service)] columns in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc) 3. [Delay (in Years)] in I_IN_Disc != 0 and add to this the Sum of the [Acquisition Expense CFs (Future Service) – Prev FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Otherwise Sum the [Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Reporting Date)] plus [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Reporting Date)] columns in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc) 3. [Delay (in Years)] in I_IN_Disc != 0 And add to this the Sum of the [Discounted Acquisition Expense CFs (Future Service)(Prev YC, t1)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Expected Closing Future Acquisition Expense Payments (LIYC)	Aggregated present value relating to the relevant GIC code of acquisition expense cash flows expected as at initial discount date reflected as at the current reporting	Number	If "Apply discounting … acquisition cash flows?" is set to "No" in the Setup Then

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	date, using the Locked-in YC (if Option to Discount Acquisition CFs = "No" then no accretion will be applied - only undiscounted values will be summed)		Sum the [Acquisition Expense CFs (Service in Current Reporting Period)] plus [Acquisition Expense CFs (Future Service)] columns in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc) 3. [Delay (in Years)] in I_IN_Disc != 0 And add to this the Sum of the [Acquisition Expense CFs (Future Service)- Prev FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Otherwise Sum the [Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Reporting Date)] plus [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Reporting Date)] columns in I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = input for "Reporting Date –

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code in I_SUB_Calc) 3. [Delay (in Years)] in I_IN_Disc != 0 And add to this the Sum of the [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, t1)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Closing Future Acquisition Expense Payments (LIYC)	Aggregated present value relating to the relevant GIC code of all acquisition expense cash flows expected as at the current reporting date, using the LIYC (if Option to Discount Acquisition CFs = "No" then no accretion will be applied - only undiscounted values will be summed)	Number	If "Apply discounting … acquisition cash flows?" is set to "No" in the Setup Then Sum the [Acquisition Expense CFs (Past Service)] plus [Acquisition Expense CFs (Service in Next Reporting Period) – Prev FX] plus [Acquisition Expense CFs (Future Service) – Prev FX] columns in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Otherwise

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Sum the [Discounted Acquisition Expense CFs (Past Service)(Locked-in YC, t0)] plus [Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Locked-in YC, t0)] plus [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, t0)] columns in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Closing Future Acquisition Expense Payments (Current YC)	Aggregated value relating to the relevant GIC code of acquisition expense cash flows expected as at the current reporting date, using the Current YC (if Option_DiscountAcqCFs="No " then no accretion will be applied - only undiscounted values will be summed)	Number	If "Apply discounting … acquisition cash flows?" is set to "No" in the Setup Then Sum the [Acquisition Expense CFs (Past Service)] plus [Acquisition Expense CFs (Service in Next Reporting Period) – Prev FX] plus [Acquisition Expense CFs (Future Service) – Prev FX] columns in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Otherwise

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Sum the [Discounted Acquisition Expense CFs (Past Service)(Current YC, t0) - Current FX] plus [Discounted Acquisition Expense CFs (Service in Next Reporting Period)(Current YC, t0) – Current FX] plus [Discounted Acquisition Expense CFs (Future Service)(Current YC, t0) – Current FX] columns in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code in I_SUB_Calc)
Impact of Moving from Prev YC to LIYC	Impact of Moving from Prev YC to LIYC on expected future acquisition expense cash flows	Number	**[Expected Closing Future Acquisition Expense Payments (LIYC)] - [Expected Closing Future Acquisition Expense Payments (Prev YC)]**
Change in Future Acquisition Expense Payments (LIYC)	Change in Future Acquisition Expense Payments (LIYC) (previous to current reporting periods)	Number	**[Closing Future Acquisition Expense Payments (LIYC)] - [Expected Closing Future Acquisition Expense Payments (LIYC)]**
Impact of Moving from LIYC to Current YC	Impact of Moving from LIYC to Current YC at current reporting date	Number	**[Closing Future Acquisition Expense Payments (Current YC)] - [Closing Future Acquisition Expense Payments (LIYC)]**
Effect on NDAC of change in interest rates (if NDAC on current rates)	Effect on NDAC of change in interest rates (if NDAC on current rates) i.e. Prev YC to LIYC and LIYC to Current YC	Number	**[Impact of Moving from Prev YC to LIYC] + [Impact of Moving from LIYC to Current YC]**
Interest Accreted on DAC	Total Interest Accreted on DAC (opening and new)	Number	**[Accretion on Pre-recognition CFs (LIYC)] + [Accretion on Opening NDAC] + [Accretion on New Future Acquisition Expense Payments]**
Acquisition Expense Experience Variance (Current/Past) for DAC	Acquisition Expense Experience Variance (Current/Past) for DAC	Number	**-1 * [Acquisition Expense Experience Variance (Past/Current)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Acquisition Expense Experience Variance (Future)	Aggregated value relating to the relevant GIC code of: - new business acquisition expense cash flows related to future service expected as at initial discount date for the current period (sourced from I_NEW_CFs) - In Force acquisition expense cash flows related to future service expected as at the previous reporting date for the current period (sourced from I_IF_FCFs) Less: - Aggregated value relating to the relevant GIC code of actual acquisition expense payments related to future service during the period (sourced from I_IF_GEN)	Number	-1 * If Insurance new business indicator = “No” Then output: 0 Otherwise: Sum the [Acquisition Expense CFs (Future Service)] column in I_NEW_CFs, where: 1. [Delay (in Years)] (in I_NEW_CFs) < **(([Reporting Date – Current] - [Reporting Date – Previous]) / 365.25)** (input in Setup and difference is in days) 2. [GIC Code] (in I_NEW_CFs) = **[GIC Code]** (given GIC Code in I_SUB_Calc) Add to this -1 * Sum of the [Acquisition Expense CFs (Future Service) – Prev FX] column in I_IF_FCFs, where: 1. [Delay (in Years)] (in I_IF_FCFs) < **2 * (([Reporting Date – Current] - [Reporting Date – Previous]) / 365.25)** (input in Setup and difference is in days) 2. [GIC Code] (in I_IF_FCFs) = **[GIC Code]** (given GIC Code in I_SUB_Calc) 3. [Reporting Date] (in I_IF_FCFs) = **[Reporting Date – Previous]** Add to this the [Acquisition Expense Payments (Future Service)]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			in I_IF_GEN, for the given GIC code
Closing Notional DAC (before release)	Closing Notional DAC (before release)	Number	**[Pre-recognition CFs]] + [Opening Notional DAC] + [New Future Acquisition Expense Payments (LIYC)] + [Change in Future Acquisition Expense Payments (LIYC)] + [Interest Accreted on DAC] + [Acquisition Expense Experience Variance (Current/Past) for DAC] + [Acquisition Expense Experience Variance (Future)])** Plus If "Apply discounting … acquisition cash flows?" is set to "Yes - Current" in the Setup Then **[Effect on NDAC of change in interest rates (if NDAC on current rates)]** Otherwise **0**
Closing Notional DAC	Closing Notional DAC after amortization based on specified amortization pattern	Number	If Sum of values in the [Discounted Amortisation Pattern (Locked-in YC, t0)] column in I_SUB_Disc2 for the given GIC Code and current reporting date **= 0** Output **0** Otherwise perform the following calculation <u>Step 1:</u> [Discounted Amortisation Pattern (Locked-in YC, t0)] column in I_SUB_Disc2 for the given GIC Code and current reporting date

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Step 2: Sum the [Discounted Amortisation Pattern (Locked-in YC, t0)] column in I_SUB_Disc2 for the given GIC Code and current reporting date, where [Reporting Period (0 = current)] = 0 Step 3: **-[Closing Notional DAC (before release)] * ((Step 1 – Step 2) / Step 1)**
Release in Notional DAC	Release in Notional DAC based on amortization pattern	Number	**[Closing Notional DAC] + [Closing Notional DAC (before release)]**

Insurance Contracts Subsequent Measurement – Foreign Exchange (I_FX)

This part of the solution performs the conversion of calculated figures based on the relevant exchange rates and also determines the impact of changes in exchange rates. Previous calculation sheets (largely I_SUB_Calc) as well as input sheets are referenced throughout.

Methodology applied to IAS 21 and IFRS 17 interactions

The calculations within the EY Accelerator solution aligns with the "Approach one" or "Single currency" methodology detailed within the IFRS Interpretations Committee (IFRIC) papers AP06 in June 2022 and AP02 in September 2022 respectively. This approach has received the most favourable reception by industry participants. Other suggested approaches to IAS 21 and IFRS 17 interaction have shown the ability to result in unusual outcomes (such as negative CSM or negative interest accretion on CSM) and is expected to result in greater operational complexity, and have therefore not been included in the solution.

Both approaches with illustrative examples and additional commentary from the IFRIC can be found in the papers embedded below:

ap02-multi-currency-groups-of-insurance-

ap06-multi-currency-groups-of-insurance-

Note that under "Approach one" or the "Single currency" methodology three different groups of currencies can be identified. We will adopt the following terminology:

- The "transactional currency" is the currency of the underlying cashflows e.g. premiums, claims expenses
- The "GIC/GRC Code currency" is the single currency within which the group of (re)insurance contracts and the related CSM is determined to be measured.

- The "reporting currency" of the entity is the currency in which the financial statements will be presented

The measurement of the contracts under IFRS 17 with subsequent IAS 21 impacts is determined as follows within the solution:

1. FX conversions for IFRS 17 measurement:
   1.1. Conversion of cashflow inputs:
      1.1.1. Cashflows (both actual and projected FCFs) are converted into the single GIC/GRC Code currency for IFRS 17 measurement
      1.1.2. These conversions occur prior to solution data load i.e. the solution accepts the 'single currency' view of the cashflows
      1.1.3. Actual cashflows occurring throughout the period are to be converted into the GIC/GRC Code's currency at the date of each transaction
      1.1.4. FCFs for initial recognition are converted into the GIC/GRC Code's currency at locked-in exchange rates (where the view of what constitutes a "locked-in" exchange rate will be determined by the relevant fact pattern and policy decision)
      1.1.5. FCFs projected from the start of the period (i.e. prior period closing projection) are converted into the GIC/GRC Code's currency at opening (i.e. prior period closing) rates
      1.1.6. FCFs at subsequent measurement are converted into the GIC/GRC Code's currency at both locked-in and closing exchange rates in order to quantify both the unlocking of CSM for changes in non-financial assumptions and the closing balances at market consistent values
      1.1.7. Note: For the measurement of reinsurance held where the GRC currency differs from the currency of the underlying GIC, the cashflows applicable to the measurement of the GRC should be converted into the GRC Code's currency prior to solution data load
   1.2. IFRS 17 solution calculations:

      1.2.1. Changes in FCFs due to FX movements will be recognised in IFIE and do not adjust the CSM. Hence changes in FCFs that adjust the CSM are measured using locked-in exchange rates alongside other locked-in financial assumptions.
      1.2.2. Where the loss-recovery component of a GRC must be adjusted for changes to the loss-component on underlying GICs **and** the GIC currency is different to that of the GRC, the solution will convert the adjustments calculated in the GIC Code currency to that of the GRC Code currency at the closing exchange rate and will not result in an IAS 21 impact as a balancing item.
2. Subsequent to the IFRS 17 measurement within the GIC/GRC Code currency, FX conversions for IAS 21 exchange rate impacts occur as follows within the solution:
   2.1. Opening balances are converted at opening exchange rates to the reporting currency
   2.2. Closing balances and changes in FCF's are converted at closing exchange rates to the reporting currency
   2.3. Cashflows occurring or accruing over the reporting period (including notional cashflows e.g. IFIE and CSM release) are converted at the average exchange rate over the period to the reporting currency. Note that this is an approximation to converting each cashflow at the exchange rate when it occurred.
3. The IAS 21 exchange impact within each build-up (FCF, CSM) is taken as the balancing item after conversion to the reporting currency. This impact is distinct from IFIE and therefore will be posted and disclosed in a line item separate from IFIE.

The following notation is used throughout:

- $\mathbf{FX_{C,\,G}}$ is the exchange rate at the current reporting date for the given GIC Code's currency (as input in the Exchange Rates input)
- $\mathbf{FX_{P,\,G}}$ is the exchange rate at the Previous reporting date for the given GIC Code's currency (as input in the Exchange Rates input)
- $\mathbf{FX_{L,\,G}}$ is the exchange rate at the GIC's locked-in FX date (referenced from I_Groups) for the given GIC Code's currency (as input in the Exchange Rates input)
- $\mathbf{FX_{A,\,G}}$ is the average exchange rate for the given GIC Code's currency, referenced from I_Groups

(AverageFX_group)

- **$FX_{C, R}$** is the exchange rate at the current reporting date for the Reporting currency (as input in the Exchange Rates input)
- **$FX_{P, R}$** is the exchange rate at the previous reporting date for the Reporting currency (as input in the Exchange Rates input)
- **$FX_{L, R}$** is the exchange rate at the GIC's locked-in FX date (referenced from I_Groups) date for the Reporting currency (as input in the Exchange Rates input)
- **$FX_{A, R}$** is the average exchange rate for the Reporting currency, referenced from I_Groups (AverageFX)

Note that an alternative to referencing **$FX_{A, G}$** and **$FX_{A, R}$** from I_Groups is to perform the appropriate calculation in the I_FX module instead of in I_Groups to obtain those values (if the corresponding inputs in I_Groups were left blank). The calculations in this case would be those documented in the "AverageFX" and "AverageFX_group" fields when those are left blank.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GIC information			
GIC Code	GIC Code associated with the row of calculations.	String	[GIC Code] Each GIC Code is referenced consecutively starting with the first input in I_SUB_Calc.
Currency	Currency associated with the given GIC Code, sourced from I_Groups	String	[Currency] for the given GIC Code, referenced from I_SUB_Calc.
Step 2: Conversions of New LRC – Profit values into reporting currency			
Opening LRC - Profit - PVFCF - Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LRC - Profit – PVFCF] **/ $FX_{P, G}$** Where [Opening LRC - Profit – PVFCF] is referenced from I_SUB_Calc for the given GIC Code
New LRC - Profit - Premium CFs (Issued, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Premium CFs (Issued, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Premium CFs (Issued, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Acquisition Expense CFs (Issued, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Acquisition Expense CFs (Issued, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Acquisition Expense CFs (Issued, Non-onerous)] is referenced from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Investment Component CFs (Issued, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Investment Component CFs (Issued, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Investment Component CFs (Issued, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Claim and Other Expense CFs (Issued, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Claim and Other Expense CFs (Issued, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Claim and Other Expense CFs (Issued, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Premium CFs (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Premium CFs (Issued, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Premium CFs (Issued, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Acquisition Expense CFs (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Acquisition Expense CFs (Issued, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Acquisition Expense CFs (Issued, Onerous)] is referenced from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Investment Component CFs (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Investment Component CFs (Issued, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Investment Component CFs (Issued, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Claim and Other Expense CFs (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Claim and Other Expense CFs (Issued, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Claim and Other Expense CFs (Issued, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Premium CFs (Acquired, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Premium CFs (Acquired, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Premium CFs (Acquired, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Acquisition Expense CFs (Acquired, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Acquisition Expense CFs (Acquired, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Acquisition Expense CFs (Acquired, Non-onerous)] is referenced from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Investment Component CFs (Acquired, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Investment Component CFs (Acquired, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Investment Component CFs (Acquired, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Claim and Other Expense CFs (Acquired, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Claim and Other Expense CFs (Acquired, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Claim and Other Expense CFs (Acquired, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Premium CFs (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Premium CFs (Acquired, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Premium CFs (Acquired, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Acquisition Expense CFs (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Acquisition Expense CFs (Acquired, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Acquisition Expense CFs (Acquired, Onerous)] is referenced from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Investment Component CFs (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Investment Component CFs (Acquired, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Investment Component CFs (Acquired, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - Claim and Other Expense CFs (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - Claim and Other Expense CFs (Acquired, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - Claim and Other Expense CFs (Acquired, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
Step 3: Movements in LRC – Profit over the period converted into reporting currency			
Interest Accreted on Opening LRC - Profit - PVFCF - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on Opening LRC - Profit - PVFCF] **/ $FX_{A, G}$** Where [Interest Accreted on Opening LRC - Profit - PVFCF] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Premium Experience Variance (Past/Current) - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Premium Experience Variance (Past/Current)] **/ $FX_{A, G}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Where [Premium Experience Variance (Past/Current)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Acquisition Expense Experience Variance (Past/Current) - Actuals FX	Sourced from I_SUB_Calc, converted at averageexchange rates	Number	[Acquisition Expense Experience Variance (Past/Current)] **/ $FX_{A, G}$** Where [Acquisition Expense Experience Variance (Past/Current)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)] **/ $FX_{A, G}$** Where [Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - Non FX – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) – Non FX] **/ $FX_{C, G}$** Where [Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) – Non FX] is referenced from I_SUB_Calc for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX – Current FX	Sourced from I_SUB_Calc, converted at currentexchange rates	Number	[Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX] **/ $FX_{C, G}$** Where [Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX] is referenced from I_SUB_Calc for the given GIC Code
Effect on LRC - Profit - PVFCF of Changes in Interest Rates – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LRC - Profit - PVFCF of Changes in Interest Rates] **/ $FX_{C, G}$** Otherwise If [FX Impact from] = "Opening" Where [Effect on LRC - Profit - PVFCF of Changes in Interest Rates] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Premium Receipts - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Premium Receipts] **/ $FX_{A, G}$** Where [Premium Receipts] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Acquisition Expense Payments - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Acquisition Expense Payments] **/ $FX_{A, G}$** Where [Acquisition Expense Payments] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Transfer of Investment Components - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Transfer of Investment Components] **/ $FX_{A, G}$** Where [Transfer of Investment Components] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Step 4: Closing LRC – Profit converted into reporting currency			
Closing LRC - Profit - PVFCF - Actuals FX	Closing value, converted at actual exchange rates for new GIC's and opening exchange rates for in-force GIC's Obtained by summing the previous 26 items in I_FX	Number	**Sum** from **[Opening LRC - Profit - PVFCF - Actuals FX] : [Transfer of Investment Components - Actuals FX]**
Closing LRC - Profit - PVFCF - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing LRC - Profit - PVFCF] **/ $FX_{C, G}$** Where [Closing LRC - Profit - PVFCF] is referenced from I_SUB_Calc for the given GIC Code
Closing LRC - Profit - PVFCF - Net foreign exchange income / (expenses)	FX impact (Prev FX or LIFX to Current FX) for relevant account for the GIC Code	Number	**[Closing LRC - Profit - PVFCF - Current FX] - [Closing LRC - Profit - PVFCF - Actuals FX]**
Step 5: Movements in LRC – Loss over the period converted into reporting currency			
Opening LRC - Loss - PVFCF - Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LRC - Loss - PVFCF] **/ $FX_{P, G}$** Where [Opening LRC - Loss - PVFCF] is referenced from I_SUB_Calc for the given GIC Code
New LRC - Loss - PVFCF (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Loss - PVFCF (Issued, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Loss - PVFCF (Issued, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
New LRC - Loss - PVFCF (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Loss - PVFCF (Acquired, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Loss - PVFCF (Acquired, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
Interest Accreted on LRC - Loss - PVFCF - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on LRC - Loss - PVFCF] **/ $FX_{A, G}$** Where [Interest Accreted on LRC - Loss - PVFCF] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	If [FX Impact from] = “ [Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)] **/ $FX_{A, G}$** Where [Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX – Current FX	Sourced from I_SUB_Calc, converted at current (closing)exchange rates	Number	[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) – Non FX] **/ $FX_{C, G}$** Where [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) – Non FX] is referenced from I_SUB_Calc for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX – Current FX	Sourced from I_SUB_Calc, converted at current (closing) exchange rates	Number	[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] **/ $FX_{C, G}$** Where [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] is referenced from I_SUB_Calc for the given GIC Code
Effect on LRC - Loss - PVFCF of Changes in Interest Rates - Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LRC - Loss - PVFCF of Changes in Interest Rates] **/ $FX_{C, G}$** Where [Effect on LRC - Loss - PVFCF of Changes in Interest Rates] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Step 6: Closing LRC – Loss converted into reporting currency			
Closing LRC - Loss - PVFCF - Actuals FX	Closing value, converted at actual exchange rates Obtained by summing the previous 26 items in I_FX	Number	
Closing LRC - Loss - PVFCF - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing LRC - Loss - PVFCF] **/ $FX_{C, G}$** Where [Closing LRC - Loss - PVFCF] is referenced from I_SUB_Calc for the given GIC Code
Closing LRC - Loss - PVFCF - Net foreign exchange income / (expenses)	FX impact (Prev FX or LIFX to Current FX) for LRC - Loss for the GIC Code	Number	**[Closing LRC - Loss - PVFCF - Current FX] - [Closing LRC - Loss - PVFCF - Actuals FX]**
Step 7: Movements in LRC – Profit - RA over the period converted into reporting currency			
Opening LRC - Profit - RA - Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LRC - Profit - RA] **/ $FX_{P, G}$** Where [Opening LRC - Profit - RA] is referenced from I_SUB_Calc for the given GIC Code
New LRC - Profit - RA (Issued, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - RA (Issued, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - RA (Issued, Non-onerous)] is referenced from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - RA (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - RA (Issued, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - RA (Issued, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - RA (Acquired, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - RA (Acquired, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - RA (Acquired, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - RA (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - RA (Acquired, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - RA (Acquired, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
Interest Accreted on LRC - Profit - RA - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on LRC - Profit - RA] **/ $FX_{A, G}$** [Where [Interest Accreted on LRC - Profit - RA] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current) – Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current)] **/ $FX_{A, G}$** Where [Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LRC - Profit - RA of Total Experience Variance (Future) - Non FX – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LRC - Profit - RA of Total Experience Variance (Future) - Non FX] **/ $FX_{C, G}$** Where [Effect on LRC - Profit - RA of Total Experience Variance (Future) - Non FX] is referenced from I_SUB_Calc for the given GIC Code
Effect on LRC - Profit - RA of Total Experience Variance (Future) - FX - CurrentFX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LRC - Profit - RA of Total Experience Variance (Future) - FX] **/ $FX_{C, G}$** Where [Effect on LRC - Profit - RA of Total Experience Variance (Future) - FX] is referenced from I_SUB_Calc for the given GIC Code
Effect on LRC - Profit - RA of Changes in Interest Rates - Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LRC - Profit - RA of Changes in Interest Rates] **/ $FX_{C, G}$** Where [Effect on LRC - Profit - RA of Changes in Interest Rates] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Step 8: Closing LRC – Profit - RA converted into reporting currency			
Closing LRC - Profit - RA - Actuals FX	Closing value, converted at actual exchange rates	Number	**Sum** from **[Opening LRC - Profit - RA - Actuals FX] :**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	Obtained by summing the previous 9 items in I_FX		**[Effect on LRC - Profit - RA of Changes in Interest Rates - Current FX]**
Closing LRC - Profit - RA - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing LRC - Profit - RA] **/ $FX_{C, G}$** Where [Closing LRC - Profit - RA] is referenced from I_SUB_Calc for the given GIC Code
Closing LRC - Profit - RA - Net foreign exchange income / (expenses)	FX impact (Prev FX or LIFX to Current FX) for LRC - Loss for the GIC Code	Number	**[Closing LRC - Profit - RA - Current FX] - [Closing LRC - Profit - RA - Actuals FX]**
Step 9: Movements in LRC – Loss - RA over the period converted into reporting currency			
Opening LRC - Loss - RA - Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LRC - Loss - RA] **/ $FX_{P, G}$** Where [Opening LRC - Loss - RA] is referenced from I_SUB_Calc for the given GIC Code
New LRC - Loss - RA (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Loss - RA (Issued, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Loss - RA (Issued, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Loss - RA (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Loss - RA (Acquired, Onerous)] **/ $FX_{L, G}$** Where [New LRC - Loss - RA (Acquired, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
Interest Accreted on LRC - Loss - RA - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on LRC - Loss - RA] **/ $FX_{A, G}$** Where [Interest Accreted on LRC - Loss - RA] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			from I_Groups for the given GIC Code
Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)] **/ $FX_{A, G}$** Where [Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX – Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX] **/ $FX_{A, G}$** Where [Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX] is referenced from I_SUB_Calc for the given GIC Code
Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX – Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX] **/ $FX_{A, G}$** Where [Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX] is referenced from I_SUB_Calc for the given GIC Code
Effect on LRC - Loss - RA of Changes in Interest Rates - Current FX	Sourced from I_SUB_Calc, converted at current exchange rates f	Number	[Effect on LRC - Loss - RA of Changes in Interest Rates] **/ $FX_{C, G}$** Where [Effect on LRC - Loss - RA of Changes in Interest Rates] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Step 10: Closing LRC – Loss - RA converted into reporting currency			
Closing LRC - Loss - RA - Actuals FX	Closing value, converted at locked-in exchange rates for	Number	**Sum** from **[Opening LRC - Loss - RA - Actuals FX] :**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	new GIC's and opening exchange rates for in-force GIC's Obtained by summing the previous 9 items in I_FX		**[Effect on LRC - Loss - RA of Changes in Interest Rates - Actuals FX]**
Closing LRC - Loss - RA - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing LRC - Loss - RA] **/ $FX_{C, G}$** Where [Closing LRC - Loss - RA] is referenced from I_SUB_Calc for the given GIC Code
Closing LRC - Loss - RA - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing LRC - Loss - RA - Current FX] - [Closing LRC - Loss - RA - Actuals FX]**
Step 11: Movements in LRC – CSM over the period converted into reporting currency			
Opening LRC - CSM – Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LRC - CSM] **/ $FX_{P, G}$** Where [Opening LRC - CSM] is referenced from I_SUB_Calc for the given GIC Code
New LRC - Profit - CSM (Issued, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - CSM (Issued, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - CSM (Issued, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - CSM (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - CSM (Issued, Onerous)] **/$FX_{L, G}$** Where [New LRC - Profit - CSM (Issued, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - CSM (Acquired, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - CSM (Acquired, Non-onerous)] **/ $FX_{L, G}$** Where [New LRC - Profit - CSM (Acquired, Non-onerous)] is referenced

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
New LRC - Profit - CSM (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates (where locked-in rates represent the most appropriate rate at recognition of the group for new business)	Number	[New LRC - Profit - CSM (Acquired, Onerous)] *** / $FX_{L, G}$** Where [New LRC - Profit - CSM (Acquired, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
Transfer of Pre-recognition CFs (Issued, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates	Number	[Transfer of Pre-recognition CFs (Issued, Non-onerous)] **/ $FX_{L, G}$** Where [Transfer of Pre-recognition CFs (Issued, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
Transfer of Pre-recognition CFs (Issued, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates	Number	[Transfer of Pre-recognition CFs (Issued, Onerous)] **/ $FX_{L, G}$** Where [Transfer of Pre-recognition CFs (Issued, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
Transfer of Pre-recognition CFs (Acquired, Non-onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates	Number	[Transfer of Pre-recognition CFs (Acquired, Non-onerous)] **/ $FX_{L, G}$** Where [Transfer of Pre-recognition CFs (Acquired, Non-onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Transfer of Pre-recognition CFs (Acquired, Onerous) – Actuals FX	Sourced from I_IN_Pre_FX, converted at locked-in exchange rates	Number	[Transfer of Pre-recognition CFs (Acquired, Onerous)] **/ $FX_{L, G}$** Where [Transfer of Pre-recognition CFs (Acquired, Onerous)] is referenced from I_IN_Pre_FX for the given GIC Code Output **0** if GIC not found in I_IN_Pre_FX
Interest Accreted on LRC - CSM – Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on LRC - CSM] **/ $FX_{A, G}$** Where [Interest Accreted on LRC - CSM] is referenced from I_SUB_Calc for the given GIC Code
Effect on LRC - CSM of Total Experience Variance (Future) - Non FX – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LRC - CSM of Total Experience Variance (Future) - Non FX] **/ $FX_{C, G}$** Where [Effect on LRC - CSM of Total Experience Variance (Future) - Non FX] is referenced from I_SUB_Calc for the given GIC Code
Release in LRC - CSM – Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Release in LRC - CSM] **/ $FX_{A, G}$** Where [Release in LRC - CSM] is referenced from I_SUB_Calc for the given GIC Code
Step 12: Closing LRC – CSM - converted into reporting currency			
Closing LRC - CSM – Actuals FX	Closing value, converted at actual exchange rates, calculated as sum of prior items	Number	**Sum** from **[Opening LRC - CSM – Actuals FX] : [Release in LRC - CSM – Actuals FX]**
Closing LRC - CSM - Current FX	Closing value, converted at current exchange rates	Number	[Closing LRC - CSM] **/ $FX_{C, G}$** Where [Closing LRC - CSM] is referenced from I_SUB_Calc for the given GIC Code
Closing LRC - CSM - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing LRC - CSM - Current FX] - [Closing LRC - CSM – Actuals FX]**
Step 13: Movements in LIC – PVFCF over the period converted into reporting currency			
Opening LIC - PVFCF - Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LIC - PVFCF] **/ $FX_{P, G}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Where [Opening LIC - PVFCF] is referenced from I_SUB_Calc for the given GIC Code
Interest Accreted on LIC - PVFCF - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on LIC - PVFCF] **/ $FX_{A, G}$** Where [Interest Accreted on LIC - PVFCF] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LIC - PVFCF of Changes to Claims CFs (Past) - Current FX	Sourced from I_SUB_Calc, converted at current exchange rates f	Number	[Effect on LIC - PVFCF of Changes to Claims CFs (Past)] **/ $FX_{C, G}$** Where [Effect on LIC - PVFCF of Changes to Claims CFs (Past)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current) - Current FX	Sourced from I_SUB_Calc, converted at currentexchange rates	Number	[Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current)] **/ $FX_{C, G}$** Where [Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LIC - PVFCF of Changes in Interest Rates – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LIC - PVFCF of Changes in Interest Rates] **/ $FX_{C, G}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Where [Effect on LIC - PVFCF of Changes in Interest Rates] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LIC - PVFCF of Change in Exchange Rates – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LIC - PVFCF of Change in Exchange Rates] **/ $FX_{C, G}$** Where [Effect on LIC - PVFCF of Change in Exchange Rates] is referenced from I_SUB_Calc for the given GIC Code
Claim and Other Expense Payments - Actuals FX	Sourced from I_SUB_Calc, converted at locked-in exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	[Claim and Other Expense Payments] **/ $FX_{A, G}$** Where [Claim and Other Expense Payments] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Step 14: Closing LIC – PVFCF - converted into reporting currency			
Closing LIC - PVFCF - Actuals FX	Closing value, converted at locked-in exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	**Sum** from **[Opening LIC - PVFCF - Actuals FX] : [Claim and Other Expense Payments - Actuals FX]**
Closing LIC - PVFCF - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing LIC - PVFCF] **/ $FX_{C, G}$** Where [Closing LIC - PVFCF] is referenced from I_SUB_Calc for the given GIC Code
Closing LIC - PVFCF - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing LIC - PVFCF - Current FX] - [Closing LIC - PVFCF - Actuals FX]**
Step 15: Movements in LIC – RA over the period converted into reporting currency			
Opening LIC - RA - Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LIC - RA] **/$FX_{P, G}$** Where [Opening LIC - RA] is referenced from I_SUB_Calc for the given GIC Code
Interest Accreted on LIC - RA - Actuals FX	Sourced from I_SUB_Calc, converted at locked-in exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	[Interest Accreted on LIC - RA] **/ $FX_{A, G}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Where [Interest Accreted on LIC - RA] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LIC - RA of Changes to Claims CFs (Past) - Actuals FX	Sourced from I_SUB_Calc, converted at locked-in exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	[Effect on LIC - RA of Changes to Claims CFs (Past)] **/ $FX_{A, G}$** Where [Effect on LIC - RA of Changes to Claims CFs (Past)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LIC - RA of New Claims and Other Expenses Incurred (Current) - Actuals FX	Sourced from I_SUB_Calc, converted at locked-in exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	[Effect on LIC - RA of New Claims and Other Expenses Incurred (Current)] **/ $FX_{A, G}$** Where [Effect on LIC - RA of New Claims and Other Expenses Incurred (Current)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Effect on LIC - RA of Change in Exchange Rates – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LIC - RA of Change in Exchange Rates] **/ $FX_{C, G}$** Where [Effect on LIC - RA of Change in Exchange Rates] is referenced from I_SUB_Calc for the given GIC Code
Effect on LIC - RA of Changes in Interest Rates – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LIC - RA of Changes in Interest Rates] **/ $FX_{C, G}$** Where [Effect on LIC - RA of Changes in Interest Rates] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			from I_Groups for the given GIC Code
Step 16: Closing LIC – RA - converted into reporting currency			
Closing LIC - RA - Actuals FX	Closing value, converted at locked-in exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	**Sum** from **[Opening LIC - RA - Actuals FX] : [Effect on LIC - RA of Changes in Interest Rates - Actuals FX]**
Closing LIC - RA - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing LIC - RA] **/ $FX_{C, G}$** Where [Closing LIC - RA - Current] is referenced from I_SUB_Calc for the given GIC Code
Closing LIC - RA - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing LIC - RA - Current FX] - [Closing LIC - RA - Actuals FX]**
Step 17: Movements in LIC – Investment Component over the period converted into reporting currency			
Opening LIC - IC - Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LIC - IC] **/ $FX_{P, G}$** Where [Closing LIC - RA - Current] is referenced from I_SUB_Calc for the given GIC Code
Effect on LIC - IC of Changes to IC CFs (Past) - Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Effect on LIC - IC of Changes to IC CFs (Past)] **/ $FX_{C, G}$** Where [Effect on LIC - IC of Changes to IC CFs (Past)] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Investment Component Payments - Actuals FX	Sourced from I_SUB_Calc, converted at averageexchange rates	Number	[Investment Component Payments] **/ $FX_{A, G}$** Where [Investment Component Payments] is referenced from I_SUB_Calc for the given GIC Code; [FX Impact from] is referenced from I_Groups for the given GIC Code
Closing LIC - IC - Actuals FX	Closing value, converted at locked-in exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	**Sum** from **[Opening LIC - IC - Actuals FX] : [Investment Component Payments - Actuals FX]** **+**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Transfer of Investment Components - Actuals FX]
Closing LIC - IC - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing LIC - IC] **/ $FX_{C, G}$** Where [Closing LIC - IC - Current] is referenced from I_SUB_Calc for the given GIC Code
Closing LIC - IC - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing LIC - IC - Current FX] - [Closing LIC - IC - Actuals FX]**
Step 18: Movements in LRC – Pre-Recognition Cash Flows over the period converted into reporting currency			
Opening LRC - PRCF – Actuals FX	Sourced from I_SUB_Calc, converted at opening exchange rates	Number	[Opening LRC - PRCF] **/ $FX_{P, G}$** Where [Opening LRC - PRCF] is referenced from I_SUB_Calc for the given GIC Code
Transfer of Pre-recognition CFs (Issued, Non-onerous)(2) – Actuals FX	Sourced from I_IN_Pre_FX, converted at averageexchange rates	Number	**[Transfer of Pre-recognition CFs (Issued, Non-onerous) – Actuals FX]**
Transfer of Pre-recognition CFs (Issued, Onerous)(2) – Actuals FX	Sourced from I_IN_Pre_FX, converted at average exchange rates	Number	**[Transfer of Pre-recognition CFs (Issued, Onerous) – Actuals FX]**
Transfer of Pre-recognition CFs (Acquired, Non-onerous)(2) – Actuals FX	Sourced from I_IN_Pre_FX, converted at average exchange rates	Number	**[Transfer of Pre-recognition CFs (Acquired, Non-onerous) – Actuals FX]**
Transfer of Pre-recognition CFs (Acquired, Onerous)(2) – Actuals FX	Sourced from I_IN_Pre_FX, converted at average exchange rates	Number	**[Transfer of Pre-recognition CFs (Acquired, Onerous) – Actuals FX]**
Pre-recognition CF Payments – Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Pre-recognition CF Payments] **/ $FX_{A, G}$** Where [Pre-recognition CF Payments] is referenced from I_SUB_Calc for the given GIC Code
Impairment of PRCF Asset – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Impairment of PRCF Asset] **/ $FX_{C, G}$** Where [Impairment of PRCF Asset] is referenced from I_SUB_Calc for the given GIC Code
Reversal of Impairment of PRCF Asset – Current FX	Sourced from I_SUB_Calc, converted at current exchange rates	Number	[Reversal of Impairment of PRCF Asset] **/ $FX_{C, G}$** Where [Reversal of Impairment of PRCF Asset] is referenced from I_SUB_Calc for the given GIC Code
Closing LRC - PRCF – Actuals FX	Closing value, converted at actual exchange rates,	Number	**[Opening LRC - PRCF – Actuals FX]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	calculated as sum of prior fields		**+** **Sum** from **[Pre-recognition CF Payments – Actuals FX] : [Reversal of Impairment of PRCF Asset – Actuals FX]** **-** **Sum** from **[Transfer of Pre-recognition CFs (Issued, Non-onerous)(2) – Actuals FX] : [Transfer of Pre-recognition CFs (Acquired, Onerous)(2) – Actuals FX]**
Closing LRC - PRCF - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing LRC - PRCF] **/ $FX_{C, G}$** Where [Closing LRC - PRCF] is referenced from I_SUB_Calc for the given GIC Code
Closing LRC - PRCF - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing LRC - PRCF - Current FX] - [Closing LRC - PRCF – Actuals FX]**
Release in Notional DAC - Actuals FX	Sourced from I_SUB_Calc, converted at average exchange rates	Number	[Release in Notional DAC] **/ $FX_{A, G}$** Where [Release in Notional DAC] is referenced from I_SUB_Calc for the given GIC Code

Insurance Contracts Initial Measurement – To Subledger (I_IN_ToSL)

This part of the solution performs the extraction of all items from I_FX, related to initial measurement, that require posting to the subledger (after the impact of changes in exchange rates). The I_FX calculation component is referenced throughout.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GIC Code	GIC Code associated with the row of calculations.	String	Reference [GIC Code] for each consecutive record in I_IN_Calc
Transfer of Pre-recognition CFs (Issued, Non-onerous) – Actuals FX	Transfer of Pre-recognition CFs (Issued, Non-onerous) - ActualsFX from I_FX for the given GIC Code	Number	Reference [Transfer of Pre-recognition CFs (Issued, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
Transfer of Pre-recognition CFs (Issued, Non-onerous)(2) - Actuals FX	Transfer of Pre-recognition CFs (Issued, Non-onerous)(2) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Transfer of Pre-recognition CFs (Issued, Non-onerous)(2) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Premium CFs (Issued, Non-onerous) - Actuals FX	New LRC - Profit - Premium CFs (Issued, Non-onerous) -	Number	Reference [New LRC - Profit - Premium CFs (Issued, Non-

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	Actuals FX from I_FX for the given GIC Code		onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Acquisition Expense CFs (Issued, Non-onerous) - Actuals FX	New LRC - Profit - Acquisition Expense CFs (Issued, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Acquisition Expense CFs (Issued, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Investment Component CFs (Issued, Non-onerous) - Actuals FX	New LRC - Profit - Investment Component CFs (Issued, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Investment Component CFs (Issued, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Claim and Other Expense CFs (Issued, Non-onerous) - Actuals FX	New LRC - Profit - Claim and Other Expense CFs (Issued, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Claim and Other Expense CFs (Issued, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - RA (Issued, Non-onerous) - Actuals FX	New LRC - Profit - RA (Issued, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - RA (Issued, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - CSM (Issued, Non-onerous) - Actuals FX	New LRC - Profit - CSM (Issued, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - CSM (Issued, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
Transfer of Pre-recognition CFs (Issued, Onerous) - Actuals FX	Transfer of Pre-recognition CFs (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Transfer of Pre-recognition CFs (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code
Transfer of Pre-recognition CFs (Issued, Onerous)(2) - Actuals FX	Transfer of Pre-recognition CFs (Issued, Onerous)(2) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Transfer of Pre-recognition CFs (Issued, Onerous)(2) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Premium CFs (Issued, Onerous) - Actuals FX	New LRC - Profit - Premium CFs (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Premium CFs (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Acquisition Expense CFs (Issued, Onerous) - Actuals FX	New LRC - Profit - Acquisition Expense CFs (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Acquisition Expense CFs (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Investment Component CFs (Issued, Onerous) - Actuals FX	New LRC - Profit - Investment Component CFs (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Investment Component CFs (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Claim and Other Expense CFs (Issued, Onerous) - Actuals FX	New LRC - Profit - Claim and Other Expense CFs (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Claim and Other Expense CFs (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
New LRC - Profit - RA (Issued, Onerous) - Actuals FX	New LRC - Profit - RA (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - RA (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - CSM (Issued, Onerous) - Actuals FX	New LRC - Profit - CSM (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - CSM (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Loss - PVFCF (Issued, Onerous) - Actuals FX	New LRC - Loss - PVFCF (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Loss - PVFCF (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Loss - RA (Issued, Onerous) - Actuals FX	New LRC - Loss - RA (Issued, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Loss - RA (Issued, Onerous) - Actuals FX] from I_FX for the given GIC Code
Transfer of Pre-recognition CFs (Acquired, Non-onerous) - Actuals FX	Transfer of Pre-recognition CFs (Acquired, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Transfer of Pre-recognition CFs (Acquired, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
Transfer of Pre-recognition CFs (Acquired, Non-onerous)(2) - Actuals FX	Transfer of Pre-recognition CFs (Acquired, Non-onerous)(2) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Transfer of Pre-recognition CFs (Acquired, Non-onerous)(2) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Premium CFs (Acquired, Non-onerous) - Actuals FX	New LRC - Profit - Premium CFs (Acquired, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Premium CFs (Acquired, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Acquisition Expense CFs (Acquired, Non-onerous) - Actuals FX	New LRC - Profit - Acquisition Expense CFs (Acquired, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Acquisition Expense CFs (Acquired, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Investment Component CFs (Acquired, Non-onerous) - Actuals FX	New LRC - Profit - Investment Component CFs (Acquired, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Investment Component CFs (Acquired, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Claim and Other Expense CFs (Acquired, Non-onerous) - Actuals FX	New LRC - Profit - Claim and Other Expense CFs (Acquired, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Claim and Other Expense CFs (Acquired, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - RA (Acquired, Non-onerous) - Actuals FX	New LRC - Profit - RA (Acquired, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - RA (Acquired, Non-onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - CSM (Acquired, Non-onerous) - Actuals FX	New LRC - Profit - CSM (Acquired, Non-onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - CSM (Acquired, Non-onerous) - Actuals FX] from I_FX for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Transfer of Pre-recognition CFs (Acquired, Onerous) - Actuals FX	Transfer of Pre-recognition CFs (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Transfer of Pre-recognition CFs (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code
Transfer of Pre-recognition CFs (Acquired, Onerous)(2) - Actuals FX	Transfer of Pre-recognition CFs (Acquired, Onerous)(2) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Transfer of Pre-recognition CFs (Acquired, Onerous)(2) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Premium CFs (Acquired, Onerous) - Actuals FX	New LRC - Profit - Premium CFs (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Premium CFs (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Acquisition Expense CFs (Acquired, Onerous) - Actuals FX	New LRC - Profit - Acquisition Expense CFs (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Acquisition Expense CFs (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Investment Component CFs (Acquired, Onerous) - Actuals FX	New LRC - Profit - Investment Component CFs (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Investment Component CFs (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - Claim and Other Expense CFs (Acquired, Onerous) - Actuals FX	New LRC - Profit - Claim and Other Expense CFs (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - Claim and Other Expense CFs (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - RA (Acquired, Onerous) - Actuals FX	New LRC - Profit - RA (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - RA (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Profit - CSM (Acquired, Onerous) - Actuals FX	New LRC - Profit - CSM (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Profit - CSM (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Loss - PVFCF (Acquired, Onerous) - Actuals FX	New LRC - Loss - PVFCF (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Loss - PVFCF (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code
New LRC - Loss - RA (Acquired, Onerous) - Actuals FX	New LRC - Loss - RA (Acquired, Onerous) - Actuals FX from I_FX for the given GIC Code	Number	Reference [New LRC - Loss - RA (Acquired, Onerous) - Actuals FX] from I_FX for the given GIC Code

Insurance Contracts Subsequent Measurement – To Subledger (I_SUB_ToSL)

This part of the solution performs the extraction of all items from I_FX, related to subsequent measurement, that require posting to the subledger (after the impact of changes in exchange rates). The I_FX calculation component is referenced throughout.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GIC Code	GIC Code associated with the row of calculations.	String	Reference [GIC Code] for each consecutive record in I_FX
Interest Accreted on Opening LRC - Profit - PVFCF - Actuals FX	Interest Accreted on Opening LRC - Profit - PVFCF - Actuals FX from I_FX for the given GIC Code	Number	Reference [Interest Accreted on Opening LRC - Profit - PVFCF - Actuals FX] from I_FX for the given GIC Code
Premium Experience Variance (Past/Current) - Actuals FX	Premium Experience Variance (Past/Current) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Premium Experience Variance (Past/Current) - Actuals FX] from I_FX for the given GIC Code
Acquisition Expense Experience Variance (Past/Current) - Actuals FX	Acquisition Expense Experience Variance (Past/Current) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Acquisition Expense Experience Variance (Past/Current) - Actuals FX] from I_FX for the given GIC Code
Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) -Actuals FX] from I_FX for the given GIC Code
Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - Non FX – Current FX	Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - Non FX – Current FX	Number	Reference [Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - Non FX – Current FX] from I_FX for the given GIC Code
Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX – Current FX	Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX – Current FX	Number	Reference [Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX – Current FX] from I_FX for the given GIC Code
Effect on LRC - Profit - PVFCF of Changes in Interest Rates – Current FX	Effect on LRC - Profit - PVFCF of Changes in Interest Rates – Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LRC - Profit - PVFCF of Changes in Interest Rates – Current FX] from I_FX for the given GIC Code
Premium Receipts - Actuals FX	Premium Receipts - Actuals FX from I_FX for the given GIC Code	Number	Reference [Premium Receipts - Actuals FX] from I_FX for the given GIC Code
Premium Receipts (2) - Actuals FX	Premium Receipts - Actuals FX	Number	**[Premium Receipts - Actuals FX]**
Acquisition Expense Payments - Actuals FX	Acquisition Expense Payments - Actuals FX from I_FX for the given GIC Code	Number	Reference [Acquisition Expense Payments - Actuals FX] from I_FX for the given GIC Code
Acquisition Expense Payments (2) - Actuals FX	Acquisition Expense Payments - Actuals FX	Number	**[Acquisition Expense Payments - Actuals FX]**
Transfer of Investment Components - Actuals FX	Transfer of Investment Components - Actuals FX	Number	Reference [Transfer of Investment Components -

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	from I_FX for the given GIC Code		Actuals FX] from I_FX for the given GIC Code
Transfer of Investment Components (2) - Actuals FX	Transfer of Investment Components - Actuals FX	Number	**[Transfer of Investment Components - Actuals FX]**
Interest Accreted on LRC - Loss - PVFCF - Actuals FX	Interest Accreted on LRC - Loss - PVFCF - Actuals FX from I_FX for the given GIC Code	Number	Reference [Interest Accreted on LRC - Loss - PVFCF - Actuals FX] from I_FX for the given GIC Code
Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX] from I_FX for the given GIC Code
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX – Current FX	Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX – Current FX	Number	Reference [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX – Current FX] from I_FX for the given GIC Code
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX – Current FX	Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX – Current FX	Number	Reference [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX – Current FX] from I_FX for the given GIC Code
Effect on LRC - Loss - PVFCF of Changes in Interest Rates – Current FX	Effect on LRC - Loss - PVFCF of Changes in Interest Rates – Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LRC - Loss - PVFCF of Changes in Interest Rates – Current FX] from I_FX for the given GIC Code
Interest Accreted on LRC - Profit - RA - Actuals FX	Interest Accreted on LRC - Profit - RA - Actuals FX from I_FX for the given GIC Code	Number	Reference [Interest Accreted on LRC - Profit - RA - Actuals FX] from I_FX for the given GIC Code
Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX] from I_FX for the given GIC Code
Effect on LRC - Profit - RA of Total Experience Variance (Future) - Non FX – Current FX	Effect on LRC - Profit - RA of Total Experience Variance (Future) - Non FX – Current FX	Number	Reference [Effect on LRC - Profit - RA of Total Experience Variance (Future) - Non FX – Current InFX] from I_FX for the given GIC Code
Effect on LRC - Profit - RA of Total Experience Variance (Future) - FX – Current FX	Effect on LRC - Profit - RA of Total Experience Variance (Future) - FX – Current FX	Number	Reference [Effect on LRC - Profit - RA of Total Experience Variance (Future) - FX – Current FX] from I_FX for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on LRC - Profit - RA of Changes in Interest Rates – Current FX	Effect on LRC - Profit - RA of Changes in Interest Rates – Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LRC - Profit - RA of Changes in Interest Rates – Current FX] from I_FX for the given GIC Code
Interest Accreted on LRC - Loss - RA - Actuals FX	Interest Accreted on LRC - Loss - RA - Actuals FX from I_FX for the given GIC Code	Number	Reference [Interest Accreted on LRC - Loss - RA - Actuals FX] from I_FX for the given GIC Code
Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX] from I_FX for the given GIC Code
Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX -Current FX	Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX -Current FX	Number	Reference [Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX - Current FX] from I_FX for the given GIC Code
Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX – Current FX	Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX – Current FX	Number	Reference [Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX – Current FX] from I_FX for the given GIC Code
Effect on LRC - Loss - RA of Changes in Interest Rates - Current FX	Effect on LRC - Loss - RA of Changes in Interest Rates - Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LRC - Loss - RA of Changes in Interest Rates - Current FX] from I_FX for the given GIC Code
Interest Accreted on LRC - CSM – Actuals FX	Interest Accreted on LRC - CSM - Actuals FX from I_FX for the given GIC Code	Number	Reference [Interest Accreted on LRC - CSM – Actuals FX] from I_FX for the given GIC Code
Effect on LRC - CSM of Total Experience Variance (Future) - Non FX – Current FX	Effect on LRC - CSM of Total Experience Variance (Future) - Non FX – Current FX	Number	Reference [Effect on LRC - CSM of Total Experience Variance (Future) - Non FX – Current FX] from I_FX for the given GIC Code
Release in LRC - CSM – Actuals FX	Release in LRC - CSM - Actuals FX from I_FX for the given GIC Code	Number	Reference [Release in LRC - CSM – Actuals FX] from I_FX for the given GIC Code
Interest Accreted on LIC - PVFCF - Actuals FX	Interest Accreted on LIC - PVFCF - Actuals FX from I_FX for the given GIC Code	Number	Reference [Interest Accreted on LIC - PVFCF - Actuals FX] from I_FX for the given GIC Code
Effect on LIC - PVFCF of Changes to Claims CFs (Past) - Current FX	Effect on LIC - PVFCF of Changes to Claims CFs (Past) - Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LIC - PVFCF of Changes to Claims CFs (Past) - Current FX] from I_FX for the given GIC Code
Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current) - Current FX	Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current) - Current	Number	Reference [Effect on LIC - PVFCF of New Claims and Other Expenses Incurred

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	FX from I_FX for the given GIC Code		(Current) - Current FX] from I_FX for the given GIC Code
Effect on LIC - PVFCF of Changes in Interest Rates - Current FX	Effect on LIC - PVFCF of Changes in Interest Rates - Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LIC - PVFCF of Changes in Interest Rates - Current FX] from I_FX for the given GIC Code
Effect on LIC - PVFCF of Change in Exchange Rates – Current FX	Effect on LIC - PVFCF of Change in Exchange Rates – Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LIC - PVFCF of Change in Exchange Rates – Current FX] from I_FX for the given GIC Code
Claim and Other Expense Payments - Actuals FX	Claim and Other Expense Payments - Actuals FX from I_FX for the given GIC Code	Number	Reference [Claim and Other Expense Payments - Actuals FX] from I_FX for the given GIC Code
Claim and Other Expense Payments (2) - Actuals FX	Claim and Other Expense Payments - Actuals FX	Number	**[Claim and Other Expense Payments - Actuals FX]**
Interest Accreted on LIC - RA - Actuals FX	Interest Accreted on LIC - RA - Actuals FX from I_FX for the given GIC Code	Number	Reference [Interest Accreted on LIC - RA - Actuals FX] from I_FX for the given GIC Code
Effect on LIC - RA of Changes to Claims CFs (Past) - Actuals FX	Effect on LIC - RA of Changes to Claims CFs (Past) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Effect on LIC - RA of Changes to Claims CFs (Past) - Actuals FX] from I_FX for the given GIC Code
Effect on LIC - RA of New Claims and Other Expenses Incurred (Current) - Actuals FX	Effect on LIC - RA of New Claims and Other Expenses Incurred (Current) - Actuals FX from I_FX for the given GIC Code	Number	Reference [Effect on LIC - RA of New Claims and Other Expenses Incurred (Current) - Actuals FX] from I_FX for the given GIC Code
Effect on LIC - RA of Change in Exchange Rates – Current FX	Effect on LIC - RA of Change in Exchange Rates – Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LIC - RA of Change in Exchange Rates – Current FX] from I_FX for the given GIC Code
Effect on LIC - RA of Changes in Interest Rates - Current FX	Effect on LIC - RA of Changes in Interest Rates - Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LIC - RA of Changes in Interest Rates - Current FX] from I_FX for the given GIC Code
Effect on LIC - IC of Changes to IC CFs (Past) - Current FX	Effect on LIC - IC of Changes to IC CFs (Past) - Current FX from I_FX for the given GIC Code	Number	Reference [Effect on LIC - IC of Changes to IC CFs (Past) - Current FX] from I_FX for the given GIC Code
Investment Component Payments - Actuals FX	Investment Component Payments - Actuals FX from I_FX for the given GIC Code	Number	Reference [Investment Component Payments - Actuals FX] from I_FX for the given GIC Code
Investment Component Payments (2) - Actuals FX	Investment Component Payments - Actuals FX	Number	**[Investment Component Payments - Actuals FX]**
Pre-recognition CF Payments – Actuals FX	Pre-recognition CF Payments - Actuals FX from I_FX for the given GIC Code	Number	Reference [Pre-recognition CF Payments - Actuals FX] from I_FX for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Pre-recognition CF Payments (2) - Actuals FX	Pre-recognition CF Payments - Actuals FX	Number	**[Pre-recognition CF Payments - Actuals FX]**
Impairment of PRCF Asset - Current FX	Impairment of PRCF Asset - Current FX from I_FX for the given GIC Code	Number	Reference [Impairment of PRCF Asset - Current FX] from I_FX for the given GIC Code
Reversal of Impairment of PRCF Asset - Current FX	Reversal of Impairment of PRCF Asset - Current FX from I_FX for the given GIC Code	Number	Reference [Reversal of Impairment of PRCF Asset – Current FX] from I_FX for the given GIC Code
Release in Notional DAC - Actuals FX	Release in Notional DAC - Actuals FX from I_FX for the given GIC Code	Number	Reference [Release in Notional DAC - Actuals FX] from I_FX for the given GIC Code
Release in Notional DAC (2) - Actuals FX	Release in Notional DAC - Actuals FX	Number	**[Release in Notional DAC - Actuals FX]**
Closing LRC - Profit - PVFCF - Net foreign exchange income / (expenses)	Closing LRC - Profit - PVFCF - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LRC - Profit - PVFCF - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code
Closing LRC - Loss - PVFCF - Net foreign exchange income / (expenses)	Closing LRC - Loss - PVFCF - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LRC - Loss - PVFCF - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code
Closing LRC - Profit - RA - Net foreign exchange income / (expenses)	Closing LRC - Profit - RA - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LRC - Profit - RA - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code
Closing LRC - Loss - RA - Net foreign exchange income / (expenses)	Closing LRC - Loss - RA - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LRC - Loss - RA - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code
Closing LRC - CSM - Net foreign exchange income / (expenses)	Closing LRC - CSM - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LRC - CSM - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code
Closing LIC - PVFCF - Net foreign exchange income / (expenses)	Closing LIC - PVFCF - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LIC - PVFCF - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code
Closing LIC - RA - Net foreign exchange income / (expenses)	Closing LIC - RA - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LIC - RA - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code
Closing LIC - IC - Net foreign exchange income / (expenses)	Closing LIC - IC - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LIC - IC - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Closing LRC - PRCF - Net foreign exchange income / (expenses)	Closing LRC - PRCF - Net foreign exchange income / (expenses) from I_FX for the given GIC Code	Number	Reference [Closing LRC - PRCF - Net foreign exchange income / (expenses)] from I_FX for the given GIC Code

Insurance Contracts Subsequent Measurement – To CSM Release (I_SUB_ToCSM)

This part of the solution derives the CSM release profile (for the next 100 periods) that are required for IFRS 17 disclosures.

Note below that in Step 1 of the calculation of the release in CSM in each period, the [Reporting Period (0 = current)] (in I_SUB_Disc2) should equal the period in which the CSM is being released, i.e.

- *[Reporting Period (0 = current)] (in I_SUB_Disc2) = 1 for LRC - CSM Release - Reporting Period 1*
- *[Reporting Period (0 = current)] (in I_SUB_Disc2) = 2 for LRC - CSM Release - Reporting Period 2, etc.*

The formulas are replicated for each reporting period apart from the above change in the formula.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GIC Code	GIC Code associated with the row of calculations.	String	Reference [GIC Code] for each consecutive record in I_SUB_Calc
LRC - CSM Release - Reporting Period 1	Release in Closing LRC – CSM (balance at the current reporting date) in the next reporting period, based on coverage units allocated to that reporting period	Number	If Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) > 0 **= 0** Output **0** Otherwise perform the following calculation <u>Step 1:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			"Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) = 1 <u>Step 2:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) > 0 <u>Step 3:</u> [Closing LRC - CSM – Current FX] *** (Step 1 / Step 2)** Where [Closing LRC - CSM – Current FX] is referenced from I_FX for the given GIC Code
LRC - CSM Release - Reporting Period 2	Release in Closing LRC – CSM (balance at the current reporting date) 2 reporting periods later, based on coverage units allocated to that reporting period	Number	If Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) > 0 **= 0** Output **0**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise perform the following calculation <u>Step 1:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) = 2 <u>Step 2:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) > 0 <u>Step 3:</u> [Closing LRC - CSM – Current FX] *** (Step 1 / Step 2)** Where [Closing LRC - CSM – Current FX] is referenced from I_FX for the given GIC Code
…	…	…	…
LRC - CSM Release - Reporting Period 100	Release in Closing LRC – CSM (balance at the current reporting date) 100 reporting periods later, based on coverage units allocated to that reporting period	Number	If Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) > 0 **= 0** Output **0** Otherwise perform the following calculation <u>Step 1:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) = 100 <u>Step 2:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc2) = **[GIC Code]** (given GIC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) > 0 <u>Step 3:</u> [Closing LRC - CSM – Current FX] *** (Step 1 / Step 2)** Where [Closing LRC - CSM – Current FX] is referenced from I_FX for the given GIC Code

Insurance Contracts Subsequent Measurement – To Pre-recognition Cash Flow (PRCF) Release (I_SUB_ToPRCF)

This part of the solution derives the Pre-recognition Cash Flow asset release profile (for the next 100 periods).

Note below that in Step 1 of the calculation of the release in PRCF in each period, the [Reporting Period (0 = current)] (in I_SUB_Disc2) should equal the period in which the PRCF is being released, i.e.

- *[Reporting Period (0 = current)] (in I_SUB_Disc2) = 1 for LRC - PRCF Release - Reporting Period 1*
- *[Reporting Period (0 = current)] (in I_SUB_Disc2) = 2 for LRC - PRCF Release - Reporting Period 2, etc.*

The formulas are replicated for each reporting period apart from the above change in the formula.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GIC Code	GIC Code associated with the row of calculations.	String	Reference [GIC Code] for each consecutive record in I_FX
LRC - PRCF Release - Reporting Period 1	Release in Closing LRC – PRCF (balance at the current reporting date) in the next reporting, based on amortisation units allocated to that reporting period	Number	If Sum [PRCF Asset Run-off Pattern] column in I_IF_Patterns where 1. [Reporting Date] (in I_IF_Patterns) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) > 0 **= 0** Output **0** Otherwise perform the following calculation <u>Step 1:</u> Sum [PRCF Asset Run-off Pattern] column in I_IF_Patterns where 1. [Reporting Date] (in I_IF_Patterns) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) = 1

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			<u>Step 2:</u> Sum [PRCF Asset Run-off Pattern] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_IF_Patterns) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) > 0 <u>Step 3:</u> [Closing LRC - PRCF – Current FX] *** (Step 1 / Step 2)** Where [Closing LRC - PRCF – Current FX] is referenced from I_FX for the given GIC Code
LRC - PRCF Release - Reporting Period 2	Release in Closing LRC – PRCF (balance at the current reporting date) 2 reporting periods later, based on amortisation units allocated to that reporting period	Number	If Sum [PRCF Asset Run-off Pattern] column in I_IF_Patterns where 1. [Reporting Date] (in I_IF_Patterns) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) > 0 **= 0** Output **0** Otherwise perform the following calculation <u>Step 1:</u> Sum [PRCF Asset Run-off Pattern] column in I_IF_Patterns where 1. [Reporting Date] (in I_IF_Patterns) = input for

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			"Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) = 2 <u>Step 2:</u> Sum [PRCF Asset Run-off Pattern] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_IF_Patterns) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) > 0 <u>Step 3:</u> [Closing LRC - PRCF – Current FX] *** (Step 1 / Step 2)** Where [Closing LRC - PRCF – Current FX] is referenced from I_FX for the given GIC Code
…	…	…	…
LRC - PRCF Release - Reporting Period 100	Release in Closing LRC – PRCF (balance at the current reporting date) 100 reporting periods later, based on amortisation units allocated to that reporting period	Number	If Sum [PRCF Asset Run-off Pattern] column in I_IF_Patterns where 1. [Reporting Date] (in I_IF_Patterns) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) > 0 **= 0** Output **0** Otherwise perform the following calculation

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			<u>Step 1:</u> Sum [PRCF Asset Run-off Pattern] column in I_IF_Patterns where 1. [Reporting Date] (in I_IF_Patterns) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) = 100 <u>Step 2:</u> Sum [PRCF Asset Run-off Pattern] column in I_SUB_Disc2 where 1. [Reporting Date] (in I_IF_Patterns) = input for "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IF_Patterns) = **[GIC Code]** (given GIC Code in I_SUB_ToPRCF) 3. [Reporting Period (0 = current)] (in I_IF_Patterns) > 0 <u>Step 3:</u> [Closing LRC - PRCF – Current FX] *** (Step 1 / Step 2)** Where [Closing LRC - PRCF – Current FX] is referenced from I_FX for the given GIC Code

Insurance Contracts Subsequent Measurement – To (Time Zero) Trial Balance (I_SUB_ToT0TB)

This part of the solution extracts all opening insurance liability/asset balances from I_FX that require posting to the opening trial balance.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GIC Code	GIC Code associated with the row of calculations.	String	Reference [GIC Code] for each consecutive record in I_Groups

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Portfolio	Portfolio associated with the GIC Code, sourced from I_Groups	String	Reference [Portfolio] for each consecutive record in I_Groups
Asset / Liability	= "Liability" if sum of all subsequent values assigned to the same portfolio is >=0 and "Asset" if sum of all subsequent values is < 0	String	If **Sum** from **[LRC – Profit - PVFCF] : [LIC - IC]** for all values assigned to the same portfolio **>= 0** Output "**Liability**" Otherwise Output "**Asset**"
LRC - Profit - PVFCF	Sourced from I_FX	Number	Reference [Opening LRC - Profit – PVFCF - Actuals FX] from I_FX for the given GIC Code
LRC - Loss - PVFCF	Sourced from I_FX	Number	Reference [Opening LRC - Loss - PVFCF - Actuals FX] from I_FX for the given GIC Code
LRC - Profit - RA	Sourced from I_FX	Number	Reference [Opening LRC - Profit - RA - Actuals FX] from I_FX for the given GIC Code
LRC - Loss - RA	Sourced from I_FX	Number	Reference [Opening LRC - Loss - RA - Actuals FX] from I_FX for the given GIC Code
LRC - CSM	Sourced from I_FX	Number	Reference [Opening LRC - CSM – Actuals FX] from I_FX for the given GIC Code
LRC - PRCF	Sourced from I_FX	Number	Reference [Opening LRC - PRCF – Actuals FX] from I_FX for the given GIC Code
LIC - PVFCF	Sourced from I_FX	Number	Reference [Opening LIC - PVFCF - Actuals FX] from I_FX for the given GIC Code
LIC - RA	Sourced from I_FX	Number	Reference [Opening LIC - RA - Actuals FX] from I_FX for the given GIC Code
LIC - IC	Sourced from I_FX	Number	Reference [Opening LIC - IC - Actuals FX] from I_FX for the given GIC Code

Insurance Contracts Subsequent Measurement – To (Time One) Trial Balance (I_SUB_ToT1TB)

This part of the solution extracts all closing insurance liability/asset balances from I_FX that require posting to the closing trial balance.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GIC Code	GIC Code associated with the row of calculations.	String	Reference [GIC Code] for each consecutive record in I_Groups
Portfolio	Portfolio associated with the GIC Code, sourced from I_Groups	String	Reference [Portfolio] for each consecutive record in I_Groups
Asset / Liability	= "Liability" if sum of all subsequent values assigned to the same portfolio is >=0 and "Asset" if sum of all subsequent values is < 0	String	If **Sum** from **[LRC – Profit - PVFCF] : [LIC - IC]** for all values assigned to the same portfolio **>= 0** Output "**Liability**" Otherwise Output "**Asset**"
LRC - Profit - PVFCF	Sourced from I_FX	Number	Reference [Closing LRC - Profit – PVFCF - Current FX] from I_FX for the given GIC Code
LRC - Loss - PVFCF	Sourced from I_FX	Number	Reference [Closing LRC - Loss - PVFCF - Current FX] from I_FX for the given GIC Code
LRC - Profit - RA	Sourced from I_FX	Number	Reference [Closing LRC - Profit - RA - Current FX] from I_FX for the given GIC Code
LRC - Loss - RA	Sourced from I_FX	Number	Reference [Closing LRC - Loss - RA - Current FX] from I_FX for the given GIC Code
LRC - CSM	Sourced from I_FX	Number	Reference [Closing LRC - CSM – Current FX] from I_FX for the given GIC Code
LRC - PRCF	Sourced from I_FX	Number	Reference [Closing LRC - PRCF – Current FX] from I_FX for the given GIC Code
LIC - PVFCF	Sourced from I_FX	Number	Reference [Closing LIC - PVFCF - Current FX] from I_FX for the given GIC Code
LIC - RA	Sourced from I_FX	Number	Reference [Closing LIC - RA - Current FX] from I_FX for the given GIC Code
LIC - IC	Sourced from I_FX	Number	Reference [Closing LIC - IC - Current FX] from I_FX for the given GIC Code

B120 Check

This part of the solution performs the check on insurance revenue required by section B120 of the IFRS 17 standard.

The table below details the calculation fields:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Reference relevant information			
GIC Code	Sourced from I_NEW_GEN	String	[GIC Code] (from I_NEW_GEN) Each GIC Code is referenced consecutively starting with the first input in I_NEW_GEN.
LIFX_date	Locked-in FX date	Date	Reference [Locked-in FX Date] from I_Groups for the given GIC code
Local currency (LIFX_date)	GIC Currency	Number	Reference [Currency] from I_Groups for the given GIC code
Local FX (LIFX_date)	Exchange rate for given GIC's currency at given locked-in date	Number	Reference the exchange rate for the GIC's currency as at the LIFX_date, from the "Exchange Rates" input
Reporting FX	Exchange rate for Reporting currency at given locked-in date	Number	Reference the exchange rate for the Reporting currency as at the LIFX_date, from the "Exchange Rates" input
Exchange (Locked-in date)	Currency Conversion rate into reporting currency	Number	**[Reporting FX] / [Local FX (LIFX_date)]**
Reporting date	Current Reporting date	Date	[Reporting Date – Current] from Setup
Local FX (Reporting_date)	Exchange rate for given GIC's currency at given reporting date	Number	Reference the exchange rate for the GIC's currency as at the **[Reporting date]**, from the "Exchange Rates" input
Reporting FX (Current)	Exchange rate for Reporting currency at given reporting date	Number	Reference the exchange rate for the Reporting currency as at the **[Reporting date]**, from the "Exchange Rates" input
Exchange (EoP)	Currency Conversion rate into reporting currency	Number	**[Reporting FX (Current)] / [Local FX (Reporting_date)]**
Exp cf (out flow) (Current period)	Exp cash out flow recognised (Current Period)	Number	<u>Step 1</u> Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = "2114000" <u>Step 2</u> **ABS(Step 1)**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
RA - (Current period)	RA recognised (Current Period)	Number	Step 1 Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = "2115000" Step 2 **ABS(Step 1)**
CSM - (Current period)	CSM recognised (Current Period)	Number	Step 1 Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = "2116000" Step 2 **ABS(Step 1)**
NDAC - (Current period)	NDAC recognised (Current Period)	Number	Step 1 Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = "2113000" Step 2 **ABS(Step 1)**
Acq & Premium CF exp var - (Current period)	Acq & Prem CF experience variance (Current Period)	Number	-1 * Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = "2111000" 3. [Transaction Type] (in Subledger) = "Premium Experience Variance (Past/Current) - Actuals FX" PLUS -1 * Sum [Amount] column in the Subledger, where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = “2112000” 3. [Transaction Type] (in Subledger) = "Acquisition Expense Experience Variance (Past/Current) - Actuals FX"
Investment component - (Current period)	Investment component - (Current period)	Number	Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = “3210000” 3. [Transaction Type] (in Subledger) = "Transfer of Investment Components - Actuals FX"
Premium receipts - (Current period)	Premium receipts - (Current period)	Number	Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = “3111000” 3. [Transaction Type] (in Subledger) = "Premium Receipts - Actuals FX"
Exp cf (out flow) - (Future Periods)	Exp cf (out flow) - (Future Periods)	Number	<u>Step 1</u> -1 * Sum of [Discounted Claim and Other Expense CFs (Incurred in the Future)(Current YC, t0) - Current FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = “Reporting Date – Current” (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code) PLUS -1 * Sum of [Closing LRC - Loss - PVFCF]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			column in I_SUB_Calc, where: 1. [GIC Code] (in I_SUB_Calc) = **[GIC Code]** (given GIC Code) <u>Step 2</u> **Step 1 * [Exchange (Locked-in date)]**
RA - (Future Periods)	RA - (Future Periods)	Number	Sum [Amount] column in the Trial Balance, where: 1. [Group Code] (in Trial Balance) = **[GIC Code]** 2. [Account] (in Trial Balance) = "LRC - Profit - RA" 3. [Asset / Liability] (in Trial Balance) = “Liability” 4. [Date] (in Trial Balance) = [Reporting Date Current] (from Setup) Minus Sum [Amount] column in the Trial Balance, where: 1. [Group Code] (in Trial Balance) = **[GIC Code]** 2. [Account] (in Trial Balance) = "LRC - Profit - RA" 3. [Asset / Liability] (in Trial Balance) = “Asset” 4. [Date] (in Trial Balance) = [Reporting Date Current] (from Setup)
CSM - (Future Periods)	CSM - (Future Periods)	Number	Sum [Amount] column in the Trial Balance, where: 1. [Group Code] (in Trial Balance) = **[GIC Code]** 2. [Account] (in Trial Balance) = "LRC - CSM" 3. [Asset / Liability] (in Trial Balance) = “Liability” 4. [Date] (in Trial Balance) = [Reporting Date Current] (from Setup) Minus Sum [Amount] column in the Trial Balance, where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			1. [Group Code] (in Trial Balance) = **[GIC Code]** 2. [Account] (in Trial Balance) = "LRC - CSM" 3. [Asset / Liability] (in Trial Balance) = "Asset" 4. [Date] (in Trial Balance) = [Reporting Date Current] (from Setup)
NDAC - (Future Periods)	NDAC - (Future Periods)	Number	Reference [Closing Notional DAC] from I_SUB_Calc for the given GIC Code * **[Exchange (Locked-in date)]**
Investment component - (Future Periods)	Investment component - (Future Periods)	Number	<u>Step 1</u> Sum of [Discounted Investment Component CFs (Payable in Future)(Locked-in YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code) Step 2 **Step 1 * [Exchange (Locked-in date)]**
Premium - (Future Periods)	Premium - (Future Periods)	Number	<u>Step 1</u> Sum of [Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code) PLUS

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Sum of [Discounted Premium CFs (Future Service)(Locked-in YC, t0) - Current FX] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code) PLUS Sum of [Discounted Premium CFs (Past Service)(Locked-in YC, t0)] column in I_SUB_Disc1, where: 1. [Reporting Date] (in I_SUB_Disc1) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_SUB_Disc1) = **[GIC Code]** (given GIC Code) <u>Step 2</u> **Step 1 * [Exchange (Locked-in date)]**
CF (IFIE)	Insurance Finance Income/Expense related to claims cash flows	Number	<u>Step 1</u> Reference [Interest Accreted on LRC - Profit - PVFCF (Claims)] from I_SUB_Calc for the given GIC code + Reference [Effect on LRC - PVFCF (Claims) of Changes in Interest Rates (2/2)] from I_SUB_Calc for the given GIC code <u>Step 2</u>

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = “2321000” 3. [Transaction Type] (in Subledger) = "Effect on LRC - Loss - PVFCF of Changes in Interest Rates - Actuals FX" <u>Step 3</u> **Step 1 * [Exchange (Locked-in date)] –** **Step 2**
RA (IFIE)	Insurance Finance Income/Expense related to risk adjustment	Number	Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = “2310000” 3. [Transaction Type] (in Subledger) = "Interest Accreted on LRC - Profit - RA - Actuals FX" PLUS Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = “2321000” 3. [Transaction Type] (in Subledger) = "Effect on LRC - Profit - RA of Changes in Interest Rates - Actuals FX"
CSM (IFIE)	Insurance Finance Income/Expense related to CSM	Number	Sum [Amount] column in the Subledger, where: 1. [Group Code] (in Subledger) = **[GIC Code]** 2. [DR Account Code] (in Subledger) = “2310000” 1. [Transaction Type] (in Subledger) = "Interest Accreted on LRC - CSM – Actuals FX"

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
NDAC (IFIE)	Insurance Finance Income/Expense related to Notional Deferred Acquisition Expenses	Number	<u>Step 1</u> -1 * Reference [Interest Accreted on DAC] from I_SUB_Calc for the given GIC code <u>Step 2</u> Sum [Discounted Acquisition Expense CFs (Current Service)(Locked-in YC, Locked-in Date)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) PLUS Sum [Discounted Acquisition Expense CFs (Future Service)(Locked-in YC, Locked-in Date)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) PLUS -1 * Sum [Acquisition Expense CFs (Service in Current Reporting Period)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) PLUS -1 * Sum [Acquisition Expense CFs (Future Service)] from I_IN_Disc, where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) Step 3 -1 * Reference [Effect on NDAC of change in interest rates (if NDAC on current rates)] from I_SUB_Calc for the given GIC code. Step 4 If "Apply discounting … acquisition cash flows?" is set to "No" in Setup Output **(Step 1 + Step 2) * [Exchange (Locked-in date)]** Otherwise If "Apply discounting … acquisition cash flows?" is set to "Yes - Current" in Setup Output **(Step 1 + Step 3) * [Exchange (Locked-in date)]** Otherwise Output **Step 1* [Exchange (Locked-in date)]**
Investment component (IFIE)	Insurance Finance Income/Expense related to Investment Component	Number	<u>Step 1</u> Sum [Discounted Investment Component CFs (Locked-in YC, Locked-in Date)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) PLUS

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			-1 * Sum [Discounted Investment Component CFs (Locked-in YC, Reporting Date)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) PLUS Reference [Actual less Expected Return on LRC IC] from I_SUB_Calc for the given GIC code <u>Step 2</u> **Step 1 * [Exchange (Locked-in date)]**
Premium (IFIE)	Insurance Finance Income/Expense related to premium cash flows	Number	<u>Step 1</u> Sum [Discounted Premium CFs (Current Service)(Locked-in YC, Reporting Date)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) PLUS Sum [Discounted Premium CFs (Future Service)(Locked-in YC, Reporting Date)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) PLUS -1 * Sum [Discounted Premium CFs (Current

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Service)(Locked-in YC, Locked-in Date)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) PLUS -1 * Sum [Discounted Premium CFs (Future Service)(Locked-in YC, Locked-in Date)] from I_IN_Disc, where: 1. [Reporting Date] (in I_IN_Disc) = "Reporting Date – Current" (input in Setup) 2. [GIC Code] (in I_IN_Disc) = **[GIC Code]** (given GIC Code) <u>Step 2</u> **Step 1 * [Exchange (Locked-in date)]**
Step 2: Check			
Total premium (current and future)	Total premium (current and future)	Number	**[Investment component - (Current period)] + [Premium receipts - (Current period)] + [Investment component - (Future periods)] + [Premium - (Future periods)] + [Investment component (IFIE)] – [Premium (IFIE)]**
Total rev adjusted for finance effect (current and future)	Total rev adjusted for finance effect (current and future)	Number	Sum from **[Exp cf (out flow) (Current Period)] : [Acq & Prem CF exp var - (Current Period)]** PLUS Sum from **[Exp cf (out flow) (Future Periods)] : [NDAC (Future Periods)] – Sum** from **[CF (IFIE)] : [NDAC (IFIE)]**
B120 check	B120 check	Number	If

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			ABS([Total premium (current and future)] – [Total rev adjusted for finance effect (current and future)]) < 0.01 Output **TRUE** Otherwise Output **FALSE**

2.2.4.2 GMM Reinsurance Calculations

Initial Measurement Calculations

Reinsurance Contracts - Insurance Initial Measurement – Discounted Cash Flows (R_I_IN_Disc)

This component of the calculation discounts the cash flows relating to newly recognised insurance GICs that are covered under the relevant reinsurance contracts (GRCs). Data from the Input components of the model that relate to new covered insurance cash flows will be referenced (such as the cash flows and the relevant GIC/GRC related information).

The following input modules are referenced:

- R_I_NEW_CFs
- I_Groups
- Yield Curves

The table below explains the steps relating to these discounting calculations:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GRC/GIC and cash flow inputs information			
Reporting Date	Reporting date associated with the row of cash flow inputs sourced from R_I_NEW_CFs.	Date	[Reporting Date] Each reporting date is referenced consecutively starting with the first input in R_I_NEW_CFs.
GIC Code	GIC Code associated with the cash flow	String	[GIC Code] referenced consecutively starting with the first input in R_I_NEW_CFs
GRC Code	GRC Code associated with covering the cash flow	String	[GRC Code] referenced consecutively starting with the first input in R_I_NEW_CFs
Locked-in YC Date	Locked-in YC Date associated with the GIC Code	Date	[Locked-in YC Date] referenced from R_I_Mapping for the given GIC Code
Currency	Currency associated with the GIC Code	String	[Currency] referenced from R_I_Mapping for the given GIC Code
Treaty covered Claim and Other CFs (Unlinked)(Incurred in Current Reporting Period)	Treaty covered Claim and Other CFs (Incurred in Current Reporting Period) referenced from R_I_NEW_CFs	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Treaty covered Claim and Other CFs (Unlinked)(Incurred in Current Reporting Period)]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			referenced consecutively starting with the first input in R_I_NEW_CFs
Treaty covered Claim and Other CFs (Unlinked)(Incurred in Future Reporting Periods)	Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods) referenced from R_I_NEW_CFs	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Treaty covered Claim and Other CFs (Unlinked)(Incurred in Future Reporting Periods)] referenced consecutively starting with the first input in R_I_NEW_CFs
Treaty covered Claim and Other CFs (Linked)(Incurred in Current Reporting Period)	Treaty covered Claim and Other CFs (Incurred in Current Reporting Period) referenced from R_I_NEW_CFs	Number	If Reinsurance new business indicator = "No" or Scope_LinkedCashflows = "No? Then output: 0 Otherwise: [Treaty covered Claim and Other CFs (Linked)(Incurred in Current Reporting Period)] referenced consecutively starting with the first input in R_I_NEW_CFs
Treaty covered Claim and Other CFs (Linked)(Incurred in Future Reporting Periods)	Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods) referenced from R_I_NEW_CFs	Number	If Reinsurance new business indicator = "No" or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: [Treaty covered Claim and Other CFs (Linked)(Incurred in Future Reporting Periods)] referenced consecutively starting with the first input in R_I_NEW_CFs
Delay (in Years)	Delay (in Years) referenced from R_I_NEW_CFs	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Delay (in Years)] referenced consecutively starting with the first input in R_I_NEW_CFs
Step 2: Referencing relevant discount rates			
Spot Rate (Unlinked)(Locked-in Date, Delay)	Spot rate for the given Locked-in YC date and Delay, as	Percentage	If Reinsurance new business indicator = "No" Then output: 0

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Referenced as "i1" in formulas for ease of reading	input in the "Yield Curves" input sheet.		Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places.
Spot Rate (Unlinked)(Locked-in Date, min[Delay, Reporting Date - Locked-in Date]) *Referenced as "i2" in formulas for ease of reading*	Spot rate for the given Locked-in YC date and given Delay, as input in the "Yield Curves" input sheet.	Percentage	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency] _Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup(MIN([Delay (in Years)]; ([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that **[Reporting Date]-[Locked-in YC Date]** represents the difference in days between the two dates.
Spot Rate (Linked)(Locked-in Date, Delay) *Referenced as "i3" in formulas for ease of reading*	Spot rate for the given Locked-in YC date and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Reinsurance new business indicator = "No" or Scope_LinkedCashflows = "No? Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places.
Spot Rate (Linked)(Locked-in Date, min[Delay, Reporting Date - Locked-in Date])	Spot rate for the given Locked-in YC date and given Delay, as input in the "Yield Curves" input sheet.	Percentage	If Reinsurance new business indicator = "No" or Scope_LinkedCashflows = "No? Then output: 0 Otherwise:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Referenced as "i4" in formulas for ease of reading			From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency] _Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup(MIN([Delay (in Years)]; ([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that **[Reporting Date]-[Locked-in YC Date]** represents the difference in days between the two dates.
Step 3: Discounting cash flows at relevant discount rates			
Discounted Treaty covered Claim and Other CFs (Incurred in Current Reporting Period)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Current Reporting Period)] * (1 + i1)** $^{(-[\text{Delay (in Years)}])}$ **+** **[Treaty covered Claim and Other CFs (Linked)(Incurred in Current Reporting Period)] * (1 + i3)** $^{(-[\text{Delay (in Years)}])}$
Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Future Reporting Periods)] * (1 + i1)** $^{(-[\text{Delay (in Years)}])}$ **+** **[Treaty covered Claim and Other CFs (ULnked)(Incurred in Future Reporting Periods)] * (1 + i3)** $^{(-[\text{Delay (in Years)}])}$
Discounted Treaty covered Claim and Other CFs (Locked-in YC, Locked-in Date)	Total Present Value of the cash flows as at the Recognition date		**[Discounted Treaty covered Claim and Other CFs (Incurred in Current Reporting Period)(Locked-in YC, Locked-in Date)] + [Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, Locked-in Date)]**
Discounted Treaty covered Claim and Other CFs (Incurred in Current Reporting Period)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: **[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Current Reporting Period)] * (1 + i1)** $^{(-[\text{Delay (in Years)}])}$ *** (1 + i2)** $^{\text{MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))}}$ **+** **[Treaty covered Claim and Other CFs (Linked)(Incurred in Current Reporting Period)] * (1 + i3)** $^{(-[\text{Delay (in Years)}])}$ *** (1 + i4)** $^{\text{MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))}}$ (Difference in dates is in days)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: **[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Future Reporting Periods)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Treaty covered Claim and Other CFs (Linked)(Incurred in Future Reporting Periods)] * (1 + i3) (-[Delay (in Years)]) * (1 + i4) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** (Difference in dates is in days)
Discounted Treaty covered Claim and Other CFs (Locked-in YC, Reporting Date)	Total Present Value of the cash flows as at the Reporting date (or cash flow date if before the reporting date)		**[Discounted Treaty covered Claim and Other CFs (Incurred in Current Reporting Period)(Locked-in YC, Reporting Date)] + [Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)]**

Reinsurance Contracts Initial Measurement – Discounted Cash Flows (R_IN_Disc)

This component of the calculation discounts the future cash flows required for the initial measurement of the asset for remaining coverage. Data from the Input components of the model that relate to new reinsurance contracts will be referenced (such as the cash flows and the relevant GRC related information). Calculations relating to the discounting of these cash flows are also performed.

Each input line (row) in R_NEW_CFs is referenced consecutively, starting with the first input. The discounting is thus also performed for each line (row) of cash flows input in R_NEW_CFs.

The table below explains the four steps relating to these discounting calculations at initial measurement.

Note that in Step 4, "**[Reporting Date] – [Locked-in YC Date]**" represents **Round(([Reporting Date]-[Locked-in YC Date])/365.25)**, where rounding is to 2 decimal places.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GRC and cash flow inputs			
Reporting Date	Reporting date associated with the row of cash flow inputs sourced from R_NEW_CFs.	Date	[Reporting Date] Each reporting date is referenced consecutively starting with the first input in R_NEW_CFs.
GRC Code	GRC Code associated with the row of cash	String	[GRC Code]

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	flow inputs sourced from R_NEW_CFs.		Each GRC Code is referenced consecutively starting with the first input in R_NEW_CFs.
Currency	Currency associated with the given GRC Code, sourced from R_Groups	String	[Currency] for the given GRC Code, referenced from the input in R_Groups.
Locked-in YC Date	Locked in YC date associated with the given GRC Code, sourced from R_Groups	Date	[Locked in YC Date] for the given GRC Code, referenced from the input in R_Groups.
Premium CFs (Unlinked)(Service in Current Reporting Period)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Premium CFs (Unlinked)(Current Service)] column in R_NEW_CFs.
Premium CFs (Unlinked)(Future Service)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Premium CFs (Unlinked)(Future Service)] column in R_NEW_CFs.
Investment Component CFs (Unlinked)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Investment Component CFs (Unlinked)] column in R_NEW_CFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)] column in R_NEW_CFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)] column in R_NEW_CFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Premium CFs (Linked)(Service in Current Reporting Period)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = “No” or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: [Premium CFs (Linked)(Current Service)] column in R_NEW_CFs.
Premium CFs (Linked)(Future Service)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = “No” or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: [Premium CFs (Linked)(Future Service)] column in R_NEW_CFs.
Investment Component CFs (Linked)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = “No” or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: [Investment Component CFs (Linked)] column in R_NEW_CFs.
Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = “No” or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: [Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)] column in R_NEW_CFs.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)	Input cash flows sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = “No” or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)] column in R_NEW_CFs.
Delay (in Years)	Sourced from corresponding input column in R_NEW_CFs (for the given row of cash flow inputs)	Number	If Reinsurance new business indicator = “No” or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: [Delay (in Years)] column in R_NEW_CFs.
Step 2: Referencing appropriate discount rates for each row of cash flows			
Spot Rate (Unlinked)(Locked-in Date, Delay)	Spot rate for the given Locked-in YC date and Delay, as	Percentage	If Reinsurance new business indicator = “No”

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Referenced as "i1" in formulas for ease of reading	input in the "Yield Curves" input sheet.		Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places.
Spot Rate (Unlinked)(Locked-in Date, min[Delay, Reporting Date - Locked-in Date]) *Referenced as "i2" in formulas for ease of reading*	Spot rate for the given Locked-in YC date and alternate Delay, as input in the "Yield Curves" input sheet.	Percentage	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency]_ Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup(MIN([Delay (in Years)]; ([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that **[Reporting Date]-[Locked-in YC Date]** represents the difference in days between the two dates.
Spot Rate (Linked)(Locked-in Date, Delay) *Referenced as "i3" in formulas for ease of reading*	Spot rate for the given Locked-in YC date and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Reinsurance new business indicator = "No" or Scope_LinkedCashflows = "No" Then output: 0 Otherwise: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places.
Spot Rate (Linked)(Locked-in Date, min[Delay, Reporting Date - Locked-in Date])	Spot rate for the given Locked-in YC date and alternate Delay, as input in the "Yield Curves" input sheet.	Percentage	If Reinsurance new business indicator = "No" or Scope_LinkedCashflows = "No" Then output: 0 Otherwise:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Referenced as "i4" in formulas for ease of reading			From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency]_ Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup(MIN([Delay (in Years)]; ([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that **[Reporting Date]-[Locked-in YC Date]** represents the difference in days between the two dates.
Step 3: Discounting of various cash flows – Present value at recognition date			
Discounted Premium CFs (Current Service)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Premium CFs (Unlinked)(Service in Current Reporting Period)] * (1 + i1) $^{(-[Delay\ (in\ Years)])}$** **+** **[Premium CFs (Linked)(Service in Current Reporting Period)] * (1 + i3) $^{(-[Delay\ (in\ Years)])}$**
Discounted Premium CFs (Future Service)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Premium CFs (Unlinked)(Future Service] * (1 + i1) $^{(-[Delay\ (in\ Years)])}$** **+** **[Premium CFs (Linked)(Future Service] * (1 + i3) $^{(-[Delay\ (in\ Years)])}$**
Discounted Investment Component CFs (Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Investment Component CFs (Unlinked)] * (1 + i1) $^{(-[Delay\ (in\ Years)])}$** **+** **[Investment Component CFs (Linked)] * (1 + i3) $^{(-[Delay\ (in\ Years)])}$**
Discounted Non-recoveries CFs (Locked-in YC, Locked-in Date)	Sum of previous 3 items to obtain the total present value of the Non-Recovery cash flows (relating to initial measurement)	Number	**[Discounted Premium CFs (Current Service)(Locked-in YC, Locked-in Date)] + [Discounted Premium CFs (Future Service)(Locked-in YC, Locked-in Date)] + [Discounted Investment Component CFs (Locked-in YC, Locked-in Date)]**
Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)] * (1 + i1) $^{(-[Delay\ (in\ Years)])}$** **+** **[Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)] * (1 + i3) $^{(-[Delay\ (in\ Years)])}$**
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Locked-in YC, Locked-in Date)	Present Value of the cash flow as at the Recognition date	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Period)] * (1 + i1) $^{(-[Delay\ (in\ Years)])}$** **+** **[Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Period)] * (1 + i3) $^{(-[Delay\ (in\ Years)])}$**
Discounted Recoveries CFs	Sum of previous 2 items to obtain the	Number	**[Discounted Recoveries CFs (On Claims Incurred in Current Reporting**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
(Locked-in YC, Locked-in Date)	total present value of the Recovery cash flows (relating to initial measurement)		**Period)(Locked-in YC, Locked-in Date)] + [Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Locked-in YC, Locked-in Date)]**
Step 4: Discounting of various cash flows – Present value at reporting date			
Discounted Premium CFs (Current Service)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: **[Premium CFs (Unlinked)(Service in Current Reporting Period)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Premium CFs (Linked)(Service in Current Reporting Period)] * (1 + i3) (-[Delay (in Years)]) * (1 + i4) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**
Discounted Premium CFs (Future Service)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: **[Premium CFs (Unlinked)(Future Service)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Premium CFs (Linked)(Future Service)] * (1 + i3) (-[Delay (in Years)]) * (1 + i4) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**
Discounted Investment Component CFs (Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: **[Investment Component CFs (Unlinked)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Investment Component CFs (Linked)] * (1 + i3) (-[Delay (in Years)]) * (1 + i4) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**
Discounted Non-recoveries CFs (Locked-in YC, Reporting Date)	Sum of previous 3 items to obtain the total present value of the Non-Recovery cash flows (at the reporting date)	Number	**[Discounted Premium CFs (Current Service)(Locked-in YC, Reporting Date)] + [Discounted Premium CFs (Future Service)(Locked-in YC, Reporting Date)] + [Discounted Investment Component CFs (Locked-in YC, Reporting Date)]**
Discounted Recoveries CFs (On	Present Value of the cash flow as at the	Number	If Reinsurance new business indicator = "No"

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Claims Incurred in Current Reporting Period)(Locked-in YC, Reporting Date)	Reporting date (or cash flow date if before the reporting date)		Then output: 0 Otherwise: **[Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)] * (1 + i3) (-[Delay (in Years)]) * (1 + i4) MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)	Present Value of the cash flow as at the Reporting date (or cash flow date if before the reporting date)	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: **[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)] * (1 + i1) (-[Delay (in Years)]) * (1 + i2) (MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))** **+** **[Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)] * (1 + i3) (-[Delay (in Years)]) * (1 + i4) (MIN([Delay (in Years)], Round(([Reporting Date]-[Locked-in YC Date])/365.25; 2))**
Discounted Recoveries CFs (Locked-in YC, Reporting Date)	Sum of previous 2 items to obtain the total present value of the Recovery cash flows (at the reporting date)	Number	**[Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Locked-in YC, Reporting Date)] + [Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)]**

Reinsurance Contracts Initial Measurement – Loss Recovery (R_IN_LR)

This component of the calculation performs the calculation required for the initial measurement of the Asset For Remaining Coverage (ARC) Loss Recovery Component relating to new onerous insurance contracts recognised within the reporting period (that are covered under the various GRCs).

The following components of the model are referenced to perform the calculations in R_IN_Calc:
- R_I_Mapping
- R_Groups
- R_NEW_LR

If the Underlying GIC model is set to "GMM" for any GRC in R_I_Mapping , the I_IN_Calc and I_SUB_Calc components under GMM insurance calculations are referenced.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GRC Code	GRC Code associated with the row of loss component inputs sourced from R_I_Mapping.	String	[GRC Code] This is sourced from R_I_Mapping. Each GRC Code is referenced consecutively starting with the first input in R_I_Mapping and only appears once.
GIC Code	GIC Code associated with the row of cash flow inputs sourced from R_I_Mapping.	String	If [GIC Code] from R_I_Mapping is blank Leave this blank Otherwise reference [GIC Code] from R_I_Mapping is blank
GIC Measurement Model	Indicator for the underlying GIC model	String	Reference [GIC Measurement Model] from R_I_Mapping for the given GRC Code
Ceding %	Ceding % of the loss recovery component sourced from R_Groups	Percentage	Reference [Ceding %] from R_Groups for the given GRC Code
Portion of GIC covered by Treaty	Portion of risk under the GIC that is covered by the relevant Treaty	Percentage	Reference [Portion of Group Covered by Reinsurance] from R_I_Mapping for the given GIC Code
New LRC - Loss - PVFCF	Referencing the New LRC - Loss – PVFCF component for the GIC	Number	If R_NEW_LR indicator = "No" Then output: 0 Otherwise: If **[GIC Measurement Model]** = "GMM" Sum [New LRC - Loss - PVFCF] column in I_IN_Calc, where: 1. [GIC Code] (in I_IN_Calc) = **[GIC Code]** (given GIC Code in R_IN_LR) Otherwise Reference

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[GIC New LRC - Loss – PVFCF] from R_NEW_LR for given **[GRC Code]&[GIC Code]**
New LRC - Loss - RA	Referencing the New LRC - Loss – Risk Adjustment component for the GIC	Number	If R_NEW_LR indicator = "No" Then output: 0 Otherwise: If **[GIC Measurement Model]** = "GMM" Reference [New LRC - Loss - RA] column in I_SUB_Calc, for the given GIC Code Otherwise Reference [GIC New LRC - Loss – RA] from R_NEW_LR given **[GRC Code]&[GIC Code]**
New LRC - Loss	Total newly recognised loss component under the GIC	Number	[New LRC - Loss - PVFCF] + [New LRC - Loss - RA]
New ARC - Loss Recovery	Loss recovery component recognised for the Asset for remaining Coverage for the given GRC	Number	If R_NEW_LR indicator = "No" Then output: 0 Otherwise: **1 * [Ceding %] * [Portion of GIC covered by Treaty] * [New LRC - Loss]**

Reinsurance Contracts Initial Measurement – Calculations (R_IN_Calc)

This component of the calculation performs the remaining calculation steps required for the initial measurement of the Asset For Remaining Coverage (ARC) for new contracts recognised within the reporting period.

In particular, the calculation aims to determine the Contractual Service Margin (CSM) associated with each of the GRCs containing new reinsurance contracts, based on the expected future (now discounted) premiums, claims recoveries, commission and Investment Component cash flows associated with these GRCs.

The cash flows are aggregated per GRC Code to perform these calculations.

The following components of the model are referenced to perform the calculations in R_IN_Calc:
- R_Groups
- R_NEW_GEN
- R_IN_Disc

- R_IN_LR

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing GRC Codes and related information			
GRC Code	GRC Code associated with the row of cash flow inputs sourced from R_NEW_GEN.	String	[GRC Code] This is sourced from R_NEW_GEN. Each GRC Code is referenced consecutively starting with the first input in R_NEW_GEN and only appears once.
Purchased/Acquired	Purchased/Acquired indicator for each GRC Code sourced from R_NEW_GEN	String	[Purchased/Acquired] This is sourced from R_NEW_GEN.
Pre-recognition CFs	Pre-recognition CFs for the GRC sourced from R_NEW_GEN	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: [Pre-recognition CFs] This is sourced from R_NEW_GEN.
Step 2: Aggregating Discounted Cash Flows per GRC Code			
New ARC - Premium CFs (Current Service)	The aggregated value relating to the relevant GRC Code as at the locked-in YC date, sourced from R_IN_Disc	Number	**-1 *** Sum of [Discounted Premium CFs (Current Service)(Locked-in YC, Locked-in Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_IN_Calc)
New ARC - Premium CFs (Future Service)	The aggregated value relating to the relevant GRC Code as at the locked-in YC date, sourced from R_NEW_Disc	Number	**-1 *** Sum of [Discounted Premium CFs (Future Service)(Locked-in YC, Locked-in Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date –

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_IN_Calc)
New ARC - Premium CFs	Sum of previous 2 items to obtain the total premium payment cash flows for each GRC Code	Number	**[New ARC - Premium CFs (Current Service)] + [New ARC - Premium CFs (Future Service)]**
New ARC - Investment Component CFs	The aggregated value relating to the relevant GRC Code as at the locked-in YC date, sourced from R_IN_Disc	Number	**-1 *** Sum of [Discounted Investment Component CFs (Locked-in YC, Locked-in Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_IN_Calc)
New ARC - Recoveries CFs (On Claims Incurred in Current Reporting Period)	The aggregated value relating to the relevant GRC Code as at the locked-in YC date, sourced from R_IN_Disc	Number	**-1 *** Sum of [Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Locked-in YC, Locked-in Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_IN_Calc)
New ARC - Recoveries CFs (On Claims Incurred in Future Reporting Periods)	The aggregated value relating to the relevant GRC Code as at the locked-in YC date, sourced from R_IN_Disc	Number	**-1 *** Sum of [Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Locked-in YC, Locked-in Date)] column in R_IN_Disc, where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_IN_Calc)
New ARC - Recoveries CFs	Sum of previous 2 items to obtain the total recoveries cash flows for each GRC Code	Number	**[New ARC - Recoveries CFs (On Claims Incurred in Current Reporting Period)] + [New ARC - Recoveries CFs (On Claims Incurred in Future Reporting Periods)]**
Step 3: Aggregating Inflows and Outflows per GRC Code			
New ARC - Total Outflows	The aggregated present value of all outflows relating to the GRC Code (excluding the risk adjustment)	Number	**[New ARC - Investment Component CFs] + [New ARC - Recoveries CFs]**
New ARC - PVFCF	The aggregated present value of all fulfilment cash flows (inflows and outflows) relating to the GRC Code (excluding the risk adjustment)	Number	**[New ARC - Premium CFs] + [New ARC - Total Outflows]**
Step 4: Determining the Risk Adjustment per GRC Code			
RA % of ABS(PVFCF Recoveries)	The risk adjustment percentage for the GRC sourced from R_Groups if the risk adjustment simplification is used (as specified in the Setup)	Percentage	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "Yes" in the Setup: Reference [RA % of ABS(PVFCF)] for the GRC Code from R_Groups If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup: Output **"N/A"**.
New ARC - RA	The ARC risk adjustment sourced from R_NEW_GEN if simplification is not used and set to a percentage of the absolute value of ARC –	Number	If [RA % of ABS(PVFCF Recoveries)] = "N/A" Then:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	Recoveries CFs if simplification is used		Reference [Initial RA] for the GRC Code from R_NEW_GEN Otherwise: **ABS([New ARC – Recoveries CFs]) * [RA % of ABS(PVFCF Recoveries)]**
Step 5: Summarising components of the ARC			
New ARC - FCF	The aggregated present value of all fulfilment cash flows (inflows and outflows) relating to the GRC Code, including the risk adjustment	Number	**[New ARC - PVFCF] + [New ARC - RA]**
Retroactive Cover?	Retroactive cover indicator for the GRC sourced from R_Groups	String	Reference [Retroactive Cover?] from R_Groups for the given GRC Code
New ARC - CSM - Non-loss-recovery	The net inflow or outflow taking into account all fulfilment cashflows	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: If **[Retroactive Cover?]** = Yes Then Output **[Pre-recognition CFs]** Otherwise Output **-[New ARC - FCF]**
New ARC - Loss Recovery	The total loss recovery component recognised for the given GRC Code	Number	Sum [New ARC - Loss Recovery] column in R_IN_LR where 1. [GRC Code] in R_IN_LR = **[GRC Code]** (in R_IN_Calc)
New ARC - CSM	The Asset for Remaining Coverage CSM after adding on the Loss Recovery Component	Number	**[New ARC - CSM - Non-loss-recovery] + [New ARC - Loss Recovery]**

Reinsurance Contracts Initial Measurement – Pre Foreign Exchange Conversion (R_IN_Pre_FX)

This component of the calculation extracts all items from R_IN_Calc that require currency conversion at a later stage of the IFRS 17 measurement calculations. This is broken down into cash flows relating to contracts that are divided into one of two categories:

- "purchased" or "acquired".

The R_IN_Calc component of the model is referenced throughout this component of the calculation.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing GIC Codes			
GRC Code	GRC Code associated with the row of cash flow inputs sourced from R_IN_Calc.	String	[GRC Code] This is sourced from R_IN_Calc. Each GRC Code is referenced consecutively starting with the first GIC Code in R_IN_Calc and only appears once.
Step 2: Isolating cash flows for “Purchased” reinsurance contracts			
Transfer of Pre-recognition CFs (Purchased)	Sourced from R_IN_Calc (if GRC is marked as "Purchased")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Purchased" For the given GRC Code Then Reference [Pre-recognition CFs] from R_IN_Calc for the given GRC Code Otherwise Output **0**
Transfer of Pre-recognition CFs (Purchased)(2)	Set equal to previous item (required since two separate postings are needed)	Number	**[Transfer of Pre-recognition CFs (Purchased)]**
New ARC - Premium CFs (Purchased)	Sourced from R_IN_Calc (if GRC is marked as "Purchased")	Number	If [Purchased/Acquired] (from R_IN_Calc) = "Purchased" for the given GRC Code Then Reference [New ARC - Premium CFs] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - Investment Component CFs (Purchased)	Sourced from R_IN_Calc (if GRC is marked as "Purchased")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Purchased/Acquired] (from R_IN_Calc) = "Purchased" for the given GRC Code Then Reference [New ARC - Investment Component CFs] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - Recoveries CFs (Purchased)	Sourced from R_IN_Calc (if GRC is marked as "Purchased")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Purchased" for the given GRC Code Then Reference [New ARC - Recoveries CFs] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - RA (Purchased)	Sourced from R_IN_Calc (if GRC is marked as "Purchased")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Purchased" for the given GRC Code Then Reference [New ARC - RA] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - CSM - Non-loss-recovery (Purchased)	Sourced from R_IN_Calc (if GRC is marked as "Purchased")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			If [Purchased/Acquired] (from R_IN_Calc) = "Purchased" for the given GRC Code Then Reference [New ARC - CSM - Non-loss-recovery] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - Loss Recovery (Purchased)	Sourced from R_IN_Calc (if GRC is marked as "Purchased")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Purchased" for the given GRC Code Then Reference [New ARC - Loss Recovery] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - CSM - (Purchased)	Sourced from R_IN_Calc (if GRC is marked as "Purchased")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Purchased" for the given GRC Code Then Reference [New ARC - CSM] from R_IN_Calc for the given GRC Code Otherwise Output **0**
Step 3: Isolating cash flows for “Acquired” reinsurance contracts			
Transfer of Pre-recognition CFs (Acquired)	Sourced from R_IN_Calc (if GIC is marked as "Acquired")	Number	If Reinsurance new business indicator = “No”

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Acquired" For the given GRC Code Then Reference [Pre-recognition CFs] from R_IN_Calc for the given GRC Code Otherwise Output **0**
Transfer of Pre-recognition CFs (Acquired)(2)	Set equal to previous item (required since two separate postings are needed)	Number	**[Transfer of Pre-recognition CFs (Acquired)]**
New ARC - Premium CFs (Acquired)	Sourced from R_IN_Calc (if GIC is marked as "Acquired")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Acquired" for the given GRC Code Then Reference [New ARC - Premium CFs] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - Investment Component CFs (Acquired)	Sourced from R_IN_Calc (if GIC is marked as "Acquired")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Acquired" for the given GRC Code Then Reference [New ARC - Investment Component CFs] from R_IN_Calc for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise Output **0**
New ARC - Recoveries CFs (Acquired)	Sourced from R_IN_Calc (if GIC is marked as "Acquired")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Acquired" for the given GRC Code Then Reference [New ARC - Recoveries CFs] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - RA (Acquired)	Sourced from R_IN_Calc (if GIC is marked as "Acquired")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Acquired" for the given GRC Code Then Reference [New ARC - RA] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - CSM - Non-loss-recovery (Acquired)	Sourced from R_IN_Calc (if GIC is marked as "Acquired")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Acquired" for the given GRC Code Then Reference [New ARC - CSM - Non-loss-recovery] from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - Loss Recovery (Acquired)	Sourced from R_IN_Calc (if GIC is marked as "Acquired")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Acquired" for the given GRC Code Then Reference [New ARC - Loss Recovery] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC - CSM (Acquired)	Sourced from R_IN_Calc (if GIC is marked as "Acquired")	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If [Purchased/Acquired] (from R_IN_Calc) = "Acquired" for the given GRC Code Then Reference [New ARC - CSM] from R_IN_Calc for the given GRC Code Otherwise Output **0**

Subsequent Measurement Calculations

Reinsurance Contracts Subsequent Measurement – Discounted Cash Flows (R_Sub_Disc1)

This component of the calculation discounts the future cash flows required for the subsequent measurement of the reinsurance liabilities/assets. This relates to both newly recognised reinsurance contracts as well as reinsurance contracts recognised in previous periods where a reinsurance liability/asset is still held at the reporting date.

Data from the Input components of the model that relate to subsequent measurement of reinsurance contracts will be referenced (such as the cash flows and the relevant GRC related information). Calculations relating to the discounting of these cash flows are also performed.

Each input line (row) in R_IF_FCFs is referenced consecutively, starting with the first input. The discounting is thus also performed for each line (row) of cash flows input in R_IF_FCFs.

The table below explains the steps relating to these discounting calculations at subsequent measurement.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GRC and cash flow inputs			
Reporting Date	Reporting date associated with the row of cash flow inputs sourced from R_IF_FCFs.	Date	[Reporting Date] Each reporting date is referenced consecutively starting with the first input in R_IF_FCFs.
GRC Code	GRC Code associated with the row of cash flow inputs sourced from R_IF_CFs.	String	[GRC Code] Each GRC Code is referenced consecutively starting with the first input in R_IF_FCFs.
Currency	Locked in YC date associated with the given GRC Code, sourced from R_Groups	Date	[Locked in YC Date] for the given GRC Code, referenced from the input in R_Groups.
Locked-in YC Date	Currency associated with the given GRC Code, sourced from R_Groups	String	[Currency] for the given GRC Code, referenced from the input in R_Groups.
Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions="No" Then output: Premium CFs (Unlinked)(Past Service) – Current FX Otherwise output: [Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] column in R_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Premium CFs (Unlinked)(Past Service) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions="No" Then output: Premium CFs (Unlinked)(Past Service) – Current FX Otherwise output: [Premium CFs (Unlinked)(Past Service) – Prev FX] column in R_IF_FCFs.
Premium CFs (Unlinked)(Past Service) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Premium CFs (Unlinked)(Past Service) – Current FX] column in R_IF_FCFs.
Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions="No" Then output: Premium CFs (Unlinked)(Service in Next Reporting Period) - Current FX Otherwise output: [Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] column in R_IF_FCFs.
Premium CFs (Unlinked)(Service in Next Reporting Period) - Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions="No" Then output: Premium CFs (Unlinked)(Service in Next Reporting Period) - Current FX Otherwise output: [Premium CFs (Unlinked)(Service in Next Reporting Period) – Prev FX] column in R_IF_FCFs.
Premium CFs (Unlinked)(Service in Next Reporting Period) - Current FX	Input cash flows sourced from corresponding input column in	Number	[Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] column in R_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	R_IF_FCFs (for the given row of cash flow inputs)		
Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions="No" Then output: Premium CFs (Unlinked)(Future Service) – Current FX Otherwise output: [Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] column in R_IF_FCFs.
Premium CFs (Unlinked)(Future Service) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions="No" Then output: Premium CFs (Unlinked)(Future Service) – Current FX Otherwise output: [Premium CFs (Unlinked)(Future Service) - Prev FX] column in R_IF_FCFs.
Premium CFs (Unlinked)(Future Service) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Premium CFs (Unlinked)(Future Service) - Current FX] column in R_IF_FCFs.
Investment Component CFs (Unlinked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LockedInAssumptions="No" Then output: Investment Component CFs (Unlinked)(Receivable in Future) – Current FX Otherwise output: [Investment Component CFs (Unlinked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)] column in R_IF_FCFs.
Investment Component CFs	Input cash flows	Number	If Scope_LockedInAssumptions="No"

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
(Unlinked)(Receivable in Future) – Prev FX	sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)		Then output: Investment Component CFs (Unlinked)(Receivable in Future) – Current FX Otherwise output: [Investment Component CFs (Unlinked)(Receivable in Future) – Prev FX] column in R_IF_FCFs.
Investment Component CFs (Unlinked)(Receivable in Future) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Investment Component CFs (Unlinked)(Receivable in Future) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Prev FX] column in R_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	cash flow inputs)		
Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Prev FX] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Prev FX] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Current FX] column in R_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	(for the given row of cash flow inputs)		
Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) – Current FX] column in R_IF_FCFs.
Premium CFs (Linked)(Past Service)(Locked-in Financial	Input cash flows sourced from corresponding input	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Assumptions)(Current Discretion)	column in R_IF_FCFs (for the given row of cash flow inputs)		[Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] column in R_IF_FCFs.
Premium CFs (Linked)(Past Service) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Past Service) – Prev FX] column in R_IF_FCFs.
Premium CFs (Linked)(Past Service) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Past Service) – Current FX] column in R_IF_FCFs.
Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] column in R_IF_FCFs.
Premium CFs (Linked)(Service in Next Reporting Period) - Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Service in Next Reporting Period) – Prev FX] column in R_IF_FCFs.
Premium CFs (Linked)(Service in	Input cash flows sourced from	Number	If Scope_LinkedCashflows="No" Then output: 0

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Next Reporting Period) - Current FX	corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)		Otherwise output: [Premium CFs (Linked)(Service in Next Reporting Period) – Current FX] column in R_IF_FCFs.
Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] column in R_IF_FCFs.
Premium CFs (Linked)(Future Service) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Future Service) - Prev FX] column in R_IF_FCFs.
Premium CFs (Linked)(Future Service) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Premium CFs (Linked)(Future Service) - Current FX] column in R_IF_FCFs.
Investment Component CFs (Linked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Investment Component CFs (Linked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)] column in R_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Investment Component CFs (Linked)(Receivable in Future) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Investment Component CFs (Linked)(Receivable in Future) – Prev FX] column in R_IF_FCFs.
Investment Component CFs (Linked)(Receivable in Future) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Investment Component CFs (Linked)(Receivable in Future) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Prev FX] column in R_IF_FCFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	cash flow inputs)		
Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Prev FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Prev FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Prev FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	(for the given row of cash flow inputs)		[Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) – Current FX] column in R_IF_FCFs.
Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) – Current FX	Input cash flows sourced from corresponding input column in R_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) – Current FX] column in R_IF_FCFs.
Delay (in Years)	Sourced from corresponding input column in	Number	[Delay (in Years)] column in R_IF_CFs.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	I_IF_FCFs (for the given row of cash flow inputs)		
Step 2: Referencing appropriate discount rates for each row of cash flows			
Spot Rate (Unlinked) (Remaining Coverage)(Previous Reporting Date, Delay) *Referenced as "i1" in formulas for ease of reading*	Spot rate for the Previous Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[ReportingDate_Previous]_[Currency]_Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup
Spot Rate (Unlinked) (Remaining Coverage)(Current Reporting Date, Delay) *Referenced as "i2" in formulas for ease of reading*	Spot rate for the Current Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date – Current]_[Currency] _Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Unlinked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date) + Delay) *Referenced as "i3" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+[Delay (in Years)]) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Unlinked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date)) *Referenced as "i4" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Unlinked) (Remaining	Spot rate for the Locked in YC date and	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency] _Unlinked_Remaining Coverage_[GRC Code]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Coverage)(Locked-in Date, (Reporting Date - Locked-in Date) + min[Delay, Reporting Period]) *Referenced as "i5" in formulas for ease of understanding*	calculated delay, as input in the "Yield Curves" input sheet.		At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+MIN([Delay (in Years)]; ([Reporting Date - Current]-[Reporting Date – Previous])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup and that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Unlinked) (Incurred Claims)(Previous Reporting Date, Delay) *Referenced as "i6" in formulas for ease of reading*	Spot rate for the Previous Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[ReportingDate_Previous]_[Currency]_Unlinked_Incurred Claims_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup
Spot Rate (Unlinked) (Incurred Claims)(Current Reporting Date, Delay) *Referenced as "i7" in formulas for ease of reading*	Spot rate for the Current Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date – Current]_[Currency] _Unlinked_Incurred Claims _[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Linked) (Remaining Coverage)(Previous Reporting Date, Delay) *Referenced as "i8" in formulas for ease of reading*	Spot rate for the Previous Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[ReportingDate_Previous]_[Currency]_Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Spot Rate (Linked) (Remaining Coverage)(Current Reporting Date, Delay) *Referenced as "i9" in formulas for ease of reading*	Spot rate for the Current Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date – Current]_[Currency] _Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Linked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date) + Delay) *Referenced as "i10" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+[Delay (in Years)]) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Linked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date)) *Referenced as "i11" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency]_Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Spot Rate (Linked) (Remaining Coverage)(Locked-in Date, (Reporting Date - Locked-in Date) + min[Delay, Reporting Period]) *Referenced as "i12" in formulas for ease of understanding*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency]_Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+MIN([Delay (in Years)]; ([Reporting Date - Current]-[Reporting Date – Previous])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup and that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Linked) (Incurred Claims)(Previous Reporting Date, Delay) *Referenced as "i13" in formulas for ease of reading*	Spot rate for the Previous Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: [**ReportingDate_Previous]_[Currency]_Linked_Incurred Claims_[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)** Rounding up is to zero decimal places. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup
Spot Rate (Linked) (Incurred Claims)(Current Reporting Date, Delay) *Referenced as "i14" in formulas for ease of reading*	Spot rate for the Current Reporting date YC and Delay, as input in the "Yield Curves" input sheet.	Percentage	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Reporting Date – Current]_[Currency]_Linked_Incurred Claims _[GRC Code]** At duration: **Roundup([Delay (in Years)] * 12)**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Rounding up is to zero decimal places. Note that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Step 3: Discounting of various cash flows – Present value at reporting date (Prev YC)			
Discounted Premium CFs (Past Service)(Prev YC, Current FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Premium CFs (Unlinked)(Past Service) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Past Service) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Premium CFs (Service in Next Reporting Period)(Prev YC, Current FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Service in Next Reporting Period) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Premium CFs (Future Service)(Prev YC, Current FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Premium CFs (Unlinked)(Future Service) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Future Service) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Investment Component CFs (Receivable in Future)(Prev YC, Current FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Investment Component CFs (Unlinked)(Receivable in Future) – Current FX] * (1 + i1) (-[Delay (in Years)])** **+** **[Investment Component CFs (Linked)(Receivable in Future) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Non-recoveries CFs (Prev YC, Current FX, t0)	Sum of previous 4 items to obtain present value at reporting date of non-recovery cash flows	Number	**[Discounted Premium CFs (Past Service)(Prev YC, Current FX, t0)] + [Discounted Premium CFs (Service in Next Reporting Period)(Prev YC, Current FX,t0)] + [Discounted Premium CFs (Future Service)(Prev YC, Current FX, t0)] + [Discounted Investment Component CFs (Receivable in Future)(Prev YC, Current FX, t0)]**
Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Previous NP Risk, Prev YC, Prev FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Prev FX] * (1 + i6) (-[Delay (in Years)])** **+** **[Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Prev FX] * (1 + i13) (-[Delay (in Years)])**
Discounted Recoveries CFs (On Claims Incurred in	Present Value of the cash flow as	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Current FX] * (1 + i6) (-[Delay (in Years)])**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Prior Reporting Periods)(Previous NP Risk, Prev YC, Current FX, t0)	at the reporting date (Prev YC)		**+ [Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Previous NP Risk) – Current FX] * (1 + i13) (-[Delay (in Years)])**
Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk, Prev YC, Current FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX] * (1 + i6) (-[Delay (in Years)]) + [Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX] * (1 + i13) (-[Delay (in Years)])**
Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Current NP Risk, Prev YC, Current FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX] * (1 + i6) (-[Delay (in Years)]) + [Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX] * (1 + i13) (-[Delay (in Years)])**
Discounted Recoveries CFs (On Claims Incurred in the Past)(Current NP Risk, Prev YC, Current FX, t0)	Sum of previous 2 items to obtain present value at previous reporting date of recovery cash flows (past) – current NP risk	Number	**[Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk, Prev YC, Current FX, t0)] + [Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Current NP Risk, Prev YC, Current FX, t0)]**
Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Current NP Risk, Prev YC, Current FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) – Current FX] * (1 + i1) (-[Delay (in Years)]) + [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk, Prev YC, Current FX, t0)	Present Value of the cash flow as at the reporting date (Prev YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) – Current FX] * (1 + i1) (-[Delay (in Years)]) + [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) – Current FX] * (1 + i8) (-[Delay (in Years)])**
Discounted Recoveries CFs (On Claims Incurred in the Future)(Current NP Risk, Prev YC, Current FX, t0)	Sum of previous 2 items to obtain present value at	Number	**[Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Current NP Risk, Prev YC, Current FX, t0)] + [Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk, Prev YC, Current FX, t0)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	previous reporting date of recovery cash flows (future) – current NP risk		
Step 4: Discounting of various cash flows – Present value at reporting date (Prior YC and Current YC)			
Discounted Premium CFs (Past Service)(Current YC, t0) - Prev FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Premium CFs (Unlinked)(Past Service) – Prev FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Past Service) – Prev FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Premium CFs (Service in Next Reporting Period)(Current YC, t0) - Prev FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period) – Prev FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Service in Next Reporting Period) – Prev FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Premium CFs (Future Service)(Current YC, t0) – Prev FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Premium CFs (Unlinked)(Future Service) – Prev FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Future Service) – Prev FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Investment Component CFs (Receivable in Future)(Current YC, t0) - Prev FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Investment Component CFs (Unlinked)(Receivable in Future) – Prev FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Investment Component CFs (Linked)(Receivable in Future) – Prev FX] * (1 + i9) (-[Delay (in Years)])**
Discounted Non-recoveries CFs (Current YC, t0) - Prev FX	Sum of previous 4 items to obtain present value at reporting date of non-recovery cash flows	Number	**[Discounted Premium CFs (Past Service)(Current YC, t0) - Prev FX] + [Discounted Premium CFs (Service in Next Reporting Period)(Current YC, t0) – Prev FX] + [Discounted Premium CFs (Future Service)(Current YC, t0) – Prev FX] + [Discounted Investment Component CFs (Receivable in Future)(Current YC, t0) – Prev FX]**
Discounted Premium CFs (Past Service)(Current YC, t0) - Current FX	Present Value of the cash flow as at the reporting	Number	**[Premium CFs (Unlinked)(Past Service) – Current FX] * (1 + i2) (-[Delay (in Years)])** **+** **[Premium CFs (Linked)(Past Service) – Current FX] * (1 + i9) (-[Delay (in Years)])**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	date (Current YC)		
Discounted Premium CFs (Service in Next Reporting Period)(Current YC, t0) - Current FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period) – Current FX] * (1 + i2) $^{(-[Delay\ (in\ Years)])}$ + [Premium CFs (Linked)(Service in Next Reporting Period) – Current FX] * (1 + i9) $^{(-[Delay\ (in\ Years)])}$**
Discounted Premium CFs (Future Service)(Current YC, t0) - Current FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Premium CFs (Unlinked)(Future Service) – Current FX] * (1 + i2) $^{(-[Delay\ (in\ Years)])}$ + [Premium CFs (Linked)(Future Service) – Current FX] * (1 + i9) $^{(-[Delay\ (in\ Years)])}$**
Discounted Investment Component CFs (Receivable in Future)(Current YC, t0) - Current FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Investment Component CFs (Unlinked)(Receivable in Future) – Current FX] * (1 + i2) $^{(-[Delay\ (in\ Years)])}$ + [Investment Component CFs (Linked)(Receivable in Future) – Current FX] * (1 + i9) $^{(-[Delay\ (in\ Years)])}$**
Discounted Non-recoveries CFs (Current YC, t0) - Current FX	Sum of previous 4 items to obtain present value at reporting date of non-recovery cash flows	Number	**[Discounted Premium CFs (Past Service)(Current YC, t0) - Current FX] + [Discounted Premium CFs (Service in Next Reporting Period)(Current YC, t0) – Current FX] + [Discounted Premium CFs (Future Service)(Current YC, t0) – Current FX] + [Discounted Investment Component CFs (Receivable in Future)(Current YC, t0) – Current FX]**
Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk, Current YC, t0)	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX] * (1 + i7) $^{(-[Delay\ (in\ Years)])}$ + [Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) – Current FX] * (1 + i14) $^{(-[Delay\ (in\ Years)])}$**
Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Current NP Risk, Current YC, t0)	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX] * (1 + i7) $^{(-[Delay\ (in\ Years)])}$ + Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Period)(Current NP Risk) – Current FX] * (1 + i14) $^{(-[Delay\ (in\ Years)])}$**
Discounted Recoveries CFs (On Claims Incurred in the Past)(Current	Sum of previous 2 items to obtain present	Number	**[Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk, Current YC, t0)] + [Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Current NP Risk, Current YC, t0)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
NP Risk, Current YC, t0)	value at reporting date of recovery cash flows (past) – Current NP risk		
Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Previous NP Risk, Current YC, t0) – Prev FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) - Prev FX] * (1 + i2) $^{(-[Delay\ (in\ Years)])}$ + [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) - Prev FX] * (1 + i9) $^{(-[Delay\ (in\ Years)])}$**
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk, Current YC, t0) - Prev FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) - Prev FX] * (1 + i2) $^{(-[Delay\ (in\ Years)])}$ + [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) - Prev FX] * (1 + i9) $^{(-[Delay\ (in\ Years)])}$**
Discounted Recoveries CFs (On Claims Incurred in the Future)(Previous NP Risk, Current YC, t0) - Prev FX	Sum of previous 2 items to obtain present value at reporting date of recovery cash flows (future) – Current NP risk	Number	**[Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Previous NP Risk, Current YC, t0) - Prev FX]+[Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk, Current YC, t0) - Prev FX]**
Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Previous NP Risk, Current YC, t0) – Current FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) - Current FX] * (1 + i2) $^{(-[Delay\ (in\ Years)])}$ + [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Previous NP Risk) - Current FX] * (1 + i9) $^{(-[Delay\ (in\ Years)])}$**
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk, Current YC, t0) - Current FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) - Current FX] * (1 + i2) $^{(-[Delay\ (in\ Years)])}$ + [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Previous NP Risk) - Current FX] * (1 + i9) $^{(-[Delay\ (in\ Years)])}$**
Discounted Recoveries CFs (On	Sum of previous 2	Number	**[Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Previous NP Risk, Current YC,**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Claims Incurred in the Future)(Previous NP Risk, Current YC, t0) - Current FX	items to obtain present value at reporting date of recovery cash flows (future) – Current NP risk		**t0) - Current FX]+[Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk, Current YC, t0) - Current FX]**
Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Current NP Risk, Current YC, t0) – Current FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) - Current FX] * (1 + i2) $^{(-[\text{Delay (in Years)}])}$ + [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) - Current FX] * (1 + i9) $^{(-[\text{Delay (in Years)}])}$**
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk, Current YC, t0) - Current FX	Present Value of the cash flow as at the reporting date (Current YC)	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) - Current FX] * (1 + i2) $^{(-[\text{Delay (in Years)}])}$ + [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) - Current FX] * (1 + i9) $^{(-[\text{Delay (in Years)}])}$**
Discounted Recoveries CFs (On Claims Incurred in the Future)(Current NP Risk, Current YC, t0) - Current FX	Sum of previous 2 items to obtain present value at reporting date of recovery cash flows (future) – Current NP risk	Number	**[Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Current NP Risk, Current YC, t0) - Current FX]+[Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk, Current YC, t0) - Current FX]**
Step 5: Discounting of cash flows – Present value at record's reporting date (Locked-in YC)			
Discounted Premium CFs (Past Service)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date	Number	**[Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i4) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ + [Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i11) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i4) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ + [Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i11) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$**
Discounted Premium CFs (Future Service)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date	Number	**[Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i4) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ + [Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i11) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$**
Discounted Investment Component CFs (Receivable in Future)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date	Number	**[Investment Component CFs (Unlinked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i3) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i4) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ + [Investment Component CFs (Linked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)] * (1 + i10) $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ * (1 + i11) $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$**
Discounted Non-recoveries CFs (Locked-in YC, Current FX, t0)	Sum of previous 4 items to obtain present value at record's reporting date of non-recovery cash flows based on current FX	Number	**[Discounted Premium CFs (Past Service)(Locked-in YC, t0)]+[Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t0)]+[Discounted Premium CFs (Future Service)(Locked-in YC, Current FX, t0)]+[Discounted Investment Component CFs (Receivable in Future)(Locked-in YC, Current FX, t0)]**
Discounted Recoveries CFs (On Claims Incurred in	Present Value of the cash flow as	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] ***

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Next Reporting Period)(Locked-in YC and NP Risk, t0)	at the record's reporting date		**(1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i4)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ **+** **[Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] *** **(1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i11)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Locked-in YC and NP Risk, t0)	Present Value of the cash flow as at the record's reporting date	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] *** **(1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i4)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$ **+** **[Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] *** **(1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i11)** $^{([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25}$
Discounted Recoveries CFs (On Claims Incurred in the Future)(Locked-in YC and NP Risk, t0)	Sum of previous 2 items to obtain present value at reporting date of recovery cash flows (future)	Number	**[Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Previous NP Risk, Locked-in YC, Prev FX, t0)] + [Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Previous NP Risk, Locked-in YC, Prev FX, t0)]**
Step 6: Discounting of cash flows – Present value at record's next reporting date (Locked-in YC) i.e. rolled forward			
Discounted Premium CFs (Past Service)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Premium CFs (Unlinked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i3)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i5)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ **+** **[Premium CFs (Linked)(Past Service)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i10)** $^{-([\text{Delay (in Years)}] + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$ ***** **(1 + i12)** $^{(\text{MIN}([\text{Delay (in Years)}]; \text{ROUND}(([\text{Reporting Date - Current}] - [\text{Reporting Date - Previous}])/365.25)) + ([\text{Reporting Date}] - [\text{Locked-in YC Date}])/365.25)}$
Discounted Premium CFs (Service in Next	Present Value of the cash flow as	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] ***

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Reporting Period)(Locked-in YC, t1)	at the record's next reporting date		**(1 + i3)** $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ ***** **(1 + i5)** $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ **+** **[Premium CFs (Linked)(Service in Next Reporting Period)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i10)** $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ ***** **(1 + i12)** $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$
Discounted Premium CFs (Future Service)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Premium CFs (Unlinked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i3)** $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ ***** **(1 + i5)** $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ **+** **[Premium CFs (Linked)(Future Service)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i10)** $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ ***** **(1 + i12)** $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$
Discounted Investment Component CFs (Receivable in Future)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Investment Component CFs (Unlinked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i3)** $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ ***** **(1 + i5)** $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ **+** **[Investment Component CFs (Linked)(Receivable in Future)(Locked-in Financial Assumptions)(Current Discretion)] *** **(1 + i10)** $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ ***** **(1 + i12)** $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$
Discounted Non-recoveries CFs (Locked-in YC, t1)	Sum of previous 4 items to obtain present value at record's next reporting	Number	**[Discounted Premium CFs (Past Service)(Locked-in YC, t1)] + [Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t1)] + [Discounted Premium CFs (Future Service)(Locked-in YC, t1)] + [Discounted Investment Component CFs (Receivable in Future)(Locked-in YC, t1)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	date of non-recovery cash flows		
Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Locked-in YC and NP Risk, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i5) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ + [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i12) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$**
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods) (Locked-in YC and NP Risk, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] * (1 + i3) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i5) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ + [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Locked-in Financial Assumptions and NP Risk)(Current Discretion)] * (1 + i10) $^{-([Delay (in Years)] + ([Reporting Date] – [Locked-in YC Date])/365.25)}$ * (1 + i12) $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)}$**
Discounted Recoveries CFs (On Claims Incurred in the Future) (Locked-in YC and NP Risk, t1)	Sum of previous 2 items to obtain present value at next reporting date of recovery cash flows (future) – Current NP risk	Number	**[Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Locked-in YC and NP Risk, t1)]+[Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Locked-in YC and NP Risk, t1)]**
Step 7: Discounting of cash flows – Present value at record's next reporting date (Previous YC)			
Discounted Premium CFs (Past Service)(Prev YC, Current FX, t1)	Present Value of the cash flow as at the	Number	**[Premium CFs (Unlinked)(Past Service)] * (1+i1) $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$ +**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	record's next reporting date		**[Premium CFs (Linked)(Past Service)] * (1+i8)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$
Discounted Premium CFs (Service in Next Reporting Period)(Prev YC, Current FX, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Premium CFs (Unlinked)(Service in Next Reporting Period) - Current FX] * (1+i1)** $^{- (MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$ **+** **[Premium CFs (Linked)(Service in Next Reporting Period) - Current FX] * (1+i8)** $^{- (MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$
Discounted Premium CFs (Future Service)(Prev YC, Current FX, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Premium CFs (Unlinked)(Future Service) - Current FX] * (1+i1)** $^{-(MAX([Delay (in Years)] ([Reporting Date - Current] – [Reporting Date - Previous])/365.25,0))}$ **+** **[Premium CFs (Linked)(Future Service) - Current FX] * (1+i8)** $^{-(MAX([Delay (in Years)] ([Reporting Date - Current] – [Reporting Date - Previous])/365.25,0))}$
Discounted Investment Component CFs (Receivable in Future)(Prev YC, Current FX, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Investment Component CFs (Unlinked)(Receivables in Future) - Current FX] * (1+i1)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$ **+** **[Investment Component CFs (Linked)(Receivables in Future) - Current FX] * (1+i8)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$
Discounted Non-recoveries CFs (Prev YC, Current FX, t1)	Sum of previous 4 items to obtain present value at next reporting date of non-recovery cashflows	Number	**[Discounted Premium CFs (Past Service)(Prev YC, Current FX, t1)] +** **[Discounted Premium CFs (Service in Next Reporting Period)(Prev YC, Current FX, t1)] +** **[Discounted Premium CFs (Future Service)(Prev YC, Current FX, t1)] +** **[Discounted Investment Component CFs (Receivable in Future)(Prev YC, Current FX, t1)]**
Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk, Prev YC, Current FX, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) - Current FX] * (1+i6)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$ **+** **[Recoveries CFs (Linked)(On Claims Incurred in Prior Reporting Periods)(Current NP Risk) - Current FX] * (1+i13)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$
Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Current NP	Present Value of the cash flow as at the record's next	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Current Reporting Periods)(Current NP Risk) - Current FX] * (1+i6)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$ **+**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Risk, Prev YC, Current FX, t1)	reporting date		**[Recoveries CFs (Linked)(On Claims Incurred in Current Reporting Periods)(Current NP Risk) - Current FX] * (1+i13)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$
Discounted Recoveries CFs (On Claims Incurred in the Past)(Current NP Risk, Prev YC, Current FX, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk, Prev YC, Current FX, t1)] + [Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Current NP Risk, Prev YC, Current FX, t1)]**
Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Current NP Risk, Prev YC, Current FX, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) - Current FX] * (1+i1)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$ **+ [Recoveries CFs (Linked)(On Claims Incurred in Next Reporting Period)(Current NP Risk) - Current FX] * (1+i8)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$
Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk, Prev YC, Current FX, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Recoveries CFs (Unlinked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) - Current FX] * (1+i1)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$ **+ [Recoveries CFs (Linked)(On Claims Incurred in Future Reporting Periods)(Current NP Risk) - Current FX] * (1+i8)** $^{-(MAX([Delay (in Years)] - ([Reporting Date - Current] – [Reporting Date - Previous])/365.25, 0))}$
Discounted Recoveries CFs (On Claims Incurred in the Future)(Current NP Risk, Prev YC, Current FX, t1)	Sum of previous 2 items to obtain present value at next reporting date of non-recovery cashflows	Number	**[Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Current NP Risk, Prev YC, Current FX, t1)] + [Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk, Prev YC, Current FX, t1)]**

Reinsurance Contracts Subsequent Measurement – Discounted Cash Flows Covered by Treaty (R_I_Sub_Disc1)

This component of the calculation discounts the future cash flows required for the subsequent measurement of the reinsurance liabilities/assets in respect of claims and other cashflows covered by treaties represented by the GRC Code. This relates to both newly recognised reinsurance contracts as well as reinsurance contracts recognised in previous periods where a reinsurance liability/asset is still held at the reporting date.

Data from the Input components of the model that relate to subsequent measurement of reinsurance contracts will be referenced (such as the cash flows and the relevant GRC related information). Calculations relating to the discounting of these cash flows are also performed.

Each input line (row) in R_I_IF_FCFs is referenced consecutively, starting with the first input. The discounting is thus also performed for each line (row) of cash flows input in R_I_IF_FCFs.

The table below explains the steps relating to these discounting calculations at subsequent measurement.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GRC and cash flow inputs			
Reporting Date	Reporting date associated with the row of cash flow inputs sourced from R_I_IF_FCFs.	Date	[Reporting Date] Each reporting date is referenced consecutively starting with the first input in R_I_IF_FCFs.
GIC Code	GIC Code associated with the row of cash flow inputs sourced from R_I_IF_CFs.	String	[GIC Code] Each GIC Code is referenced consecutively starting with the first input in R_I_IF_FCFs.
GRC Code	GRC Code associated with the row of cash flow inputs sourced from R_I_IF_CFs.	String	[GRC Code] Each GRC Code is referenced consecutively starting with the first input in R_I_IF_FCFs.
Locked-in YC Date	Locked in YC date associated with the given GIC Code, sourced from I_Groups	String	[Locked in YC Date] for the given GIC Code, referenced from the input in R_I_Mapping.
Currency	Currency associated with the given GIC Code, sourced from I_Groups	Date	[Currency] for the given GIC Code, referenced from the input in R_I_Mapping.
Treaty covered Claim and Other CFs (Unlinked)(Incurred in Next Reporting Period)	Input cash flows sourced from corresponding input column in R_I_IF_FCFs (for the given row of cash flow inputs)	Number	[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Next Reporting Period)] column in R_IF_FCFs.
Treaty covered Claim and Other CFs (Unlinked)(Incurred in Future Reporting Periods)	Input cash flows sourced from corresponding input column in R_I_IF_FCFs (for the given row of cash flow inputs)	Number	[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Future Reporting Periods)] column in R_IF_FCFs.
Treaty covered Claim and Other CFs (Linked)(Incurred in Next Reporting Period)	Input cash flows sourced from corresponding input column in R_I_IF_FCFs (for	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	the given row of cash flow inputs)		[Treaty covered Claim and Other CFs (Linked)(Incurred in Next Reporting Period)] column in R_IF_FCFs.
Treaty covered Claim and Other CFs (Linked)(Incurred in Future Reporting Periods)	Input cash flows sourced from corresponding input column in R_I_IF_FCFs (for the given row of cash flow inputs)	Number	If Scope_LinkedCashflows="No" Then output: 0 Otherwise output: [Treaty covered Claim and Other CFs (Linked)(Incurred in Future Reporting Periods)] column in R_IF_FCFs.
Delay (in Years)	Sourced from corresponding input column in I_IF_FCFs (for the given row of cash flow inputs)	Number	[Delay (in Years)] column in R_I_IF_CFs.
Step 2: Referencing appropriate discount rates for each row of cash flows			
Spot Rate (Unlinked)(Locked-in Date, (Reporting Date - Locked-in Date) + Delay) *Referenced as "i1" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+[Delay (in Years)]) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Unlinked)(Locked-in Date, (Reporting Date - Locked-in Date)) *Referenced as "i2" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Unlinked)(Locked-in Date, (Reporting Date - Locked-in Date) + min[Delay, Reporting Period]) *Referenced as "i3" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency] _Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+MIN([Delay (in Years)]; ([Reporting Date - Current]-[Reporting Date – Previous])/365.25) * 12)**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup and that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Linked)(Locked-in Date, (Reporting Date - Locked-in Date) + Delay) *Referenced as "i4" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+[Delay (in Years)]) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Linked)(Locked-in Date, (Reporting Date - Locked-in Date)) *Referenced as "i5" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]_[Currency] _Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Spot Rate (Linked)(Locked-in Date, (Reporting Date - Locked-in Date) + min[Delay, Reporting Period]) *Referenced as "i6" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency] _Linked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+MIN([Delay (in Years)]; ([Reporting Date - Current]-[Reporting Date – Previous])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup and that [Reporting Date – Current] is the

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			input for "Reporting Date – Current" in the Setup
Step 3: Discounting of cash flows – Present value at record's reporting date (Locked-in YC)			
Discounted Treaty covered Claim and Other CFs (Incurred in Next Reporting Period)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date	Number	**[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Next Reporting Period)] * (1 + i1)** $^{-([Delay (in Years)] + ([Reporting Date] - [Locked-in YC Date])/365.25)}$ **∗ (1 + i2)** $^{([Reporting Date] - [Locked-in YC Date])/365.25}$ **+ [Treaty covered Claim and Other CFs (Linked)(Incurred in Next Reporting Period)] * (1 + i4)** $^{-([Delay (in Years)] + ([Reporting Date] - [Locked-in YC Date])/365.25)}$ **∗ (1 + i5)** $^{([Reporting Date] - [Locked-in YC Date])/365.25}$
Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, t0)	Present Value of the cash flow as at the record's reporting date	Number	**[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Future Reporting Periods)] * (1 + i1)** $^{-([Delay (in Years)] + ([Reporting Date] - [Locked-in YC Date])/365.25)}$ **∗ (1 + i2)** $^{([Reporting Date] - [Locked-in YC Date])/365.25}$ **+ [Treaty covered Claim and Other CFs (Linked)(Incurred in Future Reporting Periods)] * (1 + i4)** $^{-([Delay (in Years)] + ([Reporting Date] - [Locked-in YC Date])/365.25)}$ **∗ (1 + i5)** $^{([Reporting Date] - [Locked-in YC Date])/365.25}$
Discounted Treaty covered Claim and Other CFs (Incurred in the Future)(Locked-in YC, t0)	Sum of previous 2items to obtain present value at record's reporting date of claims and other cash flows covered by the treaty	Number	**[Discounted Treaty covered Claim and Other CFs (Incurred in Next Reporting Period)(Locked-in YC, t0)]+[Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, t0)]**
Step 4: Discounting of cash flows – Present value at record's next reporting date (Locked-in YC) i.e. rolled forward			
Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, t1)	Present Value of the cash flow as at the record's next reporting date	Number	**[Treaty covered Claim and Other CFs (Unlinked)(Incurred in Future Reporting Periods)]* (1 + i1)** $^{-([Delay (in Years)] + ([Reporting Date] - [Locked-in YC Date])/365.25)}$ **∗ (1 + i3)** $^{(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] - [Reporting Date - Previous])/365.25)) + ([Reporting Date] - [Locked-in YC Date])/365.25)}$ **+ [Treaty covered Claim and Other CFs (Linked)(Incurred in Future Reporting Periods)]* (1 + i4)** $^{-([Delay (in Years)] + ([Reporting Date] - [Locked-in YC Date])/365.25)}$ **∗**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(1 + i6) **(MIN([Delay (in Years)]; ROUND(([Reporting Date - Current] – [Reporting Date - Previous])/365.25)) + ([Reporting Date] – [Locked-in YC Date])/365.25)** Rounding is to 2 decimal places

Reinsurance Contracts Subsequent Measurement – Discounted Patterns (R_Sub_Disc2)

This component of the calculation discounts the CSM coverage units patterns required for the subsequent measurement of the reinsurance liabilities/assets. This relates to both newly recognised reinsurance contracts as well as reinsurance contracts recognised in previous periods where a reinsurance liability/asset is still held at the reporting date.

Data from the Input components of the model that relate to subsequent measurement of reinsurance contracts will be referenced (such as the patterns and the relevant GRC related information).

Each input line (row) in R_IF_Patterns is referenced consecutively, starting with the first input. The discounting is thus also performed for each line (row) of coverage units input in R_IF_Patterns.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GRC and pattern inputs			
Reporting Date	Reporting date associated with the row of pattern inputs sourced from R_IF_Patterns.	Date	[Reporting Date] Each reporting date is referenced consecutively starting with the first input in R_IF_Patterns.
GRC Code	GRC Code associated with the row of pattern inputs sourced from R_IF_Patterns.	String	[GRC Code] Each GRC Code is referenced consecutively starting with the first input in R_IF_Patterns.
Currency	The GRC's currency, sourced from R_Groups	String	[Currency] for the given GRC Code, referenced from the input in R_Groups.
Locked-in YC Date	Locked in YC date associated with the given GRC Code, sourced from R_Groups	Date	[Locked in YC Date] for the given GRC Code, referenced from the input in R_Groups.
Coverage Units (Undiscounted)	Coverage units associated with the row of pattern inputs sourced from R_IF_Patterns.	Number	[Coverage Unit (Undiscounted)] for the given GRC code and Reporting Period, referenced consecutively from R_IF_Patterns.
Reporting Period (0 = current)	Reporting Period associated with the row of pattern inputs sourced from R_IF_Patterns.	Number	[Reporting Period (0 = current)] for the given GRC code and units, referenced consecutively from R_IF_Patterns.
Step 2: Referencing appropriate discount rates for each row of patterns			
Spot Rate (Locked-in Date, (Reporting Date - Locked-in Date) + # Reporting	Spot rate for the Locked in YC date and calculated delay, as input in the	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Periods * Reporting Period) *Referenced as "i1" in formulas for ease of reading*	"Yield Curves" input sheet.		**_[Currency]_Unlinked/Linked_Remaining Coverage_[GRC Code])** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25+ [Reporting Period (0 = current)] * ([Reporting Date - Current] - [Reporting Date – Previous])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days. Note that [Reporting Date – Previous] is the input for "Reporting Date – Previous" in the Setup and that [Reporting Date – Current] is the input for "Reporting Date – Current" in the Setup
Spot Rate (Locked-in Date, (Reporting Date - Locked-in Date)) *Referenced as "i2" in formulas for ease of reading*	Spot rate for the Locked in YC date and calculated delay, as input in the "Yield Curves" input sheet.	Percentage	From the "Yield curves" sheet, reference the spot rate for yield curve link: **[Locked-in YC Date] _[Currency] _Unlinked/Linked_Remaining Coverage_[GRC Code])** At duration: **Roundup((([Reporting Date]-[Locked-in YC Date])/365.25) * 12)** Rounding up is to zero decimal places. Note that the difference between two dates represents the difference in days.
Step 3: Discounting of patterns (where required)			
Discounted Coverage Units (Locked-in YC, t0)	The discounting of coverage units using the GRC's locked-in yield curve	Number	If the "Discount coverage units used for the release of the CSM?" input is set to "No" in the Setup: Output: **[Coverage Units (Undiscounted)]** Otherwise Output: **[Coverage Units (Undiscounted)]** * **((1+i1)**$^{-([\text{Reporting Period (0 = current)}]*\text{ROUND}(([\text{Reporting Date – Current}] - [\text{Reporting Date – Previous}])/365.25)+([\text{Reporting Date}]-[\text{Locked-in YC Date}])/365.25)}$**)** ***** **((1+i2)** $^{(([\text{Reporting Date}]-[\text{Locked-in YC Date}])/365.25)}$**)** Rounding is to two decimal places.

Reinsurance Contracts Subsequent Measurement – Loss Recovery Component Calculations (R_Sub_LR)

The part of the solution performs the calculations required at subsequent measurement in for any loss recovery component raised in respect of underlying onerous groups of insurance contracts that are covered by the relevant group of reinsurance contracts.

The following notation is used throughout the following section:

- **$FX_{C, GRC}$** is the exchange rate at the current reporting date for the given GRC Code's currency (as input in the Exchange Rates input)
- **$FX_{C, GIC}$** is the exchange rate at the current reporting date for the given GIC Code's currency (as input in the Exchange Rates input)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GRC and GIC information			
GRC Code	GRC Code associated with the row of inputs sourced from R_I_Mapping	String	[GRC Code] Each GRC Code is referenced consecutively starting with the first input in R_I_Mapping.
GIC Code	GIC Code associated with the row of inputs sourced from R_I_Mapping	String	If [GIC Code] from R_I_Mapping is empty: Output: " " Otherwise Output: **[GIC Code]** Each GIC Code is referenced consecutively starting with the first input in R_I_Mapping.
GIC Measurement model	Measurement model associated with the relevant GIC code sourced from R_I_Mapping	String	Reference [GIC Measurement Model] from R_I_Mapping for the given GIC code
Portion of Group Cover by Reinsurance	The portion of the Group of insurance contracts covered by the reinsurance GIC sourced from R_I_Mapping	Percentage	Reference [Portion of Group Cover by Reinsurance] from R_I_Mapping for the given GIC code
Ceding %	The proportion/percentage of cover provided by the GRC sourced from R_Groups	Percentage	Reference [Ceding %] from R_Groups for the given GIC code
Effective Recovery from GRC	Effective recovery from the GRC	Percentage	**[Portion of Group Cover by Reinsurance]*[Ceding %]**
Non-onerous/Onerous (Opening)	Profitability status of GICs at the previous reporting date	String	If **[GIC Measurement Model]** != GMM Output: Reference [Non-onerous/Onerous (Opening)] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Non-onerous/Onerous (Opening)] from I_SUB_Calc for the given GIC code
Non-onerous/Onerous (After Non FX change in FCF)	Profitability status of GICs at the current reporting date	String	If **[GIC Measurement Model]** != GMM

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Output: Reference [Non-onerous/Onerous (After Non FX change in FCF)] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Non-onerous/Onerous (After Non FX change in FCF)] from I_SUB_Calc for the given GIC code
GIC Currency	Single currency that the GIC cashflows are measured in	String	Output: Reference [Currency] from R_I_MAPPING for the given GIC code ([GIC Code])
GRC Currency	Single currency that the GRC cashflows are measured in	String	Output: Reference [Currency] from R_GROUPS for the given GRC code ([GRC Code])
Step 2: Reference relevant cashflow information in respect of the LRC – Loss – PVFCF			
Opening LRC - Loss - PVFCF	Opening LRC – Loss - PVFCF for the GIC Code	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Opening LRC - Loss - PVFCF] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Opening LRC - Loss - PVFCF] from I_SUB_Calc for the given GIC code
New LRC - Loss - PVFCF	New LRC – Loss PVFCF for the GIC Code	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If **[GIC Measurement Model]** != GMM Output: Reference [New LRC - Loss - PVFCF] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [New LRC - Loss - PVFCF] from I_SUB_Calc for the given GIC code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
LRC - Loss - PVFCF - Post Roll Forward	LRC - Loss - PVFCF - Post Roll Forward for the GIC Code	Number	If **[GIC Measurement Model]** != GMM Output: Reference [LRC - Loss - PVFCF - Post Roll Forward] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [LRC - Loss - PVFCF - Post Roll Forward] from I_SUB_Calc for the given GIC code
Effect of Changes in Interest rates on LRC - Loss – PVFCF	Effect of Changes in Interest rates on LRC - Loss – PVFCF for the GIC Code	Number	**[LRC - Loss - PVFCF - Post Roll Forward]-[New LRC - Loss - PVFCF] -[Opening LRC - Loss - PVFCF]**
Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)	Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) for the GIC Code	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)] from I_SUB_Calc for the given GIC code
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX	Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX for the GIC Code	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX] from I_SUB_Calc for the given GIC code
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) – FX	Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) – FX for the GIC Code	Number	If **[GIC Measurement Model]** != GMM

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Output: Reference [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX] from I_SUB_Calc for the given GIC code
Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)	Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2) for the GIC Code	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)] from I_SUB_Calc for the given GIC code
Closing LRC - Loss - PVFCF	Closing LRC - Loss – PVFCF for the GIC Code	Number	**[Opening LRC - Loss - PVFCF]+[New LRC - Loss - PVFCF]+[Effect of Changes in Interest rates on LRC - Loss - PVFCF]+[Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)]+[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX]+[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX+[Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)]**
Step 3: Reference relevant cashflow information in respect of the LRC – Loss – RA			
Opening LRC - Loss – RA	Opening LRC - Loss – RA for the GIC	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Opening LRC - Loss – RA] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code])

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Otherwise Output: Reference [Opening LRC - Loss – RA] from I_SUB_Calc for the given GIC code
New LRC - Loss – RA	New LRC - Loss – RA for the GIC	Number	If Reinsurance new business indicator = “No” Then output: 0 Otherwise: If **[GIC Measurement Model]** != GMM Output: Reference [New LRC - Loss – RA] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [New LRC - Loss – RA] from I_SUB_Calc for the given GIC code
LRC - Loss - RA - Post Roll Forward	LRC - Loss - RA - Post Roll Forward for the GIC	Number	If **[GIC Measurement Model]** != GMM Output: Reference [LRC - Loss - RA - Post Roll Forward] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [LRC - Loss - RA - Post Roll Forward] from I_SUB_Calc for the given GIC code
Effect of Changes in Interest rates on LRC - Loss – RA	Effect of Changes in Interest rates on LRC - Loss – RA for the GIC	Number	**[LRC - Loss - RA - Post Roll Forward] - [New LRC - Loss - RA] - [Opening LRC - Loss - RA]**
Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)	Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) for the GIC	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Effect on LRC - Loss - RA of Removal of Expected Claims

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			and Other Expenses Incurred (Current)] from I_SUB_Calc for the given GIC code
Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX	Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX for the GIC	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX] from I_SUB_Calc for the given GIC code
Effect on LRC - Loss - RA of Total Experience Variance (Future) – FX	Effect on LRC - Loss - RA of Total Experience Variance (Future) – FX for the GIC	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX] from I_SUB_Calc for the given GIC code
Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)	Effect on LRC - Loss - RA of Changes in Interest Rates (2/2) for the GIC	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)] from I_SUB_Calc for the given GIC code
Closing LRC - Loss - RA	Closing LRC - Loss – RA for the GIC	Number	**[Opening LRC - Loss - RA]+[New LRC - Loss - RA]+[Effect of Changes in Interest rates on LRC - Loss - RA]+[Effect on LRC - Loss - RA**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			of Removal of Expected Claims and Other Expenses Incurred (Current)]+[Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX]+[Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX]+[Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)]
Step 4: Aggregated Loss Component			
Opening/New LRC – Loss	Total Opening/New LRC – Loss	Number	**[Opening LRC - Loss - PVFCF]+[New LRC - Loss - PVFCF]+[Opening LRC - Loss - RA]+[New LRC - Loss - RA]**
Effect of Changes in Interest rates on LRC - Loss	Total Effect of Changes in Interest rates on LRC - Loss	Number	**[Effect of Changes in Interest rates on LRC - Loss - PVFCF]+[Effect of Changes in Interest rates on LRC - Loss - RA]**
Effect on LRC - Loss - Removal of Expected Claims and Other Expenses Incurred (Current)	Total Effect on LRC - Loss - Removal of Expected Claims and Other Expenses Incurred (Current)	Number	**[Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current)]+[Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current)]**
Effect on LRC - Loss - Total Experience Variance (Future) – FX	Total Effect on LRC - Loss - Total Experience Variance (Future) – FX	Number	**[Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX]]+[Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX]**
Effect on LRC - Loss - Changes in Interest Rates (2/2)	Total Effect on LRC - Loss - Changes in Interest Rates (2/2)	Number	**[Effect on LRC - Loss - PVFCF of Changes in Interest Rates (2/2)]]+[Effect on LRC - Loss - RA of Changes in Interest Rates (2/2)]**
Closing LRC - Loss	Total Closing LRC - Loss	Number	**[Closing LRC - Loss - PVFCF]+[Closing LRC - Loss - RA]**
Step 5: Experience Variances on underlying GIC			
Total Change in FCF (Future) Non FX	Total Change in FCF (Future) Non FX for the GIC	Number	If **[GIC Measurement Model]** != GMM Output: Reference [Total Change in FCF (Future) Non FX] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Total Change in FCF (Future) Non FX] from I_SUB_Calc for the given GIC code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on LRC - Loss - FCF of Total Experience Variance (Future)	Effect on LRC - Loss - FCF of Total Experience Variance (Future) for the GIC	Number	If **[GIC Measurement Model]** != GMM Output: Reference Effect on LRC - Loss - FCF of Total Experience Variance (Future)] from R_IF_GEN_LR for the given GRC Sub code ([GRC Code]&[GIC Code]) Otherwise Output: Reference [Effect on LRC - Loss - FCF of Total Experience Variance (Future)] from I_SUB_Calc for the given GIC code
Step 6: Adjustments to Loss Recovery Component			
ARC - P&L pass through factor	This factor determines how much of the change in FCF for the underlying GIC's goes to P&L and how much is absorbed by the CSM. This factor is dynamic and calculated in each reporting period. If there is a loss component in place on the underlying GIC's the changes in FCF that affect the GRC will flow through to P&L rather than adjust the CSM.	Percentage	If **[GIC Measurement Model**="PAA" Output: 100% Otherwise output:**[Effect on LRC - Loss - FCF of Total Experience Variance (Future)]/[Total Change in FCF (Future)]** (output 0 if Total Change in FCF (Future) = 0)
Expected Covered CFs (Future)(New)	Expected Covered CFs (Future)(New) for the GIC	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: -1* Sum of **[Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)]** in R_I_IN_Disc where: 1. [GIC Code] (in R_I_IN_Disc) = **[GIC Code]** (given GIC Code in R_SUB_LR) 2. [GRC Code] (in R_I_IN_Disc) = **[GRC Code]** (given GIC Code in R_SUB_LR)
Expected Covered CFs (Future)(Opening)	Expected Covered CFs (Future)(Opening) for the GIC	Number	-1* Sum of **[Discounted Treaty covered Claim and Other CFs (Incurred in Future Reporting Periods)(Locked-in YC, t1)]** in R_I_SUB_Disc1 where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			1. [Reporting Date] in R_I_SUB_Disc1= input for "Reporting Date- Previous" (input in Setup) 2. [GIC Code] (in R_I_SUB_Disc1) = **[GIC Code]** (given GIC Code in R_SUB_LR) 3. [GRC Code] (in R_I_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_LR)
Expected Covered CFs (Future)(Closing)	Expected Covered CFs (Future)(Closing) for the GIC	Number	-1* Sum of **[Discounted Treaty covered Claim and Other CFs (Incurred in the Future)(Locked-in YC, t0)]** in R_I_SUB_Disc1 where: 1. [Reporting Date] (in R_I_SUB_Disc1) = input for "Reporting Date- Current" (input in Setup) 2. [GIC Code] (in R_I_SUB_Disc1) = **[GIC Code]** (given GIC Code in R_SUB_LR) 3. [GRC Code] (in R_I_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_LR)
Change in covered FCFs (Future)	Change in covered FCFs (Future) for the GIC	Number	**[Expected Covered CFs (Future)(Closing)]-([Expected Covered CFs (Future)(New)]+[Expected Covered CFs (Future)(Opening)])**
Step 7: Calculation of the Loss Recovery Component			
Opening/New LRC - Loss adjusted for Effective Recovery from GRC	Opening Loss Component adjusted for the Effective Recovery from GRC	Number	**[Opening/New LRC - Loss] * [Effective Recovery from GRC]**
Opening/New ARC - Loss Recovery Component - Sub-GRC	Opening Loss Recovery Component allocated to the sub-GRC	Number	If Reinsurance new business indicator = "No" Then output: 0 Otherwise: **-1 *[New ARC - Loss Recovery]** from **R_IN_LR** for the given sub-GRC

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			– 1 * Loss Recovery (Opening) from **R_IF_GEN** for the GRC x **[Opening/New LRC - Loss adjusted for Effective Recovery from GRC]** for the sub-GRC x **[Opening/New LRC - Loss adjusted for Effective Recovery from GRC]** across the whole GRC
Effect of Changes in Interest rates on Loss Recovery - Sub-GRC	Unwinding of interest rates on opening loss recovery component at locked in yield curve converted from the GIC Code currency to the GRC Code currency at current (closing) exchange rates	Number	If **[Opening/New ARC - Loss Recovery Component - Sub-GRC]**=0 Output: 0 Otherwise Output: **[Effective Recovery from GRC] * [Effect of Changes in Interest rates on LRC - Loss] / $FX_{C, GIC}$ * $FX_{C, GRC}$**
Effect on Loss Recovery - Removal of Expected Claims and Other Expenses Incurred (Current) - Sub-GRC	Unwinding of the portion of claims and other cashflows that then impacts the release of the Loss Recovery Component converted from the GIC Code currency to the GRC Code currency at current (closing) exchange rates	Number	If **[Opening/New ARC - Loss Recovery Component - Sub-GRC]**=0 Output: 0 Otherwise Output: **[Effective Recovery from GRC] * [Effect on LRC - Loss - Removal of Expected Claims and Other Expenses Incurred (Current)] / $FX_{C, GIC}$ * $FX_{C, GRC}$**
Loss Recovered	Loss recovery that flows into P&L	Number	**[Change in covered FCFs (Future)]*[ARC - P&L pass through factor]**
Effect on Loss Recovery Component - Change in interest rates	Effect on the Loss Recovery Component of changes in interest rates (from locked in to current rates) converted from the GIC Code currency to the GRC Code currency at current (closing) exchange rates	Number	If **[Opening/New ARC - Loss Recovery Component - Sub-GRC]**=0 Output: 0 Otherwise Output: [**Effect on LRC - Loss - Changes in Interest Rates (2/2)]*[Effective Recovery from GRC] / $FX_{C, GIC}$ * $FX_{C, GRC}$**
Effect of Currency exchange rate differences	Effect of currency exchange rate differences on the loss recovery component converted from the GIC Code currency to the GRC Code currency at current (closing) exchange rates	Number	If **[Opening/New ARC - Loss Recovery Component - Sub-GRC]**=0 Output: 0 Otherwise output:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Effect on LRC - Loss - Total Experience Variance (Future) - FX] * [Effective Recovery from GRC] / $FX_{C, GIC}$ * $FX_{C, GRC}$
Pre-Closing ARC - Loss Recovery Component - Sub-GRC	Carrying amount of the loss recovery component before B199F cap – Sum of previous 7 columns	Number	**[Opening/New ARC - Loss Recovery Component - Sub-GRC]** - sum from **[Effect of Changes in Interest rates on Loss Recovery - Sub-GRC]** to **[Effect of Currency exchange rate differences]**
GIC LC Allocation Close	The portion of the carrying amount of the loss component of the onerous underlying GIC that the entity expects to recover from the GRC held converted from the GIC Code currency to the GRC Code currency at current (closing) exchange rates.	Number	**-1*[Effective Recovery from GRC]*[Closing LRC - Loss] / $FX_{C, GIC}$ * $FX_{C, GRC}$**
B119F Cap	Applying Paragraph B119F, this caps the carrying amount of the loss component at the portion of the carrying amount of the loss component of the onerous underlying GIC that the entity expects to recover from the GRC held.	Number	If **[Pre-Closing ARC - Loss Recovery Component - Sub-GRC]**>0 Output: -1* **[Pre-Closing ARC - Loss Recovery Component - Sub-GRC]** Else if **[GIC LC Allocation Close] < [Pre-Closing ARC - Loss Recovery Component - Sub-GRC]** Output:0 Otherwise Output: **[GIC LC Allocation Close] – [Pre-Closing ARC - Loss Recovery Component - Sub-GRC]**
Closing ARC - Loss Recovery Component - Sub-GRC	Closing ARC- Loss component after applying paragraph B119F	Number	**[Pre-Closing ARC - Loss Recovery Component - Sub-GRC]+[B119F Cap]**

Reinsurance Contracts Subsequent Measurement – Calculations (R_Sub_Calc)

This part of the solution performs all other calculations required for the subsequent measurement of the reinsurance liabilities/assets. Various previous calculation sheets as well as various input sheets are referenced throughout.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GRC and pattern inputs			
GRC Code	GRC Code associated with the row of inputs sourced from R_Groups.	String	[GRC Code] Each GRC Code is referenced consecutively starting with the first input in R_Groups.
Currency	Currency associated with the given GRC Code, sourced from R_Groups	String	[Currency] for the given GRC Code, referenced from the input in R_Groups.
Locked-in YC Date	Locked in YC date associated with the given GRC Code, sourced from R_Groups	Date	[Locked-in YC Date] for the given GRC Code, referenced from the input in R_Groups.
RA % of ABS(PVFCF Recoveries)	The risk adjustment percentage for the GRC sourced from R_Groups if the risk adjustment simplification is used (as specified in the Setup)	Percentage	If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "Yes" in the Setup: Reference [RA % of ABS(PVFCF)] for the GRC Code from R_Groups If the "Use simplification for the setting of the RA (% of ABS(PVFCF) relating to claims and other expenses)?" is set to "No" in the Setup: Output **"N/A"**.
Step 2: Aggregation and roll-forward of non-recovery cash flows per GRC			
Opening ARC - PVFCF (Non-recoveries)	Aggregated present value relating to the relevant GRC code as at previous reporting date, using previous YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Non-recoveries CFs (Prev YC, Current FX, t0)] column in R_SUB_Disc1, where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Opening ARC - PVFCF (Non-recoveries) - Post Roll Forward (Prev YC)	Aggregated present value relating to the relevant GRC code as at previous reporting date, using previous YC at t1 (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Non-recoveries CFs (Prev YC, Current FX, t1)] column in R_SUB_Disc1, where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(given GRC Code in R_SUB_Calc)
Opening ARC - PVFCF (Non-recoveries) - Post Roll Forward (LIYC)	Aggregated present value relating to the relevant GRC code as at previous reporting date rolled forward, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Non-recoveries CFs (Locked-in YC, t1)] column in R_SUB_Disc1, where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates (1/2)	Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates	Number	**[Opening ARC - PVFCF (Non-recoveries) - Post Roll Forward (LIYC)]-[Opening ARC - PVFCF (Non-recoveries) - Post Roll Forward (Prev YC)]**
Interest Accreted on Opening ARC - PVFCF (Non-recoveries)	Interest Accreted on Opening ARC - PVFCF (Non-recoveries)	Number	**[Opening ARC - PVFCF (Non-recoveries) - Post Roll Forward (Prev YC)] - [Opening ARC - PVFCF (Non-recoveries)]]**
New ARC - PVFCF (Non-recoveries)	Aggregated present value relating to the relevant GRC code as at locked-in YC date, using locked-in YC (sourced from R_IN_Disc)	Number	-1*Sum of [Discounted Non-recoveries CFs (Locked-in YC, Locked-in Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
New ARC - PVFCF (Non-recoveries) - Post Roll Forward	Aggregated present value relating to the relevant GRC code as at locked-in YC date rolled forward, using locked-in YC (sourced from R_IN_Disc)	Number	-1*Sum of [Discounted Non-recoveries CFs (Locked-in YC, Reporting Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_SUB_Calc)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Interest Accreted on New ARC - PVFCF (Non-recoveries)	Interest Accreted on New ARC - PVFCF (Non-recoveries)	Number	**[New ARC - PVFCF (Non-recoveries) - Post Roll Forward] - [New ARC - PVFCF (Non-recoveries)]**
ARC - PVFCF (Non-recoveries) - Post Roll Forward	Total ARC - PVFCF (Non-recoveries) - Post Roll Forward (opening and new)	Number	**[Opening ARC - PVFCF (Non-recoveries) - Post Roll Forward (LIYC)]+[New ARC - PVFCF (Non-recoveries) - Post Roll Forward]**
Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates (1/2)	Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates	Number	**[Effect on Opening ARC - PVFCF (Non-recoveries) of Changes in Interest Rates (1/2)]**
Interest Accreted on ARC - PVFCF (Non-recoveries)	Total Interest Accreted on ARC - PVFCF (Non-recoveries) (Opening and New)	Number	**[Interest Accreted on Opening ARC - PVFCF (Non-recoveries)] + [Interest Accreted on New ARC - PVFCF (Non-recoveries)]**
Step 3: Premium Experience Variance (Past/current service)			
Expected Premium (Past/Current)(Opening)	Aggregated value relating to the relevant GRC code as at previous reporting date rolled forward, using locked-in YC (sourced from R_SUB_Disc1)	Number	Sum of [Discounted Premium CFs (Past Service)(Locked-in YC, t1)] <u>plus</u> [Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t1)] columns in R_SUB_Disc1, where (for both): 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Expected Premium (Past/Current)(New)	Aggregated value relating to the relevant GRC code as at locked-in YC date rolled forward, using locked-in YC (sourced from R_IN_Disc)	Number	Sum of [Discounted Premium CFs (Current Service)(Locked-in YC, Reporting Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Premium Payments (Past/Current)	Sourced from R_IF_GEN	Number	Reference [Premium Payments (Past/Current Service)] for the given GRC Code from R_IF_GEN
Expected Premium (Past/Current)(Closing)	Aggregated value relating to the relevant GRC code as at current reporting date, using	Number	Sum of [Discounted Premium CFs (Past Service)(Locked-in YC, t0)] column in R_SUB_Disc1, where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	locked-in YC (sourced from R_SUB_Disc1)		1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
RI Premium Experience Variance (Past/Current)	RI Premium Experience Variance relating to Past/Current service	Number	**=-(([Premium Payments (Past/Current)]+[Expected Premium (Past/Current)(Closing)])-([Expected Premium (Past/Current)(Opening)]+[Expected Premium (Past/Current)(New)]))**
ARC - PVFCF (Non-recoveries) - Post Premium Experience Variances (Past/Current)	ARC - PVFCF (Non-recoveries) - Post Premium Experience Variances (Past/Current) (before removal of expected premiums)	Number	**[ARC - PVFCF (Non-recoveries) - Post Roll Forward] + [RI Premium Experience Variance (Past/Current)]**
Step 4: Non-Recoveries Experience Variance (Future service)			
Expected Non-recoveries CFs (Future)(Opening)	Aggregated value relating to the relevant GRC code as at previous reporting date rolled forward, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1 * Sum of [Discounted Premium CFs (Future Service)(Locked-in YC, t1)] plus [Discounted Investment Component CFs (Receivable in Future)(Locked-in YC, t1)] columns in R_SUB_Disc1, where (for both): 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Expected Non-recoveries CFs (Future)(New)	Aggregated value relating to the relevant GRC code as at locked-in YC date rolled forward, using locked-in YC (sourced from R_IN_Disc)	Number	-1*Sum of [Discounted Premium CFs (Future Service)(Locked-in YC, Reporting Date)] plus [Discounted Investment Component CFs (Locked-in YC, Reporting Date)] columns in R_IN_Disc, where (for both): 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_SUB_Calc)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Non-recoveries Receipts/Payments/Transfers (Future)	Sourced from R_IF_GEN	Number	-1 * Sum [Premium Payments (Future Service)] plus [New ARIC - IC (Investment Components Becoming Receivable)] for the given GRC Code from R_IF_GEN
Expected Non-recoveries CFs (Future)(Closing)	Aggregated value relating to the relevant GRC code as at current reporting date, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1 * (Sum of [Discounted Premium CFs (Service in Next Reporting Period)(Locked-in YC, t0)] plus [Discounted Premium CFs (Future Service)(Locked-in YC, t0)] plus [Discounted Investment Component CFs (Receivable in Future)(Locked-in YC, t0)]) columns in R_SUB_Disc1, where (for all of the above): 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF (Non-recoveries) of Non-recoveries CFs Experience Variance (Future - Non FX)	ARC - PVFCF (Non-recoveries) of Non-recoveries CFs Experience Variance (Future – Non FX)	Number	**([Non-recoveries Receipts/Payments/Transfers (Future)] + [Expected Non-recoveries CFs (Future)(Closing)]) - ([Expected Non-recoveries CFs (Future)(Opening)] + [Expected Non-recoveries CFs (Future)(New)])**
ARC - PVFCF (Non-recoveries) - Post Non-recoveries CFs (Non FX) Experience Variance (Future)	ARC - PVFCF (Non-recoveries) - Post Non-recoveries CFs (Non FX) Experience Variance (Future)	Number	**[ARC - PVFCF (Non-recoveries) - Post Premium Experience Variances (Past/Current)]+[Effect on ARC - PVFCF (Non-recoveries) of Non-recoveries CFs Experience Variance (Future - Non FX)]**
Premium Payments	Sourced from R_IF_GEN	Number	Sum [Premium Payments (Past/Current Service)] in R_IF_GEN plus [Premium Payments (Future Service)] in R_IF_GEN where: 1. [Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Transfer of Reinsurance Investment Components	Sourced from R_IF_GEN	Number	Reference -1 * [New ARIC - IC (Investment Components Becoming Receivable)] in R_IF_GEN where: 1. [Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc) for the given GRC Code from R_IF_GEN
ARC - PVFCF (Non-recoveries) - Post Payments/Receipts/Transfers	Rolling forward of previous (non-recovery) cash flows after allowing for past/current/future experience variances and removal of actual non-claim cash flows	Number	**[ARC - PVFCF (Non-recoveries) - Post Non-recoveries CFs (Non FX) Experience Variance (Future)]+([Premium Payments]+[Transfer of Reinsurance Investment Components])**
Closing ARC - PVFCF (Non-recoveries) – Prev FX	Aggregated present value relating to the relevant GRC code as at current reporting date, using current YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Non-recoveries CFs (Current YC, t0) - Prev FX], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Closing ARC - PVFCF (Non-recoveries) – Current FX	Aggregated present value relating to the relevant GRC code as at current reporting date, using current YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Non-recoveries CFs (Current YC, t0) - Current FX], where: 2. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 3. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates (2/2)	Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates (LIYC to Current YC)	Number	**=[Closing ARC - PVFCF (Non-recoveries) - Prev FX]-[ARC - PVFCF (Non-recoveries) - Post Payments/Receipts/Transfers]**
Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates	Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates	Number	**[Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates (1/2)] + [Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates (2/2)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on ARC - PVFCF (Non-recoveries) of Non-recoveries CFs Experience Variance (Future - FX)	Effect on ARC - PVFCF (Non-recoveries) of Non-recoveries CFs Experience Variance (Future - FX)	Number	**[Closing ARC - PVFCF (Non-recoveries) - Current FX]-[Closing ARC - PVFCF (Non-recoveries) - Prev FX]**
Step 5: Aggregation and roll-forward of recovery cash flows per GRC			
Opening ARC - PVFCF (Recoveries)	Aggregated value relating to the relevant GRC code as at previous reporting date, using previous YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Future)(Current NP Risk, Prev YC, Current FX, t0)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)	Aggregated value relating to the relevant GRC code as at previous reporting date, using Previous YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Future)(Current NP Risk, Prev YC, Current FX, t1)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Opening ARC - PVFCF (Recoveries) - Post Roll Forward (LIYC)	Aggregated value relating to the relevant GRC code as at previous reporting date rolled forward, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Future)(Current NP Risk, Locked-in YC, Current FX, t1)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates (1/2)	Effect on Opening ARC - PVFCF (Recoveries) post roll forward of Changes in Interest Rates (LIYC vs Prev YC)	Number	**[Opening ARC - PVFCF (Recoveries) - Post Roll Forward (LIYC)] – [Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)]]**
Interest Accreted on Opening ARC - PVFCF (Recoveries)	Interest Accreted on Opening ARC - PVFCF (Recoveries)	Number	**[Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)] –**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Opening ARC - PVFCF (Recoveries)]
New ARC - PVFCF (Recoveries)	Aggregated value relating to the relevant GRC code as at locked-in YC date, using locked-in YC (sourced from R_IN_Disc)	Number	-1*Sum of [Discounted Recoveries CFs (Locked-in YC, Locked-in Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) **2.** [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
New ARC - PVFCF (Recoveries) - Post Roll Forward	Aggregated value relating to the relevant GRC code as at locked-in YC date rolled forward, using locked-in YC (sourced from R_IN_Disc)	Number	-1*Sum of [Discounted Recoveries CFs (Locked-in YC, Reporting Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Interest Accreted on New ARC - PVFCF (Recoveries)	Interest Accreted on New ARC - PVFCF (Recoveries)	Number	**[New ARC - PVFCF (Recoveries) - Post Roll Forward] - [New ARC - PVFCF (Recoveries)]**
ARC - PVFCF (Recoveries) - Post Roll Forward	ARC - PVFCF (Recoveries) - Post Roll Forward (Opening and New recoveries)	Number	**[Opening ARC - PVFCF (Recoveries) - Post Roll Forward (LIYC)] + [New ARC - PVFCF (Recoveries) - Post Roll Forward]**
Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates (1/2)	Effect on opening ARC - PVFCF (Recoveries) of Changes in Interest Rates	Number	**[Effect on Opening ARC - PVFCF (Recoveries) of Changes in Interest Rates (1/2)]**
Interest Accreted on ARC - PVFCF (Recoveries)	Interest Accreted on ARC - PVFCF (Recoveries) (Opening & New)	Number	**[Interest Accreted on Opening ARC - PVFCF (Recoveries)] + [Interest Accreted on New ARC - PVFCF (Recoveries)]**
Expected Recoveries CFs (Current)(Opening)	Aggregated value of recoveries expected in current reporting period relating to the relevant GRC code as at previous reporting date rolled forward, using locked-in YC (sourced from R_SUB_Disc1)	Number	Sum of [Discounted Recoveries CFs (On Claims Incurred in Next Reporting Period)(Locked-in YC and NP Risk, t1)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Expected Recoveries CFs (Current)(New)	Aggregated value of recoveries expected in current reporting period relating to the relevant GRC code as at locked-in YC date rolled forward, using locked-in YC (sourced from R_IN_Disc)	Number	Sum of [Discounted Recoveries CFs (On Claims Incurred in Current Reporting Period)(Locked-in YC, Reporting Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF (Recoveries) of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)	Effect on ARC - PVFCF (Recoveries) of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)	Number	**([Expected Recoveries CFs (Current)(Opening)] + [Expected Recoveries CFs (Current)(New)])**
ARC - PVFCF (Recoveries) - Post Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)	ARC - PVFCF (Recoveries) – Post roll-forward of previous and new and removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)	Number	**[ARC - PVFCF (Recoveries) - Post Roll Forward] + [Effect on ARC - PVFCF (Recoveries) of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)]**
Step 6: Future claims recoveries experience variance and changes in interest rates			
Expected Recoveries CFs (Future)(Opening)	Aggregated value relating to the relevant GRC code as at previous reporting date rolled forward, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Current NP Risk, Locked-in YC, Current FX, t1)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Expected Recoveries CFs (Future)(New)	Aggregated value relating to the relevant GRC code as at locked-in YC date rolled forward, using locked-in YC (sourced from R_IN_Disc)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in Future Reporting Periods)(Locked-in YC, Reporting Date)] column in R_IN_Disc, where: 1. [Reporting Date] (in R_IN_Disc) = input for "Reporting Date – Current" (input in Setup)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			2. [GRC Code] (in R_IN_Disc) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Expected Recoveries CFs (Future)(Closing)	Aggregated value relating to the relevant GRC code as at current reporting date, using locked-in YC (sourced from R_SUB_Disc1), based on previous NP risk at current reporting date (i.e. current NP risk at previous reporting date)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Future)(Locked-in YC and NP Risk, t0)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future – Non FX)	Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future) relating to Non Forex changes	Number	**[Expected Recoveries CFs (Future)(Closing) - Prev FX] – ([Expected Recoveries CFs (Future)(Opening)] + [Expected Recoveries CFs (Future)(New)])**
ARC - PVFCF (Recoveries) - Post Recoveries CFs Non FX Experience Variances (Future)	ARC - PVFCF (Recoveries) - Post Recoveries CFs Non FX Experience Variances (Future) and removal of expected claims incurred (i.e. expected future recoveries as at current reporting date)	Number	**[ARC - PVFCF (Recoveries) - Post Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)] + [Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - Non FX)]**
ARC - PVFCF (Recoveries) - Post Change in NP Risk	Aggregated value relating to the relevant GRC code as at current reporting date, using locked-in YC (sourced from R_SUB_Disc1), current NP risk as at current reporting date	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Future)(Current NP Risk, Locked-in YC, Current FX, t0)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Closing ARC - PVFCF (Recoveries)(Previous NP Risk, Current YC, Prev FX)	Aggregated value relating to the relevant GRC code as at current reporting date, using current YC (sourced from R_IF_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Future)(Previous NP Risk, Current YC, t0) - Prev FX], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Closing ARC - PVFCF (Recoveries)(Previous NP Risk, Current YC, Current FX)	Aggregated value relating to the relevant GRC code as at current reporting date, using current YC (sourced from R_IF_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Future)(Previous NP Risk, Current YC, t0) - Current FX], where: 2. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)	Aggregated value relating to the relevant GRC code as at current reporting date, using current YC (sourced from R_IF_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Future)(Current NP Risk, Current YC, t0) - Current FX], where: 3. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 4. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates (2/2)	Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates (LIYC vs Current YC)	Number	**[Closing ARC - PVFCF (Recoveries)(Previous NP Risk, Current YC, Prev FX)]-[ARC - PVFCF (Recoveries) - Post Recoveries CFs Non FX Experience Variances (Future)]**
Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates	Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates	Number	**[Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates (1/2)] + [Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates (2/2)]**
Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - FX)	Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - FX)	Number	**[Closing ARC - PVFCF (Recoveries)(Previous NP Risk, Current YC, Current FX)]-[Closing ARC - PVFCF (Recoveries)(Previous NP Risk, Current YC, Prev FX)]**
Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - FX and Non FX)	Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - FX and Non FX)	Number	**[Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - FX)] + [Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - Non FX)]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on ARC - PVFCF (Recoveries) of Change in NP Risk	Effect on ARC - PVFCF (Recoveries) of Change in NP Risk	Number	**[Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)]-[Closing ARC - PVFCF (Recoveries)(Previous NP Risk, Current YC, Current FX)]**
Step 7: Movement in ARC PVFCF (recovery and non-recovery) over the reporting period			
Opening ARC - PVFCF	Opening ARC – PVFCF (recovery and non-recovery)	Number	**[Opening ARC - PVFCF (Non-recoveries)] + [Opening ARC - PVFCF (Recoveries)]**
Interest Accreted on Opening ARC - PVFCF	Interest Accreted on Opening ARC – PVFCF (recovery and non-recovery)	Number	**[Interest Accreted on ARC - PVFCF (Non-recoveries)] + [Interest Accreted on ARC - PVFCF (Recoveries)]**
Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)	Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)	Number	**[Effect on ARC - PVFCF (Recoveries) of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)]**
Effect on ARC - PVFCF of Total Experience Variance (Future - Non FX)	Effect on ARC - PVFCF of Total Experience Variance (Future – Non FX) (recovery and non-recovery)	Number	**[Effect on ARC - PVFCF (Non-recoveries) of Non-recoveries CFs Experience Variance (Future - Non FX)] + [Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - Non FX)]**
Effect on ARC - PVFCF of Total Experience Variance (Future - FX)	Effect on ARC - PVFCF of Total Experience Variance (Future - FX) (recovery and non-recovery)	Number	**[Effect on ARC - PVFCF (Non-recoveries) of Non-recoveries CFs Experience Variance (Future - FX)] + [Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - FX)]**
Effect on ARC - PVFCF of Total Experience Variance (Future – FX and Non FX)	Effect on ARC - PVFCF of Total Experience Variance (Future) (recovery and non-recovery)	Number	**[Effect on ARC - PVFCF of Total Experience Variance (Future - Non FX)]+[Effect on ARC - PVFCF of Total Experience Variance (Future - FX)]**
Effect on ARC - PVFCF of Change in Exchange rates	Effect on ARC - PVFCF of Change in Exchange rates	Number	**[Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - FX)]**
Effect on ARC - PVFCF of Change in NP Risk	Effect on ARC - PVFCF of Change in NP Risk (recovery and non-recovery)	Number	**[Effect on ARC - PVFCF (Recoveries) of Change in NP Risk]**
Effect on ARC - PVFCF of Changes in Interest Rates	Effect on ARC - PVFCF of Changes in Interest Rates (recovery and non-recovery)	Number	**[Effect on ARC - PVFCF (Non-recoveries) of Changes in Interest Rates] + [Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates]**
Closing ARC - PVFCF	Closing ARC – PVFCF (recovery and non-recovery)	Number	**[Closing ARC - PVFCF (Non-recoveries)] + [Closing ARC -**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)]
Step 8: Roll forward of ARC – RA (Risk Adjustment)			
Opening ARC - RA	Sourced from R_IF_GEN if simplification is not used and set to ABS([Opening ARC - PVFCF (Recoveries)]) * [RA % of ABS(PVFCF Recoveries)] if simplification is used	Number	If **[RA % of ABS(PVFCF Recoveries)]]**="N/A" Reference [Opening ARC - RA] from R_IF_GEN for the given GRC Code Otherwise output **ABS([Opening ARC - PVFCF (Recoveries)])*[RA % of ABS(PVFCF Recoveries)]**
Interest Accreted on Opening ARC - RA	Interest Accreted on Opening ARC – RA (proportional approach to recoveries)	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup: OR **[Opening ARC - PVFCF (Recoveries)]** = 0 Output **0** Otherwise Output: **[Interest Accreted on Opening ARC - PVFCF (Recoveries)] * [Opening ARC - RA] / [Opening ARC - PVFCF (Recoveries)]**
Effect on ARC - RA of Changes in Interest Rates (1/2)	Effect on Opening ARC - RA of Changes in Interest Rates (Prev YC vs LIYC)	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup: OR **[Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)]** = 0 Output **0** Otherwise Output: **[Effect on Opening ARC - PVFCF (Recoveries) of Changes in Interest Rates (1/2)] * ([Opening**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			ARC - RA] + [Interest Accreted on Opening ARC - RA]) / [Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)]
New ARC - RA	Sourced from R_IN_Calc	Number	If the given GRC Code is found in R_IN_Calc Reference [New ARC – RA] from R_IN_Calc for the given GRC Code Otherwise Output **0**
Interest Accreted on New ARC - RA	Interest Accreted on New ARC - RA	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup: OR **[New ARC - PVFCF (Recoveries)]** = 0 Output **0** Otherwise Output: **[Interest Accreted on New ARC - PVFCF (Recoveries)] * [New ARC - RA] / [New ARC - PVFCF (Recoveries)]**
Interest Accreted on ARC - RA	Interest Accreted on ARC – RA (opening and new)	Number	**[Interest Accreted on Opening ARC - RA] + [Interest Accreted on New ARC - RA]**
ARC - RA - Post Roll Forward	ARC - RA - Post Roll Forward (prior to removal of RA recoveries incurred in current period)	Number	**[Opening ARC - RA] + [New ARC - RA] + [Effect on ARC - RA of Changes in Interest Rates (1/2)] + [Interest Accreted on ARC - RA]**
Step 9: Closing ARC – RA and other movements over the period			
Closing ARC – RA	Sourced from R_IF_GEN if simplification is not used and set to ABS([Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)]) * [RA % of ABS(PVFCF Recoveries)] if simplification is used	Number	If **[RA % of ABS(PVFCF Recoveries)]]**="N/A" Reference [Closing ARC - RA] from R_IF_GEN for the given GRC Code Otherwise output **ABS([Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)])*[RA % of ABS(PVFCF Recoveries)]**
Effect on ARC - RA of Removal of Recoveries on	If RA simplification is used then this is assumed to be proportionate to the	Number	If risk adjustment simplification (in Setup) is set to "Yes"

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Expected Claims and Other Expenses Incurred (Current)	corresponding item for claims and expenses. If the Disaggregate Change in RA is not used, then also add on the interest on the RA. If RA simplification is not used then reference 'Release in ARC - RA for Recoveries on Expected Claims and Other Expenses Incurred' from R_IF_GEN. If the Disaggregate Change in RA is used, then subtract the interest on the RA.		OR [Release in ARC - RA for Recoveries on Expected Claims and Other Expenses Incurred] = 0 for the given GRC Code in R_IF_GEN Then If **[ARC - PVFCF (Recoveries) - Post Roll Forward]** = 0 Output **0** Otherwise Output **[Effect on ARC - PVFCF (Recoveries) of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)]*([ARC - RA - Post Roll Forward]+IF(OR(Option_DisaggregateChangeInRA="Yes",[Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)]=0),0,[Effect on Opening ARC - PVFCF (Recoveries) of Changes in Interest Rates (1/2)]*([Opening ARC - RA]+[Interest Accreted on Opening ARC - RA])/[Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)])+IF(OR(Option_DisaggregateChangeInRA="Yes",[Opening ARC - PVFCF (Recoveries)]=0),0,[Interest Accreted on Opening ARC - PVFCF (Recoveries)]*[Opening ARC - RA]/[Opening ARC - PVFCF (Recoveries)])+IF(OR(Option_DisaggregateChangeInRA="Yes",[New ARC - PVFCF (Recoveries)]=0),0,[Interest Accreted on New ARC - PVFCF (Recoveries)]*[New ARC - RA]/[New ARC - PVFCF (Recoveries)]))/ ABS([ARC - PVFCF (Recoveries) - Post Roll Forward])**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			If risk adjustment simplification (in Setup) is set to “No” then reference ‘**Release in ARC - RA for Recoveries on Expected Claims and Other Expenses Incurred’** for the given GRC Code in R_IF_GEN If risk adjustment simplification (in Setup) is set to “Yes” and Disaggregate the Change in RA is set to “Yes” then add on: **IF(OR(Option_DisaggregateChangeInRA="Yes",[Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)]=0),0,[Effect on Opening ARC - PVFCF (Recoveries) of Changes in Interest Rates (1/2)]*([Opening ARC - RA]+[Interest Accreted on Opening ARC - RA])/[Opening ARC - PVFCF (Recoveries) - Post Roll Forward (Prev YC)])+IF(OR(Option_DisaggregateChangeInRA="Yes",[Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)]=0),0,[Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates (2/2)]*[Closing ARC - RA]/[Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)])+IF(OR(Option_DisaggregateChangeInRA="Yes",[Opening ARC - PVFCF (Recoveries)]=0),0,[Interest Accreted on Opening ARC - PVFCF (Recoveries)]*[Opening ARC - RA]/[Opening ARC - PVFCF (Recoveries)])+IF(OR(Option_DisaggregateChangeInRA="Yes",[New ARC - PVFCF (Recoveries)]=0),0,[Interest Accreted on New ARC - PVFCF (Recoveries)]*[New ARC - RA]/[New ARC - PVFCF (Recoveries)])** If risk adjustment simplification (in Setup) is set to “No” and

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Disaggregate the Change in RA is set to "Yes" then subtract: **[Interest Accreted on ARC - RA]+[Effect on ARC - RA of Changes in Interest Rates]**
ARC - RA - Post Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)	ARC - RA - Post Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)	Number	**[ARC - RA - Post Roll Forward] + [Effect on ARC - RA of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)]**
Effect on ARC - RA of Total Experience Variance (Future FX and Non FX)	Effect on ARC - RA of Total Experience Variance (Future FX and Non FX)	Number	**[Closing ARC - RA] – ([ARC - RA - Post Roll Forward] + [Effect on ARC - RA of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)] + [Effect on ARC - RA of Change in NP Risk] + [Effect on ARC - RA of Changes in Interest Rates (2/2)])**
Effect on ARC - RA of Total Experience Variance (Future - Non FX)	Effect on ARC - RA of Total Experience Variance (Future - Non FX)	Number	**[Closing ARC - RA]-([ARC - RA - Post Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)]+[Effect on ARC - RA - Change in Exchange rates]+[Effect on ARC - RA of Change in NP Risk]]+[@[Effect on ARC - RA of Changes in Interest Rates (2/2)])**
Effect on ARC - RA - Change in Exchange rates	Effect on ARC - RA - Change in Exchange rates	Number	**If Option_DisaggregateChangeInRA ="No" or [Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)]=0 Then output: 0 Otherwise output: [Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - FX)]*[Closing ARC - RA]/ABS([Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)])**
Effect on ARC - RA of Change in NP Risk	Effect on ARC - RA of Change in NP Risk (set to 0 if portion of change	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	in RA is not assigned to reinsurance finance result or if denominator is 0)		finance result?" is set to "No" in the Setup: OR **[Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)]** = 0 Output **0** Otherwise Output: **1*[Effect on ARC - PVFCF (Recoveries) of Change in NP Risk] * [Closing ARC - RA] / ABS([Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)])**
Effect on ARC - RA of Changes in Interest Rates (2/2)	Effect on ARC - RA of Changes in Interest Rates (set to 0 if portion of change in RA is not assigned to reinsurance finance result or if denominator is 0)	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup: OR **[Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)]** = 0 Output **0** Otherwise Output: **[Effect on ARC - PVFCF (Recoveries) of Changes in Interest Rates (2/2)] * [Closing ARC - RA] / [Closing ARC - PVFCF (Recoveries)(Current NP Risk, Current YC, Current FX)]**
Effect on ARC - RA of Changes in Interest Rates	Effect on ARC - RA of Changes in Interest Rates	Number	**[Effect on ARC - RA of Changes in Interest Rates (1/2)] + [Effect on ARC - RA of Changes in Interest Rates (2/2)]**
Step 10: Movement in ARC CSM over the reporting period			
Opening ARC - CSM	Sourced from R_IF_GEN	Number	Sum of [Opening ARC - CSM] from R_IF_GEN, where: 1. [Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Opening ARC - CSM - Post Roll Forward	Opening ARC - CSM - Non-loss-recovery - Post Roll Forward (LIYC)	Number	If **[Locked-in YC Date]** > **[Reporting Date – Previous]** (input in Setup) Output **0** Otherwise Output **[Opening ARC - CSM] * (1+YC(1))** - **(([Reporting Date – Previous] – [Locked-in YC Date])/365.25)** ***** **(1+ YC(2))** **(([Reporting Date – Current] – [Locked-in YC Date])/365.25)** Where YC(1) is the spot rate referenced From the "Yield curves" sheet, for yield curve link: **[Locked-in YC Date]_[Currency]_Unlinked_Remaining Coverage_[GRC Code]** At duration: **Roundup((([Reporting Date – Previous] -[Locked-in YC Date])/365.25)*12)** And YC(2) is the spot rate referenced From the "Yield curves" sheet, for yield curve link: **[Locked-in YC Date]_[Currency]** At duration: **Roundup((([Reporting Date – Current] -[Locked-in YC Date])/365.25)*12)** Note: Rounding up is to zero decimal places. [Reporting Date – Current] and [Reporting Date – Previous] are inputs in the Setup. Differences in dates are in days
New ARC - CSM - Non-loss-recovery	Sourced from R_IN_Calc	Number	If the given GRC Code is found in R_IN_Calc

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[New ARC - CSM - Non-loss-recovery] (from R_IN_Calc) – [Pre-recognition CFs] (from R_IN_Calc) for the given GRC Code Otherwise Output **0**
New ARC - Loss recovery	Sourced from R_IN_Calc	Number	If the given GRC Code is found in R_NEW_GEN Reference [New ARC - Loss recovery] from R_IN_Calc for the given GRC Code Otherwise Output **0**
New ARC CSM	Total New ARC CSM including non-loss and loss recovery components	Number	**[New ARC - CSM - Non-loss-recovery]+[New ARC - Loss recovery]**
New ARC - CSM - Post Roll Forward	New ARC - CSM - Post Roll Forward	Number	**[New ARC - CSM]** ***** **(1+YC(2))** **(([Reporting Date – Current] – [Locked-in YC Date])/365.25)** [Reporting Date – Current] is input in the Setup. YC(2) is as described above. Differences in dates are in days
ARC - CSM - Post Roll Forward	ARC - CSM - Post Roll Forward (Opening & New)	Number	**[Opening ARC - CSM - Post Roll Forward]]+[New ARC - CSM - Post Roll Forward]**
Interest Accreted on ARC - CSM	Interest Accreted on ARC - CSM - Non-loss-recovery (Opening & New)	Number	**[ARC - CSM - Post Roll Forward]-([Opening ARC - CSM]+[New ARC CSM])**
Total Change in FCF (Future) - Non FX	Total Change in FCF (Future) from experience variances at previous exchange rates	Number	**[Effect on ARC - PVFCF (Non-recoveries) of Non-recoveries CFs Experience Variance (Future - Non FX)]+[Effect on ARC - PVFCF (Recoveries) of Recoveries CFs Experience Variance (Future - Non FX)]+[Effect on ARC - RA of Total Experience Variance (Future - Non FX)]**
Effect on ARC - CSM - Experience Variance (Future) to P&L	Effect on ARC – CSM of Covered Cashflows experience variance passing through P&L	Number	**1** * Sum of **[Loss Recovered]** from R_SUB_LR for given GRC Code
Effect on ARC - CSM - Total Experience Variance (Future - Non FX)	Effect on ARC - CSM - Total Experience Variance (Future - Non FX)	Number	**-1 * ([Total Change in FCF (Future) - Non FX]-[Effect on ARC - CSM - Experience Variance (Future) to P&L])**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
ARC - CSM - Post Total Experience Variance (Future)	ARC - CSM - Post Total Experience Variance (Future)	Number	**[ARC - CSM - Post Roll Forward]+[Effect on ARC - CSM - Total Experience Variance (Future - Non FX)]**
Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows	Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows	Number	**-1 *** Sum **[B119F Cap]** from R_SUB_LR where: [GRC Code] (in R_SUB_LR) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - CSM - Reversal of Loss Component due to changes not affecting the GRC	Effect on ARC - CSM - Reversal of Loss Component due to changes not affecting the GRC	Number	**[Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows]**
ARC - CSM - Post Reversal of Cash flows not affecting the GRC	ARC - CSM - Post Reversal of Cash flows not affecting the GRC	Number	**[ARC - CSM - Post Total Experience Variance (Future)]+[Effect on ARC - CSM - Reversal of Loss Component due to changes not affecting the GRC]**
Retroactive Cover?	Sourced from R_Groups	String	Reference [Retroactive Cover?] from R_Groups
Release in ARC - CSM	Release in ARC – CSM (post experience variances) based on coverage units allocated to current reporting period	Number	If Sum [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 for the given GRC Code and current reporting date **= 0** OR **[Retroactive Cover?]** = "Yes" for the given GRC code Output **-1*[ARC - CSM - Post Reversal of Cash flows not affecting the GRC]** Otherwise perform the following calculation <u>Step 1:</u> Sum the [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 for the given GRC Code and current reporting date, where [Reporting Period (0 = current)] = 0 <u>Step 2:</u>

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Sum [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 for the given GRC Code and current reporting date <u>Step 3:</u> **-1*[ARC - CSM - Post Exchange rate differences]** *** (Step 1 / Step 2)**
Closing ARC - CSM	Closing ARC - CSM	Number	**[ARC - CSM - Post Reversal of Cash flows not affecting the GRC]+[Release in ARC - CSM]]**
Step 11: Movement in ARC PVFCF – Loss Recovery over the reporting period			
Opening ARC - PVFCF - Loss Recovery	Aggregated Opening Loss Recovery per GRC sourced from R_IF_GEN	Number	Sum **[Loss Recovery (Opening)]** from R_IF_GEN where: 1. [Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
New PVFCF - Loss Recovery	New ARC PVFCF - Loss Recovery	Number	**[New ARC - Loss recovery]**
Interest Accreted on ARC - PVFCF - Loss Recovery	Interest Accreted on ARC - PVFCF - Loss Recovery	Number	Sum **[Effect of Changes in Interest rates on Loss Recovery - Sub-GRC]**from R_SUB_LR where: 1. [GRC Code] (in R_SUB_LR) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery	Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery due to removal of expected claims and other expenses incurred	Number	Sum **[Effect on Loss Recovery - Removal of Expected Claims and Other Expenses Incurred (Current) - Sub-GRC]** from R_SUB_LR where: 1. [GRC Code] (in R_SUB_LR) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period	Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period	Number	1 * Sum **[Loss Recovered]** from R_SUB_LR where: 1. [GRC Code] (in R_SUB_LR) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates	Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates	Number	Sum **[Effect on Loss Recovery Component - Change in interest rates)]** from R_SUB_LR where:

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			1. [GRC Code] (in R_SUB_LR) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences	Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences	Number	Sum **[Effect of Currency exchange rate differences]** from R_SUB_LR where: 1. [GRC Code] (in R_SUB_LR) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Closing ARC - PVFCF - Loss Recovery	Closing ARC - PVFCF - Loss Recovery	Number	**[Opening ARC - PVFCF - Loss Recovery]+ [New PVFCF - Loss Recovery]+[Interest Accreted on ARC - PVFCF - Loss Recovery]+[Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery]+[Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period]+[Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates]+[Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences]+[Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows]**
Step 11: Movement in ARC PVFCF – Non - Loss Recovery over the reporting period			
Opening ARC - PVFCF - Non-Loss Recovery	Opening ARC - PVFCF - Non-Loss Recovery	Number	**[Opening ARC - PVFCF] – [Opening ARC - PVFCF - Loss Recovery]**
Interest Accreted on Opening ARC - PVFCF - Non-Loss Recovery	Interest Accreted on Opening ARC - PVFCF - Non-Loss Recovery	Number	**[Interest Accreted on Opening ARC - PVFCF] – [Interest Accreted on ARC - PVFCF - Loss Recovery]**
Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Non-Loss Recovery	Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Non-Loss Recovery	Number	**[Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)] – [Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery]**
Effect on ARC - PVFCF of Total Experience Variance (Future) - Non-Loss Recovery	Effect on ARC - PVFCF of Total Experience Variance (Future) - Non-Loss Recovery	Number	**[Effect on ARC - PVFCF of Total Experience Variance (Future - Non FX)] - [Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period]**
Effect on ARC - PVFCF of Change in Exchange rates - Non-Loss Recovery	Effect on ARC - PVFCF of Change in Exchange rates - Non-Loss Recovery	Number	**[Effect on ARC - PVFCF of Change in Exchange rates] – [Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences]**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Effect on ARC - PVFCF of Change in NP Risk - Non-Loss Recovery	Effect on ARC - PVFCF of Change in NP Risk - Non-Loss Recovery	Number	**[Effect on ARC - PVFCF of Change in NP Risk]**
Effect on ARC - PVFCF of Changes in Interest Rates - Non-Loss Recovery	Effect on ARC - PVFCF of Changes in Interest Rates - Non-Loss Recovery	Number	**[Effect on ARC - PVFCF of Changes in Interest Rates] – [Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates]**
Effect on ARC - PVFCF - Non-Loss Recovery adjustment due to uncovered cash flows	Effect on ARC - PVFCF - Non-Loss Recovery adjustment due to uncovered cash flows	Number	**-1 * [Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows]**
Closing ARC - PVFCF - Non-Loss Recovery	Closing ARC - PVFCF - Non-Loss Recovery	Number	**[Closing ARC - PVFCF] -[Closing ARC - PVFCF - Loss Recovery]**
Step 12: Movement in ARIC PVFCF over the reporting period			
Opening ARIC - PVFCF	Aggregated value relating to the relevant GRC code as at previous reporting date, using previous YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Past)(Current NP Risk, Prev YC, Current FX, t0)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
ARIC - PVFCF - Post Roll Forward	Aggregated value relating to the relevant GRC code as at previous reporting date rolled forward, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Past)(Current NP Risk, Prev YC, Current FX, t1)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Previous" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Interest Accreted on ARIC - PVFCF	Interest Accreted on ARIC - PVFCF	Number	**[ARIC - PVFCF - Post Roll Forward] – [Opening ARIC - PVFCF]**
Recoveries Receipts (Past)	Sourced from R_IF_GEN	Number	Sum of [Recoveries Receipts (On Claims Incurred in Prior Reporting Periods)], where: 1. [Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
ARIC - PVFCF - Post Changes to Recoveries CFs (Past)	Aggregated value relating to the relevant GRC code as at current reporting date, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Previous NP Risk, Prev YC, Prev FX, t0)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARIC - PVFCF of Changes to Recoveries CFs (Past)	Effect on ARIC - PVFCF of Changes to Recoveries CFs (Past) (i.e. from paid claims and change in reserves)	Number	**[ARIC - PVFCF - Post Changes to Recoveries CFs (Past)]-([ARIC - PVFCF - Post Roll Forward]+[Recoveries Receipts (Past)])**
ARIC - PVFCF - Post Changes to Recoveries CFs (Past) - Current FX	Aggregated value relating to the relevant GRC code as at current reporting date, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Previous NP Risk, Prev YC, Current FX, t0)], where: 3. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARIC - PVFCF of Change in Exchange Rates	Effect on ARIC - PVFCF of Change in Exchange Rates	Number	**[ARIC - PVFCF - Post Changes to Recoveries CFs (Past) - Current FX] - [ARIC - PVFCF - Post Changes to Recoveries CFs (Past)]**
ARIC - PVFCF - Post Change in NP Risk	Aggregated value relating to the relevant GRC code as at current reporting date, using locked-in YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in Prior Reporting Periods)(Current NP Risk, Prev YC, Current FX, t0)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARIC - PVFCF of Change in NP Risk	Effect on ARIC - PVFCF of Change in NP Risk	Number	**[ARIC - PVFCF - Post Change in NP Risk]-[ARIC - PVFCF - Post**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Changes to Recoveries CFs (Past) - Current FX]
Recoveries Receipts (On Claims Incurred in Current Reporting Period)	Sourced from R_IF_GEN	Number	Sum of [Recoveries Receipts (On Claims Incurred in Current Reporting Period], where: 1. [Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
ARIC - PVFCF - Post Addition of Recoveries on New Claims and Other Expenses Incurred (Current)	Aggregated value relating to the relevant GRC code as at current reporting date (incurred in current and previous periods), using locked-in YC (sourced from R_SUB_Disc1)	Number	-1*Sum of [Discounted Recoveries CFs (On Claims Incurred in the Past)(Current NP Risk, Prev YC, Current FX, t0)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current)	Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current)	Number	**=[[ARIC - PVFCF - Post Addition of Recoveries on New Claims and Other Expenses Incurred (Current)]]-([[ARIC - PVFCF - Post Change in NP Risk]]+[[Recoveries Receipts (On Claims Incurred in Current Reporting Period)]])**
Effect on ARIC - PVFCF of Changes in Interest Rates	Effect on ARIC - PVFCF of Changes in Interest Rates	Number	**[Closing ARIC - PVFCF]-[ARIC - PVFCF - Post Addition of Recoveries on New Claims and Other Expenses Incurred (Current)]**
Recoveries Receipts	Recoveries Receipts in reporting period	Number	**[Recoveries Receipts (Past)] + [Recoveries Receipts (On Claims Incurred in Current Reporting Period)]**
Closing ARIC - PVFCF	Aggregated value relating to the relevant GRC code as at current reporting date, using current YC (sourced from R_SUB_Disc1)	Number	-1 * Sum of [Discounted Recoveries CFs (On Claims Incurred in the Past)(Current NP Risk, Current YC, t0)], where: 1. [Reporting Date] (in R_SUB_Disc1) = input for "Reporting Date – Current" (input in Setup)

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			2. [GRC Code] (in R_SUB_Disc1) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Step 13: Movement in ARIC - RA over the reporting period			
Opening ARIC - RA	Sourced from R_IF_GEN if simplification is not used and set to ABS([Opening ARIC - PVFCF]) * [RA % of ABS(PVFCF Recoveries)] if simplification is used	Number	If **[RA % of ABS(PVFCF Recoveries)]]**="N/A" Reference [Opening ARIC - RA] from R_IF_GEN for the given GRC Code Sum of [Opening ARIC – RA] from R_IF_GEN where: 1. Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc) Otherwise output **ABS([Opening ARIC - PVFCF])*[RA % of ABS(PVFCF Recoveries)]**
Closing ARIC - RA	Sourced from R_IF_GEN if simplification is not used and set to ABS([Closing ARIC - PVFCF]) * [RA % of ABS(PVFCF Recoveries)] if simplification is used	Number	If **[RA % of ABS(PVFCF Recoveries)]]**="N/A" Reference [Closing ARIC - RA] from R_IF_GEN for the given GRC Code Otherwise output **ABS([Closing ARIC - RA])*[RA % of ABS(PVFCF Recoveries)]**
Interest Accreted on ARIC - RA	Interest Accreted on ARIC - RA (set to 0 if portion of change in RA is not assigned to reinsurance finance result or if denominator is 0)	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup OR **[Opening ARIC - PVFCF]** = 0 Output **0** Otherwise Output: **[Interest Accreted on ARIC - PVFCF] / [Opening ARIC - PVFCF] * [Opening ARIC - RA]**
Effect on ARIC - RA of Recoveries on New	=ABS([Effect on ARIC - PVFCF of Recoveries on Effect on	Number	If risk adjustment simplification (in Setup) is set to "Yes"

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Claims and Other Expenses Incurred (Current)	ARIC - RA of Recoveries on New Claims and Other Expenses Incurred (Current) (if simplification is not used and this is provided in R_IF_GEN then this is used instead, set to 0 if the denominator is 0)		OR [Closing ARIC - RA (Recoveries on New Claims and Other Expenses Incurred)] = 0 for the given GRC Code in R_IF_GEN Then If **[Closing ARIC - PVFCF]** = 0 Output **0** Otherwise Output **ABS([Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current)] - [Recoveries Receipts (On Claims Incurred in Current Reporting Period)]) * [Closing ARIC – RA] / ABS([Closing ARIC - PVFCF])** Otherwise reference Sum of [Closing ARIC - RA (Recoveries on New Claims and Other Expenses Incurred)] from R_IF_GEN where 1. [Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Effect on ARIC - RA of Change in NP Risk	Effect on ARIC - RA of Change in NP Risk (set to 0 if portion of change in RA is not assigned to reinsurance finance result or if denominator is 0)	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup OR **[ARIC - PVFCF - Post Change in NP Risk]** = 0 Output **0** Otherwise Output: **[Effect on ARIC - PVFCF of Change in NP Risk] * ([Closing ARIC - RA] - [Effect on ARIC - RA of Recoveries on New Claims and Other Expenses Incurred**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			(Current)] - [Effect on ARIC - RA of Changes in Interest Rates (2/2)]) / ABS([ARIC - PVFCF - Post Change in NP Risk])
Effect on ARIC - RA of Change in Exchange Rates	Effect on ARIC - RA of Change in Exchange Rates	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup OR **[ARIC - PVFCF - Post Change in NP Risk]** = 0 Output **0** Otherwise Output: **[Effect on ARIC - PVFCF of Change in Exchange Rates]*[Closing ARIC - RA]/[Closing ARIC - PVFCF]**
Effect on ARIC - RA of Changes in Interest Rates	Effect on ARIC - RA of Changes in Interest Rates	Number	If "Disaggregate change in the risk adjustment between insurance service result and insurance finance result?" is set to "No" in the Setup OR **[ARIC - PVFCF - Post Change in NP Risk]** = 0 Output **0** Otherwise Output: **[Effect on ARIC - PVFCF of Changes in Interest Rates]*[Closing ARIC - RA]/[Closing ARIC - PVFCF]**
Effect on ARIC - RA of Changes to Recoveries CFs (Past)	Calculated as a balancing item	Number	**[Closing ARIC - RA] - ([Opening ARIC - RA] + [Interest Accreted on ARIC - RA] + [Effect on ARIC - RA of Recoveries on New Claims and Other Expenses Incurred (Current)] + [Effect on ARIC - RA of Change in NP Risk] + [Effect on ARIC - RA of Changes in Interest Rates] + [Effect on ARIC - RA of Change in Exchange Rates])**
Step 14: Movement in ARIC – IC & ARC - PRCF over the reporting period			

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Opening ARIC - IC	Sourced from R_IF_GEN	Number	Sum of [Opening ARIC - IC] from R_IF_GEN where 1. [Reporting Date] (in R_IF_GEN) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_IF_GEN) = **[GRC Code]** (given GRC Code in R_SUB_Calc)
Investment Component Receipts	Sourced from R_IF_GEN	Number	Reference -1 * [Investment Component Receipts] from R_IF_GEN for the given GRC Code at current reporting date
Closing ARIC - IC	Sourced from R_IF_GEN	Number	Reference [Closing ARIC - IC] from R_IF_GEN for the given GRC Code at current reporting date
Effect on ARIC - IC of Changes to IC CFs (Past)	Effect on ARIC - IC of Changes to IC CFs (Past)	Number	**[Closing ARIC - IC] - ([Opening ARIC - IC] - [Transfer of Reinsurance Investment Components] - [Investment Component Receipts])**
Opening ARC - PRCF	Sourced from R_IF_GEN	Number	Reference [Opening ARC - PRCF] from R_IF_GEN for the given GRC Code at current reporting date
Pre-recognition CF Receipts	Sourced from R_IF_GEN	Number	Reference [Opening ARC - PRCF] from R_IF_GEN for the given GRC Code at current reporting date
Impairment of PRCF Liability	Sourced from R_IN_Calc	Number	Reference [Impairment of PRCF Liability] from R_IF_GEN for the given GRC Code at current reporting date
Reversal of Impairment of PRCF Liability	Sourced from R_IN_Calc	Number	Reference [Reversal of Impairment of PRCF Liability] from R_IF_GEN for the given GRC Code at current reporting date
Transfer of Pre-recognition CFs	Transfer of Pre-recognition CFs	Number	If the given GRC Code is found in R_IN_Calc Reference [Pre-recognition CFs] from R_IN_Calc for the given GRC Code Otherwise Output **0**
Closing ARC - PRCF	Closing ARC - PRCF	Number	**[Opening ARC - PRCF] – [Pre-recognition CF Receipts] + [Impairment of PRCF Liability] + [Reversal of Impairment of PRCF**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Liability] + [Transfer of Pre-recognition CFs]

Reinsurance Contracts Subsequent Measurement – Foreign Exchange (R_FX)

This part of the solution performs the conversion of calculated figures based on the relevant exchange rates and also determines the impact of changes in exchange rates. Previous calculation sheets (largely R_SUB_Calc) as well as input sheets are referenced throughout.

The following notation is used throughout:

- $\mathbf{FX_{C,G}}$ is the exchange rate at the current reporting date for the given GRC Code's currency (as input in the Exchange Rates input)
- $\mathbf{FX_{P,G}}$ is the exchange rate at the Previous reporting date for the given GRC Code's currency (as input in the Exchange Rates input)
- $\mathbf{FX_{L,G}}$ is the exchange rate at the GRC's locked-in FX date (referenced from R_Groups) for the given GRC Code's currency (as input in the Exchange Rates input)
- $\mathbf{FX_{A,G}}$ is the average exchange rate for the given GRC Code's currency, referenced from R_Groups (AverageFX_group)
- $\mathbf{FX_{C,R}}$ is the exchange rate at the current reporting date for the Reporting currency (as input in the Exchange Rates input)
- $\mathbf{FX_{P,R}}$ is the exchange rate at the previous reporting date for the Reporting currency (as input in the Exchange Rates input)
- $\mathbf{FX_{L,R}}$ is the exchange rate at the GIC's locked-in FX date (referenced from R_Groups) date for the Reporting currency (as input in the Exchange Rates input)
- $\mathbf{FX_{A,R}}$ is the average exchange rate for the Reporting currency, referenced from R_Groups (AverageFX)

Note that an alternative to referencing $\mathbf{FX_{A,G}}$ and $\mathbf{FX_{A,R}}$ from R_Groups is to perform the appropriate calculation in the R_FX module instead of in R_Groups to obtain those values (if the corresponding inputs in R_Groups were left blank). The calculations in this case would be those documented in the "AverageFX" and "AverageFX_group" fields in R_Groups when those are left blank.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Step 1: Referencing relevant GRC information			
GRC Code	GRC Code associated with the row of calculations.	String	[GRC Code] Each GRC Code is referenced consecutively starting with the first input in R_SUB_Calc.
Currency	Currency associated with the given GRC Code, sourced from R_Groups	String	[Currency] for the given GRC Code, referenced from R_SUB_Calc.
Step 2: Conversions of ARC – PRCF values into reporting currency			
Opening ARC - PRCF – Actuals FX	Sourced from R_SUB_Calc, converted at opening exchange rates	Number	[Opening ARC - PRCF] **/ $\mathbf{FX_{P,G}}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Where [Opening ARC - PRCF] is referenced from R_SUB_Calc for the given GRC Code
Transfer of Pre-recognition CFs (Purchased) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates	Number	[Transfer of Pre-recognition CFs (Purchased)] **/ $FX_{L, G}$** Where [Transfer of Pre-recognition CFs (Purchased)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
Transfer of Pre-recognition CFs (Acquired) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates	Number	[Transfer of Pre-recognition CFs (Acquired)] **/ $FX_{L, G}$** Where [Transfer of Pre-recognition CFs (Acquired)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
Pre-recognition CF Receipts – Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Pre-recognition CF Receipts] **/ $FX_{A, G}$** Where [Pre-recognition CF Receipts] is referenced from R_SUB_Calc for the given GRC Code
Impairment of PRCF Liability – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Impairment of PRCF Liability] **/ $FX_{C, G}$** Where [Impairment of PRCF Liability] is referenced from R_SUB_Calc for the given GRC Code
Reversal of Impairment of PRCF Liability – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Reversal of Impairment of PRCF Liability] **/ $FX_{C, G}$** Where [Reversal of Impairment of PRCF Liability] is referenced from R_SUB_Calc for the given GRC Code
Closing ARC - PRCF – Current FX	Closing value, converted at actual exchange rates for all GRC's (sum of previous 6 values)	Number	**Sum** from **[Opening ARC - PRCF – Actuals FX]:[Transfer of Pre-recognition CFs (Acquired) – Actuals FX]** **+**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Impairment of PRCF Liability –Actuals FX] **+** **[Reversal of Impairment of PRCF Liability –Actuals FX]** **-** **[Pre-recognition CF Receipts – Actuals FX])**
Closing ARC - PRCF - Current FX	Closing value, converted at current exchange rates for all GRC's	Number	[Closing ARC - PRCF] **/ $FX_{C, G}$** Where [Closing ARC - PRCF] is referenced from R_SUB_Calc for the given GRC Code
Closing ARC - PRCF - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing ARC - PRCF - Current FX] - [Closing ARC - PRCF – Actuals FX]**
Step 3: Conversions of ARC – CSM – values into reporting currency			
Opening ARC - CSM – Actuals FX	Sourced from R_SUB_Calc, converted at opening exchange rates	Number	[Opening ARC - CSM] ***** **/ $FX_{P, G}$** Where [Opening ARC - CSM] is referenced from R_SUB_Calc for the given GRC Code
New ARC - CSM - Non-Loss-recovery (Purchased) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - CSM - Non-Loss-recovery (Purchased)] *** / $FX_{L, G}$** Where [New ARC - CSM - Non-Loss-recovery (Purchased)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
New ARC - Loss Recovery (Purchased) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - Loss Recovery (Purchased)] *** $FX_{L, G}$** Where [New ARC - Loss Recovery (Purchased)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
New ARC - CSM - Non-loss-recovery (Acquired) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that	Number	[New ARC - CSM - Non-loss-recovery (Acquired)] ***** **/ $FX_{L, G}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
	best reflects the timing of the group recognition)		Where [New ARC - CSM - Non-loss-recovery (Acquired)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
New ARC - Loss Recovery (Acquired) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - Loss Recovery (Acquired)] ***** **/ $FX_{L, G}$** Where [New ARC - Loss Recovery (Acquired)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
Interest Accreted on ARC - CSM – Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on ARC - CSM] ***** **/ $FX_{A, G}$** Where [Interest Accreted on ARC - CSM] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - CSM - Total Experience Variance (Future – Non FX) – Current FX	Sourced from R_SUB_Calc, converted at current (closing) e exchange rates	Number	[Effect on ARC - CSM - Total Experience Variance (Future – Non FX)] ***** **/ $FX_{C, G}$** Where [Effect on ARC - CSM - Non-loss-recovery of Total Experience Variance (Future – Non FX)] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - CSM - Reversal of Loss Component due to changes not affecting the GRC – Current FX	Sourced from R_SUB_Calc, converted at current (closing) exchange rates	Number	[Effect on ARC - CSM - Reversal of Loss Component due to changes not affecting the GRC] ***** **/ $FX_{C, G}$** Where [Effect on ARC - CSM - Reversal of Loss Component due to changes not affecting the GRC] is referenced from R_SUB_Calc for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Release in ARC - CSM – Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Release in ARC - CSM] * **/ $FX_{A, G}$** Where [Release in ARC - CSM] is referenced from R_SUB_Calc for the given GRC Code
Transfer of Pre-recognition CFs (Purchased)(2) – Actuals FX	Sourced from R_IN_Pre_FX, converted at average exchange rates	Number	[Transfer of Pre-recognition CFs (Purchased)(2)] * **/ $FX_{A, G}$** Where [Transfer of Pre-recognition CFs (Purchased)(2)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
Transfer of Pre-recognition CFs (Acquired)(2) – Actuals FX	Sourced from R_IN_Pre_FX, converted at average exchange rates	Number	[Transfer of Pre-recognition CFs (Acquired)(2)] * **/ $FX_{A, G}$** Where [Transfer of Pre-recognition CFs (Acquired)(2)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
Closing ARC - CSM - Actuals FX	Closing value, converted at actual exchange rates for all GRC's as the sum of prior columns	Number	**Sum** from **[Opening ARC - CSM – Actuals FX]:[Release in ARC - CSM – Actuals FX]** **-** **Sum** from **[Transfer of Pre-recognition CFs (Purchased)(2) – Actuals FX]:[Transfer of Pre-recognition CFs (Acquired)(2) – Actuals FX]**
Closing ARC - CSM - Current FX	Closing value, converted at current exchange rates for all GRC's	Number	[Closing ARC - CSM] * **/ $FX_{C, G}$** Where [Closing ARC - CSM] is referenced from R_SUB_Calc for the given GRC Code
Closing ARC - CSM - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing ARC - CSM - Current FX] –** **[Closing ARC - CSM – Actuals FX]**
Step 4: Conversions of ARC – RA values into reporting currency			

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Opening ARC - RA - Actuals FX	Sourced from R_SUB_Calc, converted at opening exchange rates	Number	[Opening ARC - RA] * **$FX_{P, R}$ / $FX_{P, G}$** Where [Opening ARC - RA] is referenced from R_SUB_Calc for the given GRC Code
New ARC - RA (Purchased) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates	Number	[New ARC - RA (Purchased)] * **$FX_{L, G}$** Where [New ARC - RA (Purchased)] is referenced from R_IN_Pre_FX for the given GRC Code
New ARC - RA (Acquired) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates	Number	[New ARC - RA (Acquired)] * **$FX_{L, G}$** Where [New ARC - RA (Acquired)] is referenced from R_IN_Pre_FX for the given GRC Code
Interest Accreted on ARC - RA - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on ARC - RA] * **/ $FX_{A, G}$** Where [Interest Accreted on ARC - RA] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARC - RA of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Effect on ARC - RA of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)] * **/ $FX_{A, G}$** Where [Effect on ARC - RA of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current)] is referenced from R_SUB_Calc for the

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARC - RA of Total Experience Variance (Future - Non FX) – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - RA of Total Experience Variance (Future - Non FX)] **/ $FX_{C, G}$** Where [Effect on ARC - RA of Total Experience Variance (Future - Non FX)] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - RA - Change in Exchange rates – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - RA - Change in Exchange rates] **/ $FX_{C, G}$** Where [Effect on ARC - RA of Total Experience Variance (Future)] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - RA of Change in NP Risk - Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - RA of Change in NP Risk] **/ $FX_{C, G}$** Where [Effect on ARC - RA of Change in NP Risk] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARC - RA of Changes in Interest Rates - Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - RA of Changes in Interest Rates] *** / $FX_{C, G}$** [Where [Effect on ARC - RA of Changes in Interest Rates] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Closing ARC - RA - Actuals FX	Closing ARC - RA - Actuals FX	Number	**Sum** from **[Opening ARC - RA - Actuals FX]:[Effect on ARC - RA of Changes in Interest Rates - Current FX]**
Closing ARC - RA - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing ARC - RA] **/ $FX_{C, G}$** Where [Closing ARC - RA] is referenced from R_SUB_Calc for the given GRC Code
Closing ARC - RA - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing ARC - RA - Current FX] - [Closing ARC - RA - Actuals FX]**
Step 5: Conversions of ARC – PVFCF – Non-Loss Recovery values into reporting currency			
Opening ARC - PVFCF - Non-Loss Recovery - Actuals FX	Sourced from R_SUB_Calc, converted at opening exchange rates	Number	[Opening ARC - PVFCF – Non-Loss Recovery] **/ $FX_{P, G}$** Where [Opening ARC - PVFCF – Non-Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code
New ARC - Premium CFs (Purchased) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - Premium CFs (Purchased)] **/ $FX_{L, G}$** Where [New ARC - Premium CFs (Purchased)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
New ARC - Investment Component CFs (Purchased) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - Investment Component CFs (Purchased)] **/ $FX_{L, G}$** Where [New ARC - Investment Component CFs (Purchased)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
New ARC - Recoveries CFs (Purchased) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - Recoveries CFs (Purchased)] **/ $FX_{L, G}$** Where [New ARC - Recoveries CFs (Purchased)] is referenced from R_IN_Pre_FX for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Output **0** if GRC not found in R_IN_Pre_FX
New ARC - Premium CFs (Acquired) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - Premium CFs (Acquired)] **/ $FX_{L, G}$** Where [New ARC - Premium CFs (Acquired)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
New ARC - Investment Component CFs (Acquired) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - Investment Component CFs (Acquired)] **/ $FX_{L, G}$** Where [New ARC - Investment Component CFs (Acquired)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
New ARC - Recoveries CFs (Acquired) – Actuals FX	Sourced from R_IN_Pre_FX, converted at locked-in exchange rates (where the locked-in rate is the rate that best reflects the timing of the group recognition)	Number	[New ARC - Recoveries CFs (Acquired)] **/ $FX_{L, G}$** Where [New ARC - Recoveries CFs (Acquired)] is referenced from R_IN_Pre_FX for the given GRC Code Output **0** if GRC not found in R_IN_Pre_FX
New ARC - PVFCF - Loss Recovery (Purchased) – Actuals FX	New ARC - PVFCF - Loss Recovery (Purchased) – Actuals FX	Number	**-1 * [New ARC - Loss Recovery (Purchased) – Actuals FX]**
New ARC - PVFCF - Loss Recovery (Acquired) – Actuals FX	New ARC - PVFCF - Loss Recovery (Acquired) – Actuals FX	Number	**-1 * [New ARC - Loss Recovery (Acquired) – Actuals FX]**
Interest Accreted on Opening ARC - PVFCF – Non-Loss Recovery - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	[Interest Accreted on Opening ARC - PVFCF – Non-Loss Recovery] ***** **/ $FX_{A, G}$** Where [Interest Accreted on Opening ARC - PVFCF – Non-

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
RI Premium Experience Variance (Past/Current) - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	[RI Premium Experience Variance (Past/Current)] *** / $FX_{A, G}$** Where [RI Premium Experience Variance (Past/Current)] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) – Non-Loss Recovery - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates for new GIC's and opening exchange rates for in-force GIC's	Number	[Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) – Non-Loss Recovery] *** / $FX_{A, G}$** Where [Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) – Non-Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARC - PVFCF of Total Experience Variance (Future) – Non-Loss Recovery – Current FX	Sourced from R_SUB_Calc, converted at current (closing) exchange rates	Number	[Effect on ARC - PVFCF of Total Experience Variance (Future) – Non-Loss Recovery] *** / $FX_{C, G}$** Where [Effect on ARC - PVFCF of Total Experience Variance (Future) – Non-Loss Recovery] is referenced

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			from R_SUB_Calc for the given GRC Code
Effect on ARC - PVFCF of Change in Exchange rates - Non-Loss Recovery – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - PVFCF of Change in Exchange rates - Non-Loss Recovery] *** / $FX_{C, G}$** Where [Effect on ARC - PVFCF of Change in Exchange rates - Non-Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - PVFCF of Change in NP Risk – Non-Loss Recovery - Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - PVFCF of Change in NP Risk – Non-Loss Recovery] *** / $FX_{C, G}$** Where [Effect on ARC - PVFCF of Change in NP Risk – Non-Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARC - PVFCF of Changes in Interest Rates – Non-Loss Recovery -Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - PVFCF of Changes in Interest Rates – Non-Loss Recovery] *** / $FX_{C, G}$** Where [Effect on ARC - PVFCF of Changes in Interest Rates – Non-Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARC - PVFCF - Non-Loss Recovery adjustment due to uncovered cash flows - Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - PVFCF - Non-Loss Recovery

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			adjustment due to uncovered cash flows] * **/ $FX_{C, G}$** Where [Effect on ARC - PVFCF - Non-Loss Recovery adjustment due to uncovered cash flows] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Premium Payments - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Premium Payments] * **/ $FX_{A, G}$** Where [Premium Payments] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Transfer of Reinsurance Investment Components - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Transfer of Reinsurance Investment Components] * **/ $FX_{A, G}$** Where [Transfer of Reinsurance Investment Components] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Closing ARC - PVFCF – Current FX	Closing value calculated by summing prior components converted at actual rates	Number	**Sum** from **[Opening ARC - PVFCF – Non-Loss Recovery - Actuals FX]: [Transfer of Reinsurance Investment Components - Actuals FX]**
Closing ARC - PVFCF – Non-Loss Recovery - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing ARC - PVFCF – Non-Loss Recovery] *** / $FX_{C, G}$**

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Where [Closing ARC - PVFCF] is referenced from R_SUB_Calc for the given GRC Code
Closing ARC - PVFCF - Non-Loss Recovery Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing ARC - PVFCF – Non-Loss Recovery - Current FX] - [Closing ARC - PVFCF - Actuals FX]**
Step 6: Conversions of ARC – PVFCF – Loss-recovery values into reporting currency			
Opening ARC - PVFCF - Loss Recovery – Actuals FX	Sourced from R_SUB_Calc, converted at opening exchange rates	Number	[Opening ARC - PVFCF - Loss Recovery] * **/ $FX_{P, G}$** Where [Opening ARC - PVFCF - Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code
New PVFCF - Loss Recovery – Actuals FX	Sourced from R_SUB_Calc, converted at locked-in exchange rates (where the locked in rate represents the most appropriate actual rate for new PVFCF)	Number	[New PVFCF - Loss Recovery] * **/ $FX_{L, G}$** Where [New PVFCF - Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code
Interest Accreted on ARC - PVFCF - Loss Recovery – Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on ARC - PVFCF - Loss Recovery] * **/ $FX_{A, G}$** Where [Interest Accreted on ARC - PVFCF - Loss Recovery] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery – Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery] * **/ $FX_{A, G}$** Where [Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period – Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period] * **/ $FX_{A, G}$** Where [Effect on ARC - PVFCF - Loss Recovery -

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Losses recovered during the period] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows] ***** **/ $FX_{C, G}$** Where [Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates] ***** **/ $FX_{C, G}$** Where [Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences] * **/ $FX_{C, G}$** Where [Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences] is referenced from R_SUB_Calc for the given GRC Code
Closing ARC - PVFCF - Loss Recovery – Actual FX	Closing value calculated by summing prior components converted at actual rates	Number	**Sum** from **[Opening ARC - PVFCF - Loss Recovery – Actual FX]:[Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences – Current FX]**
Closing ARC - PVFCF - Loss Recovery - Current FX	Closing value, converted at current exchange rates for all GRC's	Number	[Closing ARC - PVFCF - Loss Recovery] * **/ $FX_{C, G}$** Where [Closing ARC - PVFCF - Loss Recovery] is referenced from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			R_SUB_Calc for the given GRC Code
Closing ARC - Loss Recovery - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing ARC - PVFCF - Loss Recovery - Current FX] – [Closing ARC - PVFCF - Loss Recovery – Actuals FX]**
Step 7: Conversions of ARIC – PVFCF values into reporting currency			
Opening ARIC - PVFCF - Actuals FX	Sourced from R_SUB_Calc, converted at opening exchange rates	Number	[Opening ARIC - PVFCF] * **/ $FX_{P, G}$** Where [Opening ARIC - PVFCF] is referenced from R_SUB_Calc for the given GRC Code
Interest Accreted on ARIC - PVFCF - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Interest Accreted on ARIC - PVFCF] * **/ $FX_{A, G}$** Where [Interest Accreted on ARIC - PVFCF] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARIC - PVFCF of Changes to Recoveries CFs (Past) - Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARIC - PVFCF of Changes to Recoveries CFs (Past)] * **/ $FX_{C, G}$** Where [Effect on ARIC - PVFCF of Changes to Recoveries CFs (Past)] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARIC - PVFCF of Change in Exchange Rates – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARIC - PVFCF of Change in Exchange Rates] * **/ $FX_{C, G}$** Where [Effect on ARIC - PVFCF of Change in Exchange Rates] is referenced from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			R_SUB_Calc for the given GRC Code
Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current) - Current FX	Sourced from R_SUB_Calc, converted at currentexchange rates	Number	[Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current)] * **/ $FX_{C, G}$** Where [Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current)] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARIC - PVFCF of Change in NP Risk - Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARIC - PVFCF of Change in NP Risk] * **/ $FX_{C, G}$** Where [Effect on ARIC - PVFCF of Change in NP Risk] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARIC - PVFCF of Changes in Interest Rates - Current FX	Sourced from R_SUB_Calc, converted at currentexchange rates	Number	[Effect on ARIC - PVFCF of Changes in Interest Rates] * **/ $FX_{C, G}$** Where [Effect on ARIC - PVFCF of Changes in Interest Rates] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Recoveries Receipts - Actuals FX	Sourced from R_SUB_Calc, converted at averageexchange rates	Number	[Recoveries Receipts] * **/ $FX_{A, G}$** Where [Recoveries Receipts] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Closing ARIC - PVFCF - Actuals FX	Calculated as sum of prior components converted at actual exchange rates	Number	**Sum** from **[Opening ARIC - PVFCF - Actuals FX]:[Effect on ARIC - PVFCF of Changes in Interest Rates -Current FX]** **+** **[Recoveries Receipts - Actuals FX]**
Closing ARIC - PVFCF - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing ARIC - PVFCF] * **/ $FX_{C, G}$** Where [Closing ARIC - PVFCF] is referenced from R_SUB_Calc for the given GRC Code
Closing ARIC - PVFCF - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing ARIC - PVFCF - Current FX] - [Closing ARIC - PVFCF - Actuals FX]**
Step 8: Conversions of ARIC – RA values into reporting currency			
Opening ARIC - RA - Actuals FX	Sourced from R_SUB_Calc, converted at opening exchange rates	Number	[Opening ARIC - RA] * **/ $FX_{P, G}$** Where [Opening ARIC - RA] is referenced from R_SUB_Calc for the given GRC Code
Interest Accreted on ARIC - RA - Actuals FX	Sourced from R_SUB_Calc, converted at averageexchange rates	Number	[Interest Accreted on ARIC - RA] * **/ $FX_{A, G}$** Where [Interest Accreted on ARIC - RA] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARIC - RA of Changes to Recoveries CFs (Past) - Current FX	Sourced from R_SUB_Calc, converted at current (closing) exchange rates	Number	

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			[Effect on ARIC - RA of Changes to Recoveries CFs (Past)] * **/ $FX_{C, G}$** Where [Effect on ARIC - RA of Changes to Recoveries CFs (Past)] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARIC - RA of Recoveries on New Claims and Other Expenses Incurred (Current) - Current FX	Sourced from R_SUB_Calc, converted at current (closing) exchange rates	Number	[Effect on ARIC - RA of Recoveries on New Claims and Other Expenses Incurred (Current)] * **/ $FX_{C, G}$** Where [Effect on ARIC - RA of Recoveries on New Claims and Other Expenses Incurred (Current)] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARIC - RA of Change in NP Risk - Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARIC - RA of Change in NP Risk] * **/ $FX_{C, G}$** Where [Effect on ARIC - RA of Change in NP Risk] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Effect on ARIC - RA of Change in Exchange Rates – Current FX	Sourced from R_SUB_Calc, converted at current exchange rates	Number	[Effect on ARIC - RA of Change in Exchange Rates] * **/ $FX_{C, G}$** Where [Effect on ARIC - RA of Change in Exchange Rates] is referenced from

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			R_SUB_Calc for the given GRC Code
Effect on ARIC - RA of Changes in Interest Rates - Current FX	Sourced from R_SUB_Calc, converted at currentexchange rates	Number	[Effect on ARIC - RA of Changes in Interest Rates] * **/ $FX_{C, G}$** Where [Effect on ARIC - RA of Changes in Interest Rates] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Closing ARIC - RA - Actuals FX	Closing value calculated as sum of prior items converted at actual rates	Number	**Sum** from **[Opening ARIC - RA - Actuals FX]:[Effect on ARIC - RA of Changes in Interest Rates - Current FX]**
Closing ARIC - RA - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing ARIC - RA] * **/ $FX_{C, G}$** Where [Closing ARIC - RA] is referenced from R_SUB_Calc for the given GRC Code
Closing ARIC - RA - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing ARIC - RA - Current FX] - [Closing ARIC - RA - Actuals FX]**
Step 9: Conversions of ARIC – IC values into reporting currency			
Opening ARIC - IC - Actuals FX	Sourced from R_SUB_Calc, converted at opening exchange rates	Number	[Opening ARIC - IC] * **/ $FX_{P, G}$** Where [Opening ARIC - IC] is referenced from R_SUB_Calc for the given GRC Code
Effect on ARIC - IC of Changes to IC CFs (Past) – Current FX	Sourced from R_SUB_Calc, converted at currentexchange rates	Number	[Effect on ARIC - IC of Changes to IC CFs (Past)] * **/ $FX_{, G}$** Where [Effect on ARIC - IC of Changes to IC CFs (Past)] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Transfer of Reinsurance Investment Components (2) - Actuals FX	Set equal to previous item in this table [Transfer of Reinsurance Investment Components - Actuals FX]	Number	**-1 * [Transfer of Reinsurance Investment Components - Actuals FX]**
Investment Component Receipts - Actuals FX	Sourced from R_SUB_Calc, converted at average exchange rates	Number	[Investment Component Receipts] * **/ $FX_{A, G}$** Otherwise If Where [Investment Component Receipts] is referenced from R_SUB_Calc for the given GRC Code; [FX Impact from] is referenced from R_Groups for the given GRC Code
Closing ARIC - IC - Actuals FX	Calculated as sum of prior items converted at actual exchange rates	Number	**Sum** from **[Opening ARIC - IC - Actuals FX]:[Transfer of Reinsurance Investment Components (2) - Actuals FX]** **-** **[Investment Component Receipts - Actuals FX]**
Closing ARIC - IC - Current FX	Closing value, converted at current (closing) period exchange rates	Number	[Closing ARIC - IC] * **/ $FX_{C, G}$** Where [Closing ARIC - IC] is referenced from R_SUB_Calc for the given GRC Code
Closing ARIC - IC - Net foreign exchange income / (expenses)	FX impact for relevant account	Number	**[Closing ARIC - IC - Current FX] - [Closing ARIC - IC - Actuals FX]**

Reinsurance Contracts Initial Measurement – To Subledger (R_IN_ToSL)

This part of the solution performs the extraction of all items from R_FX, related to initial measurement, that require posting to the subledger (after the impact of changes in exchange rates). The R_FX calculation component is referenced throughout.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GRC Code	GRC Code associated with the row of calculations.	String	Reference [GRC Code] for each consecutive record in R_IN_Calc

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Transfer of Pre-recognition CFs (Purchased) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	Reference [Transfer of Pre-recognition CFs (Purchased) - Actuals FX] from R_FX for the given GRC Code
Transfer of Pre-recognition CFs (Purchased)(2) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	Reference [Transfer of Pre-recognition CFs (Purchased)(2) - Actuals FX] from R_FX for the given GRC Code
New ARC - Premium CFs (Purchased) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	Reference [New ARC - Premium CFs (Purchased) - Actuals FX] from R_FX for the given GRC Code
New ARC - Investment Component CFs (Purchased) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	Reference [New ARC - Investment Component CFs (Purchased) - Actuals FX] from R_FX for the given GRC Code
New ARC - Recoveries CFs (Purchased) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	Reference [New ARC - Recoveries CFs (Purchased) – Actuals FX] from R_FX for the given GRC Code
New ARC - RA (Purchased) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	Reference [New ARC - RA (Purchased) - Actuals FX] from R_FX for the given GRC Code
New ARC - CSM - Non-loss-recovery (Purchased) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	Reference [New ARC - CSM - Non-loss-recovery (Purchased) - Actuals FX] from R_FX for the given GRC Code
New ARC - Loss Recovery (Purchased) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	Reference [New ARC - Loss Recovery (Purchased) - Actuals FX] from R_FX for the given GRC Code
New ARC - PVFCF - Loss Recovery (Purchased) – Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	**[New ARC - Loss Recovery (Purchased) – Actuals FX]**
New ARC - PVFCF - Non-Loss Recovery (Purchased) - Initial Loss Recovery - Actuals FX	Sourced from R_FX (if GRC is marked as "Purchased")	Number	**[New ARC - Loss Recovery (Purchased) – Actuals FX]**
Transfer of Pre-recognition CFs (Acquired) - Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	Reference [Transfer of Pre-recognition CFs (Acquired) - Actuals FX] from R_FX for the given GRC Code
Transfer of Pre-recognition CFs (Acquired)(2) - Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	Reference [Transfer of Pre-recognition CFs (Acquired)(2) - Actuals FX] from R_FX for the given GRC Code
New ARC - Premium CFs (Acquired) – Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	Reference [New ARC - Premium CFs (Acquired) - Actuals FX] from R_FX for the given GRC Code
New ARC - Investment Component CFs (Acquired) – Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	Reference [New ARC - Investment Component CFs (Acquired) - Actuals FX] from R_FX for the given GRC Code
New ARC - Recoveries CFs (Acquired) – Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	Reference [New ARC - Recoveries CFs (Acquired) - Actuals FX] from R_FX for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
New ARC - RA (Acquired) – Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	Reference [New ARC - RA (Acquired) - Actuals FX] from R_FX for the given GRC Code
New ARC - CSM - Non-loss-recovery (Acquired) - Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	Reference [New ARC - CSM - Non-loss-recovery (Acquired) - Actuals FX] from R_FX for the given GRC Code
New ARC - Loss Recovery (Acquired) – Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	Reference [New ARC - Loss Recovery (Acquired) – Actuals FX] from R_FX for the given GRC Code
New ARC - PVFCF - Loss Recovery (Acquired) - Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	**[New ARC - Loss Recovery (Acquired) - Actuals FX]**
New ARC - PVFCF - Non-Loss Recovery (Acquired) - Initial Loss Recovery - Actuals FX	Sourced from R_FX (if GRC is marked as "Acquired")	Number	**[New ARC - Loss Recovery (Acquired) - Actuals FX]**

Reinsurance Contracts Subsequent Measurement – To Subledger (R_SUB_ToSL)

This part of the solution performs the extraction of all items from R_FX, related to subsequent measurement, that require posting to the subledger (after the impact of changes in exchange rates). The R_FX calculation component is referenced throughout.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GRC Code	Sourced from R_FX	String	Reference [GRC Code] for each consecutive record in R_SUB_Calc
Interest Accreted on Opening ARC - PVFCF - Non-Loss Recovery - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Interest Accreted on Opening ARC - PVFCF - Non-Loss Recovery - Actuals FX] from R_FX for the given GRC Code
RI Premium Experience Variance (Past/Current) - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [RI Premium Experience Variance (Past/Current) - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Non-Loss Recovery - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Non-Loss Recovery - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF of Total Experience Variance (Future) - Non-Loss Recovery – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF of Total Experience Variance (Future) - Non-Loss Recovery – Current FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF of Change in Exchange rates - Non-Loss Recovery – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF of Change in Exchange rates - Non-Loss Recovery – Current FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF of Change in NP Risk - Non-Loss Recovery - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF of Change in NP Risk - Non-Loss

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Recovery - Current FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF of Changes in Interest Rates - Non-Loss Recovery - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF of Changes in Interest Rates - Non-Loss Recovery - Current FX] from R_FX for the given GRC Code
Premium Payments - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Premium Payments - Actuals FX] from R_FX for the given GRC Code
Premium Payments (2) - Actuals FX	Set equal to previous item (required since two separate postings are needed)	Number	**[Premium Payments - Actuals FX]**
Transfer of Reinsurance Investment Components - Actuals FX	Sourced from R_FX for the given GRC Code	Number	-1 * Reference [Transfer of Reinsurance Investment Components - Actuals FX] from R_FX for the given GRC Code
Transfer of Reinsurance Investment Components (2) - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Transfer of Reinsurance Investment Components (2) - Actuals FX] from R_FX for the given GRC Code
Interest Accreted on ARC - RA - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Interest Accreted on ARC - RA - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - RA of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - RA of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - RA of Total Experience Variance (Future – Non FX) - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - RA of Total Experience Variance (Future – Non FX) - Current FX] from R_FX for the given GRC Code
Effect on ARC - RA - Change in Exchange rates - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - RA - Change in Exchange rates - Current FX] from R_FX for the given GRC Code
Effect on ARC - RA of Change in NP Risk - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - RA of Change in NP Risk - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - RA of Changes in Interest Rates - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - RA of Changes in Interest Rates - Actuals FX] from R_FX for the given GRC Code
Interest Accreted on ARC - CSM - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Interest Accreted on ARC - CSM - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - CSM - Total Experience Variance (Future – Non FX) - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - CSM - Total Experience Variance (Future – Non FX) - Current FX] from R_FX for the given GRC Code
Effect on ARC - CSM - Reversal of Loss Component	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - CSM - Reversal of Loss Component due to

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
due to changes not affecting the GRC - Current FX			changes not affecting the GRC - Current FX] from R_FX for the given GRC Code
Release in ARC - CSM - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Release in ARC - CSM - Actuals FX] from R_FX for the given GRC Code
Interest Accreted on ARC - PVFCF - Loss Recovery - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Interest Accreted on ARC - PVFCF - Loss Recovery - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period - Actuals FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows – Current FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates – Current FX] from R_FX for the given GRC Code
Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences – Current FX] from R_FX for the given GRC Code
Interest Accreted on ARIC - PVFCF - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Interest Accreted on ARIC - PVFCF - Actuals FX] from R_FX for the given GRC Code
Effect on ARIC - PVFCF of Changes to Recoveries CFs (Past) – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - PVFCF of Changes to Recoveries CFs (Past) – Current FX] from R_FX for the given GRC Code
Effect on ARIC - PVFCF of Change in Exchange Rates - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - PVFCF of Change in Exchange Rates - Current FX] from R_FX for the given GRC Code
Effect on ARIC - PVFCF of Change in NP Risk – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - PVFCF of Change in NP Risk – Current FX] from R_FX for the given GRC Code
Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current) - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current) - Current FX] from R_FX for the given GRC Code
Effect on ARIC - PVFCF of Changes in Interest Rates – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - PVFCF of Changes in Interest Rates - Current FX] from R_FX for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Recoveries Receipts - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Recoveries Receipts - Actuals FX] from R_FX for the given GRC Code
Recoveries Receipts (2) - Actuals FX	Set equal to previous item (required since two separate postings are needed)	Number	**[Recoveries Receipts - Actuals FX]**
Interest Accreted on ARIC - RA - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Interest Accreted on ARIC - RA - Actuals FX] from R_FX for the given GRC Code
Effect on ARIC - RA of Changes to Recoveries CFs (Past) - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - RA of Changes to Recoveries CFs (Past) - Current FX] from R_FX for the given GRC Code
Effect on ARIC - RA of Change in NP Risk - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - RA of Change in NP Risk - Current FX] from R_FX for the given GRC Code
Effect on ARIC - RA of Recoveries on New Claims and Other Expenses Incurred (Current) - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - RA of Recoveries on New Claims and Other Expenses Incurred (Current) - Current FX] from R_FX for the given GRC Code
Effect on ARIC - RA of Change in Exchange Rates - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - RA of Change in Exchange Rates - Current FX] from R_FX for the given GRC Code
Effect on ARIC - RA of Changes in Interest Rates - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - RA of Changes in Interest Rates - Current FX] from R_FX for the given GRC Code
Effect on ARIC - IC of Changes to IC CFs (Past) - Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Effect on ARIC - IC of Changes to IC CFs (Past) - Current FX] from R_FX for the given GRC Code
Investment Component Receipts - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Investment Component Receipts - Actuals FX] from R_FX for the given GRC Code
Investment Component Receipts (2) - Actuals FX	Set equal to previous item (required since two separate postings are needed)	Number	**[Investment Component Receipts - Actuals FX]**
Pre-recognition CF Receipts - Actuals FX	Sourced from R_FX for the given GRC Code	Number	Reference [Pre-recognition CF Receipts – Actuals FX] from R_FX for the given GRC Code
Pre-recognition CF Receipts (2) - Actuals FX	Set equal to previous item (required since two separate postings are needed)	Number	**[Pre-recognition CF Receipts – Actuals FX]**
Impairment of PRCF Liability – Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Impairment of PRCF Liability - Current FX] from R_FX for the given GRC Code
Reversal of Impairment of PRCF Liability –Current FX	Sourced from R_FX for the given GRC Code	Number	Reference [Reversal of Impairment of PRCF Liability – Current FX] from R_FX for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
Closing ARC - PRCF - Net foreign exchange income / (expenses)	Sourced from R_FX for the given GRC Code	Number	Reference [Closing ARC - PRCF - Net foreign exchange income / (expenses)] from R_FX for the given GRC Code
Closing ARC - PVFCF – Non-Loss Recovery Net foreign exchange income / (expenses)	Sourced from R_FX for the given GRC Code	Number	Reference [Closing ARC - PVFCF – Non-Loss Recovery Net foreign exchange income / (expenses)] from R_FX for the given GRC Code
Closing ARC - RA - Net foreign exchange income / (expenses)	Sourced from R_FX for the given GRC Code	Number	Reference [Closing ARC - RA - Net foreign exchange income / (expenses)] from R_FX for the given GRC Code
Closing ARC - CSM - Net foreign exchange income / (expenses)	Sourced from R_FX for the given GRC Code	Number	Reference [Closing ARC - CSM - Net foreign exchange income / (expenses)] from R_FX for the given GRC Code
Closing ARC - Loss Recovery - Net foreign exchange income / (expenses)	Sourced from R_FX for the given GRC Code	Number	Reference [Closing ARC - Loss Recovery - Net foreign exchange income / (expenses)] from R_FX for the given GRC Code
Closing ARIC - PVFCF - Net foreign exchange income / (expenses)	Sourced from R_FX	Number	Reference [Closing ARIC - PVFCF - Net foreign exchange income / (expenses)] from R_FX for the given GRC Code
Closing ARIC - RA - Net foreign exchange income / (expenses)	Sourced from R_FX	Number	Reference [Closing ARIC - RA - Net foreign exchange income / (expenses)] from R_FX for the given GRC Code
Closing ARIC - IC - Net foreign exchange income / (expenses)	Sourced from R_FX	Number	Reference [Closing ARIC - IC - Net foreign exchange income / (expenses)] from R_FX for the given GRC Code
Effect on ARC - PVFCF - Non-Loss Recovery adjustment due to uncovered cash flows – Current FX	Sourced from R_FX	Number	Reference [Effect on ARC - PVFCF - Non-Loss Recovery adjustment due to uncovered cash flows - Current FX] from R_FX for the given GRC Code

Reinsurance Contracts Subsequent Measurement – To CSM Release (R_SUB_ToCSM)

This part of the solution derives the CSM release profile (for the next 100 periods) that are required for IFRS 17 disclosures.

Note below that in Step 1 of the calculation of the release in CSM in each period, the [Reporting Period (0 = current)] (in R_SUB_Disc2) should equal the period in which the CSM is being released, i.e.

- *[Reporting Period (0 = current)] (in I_SUB_Disc2) = 1 for LRC - CSM Release - Reporting Period 1*
- *[Reporting Period (0 = current)] (in I_SUB_Disc2) = 2 for LRC - CSM Release - Reporting Period 2, etc.*

The formulas are replicated for each reporting period apart from the above change in the formula.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GRC Code	GRC Code associated with the row of calculations.	String	Reference [GRC Code] for each consecutive record in R_SUB_Calc

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
ARC - CSM Release - Reporting Period 1	Release in Closing ARC – CSM (balance at the current reporting date) in the next reporting period, based on coverage units allocated to that reporting period	Number	If Sum [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in I_SUB_Disc2) = **[GRC Code]** (given GRC Code in R_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) > 0 **= 0** Output **0** Otherwise perform the following calculation <u>Step 1:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 where 1. [Reporting Date] (in R_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in I_SUB_Disc2) = **[GRC Code]** (given GRC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in R_SUB_Disc2) = 1 <u>Step 2:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 where 1. [Reporting Date] (in R_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc2) = **[GRC Code]** (given GRC Code in R_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in R_SUB_Disc2) > 0

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			<u>Step 3:</u> [Closing ARC - CSM – CurrentFX] ***** **(Step 1 / Step 2)** Where [Closing ARC - CSM – Current FX] is referenced from R_FX for the given GRC Code
…	…	…	…
ARC - CSM Release - Reporting Period 100	Release in Closing ARC – CSM (balance at the current reporting date) in the next reporting period, based on coverage units allocated to that reporting period	Number	If Sum [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 where 1. [Reporting Date] (in I_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in I_SUB_Disc2) = **[GRC Code]** (given GRC Code in R_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in I_SUB_Disc2) > 0 **= 0** Output **0** Otherwise perform the following calculation <u>Step 1:</u> Sum [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 where 1. [Reporting Date] (in R_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in I_SUB_Disc2) = **[GRC Code]** (given GRC Code in I_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in R_SUB_Disc2) = 100 <u>Step 2:</u>

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
			Sum [Discounted Coverage Units (Locked-in YC, t0)] column in R_SUB_Disc2 where 1. [Reporting Date] (in R_SUB_Disc2) = input for "Reporting Date – Current" (input in Setup) 2. [GRC Code] (in R_SUB_Disc2) = **[GRC Code]** (given GRC Code in R_SUB_ToCSM) 3. [Reporting Period (0 = current)] (in R_SUB_Disc2) > 0 <u>Step 3:</u> [Closing ARC - CSM Current FX] *** (Step 1 / Step 2)** Where [Closing ARC - CSM Current FX] is referenced from R_FX for the given GRC Code

Reinsurance Contracts Subsequent Measurement – To (Time Zero) Trial Balance (R_SUB_ToT0TB)

This part of the solution extracts all opening reinsurance liability/asset balances from R_FX that require posting to the opening trial balance.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GRC Code	Sourced from R_Groups	String	Reference [GRC Code] for each consecutive record in R_Groups
Portfolio	Sourced from R_Groups	String	Reference [Portfolio] for each consecutive record in R_Groups
ARC - PVFCF - Non-Loss Recovery	Sourced from R_FX	Number	Reference [Opening ARC - PVFCF - Non-Loss Recovery – Actuals FX] from R_FX for the given GRC Code
ARC - RA	Sourced from R_FX	Number	Reference [Opening ARC – RA – Actuals FX] from R_FX for the given GRC Code
ARC - CSM	Sourced from R_FX	Number	Reference [Opening ARC – CSM – Actuals FX] from R_FX for the given GRC Code
ARC - PVFCF - Loss Recovery	Sourced from R_FX	Number	Reference [Opening ARC - PVFCF - Loss Recovery – Actuals FX] from R_FX for the given GRC Code
ARC - PRCF	Sourced from R_FX	Number	Reference [Opening ARC – PRCF – Actuals FX] from R_FX for the given GRC Code
ARIC - PVFCF	Sourced from R_FX	Number	Reference [Opening ARIC – PVFCF –Actuals FX] from R_FX for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
ARIC - RA	Sourced from R_FX	Number	Reference [Opening ARIC – RA-Actuals FX] from R_FX for the given GRC Code
ARIC - IC	Sourced from R_FX	Number	Reference [Opening ARIC – IC - Actuals FX] from R_FX for the given GRC Code
Asset / Liability	= "Asset" if sum of all subsequent values assigned to the same portfolio is >=0 and "Liability" if sum of all subsequent values is < 0	String	If **Sum** from **[ARC – PVFCF – Non-Loss Recovery]:[ARIC - IC]** for all values assigned to the same portfolio **>= 0** Output "**Asset**" Otherwise Output "**Liability**"

Reinsurance Contracts Subsequent Measurement – To (Time One) Trial Balance (R_SUB_ToT1TB)

This part of the solution extracts all closing reinsurance liability/asset balances from R_FX that require posting to the closing trial balance.

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
GRC Code	GRC Code associated with the row of calculations.	String	Reference [GRC Code] for each consecutive record in R_Groups
Portfolio	Sourced from R_Groups	String	Reference [Portfolio] for each consecutive record in R_Groups
ARC – PVFCF – Non -Loss Recovery	Sourced from R_FX	Number	Reference [Closing ARC – PVFCF – Non-Loss Recovery – Current FX] from R_FX for the given GRC Code
ARC - RA	Sourced from R_FX	Number	Reference [Closing ARC – RA – Current FX] from R_FX for the given GRC Code
ARC - CSM	Sourced from R_FX	Number	Reference [Closing ARC – CSM – Current FX] from R_FX for the given GRC Code
ARC - PVFCF - Loss Recovery	Sourced from R_FX	Number	Reference [Closing ARC - PVFCF - Loss Recovery - Current FX] from R_FX for the given GRC Code
ARC - PRCF	Sourced from R_FX	Number	Reference [Closing ARC – PRCF - Current FX] from R_FX for the given GRC Code
ARIC - PVFCF	Sourced from R_FX	Number	Reference [Closing ARIC – PVFCF – Current FX] from R_FX for the given GRC Code

Calculation Fields	Description	Calculation Field Type	Formula (Formulas noted in bold text)
ARIC - RA	Sourced from R_FX	Number	Reference [Closing ARIC – RA – Current FX] from R_FX for the given GRC Code
ARIC - IC	Sourced from R_FX	Number	Reference [Closing ARIC – IC – Current FX] from R_FX for the given GRC Code
Asset / Liability	= "Asset" if sum of all subsequent values assigned to the same portfolio is >=0 and "Liability" if sum of all subsequent values is < 0	String	If **Sum** from **[ARC – PVFCF – Non-Loss Recovery]:[ARIC - IC]** for all values assigned to the same portfolio **>= 0** Output "**Asset**" Otherwise Output "**Liability**"

2.2.5 Posting to Subledger and Trial Balance

This section describes the process of posting the above calculated results to the subledger and trial balance as well as the accounts that comprise the IFRS 17 subledger and trial balance.

The opening and closing (re)insurance asset/liability values (affecting the Statement of Financial Position) are posted to the IFRS 17 trial balance. The movements in the various components of the (re)insurance assets/liabilities over the reporting period (affecting the Statement of Comprehensive Income) are posted to the IFRS 17 subledger.

2.2.5.1 Subledger

The Subledger lists the amounts relating to each of the 90+ Insurance and 60+ Reinsurance "Transaction Types" for each GIC and GRC Code, that are required for the IFRS 17 disclosures. The Subledger contains the following fields:

- Date (Always the current Reporting Date as input in Setup)
- Transaction Type
- Group Code
- Amount
- Reporting Segment
- DR Account Code
- CR Account Code
- Transition method

The image below demonstrates how this may look:

Date	Transaction Type	Group Cod	Amou	Reporting Segmer	DR Account Cod	CR Account Cod	Transition method
2018/12/31	Transfer of Investment Components (2) - Actuals FX	P12018	-	[segment 1]	1222100	3210000	Full Retrospective
2018/12/31	Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	P12018	-	[segment 1]	2121000	1212100	Full Retrospective
2018/12/31	Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	P12018	-	[segment 1]	2121000	1212200	Full Retrospective
2018/12/31	Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current) - Actuals FX	P12018	34.16	[segment 1]	2121000	1221100	Full Retrospective
2018/12/31	Effect on LIC - RA of New Claims and Other Expenses Incurred (Current) - Actuals FX	P12018	1.71	[segment 1]	2121000	1221200	Full Retrospective
2018/12/31	Transfer of Investment Components (2) - Actuals FX	P22018	-	[segment 2]	1222100	3210000	Modified Retrospective
2018/12/31	Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	P22018	(292.81)	[segment 2]	2121000	1212100	Modified Retrospective
2018/12/31	Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	P22018	(14.64)	[segment 2]	2121000	1212200	Modified Retrospective
2018/12/31	Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current) - Actuals FX	P22018	1 951.80	[segment 2]	2121000	1221100	Modified Retrospective
2018/12/31	Effect on LIC - RA of New Claims and Other Expenses Incurred (Current) - Actuals FX	P22018	97.59	[segment 2]	2121000	1221200	Modified Retrospective
2018/12/31	Transfer of Investment Components (2) - Actuals FX	P32017	-	[segment 3]	1222100	3210000	Fair Value
2018/12/31	Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	P32017	-	[segment 3]	2121000	1212100	Fair Value

The first group of Transaction Types relate to newly recognised insurance contracts and correspond to each field (besides "GIC Code") in the I_IN_ToSL calculation module. Starting with the first GIC Code in I_IN_ToSL, each field is listed in the "Transaction Type" column with the corresponding amount (from I_IN_ToSL) for each field, relevant to the GIC Code. The GIC Code is also listed as many times, as seen above. This is so that the Reporting Segment related to the GIC Code can be referenced from I_Groups.

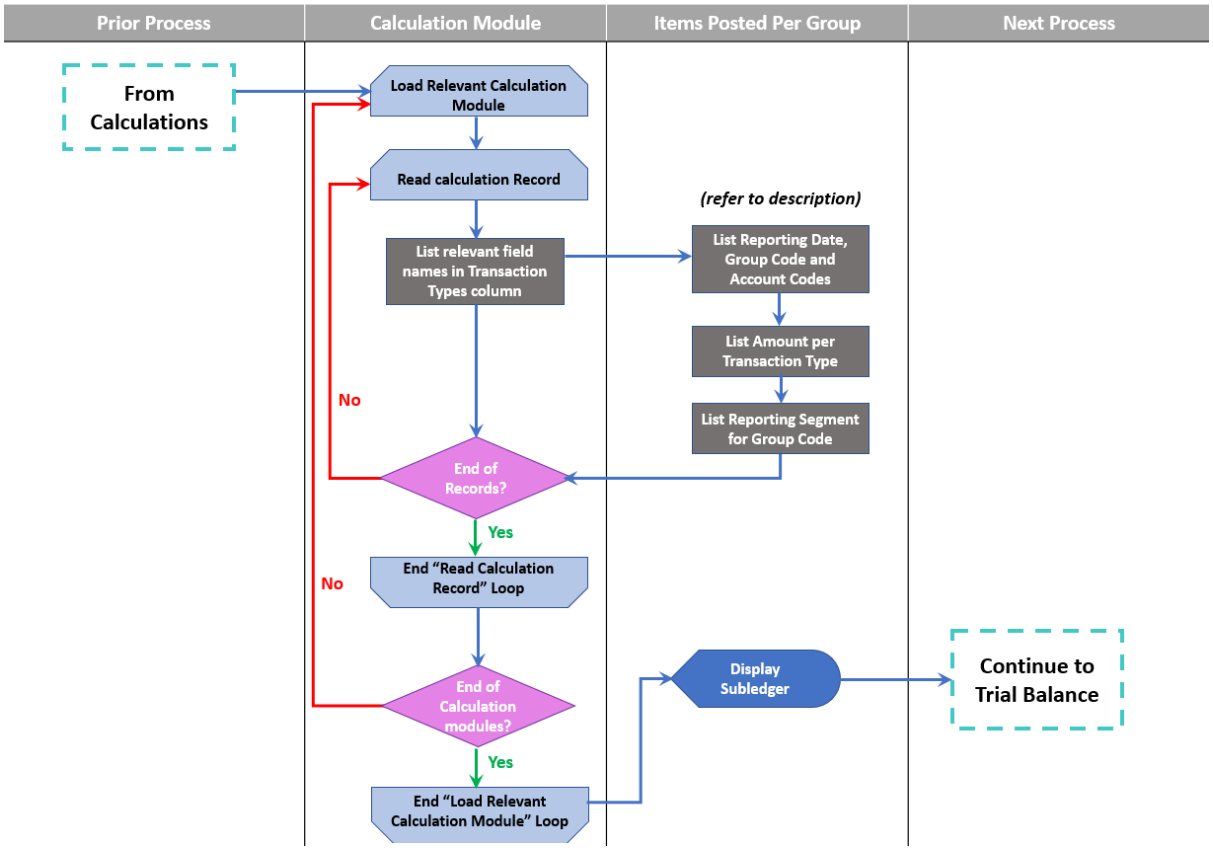
The next Insurance Transaction Types are listed as described above but are referenced from I_SUB_ToSL instead.

The reinsurance transaction types are listed in a similar manner. The R_IN_ToSL (first 20 transaction types) and R_SUB_ToSL (next 55 transaction types) components of the calculation are referenced instead.

Each Transaction Type is also associated with a DR (Debit) and CR (Credit) account code. These account codes associated with the Transaction Types can be found in the appendix.

The Transition Method is referenced from I_Groups for the GIC (left blank for reinsurance items).

The process is represented visually below:



2.2.5.2 Trial Balance

The Trial Balance is created in a similar way to the Subledger. The Trial Balance lists the amounts relating to each of the 18 Insurance Asset/Liability and 16 Reinsurance Asset/Liability "Accounts" for each GIC and GRC Code, that are required for the IFRS 17 disclosures. The Trial Balance contains the following fields:

- Date (Previous Reporting Date for I_SUB_ToT0TB and R_SUB_ToT0TB, Current Reporting Date for I_SUB_ToT1TB and R_SUB_ToT1TB
- Asset/Liability
- Account
- Group Code
- Amount
- Reporting Segment
- Account Code
- Transition Method

The image below demonstrates how this may look:

Date	Asset / Liability	Account	Group Code	Amou	Reporting Segment	Account Code	Transition method
2017/12/31	Asset	LRC - Profit - PVFCF	P12018	-	[segment 1]	1211100	Full Retrospective
2017/12/31	Asset	LRC - Loss - PVFCF	P12018	-	[segment 1]	1212100	Full Retrospective
2017/12/31	Asset	LRC - Profit - RA	P12018	-	[segment 1]	1211200	Full Retrospective
2017/12/31	Asset	LRC - Loss - RA	P12018	-	[segment 1]	1212200	Full Retrospective
2017/12/31	Asset	LRC - CSM	P12018	-	[segment 1]	1211300	Full Retrospective
2017/12/31	Asset	LRC - PRCF	P12018	100.00	[segment 1]	1213100	Full Retrospective
2017/12/31	Asset	LIC - PVFCF	P12018	-	[segment 1]	1221100	Full Retrospective
2017/12/31	Asset	LIC - RA	P12018	-	[segment 1]	1221200	Full Retrospective
2017/12/31	Asset	LIC - IC	P12018	-	[segment 1]	1222100	Full Retrospective
2017/12/31	Asset	LRC - Profit - PVFCF	P22018	-	[segment 2]	1211100	Modified Retrospective
2017/12/31	Asset	LRC - Loss - PVFCF	P22018	-	[segment 2]	1212100	Modified Retrospective
2017/12/31	Asset	LRC - Profit - RA	P22018	-	[segment 2]	1211200	Modified Retrospective
2017/12/31	Asset	LRC - Loss - RA	P22018	-	[segment 2]	1212200	Modified Retrospective
2017/12/31	Asset	LRC - CSM	P22018	-	[segment 2]	1211300	Modified Retrospective
2017/12/31	Asset	LRC - PRCF	P22018	50.00	[segment 2]	1213100	Modified Retrospective
2017/12/31	Asset	LIC - PVFCF	P22018	-	[segment 2]	1221100	Modified Retrospective

The first 9 Accounts relate to opening asset/liability balances for insurance contracts and correspond to each field (besides “GIC Code”, “Portfolio” and “Asset/Liability”) in the I_SUB_ToT0TB calculation module. Starting with the first GIC Code in I_SUB_ToT0TB, each field is listed in the “Account” column with the corresponding amount (from I_SUB_ToT0TB), for each field, relevant to the GIC Code. Each amount for a GIC is multiplied by -1 if the GIC is in an “Asset” position.

The GIC Code is also listed as many times, as seen above. This is so that the Reporting Segment related to the GIC Code can be referenced from I_Groups. The “Asset/Liability” column in the Trial Balance contains either “Asset” or “Liability” as referenced from the “Asset/Liability” column in I_SUB_ToT0TB for that GIC/GRC Code.

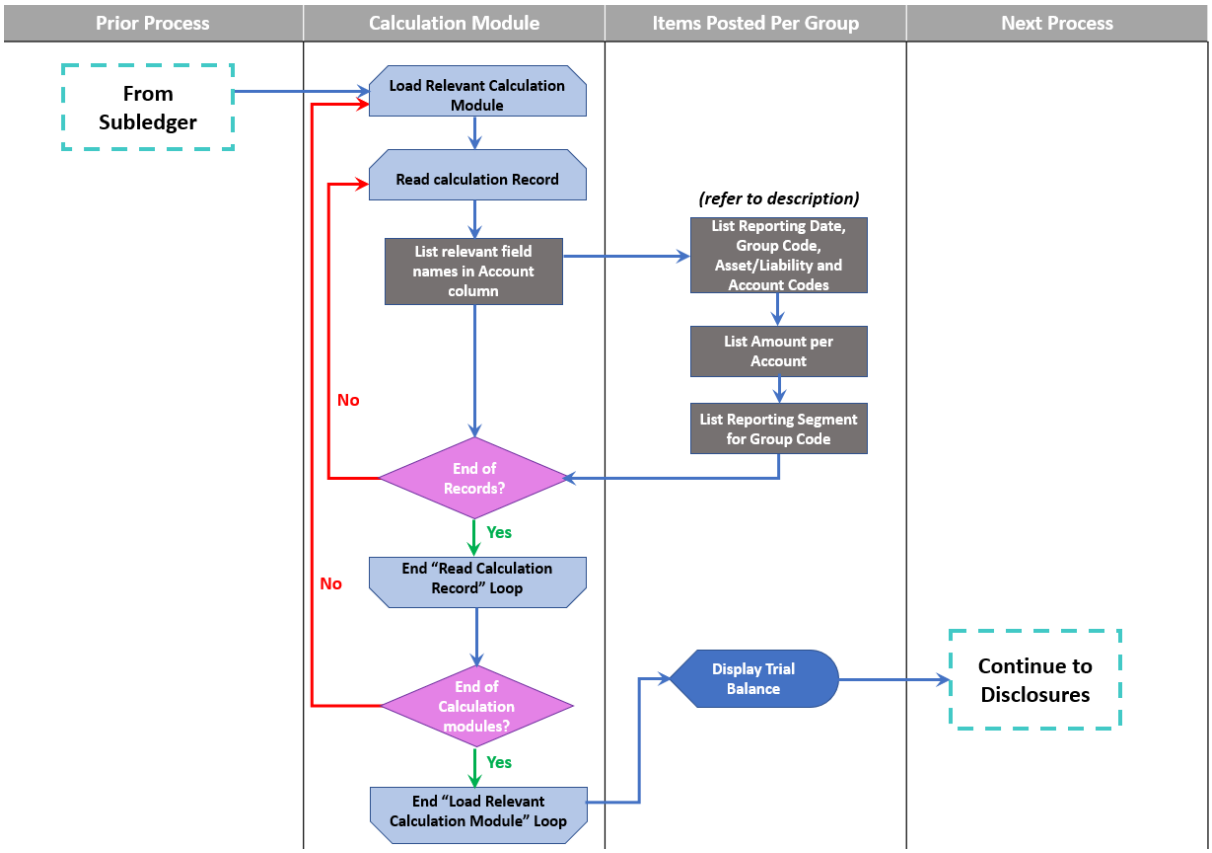
The next 9 Insurance Accounts are listed as described above but are referenced from I_SUB_ToT1TB instead.

The Reinsurance Accounts are listed in a similar manner. The R_SUB_ToT0TB (first 8 transaction types) and R_SUB_ToT1TB (next 8 transaction types) components of the calculation are referenced instead. Another difference to the above is that each amount for the GRC is multiplied by -1 if the GRC is in a “Liability” position.

Each Account is also associated with an Account Code. These account codes associated with the items in the “Account” column can be found in the appendix.

The Transition Method is referenced from I_Groups for the GIC (left blank for reinsurance items).

The process is represented visually below:



2.2.5.3 CSM Release

The CSM release module lists the amount of CSM (for insurance LRC and reinsurance ARC) that is allocated to each future reporting period per GIC and GRC and contains the following fields:

- Date
- Account
- Group Code
- Amount
- Reporting Segment
- Insurance/Reinsurance
- Reporting Period
- Transition Method

The image below demonstrates how this may look:

Date	Account	Group Code	Amount	Reporting Segment	Insurance/Reinsurance	Reporting Period	Transition Method
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	1	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	2	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	3	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	4	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	5	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	6	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	7	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	8	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	9	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	10	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	11	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	12	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	13	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	14	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	15	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	16	
2018/12/31	LRC - CSM Release - Reporting	P12018	-	[segment 1]	Insurance	17	

For insurance contracts, the Accounts relate to the LRC – CSM Release Reporting Period and correspond to each field (besides “GIC Code”) in the I_SUB_ToCSM calculation module. Starting with the first GIC Code in I_SUB_ToCSM, each field is listed in the “Account” column with the corresponding amount (in the Amount column) from I_SUB_ToCSM. The GIC Code is also listed as many times, as seen above. This is so that the Reporting Segment related to the GIC Code can be referenced from I_Groups.

The Transition Method is referenced from I_Groups for the GIC (left blank for reinsurance items).

The CSM release for reinsurance contracts is done in a similar manner. The Accounts relate to the ARC – CSM Release Reporting Period and correspond to each field (besides “GRC Code”) in the R_SUB_ToCSM calculation module. Starting with the first GRC Code in R_SUB_ToCSM, each field is listed in the “Account” column with the corresponding amount (in the Amount column) from R_SUB_ToCSM. The GRC Code is also listed as many times, as seen above. This is so that the Reporting Segment related to the GRC Code can be referenced from R_Groups.

The “Insurance/Reinsurance” column contains either “Insurance” or “Reinsurance” based on whether the LRC CSM or ARC CSM, respectively, is being listed for that GIC/GRC Code. The Reporting Period column contains just the number of reporting periods in the future to which the CSM run-off relates and corresponds to the reporting period in the Account column.

2.2.5.4 PRCF Release

The PRCF release module lists the amount of Pre-Recognition Cash Flows (for insurance LRC and reinsurance ARC) that is allocated to each future reporting period per GIC/GRC and contains the following fields:

- Date
- Account
- Group Code
- Amount

- Reporting Segment
- Insurance/Reinsurance
- Reporting Period
- Transition Method

The image below demonstrates how this may look:

Account	Group Code	Amount	Reporting Segment	Insurance/Reinsurance	Reporting Period	Transition Method
LRC - PRCF Release - Reporting Period 1	P12018	-	[segment 1]	Insurance	1	
LRC - PRCF Release - Reporting Period 2	P12018	-	[segment 1]	Insurance	2	
LRC - PRCF Release - Reporting Period 3	P12018	-	[segment 1]	Insurance	3	
LRC - PRCF Release - Reporting Period 4	P12018	-	[segment 1]	Insurance	4	
LRC - PRCF Release - Reporting Period 5	P12018	-	[segment 1]	Insurance	5	
LRC - PRCF Release - Reporting Period 6	P12018	-	[segment 1]	Insurance	6	
LRC - PRCF Release - Reporting Period 7	P12018	-	[segment 1]	Insurance	7	
LRC - PRCF Release - Reporting Period 8	P12018	-	[segment 1]	Insurance	8	
LRC - PRCF Release - Reporting Period 9	P12018	-	[segment 1]	Insurance	9	
LRC - PRCF Release - Reporting Period 10	P12018	-	[segment 1]	Insurance	10	
LRC - PRCF Release - Reporting Period 11	P12018	-	[segment 1]	Insurance	11	
LRC - PRCF Release - Reporting Period 12	P12018	-	[segment 1]	Insurance	12	
LRC - PRCF Release - Reporting Period 13	P12018	-	[segment 1]	Insurance	13	
LRC - PRCF Release - Reporting Period 14	P12018	-	[segment 1]	Insurance	14	
LRC - PRCF Release - Reporting Period 15	P12018	-	[segment 1]	Insurance	15	
LRC - PRCF Release - Reporting Period 16	P12018	-	[segment 1]	Insurance	16	
LRC - PRCF Release - Reporting Period 17	P12018	-	[segment 1]	Insurance	17	
LRC - PRCF Release - Reporting Period 18	P12018	-	[segment 1]	Insurance	18	
LRC - PRCF Release - Reporting Period 19	P12018	-	[segment 1]	Insurance	19	
LRC - PRCF Release - Reporting Period 20	P12018	-	[segment 1]	Insurance	20	
LRC - PRCF Release - Reporting Period 21	P12018	-	[segment 1]	Insurance	21	
LRC - PRCF Release - Reporting Period 22	P12018	-	[segment 1]	Insurance	22	
LRC - PRCF Release - Reporting Period 23	P12018	-	[segment 1]	Insurance	23	
LRC - PRCF Release - Reporting Period 24	P12018	-	[segment 1]	Insurance	24	
LRC - PRCF Release - Reporting Period 25	P12018	-	[segment 1]	Insurance	25	

This is populated in a similar way to the CSM Release, detailed above, however the Account and Amount items are obtained from the I_SUB_ToPRCF calculation module.

2.2.6 Disclosures

This section describes the presentation of the IFRS 17 disclosures as well as the process and formulas for transforming the trial balance/subledger outputs into disclosures that the user will see.

The subledger and trial balance items are first summarized in a matrix that relates all Statement of Comprehensive Income (SoCI) accounts to the relevant Statement of Financial Position (SoFP) accounts affected by their movements. These are the “master” disclosures and is called I_Disclosures_Master for insurance disclosures and R_Disclosures_Master for reinsurance disclosures.

2.2.6.1 Insurance Master Disclosure

The subledger and trial balance items that relate to insurance contracts are first summarized in a matrix that relates all Statement of Comprehensive Income accounts to the relevant Statement of Financial Position accounts affected by their movements. All accounts involved in movements in each financial statement line item (i.e. most granular level of accounts) are summarized here. Essentially, this part of the process builds up the IFRS 17 disclosures at a line item level, from the subledger and trial balance.

The release of the pre-recognition cash flows as well as the CSM release in each future reporting period is listed.

The user is able to choose whether to view these accounts per Insurance Reporting Segment or in total (i.e. across all Reporting Segments), as input in the Setup. An enhancement to the solution is to make this view available for each Reporting Segment (and in total) so that one does not have to choose to see these one at a time.

In addition, there should be a functionality to view these disclosures per transition method (as specified in I_Groups for each GIC), or in total (Default).

The table below lists the matrix of all IFRS 17 accounts (i.e. each debit/credit combination) that relates movements in all IFRS 17 SoFP line items to SoCI line items for insurance:

Insurance reporting segment: Total

Transition method: Default

GMM - Master Disclosure - Insurance Contracts Issued	Account code	Liability for remaining coverage						Liability for incurred claims			Cash
		Pre-recognition cash flows	Excluding loss component			Loss component		Investment components	Claims and other expenses		
		Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Risk adjustment	Contractual service margin	Estimates of the present value of future cash flows	Risk adjustment	Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Risk adjustment	
Assets		1213100	1211100	1211200	1211300	1212100	1212200	1222100	1221100	1221200	
Liabilities		1213100	1211100	1211200	1211300	1212100	1212200	1222100	1221100	1221200	
Opening		Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	
Insurance revenue (Current)											
Premium experience variance	2111000		(2111000; 1211100)								
Acquisition cash flow experience variance	2112000		(2112000; 1211100)								
Expected insurance service expenses incurred in the period	2114000		(2114000; 1211100)								
Change in the risk adjustment	2115000			(2115000; 1211200)							
Amount of contractual service margin recognised	2116000				(2116000; 1211300)						
Allocation of the portion of premiums that relate to the recovery of insurance acquisition	2113000		(2113000; 1211100)								
Insurance service expenses (Current)											
Incurred claims and other expenses	2121000					(2121000; 1212100)	(2121000; 1212200)		(2121000; 1221100)	(2121000; 1221200)	
Amortisation of insurance acquisition cash flows	2122000		(2122000; 1211100)								
Impairment of pre-recognition cash flows asset	2123000	(2123000; 1213100)									
Reversal of Impairment of pre-recognition cash flows asset	2124000	(2124000; 1213100)									
Contracts initially recognised in the period (Future)											
Contracts issued											
Non-onerous											
Estimates of present value of future cash outflows excluding insurance acquisition cash flows	2125111		(2125111; 1211100)								
Estimates of insurance acquisition cash flows	2125112		(2125112; 1211100)								
Transfer of pre-recognition cash flows	3221100	(3221100; 1213100)			(3221100; 1211300)						
Estimates of present value of future cash inflows	2125113		(2125113; 1211100)								
Risk adjustment	2125114			(2125114; 1211200)							
Contractual service margin	2125115				(2125115; 1211300)						
Onerous											
Estimates of present value of future cash outflows, excluding insurance acquisition cash flows	2125121		(2125121; 1211100)			(2125121; 1212100)					
Estimates of insurance acquisition cash flows	2125122		(2125122; 1211100)								
Transfer of pre-recognition cash flows	3221200	(3221200; 1213100)			(3221200; 1211300)						
Estimates of present value of future cash inflows	2125123		(2125123; 1211100)								
Risk adjustment	2125124			(2125124; 1211200)			(2125124; 1212200)				
Contractual service margin	2125125				(2125125; 1211300)						
Contracts acquired											
Non-onerous											
Estimates of present value of future cash outflows, excluding insurance acquisition cash flows	2125211		(2125211; 1211100)								
Estimates of insurance acquisition cash flows	2125212		(2125212; 1211100)								
Transfer of pre-recognition cash flows	3222100	(3222100; 1213100)			(3222100; 1211300)						
Estimates of present value of future cash inflows	2125213		(2125213; 1211100)								
Risk adjustment	2125214			(2125214; 1211200)							
Contractual service margin	2125215				(2125215; 1211300)						

Insurance service result

		Onerous										
		Estimates of present value of future cash outflows, excluding insurance acquisition cash flows	2125221		(2125221; 1211100)			(2125221; 1212100)				
		Estimates of insurance acquisition cash flows	2125222		(2125222; 1211100)							
		Transfer of pre-recognition cash flows	3222200	(3222200; 1213100)			(3222200; 1211300)					
		Estimates of present value of future cash inflows	2125223		(2125223; 1211100)							
		Risk adjustment	2125224			(2125224; 1211200)			(2125224; 1212200)			
		Contractual service margin	2125225				(2125225; 1211300)					
		Changes in estimates that adjust the contractual service margin	2126000		(2126000; 1211100)	(2126000; 1211200)	(2126000; 1211300)					
		Changes in estimates that do not adjust the contractual service margin	2127000					(2127000; 1212100)	(2127000; 1212200)			
Past		Changes to liabilities for incurred claims	2128000							(2128000; 1222100)	(2128000; 1221100)	(2128000; 1221200)
Insurance finance expense	Insurance finance income / (expense)											
		Interest accreted	2310000		(2310000; 1211100)	(2310000; 1211200)	(2310000; 1211300)	(2310000; 1212100)	(2310000; 1212200)		(2310000; 1221100)	(2310000; 1221200)
		Effect of changes in interest rates and other financial assumptions										
		Profit / loss	2321000		(2321000; 1211100)	(2321000; 1211200)		(2321000; 1212100)	(2321000; 1212200)		(2321000; 1221100)	(2321000; 1221200)
		Other comprehensive income	2322000		(2322000; 1211100)	(2322000; 1211200)		(2322000; 1212100)	(2322000; 1212200)		(2322000; 1221100)	(2322000; 1221200)
		Net foreign exchange income / (expenses)										
		Profit / loss	2331000	(2331000; 1213100)	(2331000; 1211100)	(2331000; 1211200)	(2331000; 1211300)	(2331000; 1212100)	(2331000; 1212200)	(2331000; 1222100)	(2331000; 1221100)	(2331000; 1221200)
		Other comprehensive income	2332000	(2332000; 1213100)	(2332000; 1211100)	(2332000; 1211200)	(2332000; 1211300)	(2332000; 1212100)	(2332000; 1212200)	(2332000; 1222100)	(2332000; 1221100)	(2332000; 1221200)
CFs/Transfers	Transfers											
		Transfer of investment components	3210000		(3210000; 1211100)					(3210000; 1222100)		
	Cash flows											
		Premiums received	3111000		(3111000; 1211100)							(3111000; 1100000)
		Claims and other expenses paid	3112000								(3112000; 1221100)	(3112000; 1100000)
		Investment components paid	3113000							(3113000; 1222100)		(3113000; 1100000)
		Insurance acquisition cash flows paid	3114000	(3114000; 1213100)	(3114000; 1211100)							(3114000; 1100000)
	Closing			Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"
	Assets			1213100	1211100	1211200	1211300	1212100	1212200	1222100	1221100	1221200
	Liabilities			1213100	1211100	1211200	1211300	1212100	1212200	1222100	1221100	1221200
	Closing			Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures

The above is interpreted as follows:

- Line items running downwards (i.e. on the left side) are SoCI accounts, while items running across (i.e. at the top) are SoFP accounts. Each is associated with its own account number (as described in section 2.2.5 and noted in the appendix)
- The matrix entries (x; y) represent the amount relating to the IFRS 17 line item, where x is the debit account and y is the credit account, aggregated at the chosen level of reporting. These are obtained from the Subledger.
- For example, if viewing disclosures for [Segment 1] (as input in Setup), the value represented by (x; y) would be the sum across the “Amount” column in the Subledger in all instances where the following conditions are met:
  - The “Reporting Segment” column = [Segment 1]
  - The “Dr Account Code” column = x
  - The “Cr Account Code” column = y
  - The “Date” column = [Reporting Date – Current] as input in Setup
- If viewing disclosures at the Total level, all except the first of the above conditions would apply.
- The opening and closing LRC and LIC Asset/Liability balances are also disclosed and indicated with a single account number above (since these are balances) and are

obtained from the Trial Balance.

- For example, if viewing disclosures for [Segment 1] (as input in Setup), the opening/closing balance value, z, would be the sum across the “Amount” column in the Trial Balance in all instances where the following conditions are met:
  - The “Reporting Segment” column = [Segment 1]
  - The “Account Code” column = z
  - The “Asset/Liability” column = “Asset” (for the opening/closing Assets balance); “Liability” (for the opening/closing Liabilities balance) as appropriate for the row
  - The “Date” column = [Reporting Date – Previous] (for the opening balances); [Reporting Date – Current] (for the closing balances), as input in Setup
  - Note that for the opening and closing Asset balances, this sum must be multiplied by -1.
- If viewing disclosures at the Total level, all except the first of the above conditions would apply.
- The total opening balances are obtained by summing across the opening Assets/Liabilities opening balances as indicated above (total closing balances are obtained in a similar way)

The image below gives an example of the master disclosures output would look like:

GMM - Master Disclosure - Insurance Contracts Issued	Account code	Liability for remaining coverage						Liability for incurred claims			Cash
		Pre-recognition cash flows	Excluding loss component			Loss component		Investment components	Claims and other expenses		
		Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Risk adjustment	Contractual service margin	Estimates of the present value of future cash flows	Risk adjustment	Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Risk adjustment	
Assets		(6 100)	-	-	-	-	-	-	-	-	
Liabilities		-	(3 993)	932	2 500	-	-	6 000	5 928	296	
Opening		(6 100)	(3 993)	932	2 500	-	-	6 000	5 928	296	
Insurance service result – Current – Insurance revenue											
Premium experience variance	2111000		5 050								
Acquisition cash flow experience variance	2112000		(5 010)								
Expected insurance service expenses incurre	2114000		(420 069)								
Change in the risk adjustment	2115000			(8 965)							
Amount of contractual service margin recogr	2116000				(7 556)						
Allocation of the portion of premiums that re	2113000		(22 896)								
Insurance service expenses											
Incurred claims and other expenses	2121000					(502)	(25)		418 514	141	
Amortisation of insurance acquisition cash fl	2122000		22 896								
Impairment of pre-recognition cash flows as	2123000	-									
Reversal of impairment of pre-recognition ca	2124000	-									
Future – Contracts initially recognised in the period											
Contracts issued											
Non-onerous											
Estimates of present value	2125111		1 874 456								
Estimates of insurance ac	2125112		87 438								
Transfer of pre-recognitic	3221100	4 000			(4 000)						
Estimates of present value	2125113		(2 039 655)								
Risk adjustment	2125114			38 601							
Contractual service margi	2125115				39 160						
Onerous											
Estimates of present value	2125121		32 381			5 262					
Estimates of insurance ac	2125122		8 000								
Transfer of pre-recognitic	3221200	2 000			(2 000)						
Estimates of present value	2125123		(44 000)								
Risk adjustment	2125124			1 619			263				
Contractual service margi	2125125				2 000						
Contracts acquired											
Non-onerous											
Estimates of present value	2125211		442								
Estimates of insurance ac	2125212		156								
Transfer of pre-recognitic	3222100	100			(100)						
Estimates of present value	2125213		(780)								
Risk adjustment	2125214			22							
Contractual service margi	2125215				160						
Onerous											
Estimates of present value	2125221		-			-					
Estimates of insurance ac	2125222		-								
Transfer of pre-recognitic	3222200	-			-						
Estimates of present value	2125223		-								
Risk adjustment	2125224			-			-				
Contractual service margi	2125225				-						
Changes in estimates that adjust the contract	2126000		4 683	(1 207)	(3 476)						
Changes in estimates that do not adjust the c	2127000					27 405	1 370				
Past – Changes to liabilities for incurred claims	2128000							(6 000)	300	(135)	

Insurance finance expense	Insurance finance income / (expense)											
	Interest accreted	2310000		43 427	2 030	1 908	169	8		272	14	
	Effect of changes in interest rates and other financial assumptions											
	Profit / loss	2321000		(95 487)	(2 015)		(767)	(38)		(179)	(9)	
	Other comprehensive income	2322000		-	-		-	-		-	-	
	Net foreign exchange income / (expenses)											
	Profit / loss	2331000	-	47 913.55	4 233.64	-	4 437	222	2 250	2 325	116.26	
	Other comprehensive income	2332000	-	-	-	-	-	-	-	-	-	
CFs/Transfers	Transfers											
	Transfer of investment components	3210000		(4 800)					4 800			
	Cash flows											
	Premiums received	3111000		1 014 000								(1 014 00
	Claims and other expenses paid	3112000								(418 700)		418 70
	Investment components paid	3113000							(4 800)			4 80
	Insurance acquisition cash flows paid	3114000	(1 800)	(76 900)								78 70
	Closing		(1 800)	427 251	35 251	28 597	36 004	1 800	2 250	8 459	423	
	Assets		-	(127)	21	14	-	-	-	34	2	
	Liabilities		(1 800)	427 378	35 230	28 583	36 004	1 800	2 250	8 425	421	
	Closing		(1 800)	427 251	35 251	28 597	36 004	1 800	2 250	8 459	423	

Pre-Recognition Cash Flow (PRCF) release and CSM release

This section lists the insurance pre-recognition cash flows released as well as the insurance CSM released in each future reporting period as follows:

Reporting Period		PRCF release	CSM release
Reporting Period 1	1	Sum across Amount column of PRCF Release module (described in 2.2.5.4), where Reporting Segment = [Reporting segment x], Insurance/Reinsurance = “insurance” Reporting Period = 1	Sum across Amount column of CSM Release module (described in 2.2.5.3), where Reporting Segment = [Reporting segment x], Insurance/Reinsurance = “insurance” Reporting Period = 1
Reporting Period 2	2	Sum across Amount column of PRCF Release module (described in 2.2.5.4), where Reporting Segment = [Reporting segment x], Insurance/Reinsurance = “insurance” Reporting Period = 2	Sum across Amount column of CSM Release module (described in 2.2.5.3), where Reporting Segment = [Reporting segment x], Insurance/Reinsurance = “insurance” Reporting Period = 2
Reporting Period 3	3	Sum across Amount column of PRCF Release module (described in 2.2.5.4), where Reporting Segment = [Reporting segment x], Insurance/Reinsurance = “insurance” Reporting Period = 3	Sum across Amount column of CSM Release module (described in 2.2.5.3), where Reporting Segment = [Reporting segment x], Insurance/Reinsurance = “insurance” Reporting Period = 3

Reporting Period 4	4	Sum across Amount column of PRCF Release module (described in 2.2.5.4), where Reporting Segment = [Reporting segment x], Insurance/Reinsurance = “insurance” Reporting Period = 4	Sum across Amount column of CSM Release module (described in 2.2.5.3), where Reporting Segment = [Reporting segment x], Insurance/Reinsurance = “insurance” Reporting Period = 4
…	…	…	…

2.2.6.2 Insurance Disclosures (I_Disclosures)

The items in I_Disclosures_Master are summarised into various different disclosure tables that are consistent with IFRS 17 reporting. These tables isolate and aggregate the granular IFRS 17 accounts into understandable disclosures that are viewed by the user.

The user will view these disclosures per Reporting Segment or in total, as well as per transition method or in total, i.e. as chosen for I_Disclosures_Master. Once again, an enhancement to the solution is to make this view available for each Reporting Segment (and in total) so that one does not have to choose to see these one at a time.

For each table described below, the values from I_Disclosures_Master that are aggregated to arrive at the values for the given table's line item are referenced with a formula. The I_Disclosures_Master has been shown as a grid below to facilitate this referencing.

GMM - Master Disclosure - Insurance Contracts Issued	Liability for remaining coverage						Liability for incurred claims			Cash
	Pre-recognition cash flows	Excluding loss component			Loss component		Investment components	Claims and other expenses		
	H7	I7	J7	K7	L7	M7	N7	O7	P7	
Account code	*H8*	*I8*	*J8*	*K8*	*L8*	*M8*	*N8*	*O8*	*P8*	*Q8*
Assets	H9	I9	J9	K9	L9	M9	N9	O9	P9	Q9
Liabilities	H10	I10	J10	K10	L10	M10	N10	O10	P10	Q10
Opening	H11	I11	J11	K11	L11	M11	N11	O11	P11	Q11
Insurance revenue	H12	I12	J12	K12	L12	M12	N12	O12	P12	Q12
Premium experience variance	H13	I13	J13	K13	L13	M13	N13	O13	P13	Q13
Acquisition cash flow experience variance	H14	I14	J14	K14	L14	M14	N14	O14	P14	Q14
Expected insurance service expenses incurred	H15	I15	J15	K15	L15	M15	N15	O15	P15	Q15
Change in the risk adjustment	H16	I16	J16	K16	L16	M16	N16	O16	P16	Q16
Amount of contractual service margin recogni	H17	I17	J17	K17	L17	M17	N17	O17	P17	Q17
Allocation of the portion of premiums that rel	H18	I18	J18	K18	L18	M18	N18	O18	P18	Q18
Insurance service expenses	H19	I19	J19	K19	L19	M19	N19	O19	P19	Q19
Incurred claims and other expenses	H20	I20	J20	K20	L20	M20	N20	O20	P20	Q20
Amortisation of insurance acquisition cash flo	H21	I21	J21	K21	L21	M21	N21	O21	P21	Q21
Impairment of pre-recognition cash flows asse	H22	I22	J22	K22	L22	M22	N22	O22	P22	Q22
Reversal of impairment of pre-recognition cas	H23	I23	J23	K23	L23	M23	N23	O23	P23	Q23
Contracts initially recognised in the period	H24	I24	J24	K24	L24	M24	N24	O24	P24	Q24
Contracts issued	H25	I25	J25	K25	L25	M25	N25	O25	P25	Q25
Non-onerous	H26	I26	J26	K26	L26	M26	N26	O26	P26	Q26
Estimates of present value	H27	I27	J27	K27	L27	M27	N27	O27	P27	Q27
Estimates of insurance acc	H28	I28	J28	K28	L28	M28	N28	O28	P28	Q28
Transfer of pre-recognitio	H29	I29	J29	K29	L29	M29	N29	O29	P29	Q29
Estimates of present value	H30	I30	J30	K30	L30	M30	N30	O30	P30	Q30
Risk adjustment	H31	I31	J31	K31	L31	M31	N31	O31	P31	Q31
Contractual service margir	H32	I32	J32	K32	L32	M32	N32	O32	P32	Q32
Onerous	H33	I33	J33	K33	L33	M33	N33	O33	P33	Q33
Estimates of present value	H34	I34	J34	K34	L34	M34	N34	O34	P34	Q34
Estimates of insurance acc	H35	I35	J35	K35	L35	M35	N35	O35	P35	Q35
Transfer of pre-recognitio	H36	I36	J36	K36	L36	M36	N36	O36	P36	Q36
Estimates of present value	H37	I37	J37	K37	L37	M37	N37	O37	P37	Q37
Risk adjustment	H38	I38	J38	K38	L38	M38	N38	O38	P38	Q38
Contractual service margir	H39	I39	J39	K39	L39	M39	N39	O39	P39	Q39
Contracts acquired	H40	I40	J40	K40	L40	M40	N40	O40	P40	Q40
Non-onerous	H41	I41	J41	K41	L41	M41	N41	O41	P41	Q41
Estimates of present value	H42	I42	J42	K42	L42	M42	N42	O42	P42	Q42
Estimates of insurance acc	H43	I43	J43	K43	L43	M43	N43	O43	P43	Q43
Transfer of pre-recognitio	H44	I44	J44	K44	L44	M44	N44	O44	P44	Q44
Estimates of present value	H45	I45	J45	K45	L45	M45	N45	O45	P45	Q45
Risk adjustment	H46	I46	J46	K46	L46	M46	N46	O46	P46	Q46
Contractual service margir	H47	I47	J47	K47	L47	M47	N47	O47	P47	Q47
Onerous	H48	I48	J48	K48	L48	M48	N48	O48	P48	Q48
Estimates of present value	H49	I49	J49	K49	L49	M49	N49	O49	P49	Q49
Estimates of insurance acc	H50	I50	J50	K50	L50	M50	N50	O50	P50	Q50
Transfer of pre-recognitio	H51	I51	J51	K51	L51	M51	N51	O51	P51	Q51
Estimates of present value	H52	I52	J52	K52	L52	M52	N52	O52	P52	Q52
Risk adjustment	H53	I53	J53	K53	L53	M53	N53	O53	P53	Q53
Contractual service margir	H54	I54	J54	K54	L54	M54	N54	O54	P54	Q54
Changes in estimates that adjust the contract	H55	I55	J55	K55	L55	M55	N55	O55	P55	Q55
Changes in estimates that do not adjust the cc	H56	I56	J56	K56	L56	M56	N56	O56	P56	Q56

Insurance service result

Current

Future

Past	Changes to liabilities for incurred claims	H57	I57	J57	K57	L57	M57	N57	O57	P57	Q57
Insurance finance expense	Insurance finance income / (expense)	H58	I58	J58	K58	L58	M58	N58	O58	P58	Q58
	Interest accreted	H59	I59	J59	K59	L59	M59	N59	O59	P59	Q59
	Effect of changes in interest rates and other f	H60	I60	J60	K60	L60	M60	N60	O60	P60	Q60
	Profit / loss	H61	I61	J61	K61	L61	M61	N61	O61	P61	Q61
	Other comprehensive income	H62	I62	J62	K62	L62	M62	N62	O62	P62	Q62
	Net foreign exchange income / (expenses)	H63	I63	J63	K63	L63	M63	N63	O63	P63	Q63
	Profit / loss	H64	I64	J64	K64	L64	M64	N64	O64	P64	Q64
	Other comprehensive income	H65	I65	J65	K65	L65	M65	N65	O65	P65	Q65
CFs/Transfers	Transfers	H66	I66	J66	K66	L66	M66	N66	O66	P66	Q66
	Transfer of investment components	H67	I67	J67	K67	L67	M67	N67	O67	P67	Q67
	Cash flows	H68	I68	J68	K68	L68	M68	N68	O68	P68	Q68
	Premiums received	H69	I69	J69	K69	L69	M69	N69	O69	P69	Q69
	Claims and other expenses paid	H70	I70	J70	K70	L70	M70	N70	O70	P70	Q70
	Investment components paid	H71	I71	J71	K71	L71	M71	N71	O71	P71	Q71
	Insurance acquisition cash flows paid	H72	I72	J72	K72	L72	M72	N72	O72	P72	Q72
	Closing	H73	I73	J73	K73	L73	M73	N73	O73	P73	Q73
		H74	I74	J74	K74	L74	M74	N74	O74	P74	Q74
	Assets	H75	I75	J75	K75	L75	M75	N75	O75	P75	Q75
	Liabilities	H76	I76	J76	K76	L76	M76	N76	O76	P76	Q76
	Closing	H77	I77	J77	K77	L77	M77	N77	O77	P77	Q77

Roll-forward of net (assets) / liabilities for insurance contracts issued showing the liability for remaining coverage and the liability for incurred claims

	Liability (asset) for pre-recognition cash flows	Liability for remaining coverage		Liability for incurred claims	Total Liability
		Excluding loss component	Loss component		
Insurance contract assets as at 2017/12/31	=SUM(I_Disclosures_Master!H9:H9)	=SUM(I_Disclosures_Master!I9:K9)	=SUM(I_Disclosures_Master!L9:M9)	=SUM(I_Disclosures_Master!N9:P9)	Sum of row
Insurance contract liabilities as at 2017/12/31	=SUM(I_Disclosures_Master!H10:H10)	=SUM(I_Disclosures_Master!I10:K10)	=SUM(I_Disclosures_Master!L10:M10)	=SUM(I_Disclosures_Master!N10:P10)	Sum of row
Net insurance contract (assets) / liabilities as at 2017/12/31	Sum above 2 items	Sum above 2 items	Sum above 2 items	Sum above 2 items	Sum of row
Insurance revenue		=SUM(I_Disclosures_Master!I13:K18)			Sum of row
Insurance service expenses					
Incurred claims and other expenses			=SUM(I_Disclosures_Master!L20:M20)	=SUM(I_Disclosures_Master!O20:P20)	Sum of row
Amortisation of insurance acquisition cash flows		=I_Disclosures_Master!I21			Sum of row
Impairment of pre-recognition cash flows asset	=I_Disclosures_Master!$H$22				Sum of row
Reversal of impairment of pre-recognition cash flows asset	=I_Disclosures_Master!$H$23				Sum of row
Losses on onerous contracts and reversals of those losses			SUM(I_Disclosures_Master!L34:M38;I_Disclosures_Master!L49:M53;I_Disclosures_Master!L56:M56)		Sum of row
Changes to liabilities for incurred claims				=SUM(I_Disclosures_Master!N57:P57)	Sum of row
Transfer of pre-recognition cash flows	SUM(I_Disclosures_Master!H29;I_Disclosures_Master!H36;I_Disclosures_Master!H44;I_Disclosures_Master!H51)	SUM(I_Disclosures_Master!K29;I_Disclosures_Master!K36;I_Disclosures_Master!K44;I_Disclosures_Master!K51)			Sum of row
Transfer of investment components		=I_Disclosures_Master!I67		=I_Disclosures_Master!N67	Sum of row
Insurance service result (ISR)	Sum above 3 values	Sum above 4 values	Sum above 2 values	Sum above 3 values	Sum of row
Interest accreted		=SUM(I_Disclosures_Master!I59:K59)	=SUM(I_Disclosures_Master!L59:M59)	=SUM(I_Disclosures_Master!O59:P59)	Sum of row
Effect of changes in interest rates and other financial assumptions		=SUM(I_Disclosures_Master!I61:K62)	=SUM(I_Disclosures_Master!L61:M62)	=SUM(I_Disclosures_Master!O61:P62)	Sum of row
Net foreign exchange income / (expenses)	=SUM(I_Disclosures_Master!H64:H65)	=SUM(I_Disclosures_Master!I64:K65)	=SUM(I_Disclosures_Master!L64:M65)	=SUM(I_Disclosures_Master!N64:P65)	Sum of row
Insurance finance income / (expense) from insurance contracts issued (IFIE)	Sum above 1 value	Sum above 3 values	Sum above 3 values	Sum above 3 values	Sum of row
Total changes in the statement of comprehensive income	ISR + IFIE	ISR + IFIE	ISR + IFIE	ISR + IFIE	Sum of row
Cash flows					
Premiums received		=I_Disclosures_Master!I69			Sum of row
Claims and other expenses paid				I_Disclosures_Master!O70+I_Disclosures_Master!N71	Sum of row
Insurance acquisition cash flows paid	=SUM(I_Disclosures_Master!H72:H72)	=SUM(I_Disclosures_Master!I72:I72)			Sum of row
Total cash flows	Sum above 1 value	Sum above 2 values	Sum above 2 values	Sum above 2 values	Sum of row
Net insurance contract (assets)/liabilities as at 2018/12/31	See description	See description	See description	See description	Sum of row
Insurance contract assets as at 2018/12/31	=SUM(I_Disclosures_Master!H75:H75)	=SUM(I_Disclosures_Master!I75:K75)	=SUM(I_Disclosures_Master!L75:M75)	=SUM(I_Disclosures_Master!N75:P75)	Sum of row
Insurance contract liabilities as at 2018/12/31	=SUM(I_Disclosures_Master!H76:H76)	=SUM(I_Disclosures_Master!I76:K76)	=SUM(I_Disclosures_Master!L76:M76)	=SUM(I_Disclosures_Master!N76:P76)	Sum of row
Net insurance contract (assets) / liabilities as at 2018/12/31	Sum above 2 values	Sum above 2 values	Sum above 2 values	Sum above 2 values	Sum of row

Description

This is the sum of **Net insurance contract (assets) / liabilities as at [Previous Reporting Date] + Total changes in the statement of comprehensive income + Total cash flows,** for that column.

Roll-forward of net (assets) / liabilities for insurance contracts issued showing the estimates of the present value of future cash flows, risk adjustment and contractual service margin

	Estimates of the present value of future cash flows (A)	Risk adjustment (B)	Contractual service margin (C)	Total Liability (D)
Insurance contract assets as at 2017/12/31	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H9:$P9))	((I_Disclosures_MBster!$H$7:$P$7=B)*(I_Disclosures_MBster!$H9:$P9))	((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H9:$P9))	Sum of row
Insurance contract liabilities as at 2017/12/31	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H10:$P10))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H10:$P10))	((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H10:$P10))	Sum of row
Net insurance contract (assets) / liabilities as at 2017/12/31	Sum above 2 items	Sum above 2 items	Sum above 2 items	Sum of row
Changes that relate to current services				
Contractual service margin recognised for current service provided			((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H$12:$P$21))	Sum of row
Risk adjustment recognised for the risk expired		((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H$12:$P$21))		Sum of row
Experience adjustments	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$12:$P$23))			Sum of row
Changes that relate to future services				
Contracts initially recognised in the period	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$24:$P$54))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H$24:$P$54))	((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H$24:$P$54))	Sum of row
Changes in estimates that adjust the contractual service margin	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$55:$P$55))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H$55:$P$55))	((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H$55:$P$55))	Sum of row
Changes in estimates that do not adjust the contractual service margin	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$56:$P$56))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H$56:$P$56))		Sum of row
Changes that relate to past services				
Adjustment to liabilities for past claims	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$57:$P$57))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H$57:$P$57))		Sum of row
Insurance service result (ISR)	Sum above 5 items	Sum above 5 items	Sum above 3 items	Sum of row
Interest accreted	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$59:$P$59))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H$59:$P$59))	((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H$59:$P$59))	Sum of row
Effect of changes in interest rates and other financial assumptions	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$60:$P$62))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H$60:$P$62))		Sum of row
Net foreign exchange income / (expenses)	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$63:$P$65))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H$63:$P$65))	((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H$63:$P$65))	Sum of row
Insurance finance income / (expense) from insurance contracts issued (IFIE	Sum above 3 items	Sum above 3 items	Sum above 2 items	Sum of row
Total changes in the statement of comprehensive income	ISR + IFIE	ISR + IFIE	ISR + IFIE	Sum of row
Cash flows				
Premiums received	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H69:$P69))			Sum of row
Claims and other expenses paid	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H70:$P71))			Sum of row
Insurance acquisition cash flows paid	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H72:$P72))			Sum of row
Total cash flows	Sum above 3 items			Sum of row
Net insurance contract (assets)/liabilities as at 2018/12/31	See description	See description	See description	Sum of row
Insurance contract assets as at 2018/12/31	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H75:$P75))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H75:$P75))	((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H75:$P75))	Sum of row
Insurance contract liabilities as at 2018/12/31	((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H76:$P76))	((I_Disclosures_Master!$H$7:$P$7=B)*(I_Disclosures_Master!$H76:$P76))	((I_Disclosures_Master!$H$7:$P$7=C)*(I_Disclosures_Master!$H76:$P76))	Sum of row
Net insurance contract (assets) / liabilities as at 2018/12/31	Sum above 2 items	Sum above 2 items	Sum above 2 items	Sum of row

The above is interpreted as follows:

For example where the formula reads **((I_Disclosures_Master!$H$7:$P$7=A)*(I_Disclosures_Master!$H$12:$P$23)),** this takes the sum of all values in I_Disclosures_Master in the range H12 to P23, where the column headings (in row 7) in the I_Disclosures_Master = "Estimates of the present value of future cash flows"

Description

This is the sum of **Net insurance contract (assets) / liabilities as at [Previous Reporting Date] + Total changes in the statement of comprehensive income + Total cash flows,** for that column.

Insurance Revenue

	2018/12/31
Amounts relating to the changes in the liability for remaining coverage	
Experience adjustments for premum receipts	=- SUM(I_Disclosures_Master!I13:I14)
Expected insurance service expenses incurred in the period	= SUM(I_Disclosures_Master!I15)
Change in the risk adjustment for non-financial risk	= I_Disclosures_Master!J16
Amount of contractual service margin recognised in profit or loss	=- I_Disclosures_Master!K17
Amounts relating to the recovery of insurance acquisition cash flows	
Allocation of the portion of premiums that relate to the recovery of insuranc	=- I_Disclosures_Master!I18
Insurance revenue	Sum of all above items

Effect on the statement of financial position of insurance contracts issued that are initially recognised in the period

	Contracts issued		Contracts acquired		Total
	Non-onerous	Onerous	Non-onerous	Onerous	
Account Code					
Insurance contract liabilities					
Estimates of present value of future cash outflows, excluding insurance acquisition cash flows	I_Disclosures_MasterII27	I_Disclosures_MasterII34+I_Disclosures_MasterIL34	I_Disclosures_MasterII42	I_Disclosures_MasterII49+I_Disclosures_MasterIL49	Sum of row
Estimates of insurance acquisition cash flows	=I_Disclosures_MasterII28+I_Disclosures_MasterIH29	=I_Disclosures_MasterII35+I_Disclosures_MasterIH36	=I_Disclosures_MasterII43+I_Disclosures_MasterIH44	=I_Disclosures_MasterII50+I_Disclosures_MasterIH51	Sum of row
Estimates of present value of future cash outflows	**Sum of Above 2 items**	**Sum of Above 2 items**	**Sum of Above 2 items**	**Sum of Above 2 items**	**Sum of row**
Estimates of present value of future cash inflows	=I_Disclosures_MasterII30	=I_Disclosures_MasterII37	=I_Disclosures_MasterII45	=I_Disclosures_MasterII52	Sum of row
Risk adjustment	=I_Disclosures_MasterIJ31	=I_Disclosures_MasterIJ38+I_Disclosures_MasterIM38	=I_Disclosures_MasterIJ46	=I_Disclosures_MasterIJ53+I_Disclosures_MasterIM53	Sum of row
Contractual service margin	=I_Disclosures_MasterIK29+I_Disclosures_MasterIK32		=I_Disclosures_MasterIK44+I_Disclosures_MasterIK47		Sum of row
Amount included in insurance contract liabilities for the period	**Sum of Above 4 items**	**Sum of Above 3 items**	**Sum of Above 4 items**	**Sum of Above 3 items**	**Sum of row**

Insurance finance income / (expense) for insurance contracts issued

	2018/12/31
Insurance finance income / (expenses) from insurance contracts issued	
Interest accreted	=- SUM(I_Disclosures_Master!I59:P59)
Effect of changes in interest rates and other financial assumptions	=- SUM(I_Disclosures_Master!I61:P62)
Net foreign exchange income / (expenses)	=- SUM(I_Disclosures_Master!H64:P65)
Total insurance finance income / (expenses) from insurance contracts issued	Sum of Above 3 items
Amounts recognised in profit or loss	=- SUM(I_Disclosures_Master!I59:P59;I_Disclosures_Master!I61:P61;I_Disclosures_Master!I64:P64)
Amounts recognised in OCI	=- SUM(I_Disclosures_Master!I62:P62;I_Disclosures_Master!I65:P65)

The expected timing of when assets for insurance acquisition cash flows will be derecognised and included in the measurement of the group of insurance contracts to which they are allocated

	2018						
	Up to 1 year	1-2 years	2-3 years	3-4 years	4-5 years	>5 years	Total
Expected timing of derecognition of assets balance as at 2018/12/31	Reference PRCF Asset release amount at Reporting Period 1 (from I_Disclosures_Master)	Reference PRCF Asset release amount at Reporting Period 2 (from I_Disclosures_Master)	Reference PRCF Asset release amount at Reporting Period 3 (from I_Disclosures_Master)	Reference PRCF Asset release amount at Reporting Period 4 (from I_Disclosures_Master)	Reference PRCF Asset release amount at Reporting Period 5 (from I_Disclosures_Master)	Sum of PRCF Asset release amount for reporting periods > 5 (from I_Disclosures_Master)	Sum of row

2.2.6.3 Reinsurance Master Disclosure

The subledger and trial balance items that relate to reinsurance contracts are first summarized in a matrix that relates all Statement of Comprehensive Income accounts to the relevant Statement of Financial Position accounts affected by their movements. All accounts involved in movements in each financial statement line item (i.e. most granular level of accounts) are summarized here. Essentially, this part of the process builds up the IFRS 17 reinsurance disclosures at a line item level, from the subledger and trial balance.

The release of the CSM in each future reporting period is listed.

The user is able to choose whether to view these accounts per Reinsurance Reporting Segment or in total (i.e. across all Reporting Segments), as input in the Setup. An enhancement to the solution is to make this view available for each Reporting Segment (and in total) so that one does not have to choose to see these one at a time.

The table below lists the matrix of all IFRS 17 accounts (i.e. each debit/credit combination) that relates movements in all IFRS 17 SoFP line items to SoCI line items for reinsurance:

GMM - Master Disclosure - Reinsurance Contracts Held		Account code	Asset for remaining coverage					Amounts recoverable on incurred claims			Cash
			Pre-recognition cash flows	Excluding loss-recovery component			Loss-recovery component	Investment components	Recoveries		
			Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Risk adjustment	Contractual service margin	Contractual service margin	Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Risk adjustment	
Assets			1313100	1311100	1311200	1311310	1312110	1322100	1321100	1321200	
Liabilities			1313100	1311100	1311200	1311310	1312110	1322100	1321100	1321200	
Opening			Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	
Reinsurance service result											
Allocation of reinsurance premiums											
Premium experience variance	Current	2211000		(2211000; 1311100)							
Expected recovery on insurance service expenses incurred in the period	Current	2212000		(2212000; 1311100)							
Change in the risk adjustment	Current	2213000			(2213000; 1311200)						
Net cost/gain recognised in profit or loss	Current	2214000				(2214000; 1311310)					
Contracts initially recognised in the period	Future										
Contracts purchased	Future										
Estimates of present value of future cash outflows	Future	2215110		(2215110; 1311100)							
Transfer of pre-recognition cash flows	Future	3321000	(3321000; 1313100)			(3321000; 1311310)					
Estimates of present value of future cash inflows	Future	2215120		(2215120; 1311100)							
Risk adjustment	Future	2215130			(2215130; 1311200)						
Contractual service margin	Future	2215140				(2215140; 1311310)					
Contracts acquired	Future										
Estimates of present value of future cash outflows	Future	2215210		(2215210; 1311100)							
Transfer of pre-recognition cash flows	Future	3322000	(3322000; 1313100)			(3322000; 1311310)					
Estimates of present value of future cash inflows	Future	2215220		(2215220; 1311100)							
Risk adjustment	Future	2215230			(2215230; 1311200)						
Contractual service margin	Future	2215240				(2215240; 1311310)					
Amounts recoverable from reinsurers											
Amounts recoverable for claims and other expenses incurred	Past	2221000							(2221000; 1321100)	(2221000; 1321200)	
Changes in estimates that adjust the contractual service margin	Past	2222000		(2222000; 1311100)	(2222000; 1311200)	(2222000; 1311310)					
Impairment of Pre-Recognition Cash Flows Liability	Past	2223000					(2223000; 1312110)				
Reversal of Impairment of Pre-Recognition Cash Flows Liability	Past	2224000					(2224000; 1312110)				
Loss Recovery	Past										
Loss Recovery related to onerous underlying contracts at initial measurement	Past	2226000		(2226000; 1311100)	(2226000; 1311200)	(2226000; 1311310)	(2226000; 1312110)				
Recognition and recovery of loss-recovery component	Past	2225000		(2225000; 1311100)	(2225000; 1311200)	(2225000; 1311310)	(2225000; 1312110)				
Changes in amounts recoverable arising from changes in liability for incurred claims	Past	2227000						(2224000; 1322100)	(2224000; 1321100)	(2224000; 1321200)	
Reinsurance finance expense											
Reinsurance finance income / (expense)											
Interest accreted		2410000		(2410000; 1311100)	(2410000; 1311200)	(2410000; 1311310)	(2410000; 1312110)		(2410000; 1321100)	(2410000; 1321200)	
Effect of changes in interest rates and other financial assumptions											
Profit / loss		2421000		(2421000; 1311100)	(2421000; 1311200)				(2421000; 1321100)	(2421000; 1321200)	
Other comprehensive income		2422000		(2422000; 1311100)	(2422000; 1311200)				(2422000; 1321100)	(2422000; 1321200)	
Effect of changes in the risk of non-performance by reinsurers		2430000		(2430000; 1311100)	(2430000; 1311200)				(2430000; 1321100)	(2430000; 1321200)	
Net foreign exchange income / (expenses)											
Profit / loss		2441000	(2441000; 1313100)	(2441000; 1311100)	(2441000; 1311200)	(2441000; 1311310)	(2441000; 1312110)	(2441000; 1322100)	(2441000; 1321100)	(2441000; 1321200)	
Other comprehensive income		2442000	(2442000; 1313100)	(2442000; 1311100)	(2442000; 1311200)	(2442000; 1311310)	(2442000; 1312110)	(2442000; 1322100)	(2442000; 1321100)	(2442000; 1321200)	
CFs/Transfers											
Transfers											
Transfer of reinsurance investment components		3310000		(3310000; 1311100)				(3310000; 1322100)			
Cash flows											
Premiums paid		3121000	(3121000; 1313100)	(3121000; 1311100)							(3121000; 1100000)
Amounts received		3122000							(3122000; 1321100)		(3122000; 1100000)
Reinsurance investment components received		3123000						(3123000; 1322100)			(3123000; 1100000)
Closing			Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	Sum above from "Opening"	
Assets			1313100	1311100	1311200	1311310	1312110	1322100	1321100	1321200	
Liabilities			1313100	1311100	1311200	1311310	1312110	1322100	1321100	1321200	
Closing			Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	Sum above two figures	

The above is interpreted as follows:

- Line items running downwards (i.e. on the left side) are SoCI accounts, while items running across (i.e. at the top) are SoFP accounts. Each is associated with its own account number (as described in section 2.2.5 and noted in the appendix)
- The matrix entries (x; y) represent the amount relating to the IFRS 17 line item, where x is the credit account and y is the debit account, aggregated at the chosen level of reporting. These are obtained from the Subledger. Note that certain cashflows have opposite debit and credit codes depending on the nature of the cashflow which

result in a negative cashflow. This have been highlighted in red in the above table.

- For example, if viewing disclosures for [ri Segment 1] (as input in Setup), the value represented by (x; y) would be the sum across the "Amount" column in the Subledger in all instances where the following conditions are met:
  - The "Reporting Segment" column = [ri Segment 1]
  - The "Dr Account Code" column = y
  - The "Cr Account Code" column = x
  - The "Date" column = [Reporting Date – Current] as input in Setup
- If viewing disclosures at the Total level, all except the first of the above conditions would apply.
- The opening and closing ARC and ARIC Asset/Liability balances are also disclosed and indicated with a single account number above (since these are balances) and are obtained from the Trial Balance.
- For example, if viewing disclosures for [ri Segment 1] (as input in Setup), the opening/closing balance value, z, would be the sum across the "Amount" column in the Trial Balance in all instances where the following conditions are met:
  - The "Reporting Segment" column = [ri Segment 1]
  - The "Account Code" column = z
  - The "Asset/Liability" column = "Asset" (for the opening/closing Assets balance); "Liability" (for the opening/closing Liabilities balance) as appropriate for the row
  - The "Date" column = [Reporting Date – Previous] (for the opening balances); [Reporting Date – Current] (for the closing balances), as input in Setup
  - Note that for the opening and closing Liability balances, this sum must be multiplied by -1.
- If viewing disclosures at the Total level, all except the first of the above conditions would apply.
- The total opening balances are obtained by summing across the Assets/Liabilities opening balances as indicated above (total closing balances are obtained in a similar way)

The image below gives an example of the what reinsurance master disclosures output could look like:

GMM – Master Disclosure – Reinsurance Contracts Held		Account code	Asset for remaining coverage					Amounts recoverable on incurred claims			Cash
			Pre-recognition cash flows	Excluding loss-recovery component			Loss-recovery component	Investment components	Recoveries		
			Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Risk adjustment	Contractual service margin	Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Estimates of the present value of future cash flows	Risk adjustment	
	Assets		-	-	-	-	-	-	-	-	
	Liabilities		(100.00)	66.55	(15.53)	50.00	-	-	(98.80)	(4.94)	
	Opening		(100.00)	66.55	(15.53)	50.00	-	-	(98.80)	(4.94)	
Reinsurance service result	Allocation of reinsurance premiums										
Current	Premium experience variance	2211000		(105.00)							
Current	Expected recovery on insurance service expenses incurred in the period	2212000		145.02							
Current	Change in the risk adjustment	2213000			7.71						
Current	Net cost/gain recognised in profit or loss	2214000				(51.07)					
Future	Contracts initially recognised in the period										
Future	Contracts purchased										
Future	Estimates of present value of future cash outflows	2215110		450.00							
Future	Transfer of liability for pre-recognition cash flows	3321000	-			-					
Future	Estimates of present value of future cash inflows	2215120		(472.42)							
Future	Risk adjustment	2215130			(23.62)						
Future	Contractual service margin	2215140				46.04					
Future	Contracts acquired										
Future	Estimates of present value of future cash outflows	2215210		78.02							
Future	Transfer of liability for pre-recognition cash flows	3322000	-			-					
Future	Estimates of present value of future cash inflows	2215220		(371.02)							
Future	Risk adjustment	2215230			(18.55)						
Future	Contractual service margin	2215240				311.55					
	Amounts recoverable from reinsurers										
	Amounts recoverable for claims and other expenses incurred	2221000					9.24		(22.43)	(2.37)	
	Changes in estimates that adjust the contractual service margin	2222000		(69.17)	(0.05)	348.92					
	Impairment of Pre-Recognition Cash Flows Liability	2223000	2.00								
	Reversal of Impairment of Pre-Recognition Cash Flows Liability	2224000	(10.00)								
	Loss Recovery										
	Loss Recovery related to onerous underlying contracts at initial measurement	2226000		315.65	-	(315.65)	(315.65)				
	Recognition and recovery of loss-recovery component	2225000		-	-	-	(7.23)				
Past	Changes in amounts recoverable arising from changes in liabilities for incurred claims	2227000						-	95.00	2.34	
Reinsurance finance expense	Reinsurance finance income / (expense)										
	Interest accreted	2410000		(10.75)	(1.94)	4.25	(3.22)		(3.83)	(0.19)	
	Effect of changes in interest rates and other financial assumptions										
	Profit / loss	2421000		(18.40)	1.15		27.68		3.80	0.19	
	Other comprehensive income	2422000		-	-		-		-	-	
	Effect of changes in the risk of non-performance by reinsurers	2430000		0.92	0.05		-		0.93	(0.05)	
	Net foreign exchange income / (expenses)										
	Profit / loss	2441000	-	0.00	13.98	(293.67)	-	-	-	-	
	Other comprehensive income	2442000	-	-	-	-	-	-	-	-	
CFs/Transfers	Transfers										
	Transfer of reinsurance investment components	3310000		-				-			
	Cash flows										
	Premiums paid	3121000	(45.00)	(85.00)							130.00
	Amounts received	3122000							(75.00)		75.00
	Reinsurance investment components received	3123000						-			-
	Closing		(153.00)	(75.61)	(36.80)	100.36	(295.19)	-	(100.33)	(5.02)	
	Assets		-	58.63	(12.22)	40.16	(5.17)	-	(68.54)	(3.43)	
	Liabilities		(153.00)	(134.24)	(24.58)	60.20	(290.02)	-	(31.78)	(1.59)	
	Closing		(153.00)	(75.61)	(36.80)	100.36	(295.19)	-	(100.33)	(5.02)	

Reinsurance CSM release

This section lists the reinsurance CSM released in each future reporting period as follows:

Reporting Period		CSM release
Reporting Period 1	1	Sum across Amount column of CSM Release module (described in 2.2.5.3), where Reporting Segment = [ri Reporting segment x], Insurance/Reinsurance = “Reinsurance”

		Reporting Period = 1
Reporting Period 2	2	Sum across Amount column of CSM Release module (described in 2.2.5.3), where Reporting Segment = [ri Reporting segment x], Insurance/Reinsurance = “Reinsurance” Reporting Period = 2
Reporting Period 3	3	Sum across Amount column of CSM Release module (described in 2.2.5.3), where Reporting Segment = [ri Reporting segment x], Insurance/Reinsurance = “Reinsurance” Reporting Period = 3
Reporting Period 4	4	Sum across Amount column of CSM Release module (described in 2.2.5.3), where Reporting Segment = [ri Reporting segment x], Insurance/Reinsurance = “Reinsurance” Reporting Period = 4
…	…	…

2.2.6.4 Reinsurance Disclosures (R_Disclosures)

The items in R_Disclosures_Master are summarised into various different disclosure tables that are consistent with IFRS 17 reporting. These tables isolate and aggregate the granular IFRS 17 accounts into understandable disclosures that are viewed by the user.

The user will view these disclosures per reinsurance Reporting Segment or in total i.e. as chosen for R_Disclosures_Master. Once again, an enhancement to the solution is to make this view available for each Reporting Segment (and in total) so that one does not have to choose to see these one at a time.

For each table described below, the values from R_Disclosures_Master that are aggregated to arrive at the values for the given table's line item are referenced with a formula. The R_Disclosures_Master has been shown as a grid below to facilitate this referencing.

		GMM - Master Disclosure - Reinsurance Contracts Held	Account code	Asset for remaining coverage					Amounts recoverable on incurred claims			Cash
				Pre-recognition cash flows	Excluding loss-recovery component			Loss-recovery component	Investment components	Recoveries		
				H4	I4	J4	K4	L4	M4	N4	O4	
		Assets		H5	I5	J5	K5	L5	M5	N5	O5	P5
		Liabilities		H6	I6	J6	K6	L6	M6	N6	O6	P6
		Opening		H7	I7	J7	K7	L7	M7	N7	O7	P7
Reinsurance service result		Allocation of reinsurance premiums		H8	I8	J8	K8	L8	M8	N8	O8	P8
Reinsurance service result	Current	Premium experience variance	2211000	H9	I9	J9	K9	L9	M9	N9	O9	P9
Reinsurance service result	Current	Expected recovery on insurance service expenses incurred in the period	2212000	H10	I10	J10	K10	L10	M10	N10	O10	P10
Reinsurance service result	Current	Change in the risk adjustment	2213000	H11	I11	J11	K11	L11	M11	N11	O11	P11
Reinsurance service result	Current	Net cost/gain recognised in profit or loss	2214000	H12	I12	J12	K12	L12	M12	N12	O12	P12
Reinsurance service result	Future	Contracts initially recognised in the period		H13	I13	J13	K13	L13	M13	N13	O13	P13
Reinsurance service result	Future	Contracts purchased		H14	I14	J14	K14	L14	M14	N14	O14	P14
Reinsurance service result	Future	Estimates of present value of future cash outflows	2215110	H15	I15	J15	K15	L15	M15	N15	O15	P15
Reinsurance service result	Future	Transfer of pre-recognition cash flows	3222200	H16	I16	J16	K16	L16	M16	N16	O16	P16
Reinsurance service result	Future	Estimates of present value of future cash inflows	2215120	H17	I17	J17	K17	L17	M17	N17	O17	P17
Reinsurance service result	Future	Risk adjustment	2215130	H18	I18	J18	K18	L18	M18	N18	O18	P18
Reinsurance service result	Future	Contractual service margin	2215140	H19	I19	J19	K19	L19	M19	N19	O19	P19
Reinsurance service result	Future	Contracts acquired		H20	I20	J20	K20	L20	M20	N20	O20	P20
Reinsurance service result	Future	Estimates of present value of future cash outflows	2215210	H21	I21	J21	K21	L21	M21	N21	O21	P21
Reinsurance service result	Future	Transfer of pre-recognition cash flows	3310000	H22	I22	J22	K22	L22	M22	N22	O22	P22
Reinsurance service result	Future	Estimates of present value of future cash inflows	2215220	H23	I23	J23	K23	L23	M23	N23	O23	P23
Reinsurance service result	Future	Risk adjustment	2215230	H24	I24	J24	K24	L24	M24	N24	O24	P24
Reinsurance service result	Future	Contractual service margin	2215240	H25	I25	J25	K25	L25	M25	N25	O25	P25
Reinsurance service result		Amounts recoverable from reinsurers		H26	I26	J26	K26	L26	M26	N26	O26	P26
Reinsurance service result		Amounts recoverable for claims and other expenses incurred	2221000	H27	I27	J27	K27	L27	M27	N27	O27	P27
Reinsurance service result		Impairment of Pre-Recognition Cash Flows Liability	2223000	H28	I28	J28	K28	L28	M28	N28	O28	P28
Reinsurance service result		Reversal of Impairment of Pre-Recognition Cash Flows Liability	2224000	H29	I29	J29	K29	L29	M29	N29	O29	P29
Reinsurance service result		Changes in estimates that adjust the contractual service margin	2222000	H30	I30	J30	K30	L30	M30	N30	O30	P30
Reinsurance service result		Loss Recovery		H31	I31	J31	K31	L31	M31	N31	O31	P31
Reinsurance service result		Loss Recovery related to onerous underlying contracts at initial measurement	2224000	H32	I32	J32	K32	L32	M32	N32	O32	P32
Reinsurance service result		Recognition and recovery of loss-recovery component	2223000	H33	I33	J33	K33	L33	M33	N33	O33	P33
Reinsurance service result	Past	Changes in amounts recoverable arising from changes in liability for incurred claims	2225000	H34	I34	J34	K34	L34	M34	N34	O34	P34
Reinsurance finance expense		Reinsurance finance income / (expense)		H35	I35	J35	K35	L35	M35	N35	O35	P35
Reinsurance finance expense		Interest accreted	2331000	H36	I36	J36	K36	L36	M36	N36	O36	P36
Reinsurance finance expense		Effect of changes in interest rates and other financial assumptions		H37	I37	J37	K37	L37	M37	N37	O37	P37
Reinsurance finance expense		Profit / loss	2332000	H38	I38	J38	K38	L38	M38	N38	O38	P38
Reinsurance finance expense		Other comprehensive income	2410000	H39	I39	J39	K39	L39	M39	N39	O39	P39
Reinsurance finance expense		Effect of changes in the risk of non-performance by reinsurers	2421000	H40	I40	J40	K40	L40	M40	N40	O40	P40
Reinsurance finance expense		Net foreign exchange income / (expenses)		H41	I41	J41	K41	L41	M41	N41	O41	P41
Reinsurance finance expense		Profit / loss	2422000	H42	I42	J42	K42	L42	M42	N42	O42	P42
Reinsurance finance expense		Other comprehensive income	2430000	H43	I43	J43	K43	L43	M43	N43	O43	P43
CFs/Transfers		Transfers		H44	I44	J44	K44	L44	M44	N44	O44	P44
CFs/Transfers		Transfer of reinsurance investment components	3222100	H45	I45	J45	K45	L45	M45	N45	O45	P45
CFs/Transfers		Cash flows		H46	I46	J46	K46	L46	M46	N46	O46	P46
CFs/Transfers		Premiums paid	3113000	H47	I47	J47	K47	L47	M47	N47	O47	P47
CFs/Transfers		Amounts received	3114000	H48	I48	J48	K48	L48	M48	N48	O48	P48
CFs/Transfers		Reinsurance investment components received	3121000	H49	I49	J49	K49	L49	M49	N49	O49	P49
		Closing		H50	I50	J50	K50	L50	M50	N50	O50	P50
				H51	I51	J51	K51	L51	M51	N51	O51	P51
		Assets		H52	I52	J52	K52	L52	M52	N52	O52	P52
		Liabilities		H53	I53	J53	K53	L53	M53	N53	O53	P53
		Closing		H54	I54	J54	K54	L54	M54	N54	O54	P54

Roll-forward of net assets / (liabilities) for reinsurance contracts held showing the asset for remaining coverage and the amounts recoverable on incurred claims

	Asset (liability) for pre-recognition cash flows	Asset for remaining coverage		Amounts recoverable on incurred claims	Total Asset
		Excluding loss-recovery component	Loss-recovery component		
Reinsurance contract assets as at 2017/12/31	=SUM(R_Disclosures_Master!H6:H6)	=SUM(R_Disclosures_Master!I6:K6)	=SUM(R_Disclosures_Master!L6:L6)	=SUM(R_Disclosures_Master!M6:O6)	Sum of row
Reinsurance contract liabilities as at 2017/12/31	=SUM(R_Disclosures_Master!H7:H7)	=SUM(R_Disclosures_Master!I7:K7)	=SUM(R_Disclosures_Master!L7:L7)	=SUM(R_Disclosures_Master!M7:O7)	Sum of row
Net reinsurance contract assets / (liabilities) as at 2017/12/31	Sum above two items	Sum above two items	Sum above two items	Sum above two items	Sum of row
Allocation of reinsurance premiums		=SUM(R_Disclosures_Master!H10:K26)			Sum of row
Amounts recoverable from reinsurers					Sum of row
Amounts recoverable for claims and other expenses incurred in the period			=R_Disclosures_Master!L28	=SUM(R_Disclosures_Master!N28:O28)	Sum of row
Adjustments for onerous underlying contracts			=R_Disclosures_Master!L33		Sum of row
Recognition and recovery of loss-recovery component			=R_Disclosures_Master!L34		Sum of row
Impairment and Reversal of Impairment of Pre-Recognition Cash Flows Liability	=SUM(R_Disclosures_Master!H30,R_Disclosures_Master!H31)				
Changes in amounts recoverable arising from changes in liability for incurred claims				=SUM(R_Disclosures_Master!M35:O35)	Sum of row
Transfer of pre-recognition cash flows	=SUM(R_Disclosures_Master!H17,R_Disclosures_Master!H23)	=SUM(R_Disclosures_Master!K17,R_Disclosures_Master!K23)			Sum of row
Transfer of reinsurance investment components		=R_Disclosures_Master!I46		=R_Disclosures_Master!M46	Sum of row
Net income / (expense) from reinsurance contracts held	Sum above one item	Sum above two items	Sum above three items	Sum above three items	Sum of row
Interest accreted		=SUM(R_Disclosures_Master!I37:K37)	=SUM(R_Disclosures_Master!L37:L37)	=SUM(R_Disclosures_Master!N37:O37)	Sum of row
Effect of changes in interest rates and other financial assumptions		=SUM(R_Disclosures_Master!I39:K40)	=SUM(R_Disclosures_Master!L39:L40)	=SUM(R_Disclosures_Master!N39:O40)	Sum of row
Effect of changes in the risk of non-performance by reinsurers		=SUM(R_Disclosures_Master!I41:K41)		=SUM(R_Disclosures_Master!N41:O41)	Sum of row
Net foreign exchange income / (expenses)	=SUM(R_Disclosures_Master!H43:H44)	=SUM(R_Disclosures_Master!I43:K44)	=SUM(R_Disclosures_Master!L43:L44)	=SUM(R_Disclosures_Master!N43:O44)	Sum of row
Reinsurance finance income / (expense) from reinsurance contracts held	Sum above one item	Sum above four items	Sum above three items	Sum above four items	Sum of row
Total changes in the statement of comprehensive income	RSR+RFIE	RSR+RFIE	RSR+RFIE	RSR+RFIE	Sum of row
Cash flows					Sum of row
Premiums paid	=SUM(R_Disclosures_Master!H48:H48)	=SUM(R_Disclosures_Master!I48:I48)			Sum of row
Amounts received				=SUM(R_Disclosures_Master!M49:N50)	Sum of row
Total cash flows	Sum above one item	Sum above one item		Sum above one item	Sum of row
Net reinsurance contract assets / (liabilities) as at 2018/12/31	See description	See description	See description	See description	Sum of row
Reinsurance contract assets as at 2018/12/31	=SUM(R_Disclosures_Master!H53:H53)	=SUM(R_Disclosures_Master!I53:K53)	=SUM(R_Disclosures_Master!L53:L53)	=SUM(R_Disclosures_Master!M53:O53)	Sum of row
Reinsurance contract liabilities as at 2018/12/31	=SUM(R_Disclosures_Master!H54:H54)	=SUM(R_Disclosures_Master!I54:K54)	=SUM(R_Disclosures_Master!L54:L54)	=SUM(R_Disclosures_Master!M54:O54)	Sum of row
Net reinsurance contract assets/(liabilities) as at 2018/12/31	Sum above two items	Sum above two items	Sum above two items	Sum above two items	Sum of row

Description

This is the sum of **Net reinsurance contract (assets) / liabilities as at [Previous Reporting Date] + Total changes in the statement of comprehensive income + Total cash flows,** for that column.

Roll-forward of net assets / (liabilities) for reinsurance contracts held showing the estimates of the present value of future cash flows, risk adjustment and contractual service margin

	Estimates of the present value of future cash flows (A)	Risk adjustment (B)	Contractual service margin (C)	Total Asset
Reinsurance contract assets as at 2017/12/31	**((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H6**	**((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H6:$O6))**	**((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H6:$O6))**	**Sum of row**
Reinsurance contract liabilities as at 2017/12/31	**((R_Disclosures_Master!$H$4:$O$4=A))*(R_Disclosures_Master!$H**	**((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H7:$O7))**	**((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H7:$O7))**	**Sum of row**
Net reinsurance contract assets / (liabilities) as at 2017/12/31	**Sum above two items**	**Sum above two items**	**Sum above two items**	**Sum above two items**
Changes that relate to current services				Sum of row
Contractual service margin recognised for current service received			((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H$28:$O$28))+((R_Disclosures_Master!$H$4:$O$4=E$34)*(R_Disclosures_Master!$H$28:$O$28))	Sum of row
Risk adjustment recognised for the risk expired		((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H$28:$O$28))+((R_Disclosures_Master!$H$4:$O$4=D$34)*(R_Disclosures_Master!$H$28:$O$28))		Sum of row
Experience adjustments	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$28:$O$28))+((R_Disclosures_Master!$H$4:$O$4=C$34)*(R_Disclosures_Master!$H$28:$O$28))			Sum of row
Changes that relate to future services				Sum of row
Contracts initially recognised in the period	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$16:$O$26))	((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H$16:$O$26))	((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H$16:$O$26))	Sum of row
Changes in estimates that adjust the contractual service margin	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$29:$O$29))	((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H$29:$O$29))	((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H$29:$O$29))	Sum of row
Adjustments for onerous underlying contracts			((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H$31:$O$31))	Sum of row
Recognition and recovery of loss-recovery component	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$32:$O$32))			Sum of row
Changes that relate to past services				Sum of row
Changes in amounts recoverable arising from changes in the liability for incurred clair	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$33:$O$33))	((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H$33:$O$33))		Sum of row
Net income / (expense) from reinsurance contracts held	**Sum above four items**	**Sum above four items**	**Sum above four items**	**Sum of row**
Interest accreted	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$35:$O$35))	((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H$35:$O$35))	((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H$35:$O$35))	Sum of row
Effect of changes in interest rates and other financial assumptions	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$37:$O$38))	((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H$37:$O$38))		Sum of row
Effect of changes in the risk of non-performance by reinsurers	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$39:$O$39))	((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H$39:$O$39))		Sum of row
Net foreign exchange income / (expenses)	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$41:$O$42))	((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H$41:$O$42))	((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H$41:$O$42))	Sum of row
Reinsurance finance income / (expense) from reinsurance contracts held	**Sum above four items**	**Sum above four items**	**Sum above two items**	**Sum of row**
Total changes in the statement of comprehensive income	**RSR+RFIE**	**RSR+RFIE**	**RSR+RFIE**	**Sum of row**
Cash flows				**Sum of row**
Premiums paid	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$46:$O$46))			Sum of row
Amounts received	((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$47:$O$48))			Sum of row
Total cash flows	**Sum above two items**			**Sum of row**
Net reinsurance contract assets / (liabilities) as at 2018/12/31	**See Description**	**See Description**	**See Description**	**Sum of row**
Reinsurance contract assets as at 2018/12/31	**((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H5**	**((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H51:$O51))**	**((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H51:$O51))**	**Sum of row**
Reinsurance contract liabilities as at 2018/12/31	**((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H5**	**((R_Disclosures_Master!$H$4:$O$4=B)*(R_Disclosures_Master!$H52:$O52))**	**((R_Disclosures_Master!$H$4:$O$4=C)*(R_Disclosures_Master!$H52:$O52))**	**Sum of row**
Net reinsurance contract assets/(liabilities) as at 2018/12/31	**Sum above two items**	**Sum above two items**	**Sum above two items**	**Sum of row**

The above is interpreted as follows:

For example where the formula reads **((R_Disclosures_Master!$H$4:$O$4=A)*(R_Disclosures_Master!$H$10:$O$13)),** this takes the sum of all values in R_Disclosures_Master in the range H10 to O13, where the column headings (in row 4) in the R_Disclosures_Master = “Estimates of the present value of future cash flows”

Description

This is the sum of **Net reinsurance contract assets / (liabilities) as at [Previous Reporting Date] + Total changes in the statement of comprehensive income + Total cash flows,** for that column.

Net income or expense from reinsurance contracts held

	2018/12/31
Account Code	
Amounts relating to the changes in the asset for remaining coverage	
Experience adjustments for premium payments	=-R_Disclosures_Master!I10
Expected recovery on insurance service expenses incurred in the period	=-R_Disclosures_Master!I11
Change in the risk adjustment for non-financial risk	=-R_Disclosures_Master!J12
Net cost/gain recognised in profit or loss	=-R_Disclosures_Master!K13
Cost of retroactive cover on reinsurance contracts held	=SUM(R_Disclosures_Master!$H$16:$K$26)
Allocation of reinsurance premiums	**Sum above 5 items**
Amounts recoverable for claims and other expenses incurred in the period	=-SUM(R_Disclosures_Master!$L$28:$O$28)
Changes in amounts recoverable arising from changes in liability for incurred claims	=-SUM(R_Disclosures_Master!$M$35:$O$35)
Adjustments for onerous underlying contracts	=-R_Disclosures_Master!$L$33
Impairment and Reversal of Impairment of Pre-Recognition Cash Flows Liability	=-SUM(R_Disclosures_Master!H30:H31)
Recognition and recovery of loss-recovery component	=-R_Disclosures_Master!L34
Amounts recoverable from reinsurers	**Sum above 5 items**
Net income / (expense) from reinsurance contracts held	**Allocation of reinsurance premiums + Amounts recoverable from reinsurers**

Effect on the statement of financial position of reinsurance contracts held that are initially recognised in the period

	Contracts purchased	Contracts acquired	Total
Account Code			
Reinsurance contract assets			
Estimates of present value of future cash outflows	=R_Disclosures_Master!I16	=R_Disclosures_Master!I22	Sum of row
Estimates of present value of future cash inflows	=SUM(R_Disclosures_Master!H17;R_Disclosures_Master!I18)	=SUM(R_Disclosures_Master!H23;R_Disclosures_Master!I24)	Sum of row
Risk adjustment	=R_Disclosures_Master!J19	=R_Disclosures_Master!J25	Sum of row
Contractual service margin	=SUM(R_Disclosures_Master!K17;R_Disclosures_Master!K20)	=SUM(R_Disclosures_Master!K23;R_Disclosures_Master!K26)	Sum of row
Amount included in reinsurance contract assets for the period	Sum above 4 items	Sum above 4 items	Sum of row

Reinsurance finance income / (expense) for reinsurance contracts held

	2018/12/31
Reinsurance finance income / (expenses) from reinsurance contracts held	
Interest accreted	=SUM(R_Disclosures_Master!$H$37:$O$37)
Effect of changes in interest rates and other financial assumptions	=SUM(R_Disclosures_Master!$H$39:$O$40)
Effect of changes in non-performance risk of reinsurers	=SUM(R_Disclosures_Master!$H$41:$O$41)
Net foreign exchange income / (expenses)	=SUM(R_Disclosures_Master!$H$43:$O$44)
Total Reinsurance finance income / (expenses) from reinsurance contracts held	Sum above 4 items
Amounts recognised in profit or loss	=SUM(R_Disclosures_Master!$H$37:$O$37,R_Disclosures_Master!$H$39:$O$39,R_Disclosures_Master!$H$41:$O$41,R_Disclosures_Master!$H$43:$O$43
Amounts recognised in OCI	=SUM(R_Disclosures_Master!$H$40:$O$40,R_Disclosures_Master!$H$44:$O$44)

2.2.6.5 Financials

The items in I_Disclosures and R_Disclosures are summarised into the IFRS 17 Statement of Financial Position and Statement of Comprehensive Income.

The images below demonstrate how these look as well as indicate which values from I_Disclosures and R_Disclosures are referenced.

Statement of financial position	[Reporting Date - Current]	[Reporting Date - Previous]
Financial assets		
Insurance contract assets	Reference value for "Insurance contract assets as at [Reporting Date - Current]" in I_Disclosures under "Total Liability" column, multiplied by -1.	Reference value for "Insurance contract assets as at [Reporting Date - Previous]" in I_Disclosures under "Total Liability" column, multiplied by -1.
Reinsurance contract assets	Reference value for "Reinsurance contract assets as at [Reporting Date - Current]" in R_Disclosures under "Total Asset" column.	Reference value for "Reinsurance contract assets as at [Reporting Date - Previous]" in R_Disclosures under "Total Asset" column.
Other assets		
Total assets	Sum above 2 values	Sum above 2 values
Insurance contract liabilities	Reference value for "Insurance contract liabilities as at [Reporting Date - Current]" in I_Disclosures under "Total Liability" column.	Reference value for "Insurance contract liabilities as at [Reporting Date - Previous]" in I_Disclosures under "Total Liability" column.
Reinsurance contract liabilities	Reference value for "Reinsurance contract liabilities as at [Reporting Date - Current]" in R_Disclosures under "Total Asset" column, multiplied by -1.	Reference value for "Reinsurance contract liabilities as at [Reporting Date - Previous]" in R_Disclosures under "Total Asset" column, multiplied by -1.
Other liabilities		
Equity		
Total liabilities and equity	Sum above 2 values	Sum above 2 values

Statement of comprehensive income

	[Reporting Date - Current]
Insurance revenue	Reference value for "Insurance Revenue" in I_Disclosures under "Total Liability" column, multiplied by -1.
Insurance service expenses	Sum all amounts under Insurance Service Expenses in "Total Liability" column (I_Disclosures), multiplied by -1.
Insurance service result before rei	**Sum above 2 values**
Allocation of reinsurance premiums	Reference value for "Allocation of reinsurance premiums" in R_Disclosures under "Total Asset" column.
Amounts recoverable from reinsure	Sum all amounts under Amounts recoverable from reinsurers in "Total Asset" column (R_Disclosures).
Net income / (expenses) from reins	**Sum above 2 values**
Insurance service result	**Insurance service result before reinsurance contracts held + Net income / (expenses) from reinsurance contracts held**
Insurance finance income / (expense	From "Insurance finance income / (expense) for insurance contracts issued" table in I_Disclosures, reference amount for "Amounts recognised in profit or loss"
Reinsurance finance income / (expe	From "Reinsurance finance income / (expense) for reinsurance contracts issued" table in R_Disclosures, reference amount for "Amounts recognised in profit or loss"
Net insurance finance result	**Sum above 2 values**
Profit before tax	**Insurance service result + Net insurance finance result**

Other comprehensive income

Insurance finance income / (expense	From "Insurance finance income / (expense) for insurance contracts issued" table in I_Disclosures, reference amount for "Amounts recognised in OCI"
Reinsurance finance income / (expe	From "Reinsurance finance income / (expense) for reinsurance contracts issued" table in R_Disclosures, reference amount for "Amounts recognised in OCI"
Net insurance finance result	**Sum above 2 values**
Total other comprehensive income	**=Net insurance finance result**

Appendix A

This section lists the Debit and Credit Account codes associated with the Transaction Types/Accounts in the Subledger and Trial Balance, as used in this technical specification document.

Transaction Type	Dr Account Code	Cr Account Code
Transfer of Pre-recognition CFs (Issued, Non-onerous) - Actuals FX	3221100	1211300
Transfer of Pre-recognition CFs (Issued, Non-onerous)(2) - Actuals FX	1213100	3221100
New LRC - Profit - Premium CFs (Issued, Non-onerous) - Actuals FX	2125113	1211100
New LRC - Profit - Acquisition Expense CFs (Issued, Non-onerous) - Actuals FX	2125112	1211100
New LRC - Profit - Investment Component CFs (Issued, Non-onerous) - Actuals FX	2125111	1211100
New LRC - Profit - Claim and Other Expense CFs (Issued, Non-onerous) - Actuals FX	2125111	1211100
New LRC - Profit - RA (Issued, Non-onerous) - Actuals FX	2125114	1211200
New LRC - Profit - CSM (Issued, Non-onerous) - Actuals FX	2125115	1211300
Transfer of Pre-recognition CFs (Issued, Onerous) - Actuals FX	3221200	1211300
Transfer of Pre-recognition CFs (Issued, Onerous)(2) - Actuals FX	1213100	3221200
New LRC - Profit - Premium CFs (Issued, Onerous) - Actuals FX	2125123	1211100
New LRC - Profit - Acquisition Expense CFs (Issued, Onerous) - Actuals FX	2125122	1211100
New LRC - Profit - Investment Component CFs (Issued, Onerous) - Actuals FX	2125121	1211100
New LRC - Profit - Claim and Other Expense CFs (Issued, Onerous) - Actuals FX	2125121	1211100
New LRC - Profit - RA (Issued, Onerous) - Actuals FX	2125124	1211200
New LRC - Profit - CSM (Issued, Onerous) - Actuals FX	2125125	1211300
New LRC - Loss - PVFCF (Issued, Onerous) - Actuals FX	2125121	1212100
New LRC - Loss - RA (Issued, Onerous) - Actuals FX	2125124	1212200
Transfer of Pre-recognition CFs (Acquired, Non-onerous) - Actuals FX	3222100	1211300
Transfer of Pre-recognition CFs (Acquired, Non-onerous)(2) - Actuals FX	1213100	3222100
New LRC - Profit - Premium CFs (Acquired, Non-onerous) - Actuals FX	2125213	1211100
New LRC - Profit - Acquisition Expense CFs (Acquired, Non-onerous) - Actuals FX	2125212	1211100

New LRC - Profit - Investment Component CFs (Acquired, Non-onerous) - Actuals FX	2125211	1211100
New LRC - Profit - Claim and Other Expense CFs (Acquired, Non-onerous) - Actuals FX	2125211	1211100
New LRC - Profit - RA (Acquired, Non-onerous) - Actuals FX	2125214	1211200
New LRC - Profit - CSM (Acquired, Non-onerous) - Actuals FX	2125215	1211300
Transfer of Pre-recognition CFs (Acquired, Onerous) - Actuals FX	3222200	1211300
Transfer of Pre-recognition CFs (Acquired, Onerous)(2) - Actuals FX	1213100	3222200
New LRC - Profit - Premium CFs (Acquired, Onerous) - Actuals FX	2125223	1211100
New LRC - Profit - Acquisition Expense CFs (Acquired, Onerous) - Actuals FX	2125222	1211100
New LRC - Profit - Investment Component CFs (Acquired, Onerous) - Actuals FX	2125221	1211100
New LRC - Profit - Claim and Other Expense CFs (Acquired, Onerous) - Actuals FX	2125221	1211100
New LRC - Profit - RA (Acquired, Onerous) - Actuals FX	2125224	1211200
New LRC - Profit - CSM (Acquired, Onerous) - Actuals FX	2125225	1211300
New LRC - Loss - PVFCF (Acquired, Onerous) - Actuals FX	2125221	1212100
New LRC - Loss - RA (Acquired, Onerous) - Actuals FX	2125224	1212200
Interest Accreted on Opening LRC - Profit - PVFCF - Actuals FX	2310000	1211100
Interest Accreted on LRC - Loss - PVFCF - Actuals FX	2310000	1212100
Interest Accreted on LRC - Profit - RA - Actuals FX	2310000	1211200
Interest Accreted on LRC - Loss - RA - Actuals FX	2310000	1212200
Interest Accreted on LRC - CSM – Actuals FX	2310000	1211300
Interest Accreted on LIC - PVFCF - Actuals FX	2310000	1221100
Interest Accreted on LIC - RA - Actuals FX	2310000	1221200
Premium Experience Variance (Past/Current) - Actuals FX	2111000	1211100
Acquisition Expense Experience Variance (Past/Current) - Actuals FX	2112000	1211100
Effect on LIC - PVFCF of Changes to Claims CFs (Past) – Current FX	2128000	1221100
Effect on LIC - RA of Changes to Claims CFs (Past) - Current FX	2128000	1221200
Effect on LIC - IC of Changes to IC CFs (Past) - Current FX	2128000	1222100
Effect on LRC - Profit - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	2114000	1211100

Effect on LRC - Loss - PVFCF of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	2121000	1212100
Effect on LRC - Profit - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	2115000	1211200
Effect on LRC - Loss - RA of Removal of Expected Claims and Other Expenses Incurred (Current) - Actuals FX	2121000	1212200
Effect on LIC - PVFCF of New Claims and Other Expenses Incurred (Current) - Current FX	2121000	1221100
Effect on LIC - RA of New Claims and Other Expenses Incurred (Current) - Current FX	2121000	1221200
Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - FX – Current FX	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1211100
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - FX – Current FX	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1212100
Effect on LRC - Profit - RA of Total Experience Variance (Future) - FX - Current FX	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1211200
Effect on LRC - Loss - RA of Total Experience Variance (Future) - FX – Current FX	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1212200
Effect on LRC - Profit - PVFCF of Total Experience Variance (Future) - Non FX - Current FX	2126000	1211100
Effect on LRC - Loss - PVFCF of Total Experience Variance (Future) - Non FX - Current FX	2127000	1212100
Effect on LRC - Profit - RA of Total Experience Variance (Future) - Non FX - Current FX	2126000	1211200
Effect on LRC - Loss - RA of Total Experience Variance (Future) - Non FX - Current FX	2127000	1212200
Effect on LRC - CSM of Total Experience Variance (Future) - Non FX - Current FX	2126000	1211300
Release in LRC - CSM – Actuals FX	2116000	1211300
Effect on LRC - Profit - PVFCF of Changes in Interest Rates – Current Current FX	2321000 (2322000 if “Where to recognise … other financial	1211100

	assumptions?" is set to "OCI" in Setup)	
Effect on LRC - Loss - PVFCF of Changes in Interest Rates - Current FX	2321000 (2322000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)	1212100
Effect on LRC - Profit - RA of Changes in Interest Rates - Current FX	2321000 (2322000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)	1211200
Effect on LRC - Loss - RA of Changes in Interest Rates - Current FX	2321000 (2322000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)	1212200
Effect on LIC - PVFCF of Changes in Interest Rates - Current FX	2321000 (2322000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)	1221100
Effect on LIC - RA of Changes in Interest Rates - Current FX	2321000 (2322000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)	1221200
Effect on LIC - PVFCF of Change in Exchange Rates – Current FX	2331000 (2332000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)	1221100
Effect on LIC - RA of Change in Exchange Rates – Current FX	2331000 (2332000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)	1221200
Premium Receipts - Actuals FX	3111000	1211100
Premium Receipts (2) - Actuals FX	1100000	3111000
Acquisition Expense Payments - Actuals FX	3114000	1211100
Acquisition Expense Payments (2) - Actuals FX	1100000	3114000
Claim and Other Expense Payments - Actuals FX	3112000	1221100
Claim and Other Expense Payments (2) - Actuals FX	1100000	3112000
Transfer of Investment Components - Actuals FX	3210000	1211100
Transfer of Investment Components (2) - Actuals FX	1222100	3210000
Investment Component Payments - Actuals FX	3113000	1222100

Investment Component Payments (2) - Actuals FX	1100000	3113000
Pre-recognition CF Payments – Actuals FX	3114000	1213100
Pre-recognition CF Payments (2) – Actuals FX	1100000	3114000
Impairment of PRCF Asset – Current FX	2123000	1213100
Reversal of Impairment of PRCF Asset – Current FX	2124000	1213100
Release in Notional DAC - Actuals FX	1211100	2122000
Release in Notional DAC (2) - Actuals FX	2113000	1211100
Closing LRC - Profit - PVFCF - Net foreign exchange income / (expenses)	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1211100
Closing LRC - Loss - PVFCF - Net foreign exchange income / (expenses)	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1212100
Closing LRC - Profit - RA - Net foreign exchange income / (expenses)	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1211200
Closing LRC - Loss - RA - Net foreign exchange income / (expenses)	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1212200
Closing LRC - CSM - Net foreign exchange income / (expenses)	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1211300
Closing LIC - PVFCF - Net foreign exchange income / (expenses)	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1221100
Closing LIC - RA - Net foreign exchange income / (expenses)	2331000 (2332000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)	1221200
Closing LIC - IC - Net foreign exchange income / (expenses)	2331000 (2332000 if “Where to recognise … other financial	1222100

	assumptions?" is set to "OCI" in Setup)	
Closing LRC - PRCF - Net foreign exchange income / (expenses)	2331000 (2332000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)	1213100
Transfer of Pre-recognition CFs (Purchased) – Actuals nFX	1313100	3321000
Transfer of Pre-recognition CFs (Purchased)(2) – Actuals FX	3321000	1311300
New ARC - Premium CFs (Purchased) – Actuals FX	1311110	2215110
New ARC - Investment Component CFs (Purchased) – Actuals FX	1311110	2215120
New ARC - Recoveries CFs (Purchased) - Actuals FX	1311110	2215120
New ARC - RA (Purchased) - Actuals FX	1311200	2215130
New ARC - CSM - Non-Loss Recovery (Purchased) - Actuals FX	1311300	2215140
New ARC - Loss Recovery (Purchased) - Actuals FX	1311300	2226000
New ARC - PVFCF - Loss Recovery (Purchased) - Actuals FX	1312110	2226000
New ARC - PVFCF - Non-Loss Recovery (Purchased) - Initial Loss Recovery - Actuals FX	2226000	1311110
Transfer of Pre-recognition CFs (Acquired) - Actuals FX	1313100	3322000
Transfer of Pre-recognition CFs (Acquired)(2) - Actuals FX	3322000	1311300
New ARC - Premium CFs (Acquired) - Actuals FX	1311110	2215210
New ARC - Investment Component CFs (Acquired) - Actuals FX	1311110	2215220
New ARC - Recoveries CFs (Acquired) - Actuals FX	1311110	2215220
New ARC - RA (Acquired) - Actuals FX	1311200	2215230
New ARC - CSM - Non-Loss Recovery (Acquired) - Actuals FX	1311300	2215240
New ARC - Loss Recovery (Acquired) - Actuals FX	1311300	2226000
New ARC - PVFCF - Loss Recovery (Acquired) - Actuals FX	1312110	2226000
New ARC - PVFCF - Non-Loss Recovery (Acquired) - Initial Loss Recovery - Actuals FX	2226000	1311110
Interest Accreted on Opening ARC - PVFCF - Non-Loss Recovery - Actuals FX	1311110	2410000
Interest Accreted on ARC - RA - Actuals FX	1311200	2410000
Interest Accreted on ARC - CSM - Actuals FX	1311300	2410000
Interest Accreted on ARC - PVFCF - Loss Recovery - Actuals FX	1312110	2410000

Interest Accreted on ARIC - PVFCF - Actuals FX	1321100	2410000
Interest Accreted on ARIC - RA - Actuals FX	1321200	2410000
RI Premium Experience Variance (Past/Current) - Actuals FX	1311110	2211000
Effect on ARIC - PVFCF of Changes to Recoveries CFs (Past) - Current FX	1321100	2227000
Effect on ARIC - RA of Changes to Recoveries CFs (Past) – Current FX	1321200	2227000
Effect on ARIC - IC of Changes to IC CFs (Past) - Current FX	1322100	2227000
Effect on ARC - PVFCF of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Non-Loss Recovery - Actuals FX	1311110	2212000
Effect on ARC - PVFCF - Loss Recovery - Release of Loss recovery – Actuals FX	1312110	2221000
Effect on ARC - RA of Removal of Recoveries on Expected Claims and Other Expenses Incurred (Current) - Actuals FX	1311200	2213000
Effect on ARIC - PVFCF of Recoveries on New Claims and Other Expenses Incurred (Current) - Current FX	1321100	2221000
Effect on ARIC - RA of Recoveries on New Claims and Other Expenses Incurred (Current) - Current FX	1321200	2221000
Effect on ARC - PVFCF of Total Experience Variance (Future) - Non-Loss Recovery – Current FX	1311110	2222000
Effect on ARC - PVFCF - Loss Recovery - Losses recovered during the period – Actuals FX	1312110	2225000
Effect on ARC - PVFCF - Loss Recovery adjustment due to uncovered cash flows – Current FX	1312110	2225000
Effect on ARC - RA of Total Experience Variance (Future - Non FX) – Current FX	1311200	2222000
Effect on ARC - CSM - Total Experience Variance (Future - Non FX) – Current FX	1311300	2222000
Effect on ARC - CSM - Reversal of Loss Component due to changes not affecting the GRC – Current FX	1311300	2225000
Effect on ARC - PVFCF of Change in Exchange rates - Non-Loss Recovery – Current FX	1311110	2441000 (2442000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Effect on ARC - RA - Change in Exchange rates – Current FX	1311200	2441000 (2442000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Effect on ARC - PVFCF - Loss Recovery due to currency exchange differences – Current FX	1312110	2441000

		(2442000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Release in ARC - CSM – Current FX	1311300	2214000
Effect on ARC - PVFCF of Change in NP Risk - Non-Loss Recovery - Current FX	1311110	2430000
Effect on ARC - RA of Change in NP Risk – Current FX	1311200	2430000
Effect on ARIC - PVFCF of Change in NP Risk - Current FX	1321100	2430000
Effect on ARIC - RA of Change in NP Risk - Current FX	1321200	2430000
Effect on ARC - PVFCF of Changes in Interest Rates - Non-Loss Recovery - Current FX	1311110	2421000 (2422000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Effect on ARC - PVFCF - Loss Recovery due to Changes in Interest Rates – Current FX	1312110	2421000 (2422000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Effect on ARC - RA of Changes in Interest Rates - Current FX	1311200	2421000 (2422000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Effect on ARIC - PVFCF of Changes in Interest Rates - Current FX	1321100	2421000 (2422000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Effect on ARIC - RA of Changes in Interest Rates - Current FX	1321200	2421000 (2422000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Effect on ARIC - PVFCF of Change in Exchange Rates – Current FX	1321100	2441000 (2442000 if “Where to recognise … other financial assumptions?” is set to “OCI” in Setup)
Effect on ARIC - RA of Change in Exchange Rates – Current FX	1321200	2441000 (2442000 if “Where to recognise … other financial

		assumptions?" is set to "OCI" in Setup)
Premium Payments - Actuals FX	1311110	3121000
Premium Payments (2) - Actuals FX	3121000	1100000
Recoveries Receipts - Actuals FX	1321100	3122000
Recoveries Receipts (2) - Actuals FX	3122000	1100000
Transfer of Reinsurance Investment Components - Actuals FX	3310000	1311110
Transfer of Reinsurance Investment Components (2) - Actuals FX	1322100	3310000
Investment Component Receipts - Actuals FX	3123000	1322100
Investment Component Receipts (2) - Actuals FX	1100000	3123000
Pre-recognition CF Receipts - Actuals FX	3121000	1313100
Pre-recognition CF Receipts (2) - Actuals FX	1100000	3121000
Impairment of PRCF Liability - Current FX	1313100	2223000
Reversal of Impairment of PRCF Liability – Current FX	1313100	2224000
Closing ARC - PVFCF - Non-Loss Recovery Net foreign exchange income / (expenses)	1311110	2441000 (2442000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)
Closing ARC - Loss Recovery - Net foreign exchange income / (expenses)	1312110	2441000 (2442000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)
Closing ARC - RA - Net foreign exchange income / (expenses)	1311200	2441000 (2442000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)
Closing ARC - CSM - Net foreign exchange income / (expenses)	1311300	2441000 (2442000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)
Closing ARC - PRCF - Net foreign exchange income / (expenses)	1313100	2441000 (2442000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)
Closing ARIC - PVFCF - Net foreign exchange income / (expenses)	1321100	2441000 (2442000 if "Where to recognise … other financial

		assumptions?" is set to "OCI" in Setup)
Closing ARIC - RA - Net foreign exchange income / (expenses)	1321200	2441000 (2442000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)
Closing ARIC - IC - Net foreign exchange income / (expenses)	1322100	2441000 (2442000 if "Where to recognise … other financial assumptions?" is set to "OCI" in Setup)
Effect on ARC - PVFCF - Non-Loss Recovery adjustment due to uncovered cash flows – Current FX	1311110	2225000

Account	Account Code
LRC - Profit - PVFCF	1211100
LRC - Loss - PVFCF	1212100
LRC - Profit - RA	1211200
LRC - Loss - RA	1212200
LRC - CSM	1211300
LRC - PRCF	1213100
LIC - PVFCF	1221100
LIC - RA	1221200
LIC - IC	1222100
ARC – PVFCF – Non-Loss Recovery	1311110
ARC - RA	1311200
ARC - CSM	1311300
ARC - PVFCF - Loss-recovery	1312110
ARC - PRCF	1313100
ARIC - PVFCF	1321100
ARIC - RA	1321200
ARIC - IC	1322100

Appendix B

Currency	Code
ADB Unit of Account	XUA
Afghani	AFN
Algerian Dinar	DZD
Argentine Peso	ARS
Armenian Dram	AMD
Aruban Florin	AWG
Australian Dollar	AUD
Azerbaijanian Manat	AZN
Bahamian Dollar	BSD
Bahraini Dinar	BHD
Baht	THB
Balboa	PAB
Barbados Dollar	BBD
Belarussian Ruble	BYR
Belize Dollar	BZD
Bermudian Dollar	BMD
Bolivar	VEF
Boliviano	BOB
Brazilian Real	BRL
Brunei Dollar	BND
Bulgarian Lev	BGN
Burundi Franc	BIF
Cabo Verde Escudo	CVE
Canadian Dollar	CAD
Cayman Islands Dollar	KYD
CFA Franc BCEAO	XOF
CFA Franc BEAC	XAF
CFP Franc	XPF
Chilean Peso	CLP
Colombian Peso	COP
Comoro Franc	KMF
Congolese Franc	CDF
Convertible Mark	BAM
Cordoba Oro	NIO
Cordoba Oro	CRC
Cuban Peso	CUP
Czech Koruna	CZK
Dalasi	GMD
Danish Krone	DKK
Denar	MKD
Djibouti Franc	DJF
Dobra	STD

Dominican Peso	DOP
Dong	VND
East Caribbean Dollar	XCD
Egyptian Pound	EGP
El Salvador Colon	SVC
Ethiopian Birr	ETB
Euro	EUR
Falkland Islands Pound	FKP
Fiji Dollar	FJD
Forint	HUF
Ghana Cedi	GHS
Gibraltar Pound	GIP
Gourde	HTG
Guarani	PYG
Guinea Franc	GNF
Guyana Dollar	GYD
Hong Kong Dollar	HKD
Hryvnia	UAH
Iceland Krona	ISK
Indian Rupee	INR
Iranian Rial	IRR
Iraqi Dinar	IQD
Jamaican Dollar	JMD
Jordanian Dinar	JOD
Kenyan Shilling	KES
Kina	PGK
Kip	LAK
Kuna	HRK
Kuwaiti Dinar	KWD
Kwacha	MWK
Kwanza	AOA
Kyat	MMK
Lari	GEL
Lebanese Pound	LBP
Lek	ALL
Lempira	HNL
Leone	SLL
Liberian Dollar	LRD
Libyan Dinar	LYD
Lilangeni	SZL
Loti	LSL
Malagasy Ariary	MGA
Malaysian Ringgit	MYR
Mauritius Rupee	MUR
Mexican Peso	MXN
Mexican Unidad de Inversion (UDI)	MXV

Moldovan Leu	MDL
Moroccan Dirham	MAD
Mozambique Metical	MZN
Mvdol	BOV
Naira	NGN
Nakfa	ERN
Namibia Dollar	NAD
Nepalese Rupee	NPR
Netherlands Antillean Guilder	ANG
New Israeli Sheqel	ILS
New Taiwan Dollar	TWD
New Zealand Dollar	NZD
Ngultrum	BTN
North Korean Won	KPW
Norwegian Krone	NOK
Nuevo Sol	PEN
Ouguiya	MRO
Pa'anga	TOP
Pakistan Rupee	PKR
Pataca	MOP
Peso Convertible	CUC
Peso Uruguayo	UYU
Philippine Peso	PHP
Pound Sterling	GBP
Pula	BWP
Qatari Rial	QAR
Quetzal	GTQ
Rand	ZAR
Rial Omani	OMR
Riel	KHR
Romanian Leu	RON
Rufiyaa	MVR
Rupiah	IDR
Russian Ruble	RUB
Rwanda Franc	RWF
Saint Helena Pound	SHP
Saudi Riyal	SAR
SDR (Special Drawing Right)	XDR
Serbian Dinar	RSD
Seychelles Rupee	SCR
Singapore Dollar	SGD
Solomon Islands Dollar	SBD
Som	KGS
Somali Shilling	SOS
Somoni	TJS
South Sudanese Pound	SSP

Sri Lanka Rupee	LKR
Sucre	XSU
Sudanese Pound	SDG
Surinam Dollar	SRD
Swedish Krona	SEK
Swiss Franc	CHF
Syrian Pound	SYP
Taka	BDT
Tala	WST
Tanzanian Shilling	TZS
Tenge	KZT
Trinidad and Tobago Dollar	TTD
Tugrik	MNT
Tunisian Dinar	TND
Turkish Lira	TRY
Turkmenistan New Manat	TMT
UAE Dirham	AED
Uganda Shilling	UGX
Unidad de Fomento	CLF
Unidad de Valor Real	COU
Uruguay Peso en Unidades Indexadas (URUIURUI)	UYI
US Dollar	USD
US Dollar (Next day)	USN
Uzbekistan Sum	UZS
Vatu	VUV
WIR Euro	CHE
WIR Franc	CHW
Won	KRW
Yemeni Rial	YER
Yen	JPY
Yuan Renminbi	CNY
Zambian Kwacha	ZMW
Zimbabwe Dollar	ZWL
Zloty	PLN

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