

Solvency II Annual Reporting: Variation Analysis Templates

Are you ready to complete the annual reporting templates S.29.01 to S.29.04?

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(Re)insurance undertakings completing their Solvency II reporting are required to submit four reporting templates analysing the variance over the year.

These additional templates disclose the change in the excess of assets over liabilities (i.e. Solvency II Own Funds) over the twelve month period since the previous set of annual reporting templates were submitted to the regulator. The additional templates required to be populated are:



In this briefing note we discuss the Quantitative Reporting Templates (“QRTs”) in relation to variation analysis and provide insight on how to approach them.

General Comments

The variation analysis is split into four distinct reporting templates, which include disclosures such as a breakdown of the change in the reconciliation reserve, details of the change in investments and revenues generated from such investments, and a more detailed analysis of the change in Best Estimate Liability (“BEL”) over the period. In tandem, these four templates produce a detailed analysis of the change in the excess of assets over liabilities since the previous annual valuation date.

EIOPA issued an explanatory note in June 2017 (updated in March 2018 and again in July 2018)¹ on the Variation Analysis templates, which includes supplemental detail to the final Implementing Technical Standard (“ITS”) on supervisory reporting annex II (i.e. the QRT LOG files), FAQs, and a number of non-life examples, and a unit-linked and index-linked example to help undertakings in populating the templates. An updated version of the ITS was published on 23 November 2018². This included some updates to

the LOG files for the Variation Analysis templates. Further updates to the QRT LOG files were published in December 2019 but these did not include any changes to the Variation Analysis templates.

As with other reporting templates, when uploading to the supervising authority, there are a number of internal checks within each template, as well as a number of additional cross-template validations, which need to be passed before a successful upload is permitted. However, these validations only exist on some cells within the Variation Analysis Templates; therefore passing the predefined validations doesn’t necessarily guarantee you have completed these templates correctly.

The content of this briefing note makes reference to specific cells in the Variation Analysis templates – therefore it is advisable to read this note in conjunction with the reporting templates themselves. The latest annotated templates from EIOPA – at the time of writing – can be found [here](#). (This is the version for use as at 31 December 2019. The templates are updated by EIOPA annually.) Undertakings should ensure that they are using the appropriate version of the templates and LOG files.

It should also be noted that EIOPA has proposed significant changes to these templates as part of the 2020 review³

¹ [EIOPA explanatory note on VA templates](#)

² [Updated ITS on reporting templates](#)

³ [Milliman briefing note on EIOPA’s proposed changes to the QRTs](#)

S.29.01 Excess of Assets over Liabilities

This template shows the change in Own Funds over the previous 12 months, split into its constituent parts. There are three separate tables in this template to be populated, as shown in Figure 1:

FIGURE 1: OVERVIEW OF VARIATION ANALYSIS TEMPLATE S.29.01

S.29.01.01.01

Reconciliation with Own funds - Items reported in "Own funds"

	Year N	Year N-1	Variation
	C0010	C0020	C0030
R0010			
R0020			
R0030			
R0040			
R0050			
R0060			
R0070			
R0080			
R0090			
R0100			
R0110			
R0120			

Populated using data from S.23.01 Own Funds

Year N = current valuation date

Year N-1 = previous valuation date

S.29.01.01.02

Variation of components of reconciliation reserve - Items reported in "Own funds"

	Variation
	C0030
R0130	
R0140	
R0150	
R0160	
R0170	
R0180	

R0190	= S.29.02 row R0060
R0200	= S.29.03 row R0360 + R0370
R0210	
R0220	
R0230	
R0240	
R0250	

- The total change in Own Funds over the period is presented in the same format as in template S.23.01 (Own Funds).
- An analysis is then performed on row R0080 (the change in the reconciliation reserve), to break this item down into its fundamental components (which are not disclosed in the S.23.01 template). Some of the information here can be populated using data from template S.23.03 (annual movements on Own Funds). For example, changes in ordinary share capital over the period, and other tiered capital items can be found there.
- Finally, a more detailed analysis is shown for row R0130 in the reconciliation reserve analysis table, which includes links to the other Variation Analysis templates S.29.02 and S.29.03

(row R0190 is intended to be populated from template S.29.02 row R0060, while row R0200 is intended to be populated from template S.29.03 row R0360 + R0370). As outlined in the explanatory notes, the sum total of rows in this table should equal the value of R0130 in the second table.

Care should be taken with the sign convention in this template – please consult the explanatory note for further details.

The amount reported in R0250 (Other variations in Excess of Assets over Liabilities) should reconcile R0190 to R0240 with R0130. For example, it is intended that this line will include technical flows (i.e. actual cashflows over the period) other than those reported in S.29.03 R0310 to R0350, variation due to 'other liabilities', variation due reinsurance receivables and payables, and variation due to property held for own use. Undertakings should be able to explain the underlying amounts reported in R0250, if material.

Following the revision to the ITS in 2018, EIOPA clarified that "Variations due to investments and financial liabilities" (C0030/R0190) should not include amounts relating to holdings of Own Shares.

S.29.02 Excess of Assets over Liabilities - explained by investments and financial liabilities

This template provides a detailed analysis of the change in Own Funds due to changes in investments and financial liabilities over the period. It includes investments held at the previous valuation date, and investments issued and purchased over the period, including derivatives, own shares, financial liabilities etc.

The scope of this template includes:

- Changes in Own Funds as a result of valuation of assets and liabilities (e.g. realised gains and losses from sales, and also changes in the valuation of assets and liabilities)
- Revenues generated by investments held
- Expenses related to investments
- Changes in assets held for unit-linked and index-linked funds

This template does not include details on:

- Property held for own use (for example, the revenues reported in rows R0070 to R0090 should not include those in respect of property held for own use)

The template is divided into two parts: the first part shows the impact on Own Funds as a result of changes in the valuation of assets and financial liabilities, while the remaining rows detail the impact on Own Funds as a result of investment revenues and expenses. Row R0040 should equal the sum of R0070 to R0100, and should include dividends, interests, rents and other revenues arising from those investments that are within the scope of this template.

S.29.03 Excess of Assets over Liabilities - explained by technical provisions

S.29.03 is split notionally into two parts:

- A BEL analysis of movement over the period is firstly disclosed, followed by
- A disclosure on the technical flows over the period (e.g. premiums written, claims paid and expenses incurred).

The two sets of tables aggregate together so that the template details the change in Own Funds over the period as a result of changes in BEL and technical flows. Therefore, this template does not just disclose a change in technical provisions as the title of the reporting template might suggest, as it also includes actual cashflows over the period. EIOPA made it clear in the amendments to the ITS in 2018 that accepted reinsurance on unit-linked and index-linked business should be included within the template.

BEL ANALYSIS OF MOVEMENT

This table should only reflect amounts related to the BEL – it should not include the risk margin, technical provisions calculated as a whole, or any amounts in respect of transitional measures.

The BEL analysis of movement table is split into discrete components, which are prescribed by the Solvency II regulations. Undertakings will need to disclose the opening and closing BEL over the period, as well as the breakdown of this movement into defined categories, for example:

- Exceptional elements triggering a restatement of opening BEL
- Impacts as a result of purchasing new blocks of business
- New business sold over the period
- Unwind of discount rate
- Experience variations
- Changes in non-economic assumptions
- Changes in economic assumptions

There are two separate columns to be populated, one for life and one for non-life business. As mentioned above, EIOPA has developed a number of relevant examples in the explanatory notes to help undertakings in populating this template.

For the BEL analysis of movement, EIOPA has noted that undertakings should establish an appropriate method and use it consistently year-on-year. In case of doubt, EIOPA recommends that undertakings contact their local supervisor.

There are two options for populating the BEL analysis of movement. Undertakings can either opt to report this movement based on underwriting year (“UWY”) in rows R0010 to R0140, or accident year (“AY”) in rows R0150 to R0290. This choice is left to the judgement of the undertaking. EIOPA has stated that undertakings are expected to use UWY for Life business other than annuities.

A detailed description of each element of the UWY analysis can be found in Appendix 1 of this briefing note. The AY analysis is similar so we have not included an additional description. As with any analysis of movement, each element is a discrete ‘progression’ from the previous – this should be kept in mind when populating the template.

UNIT-LINKED ASSETS & TECHNICAL FLOWS

In row R0300 (“Net variation for index-linked and unit-linked business” since 2018), undertakings are required to disclose the net change in the value of assets held for index-linked and unit-linked funds and of index-linked and unit-linked technical provisions (calculated as best estimate and risk margin or calculated as a whole). This is for information purposes only.

An analysis of the technical flows, including those related to unit-linked and index-linked business, over the period is then requested in rows R0310 to R0350. Undertakings are required to disclose:

- Premiums written during period
- Claims and benefits paid during the period
- Expenses incurred during the period (not including investment expenses – these are captured in template S.29.02)
- Cashflows paid and received regarding reinsurance recoverables

Row R0360, the variation in Own Funds as a result of gross technical provisions, is then calculated as:

- The change in BEL over the period (as analysed above)
- *Plus* the change in risk margin over the period
- *Plus* the change in technical provisions calculated as a whole
- *Plus* the change in transitional measures
- *Plus* the total value of technical flows

Finally, the change in reinsurance recoverables over the period is disclosed in R0370.

S.29.04 Detailed analysis per period - Technical flows versus Technical provisions

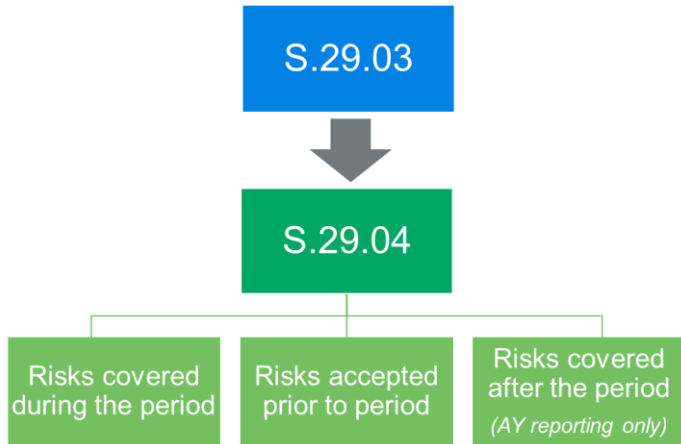
This template provides an alternative analysis of the information provided in S.29.03, including a split of the S.29.03 data by line of business. It also provides details on the change in technical provisions calculated as a whole over the period. Similar to S.29.03, two tables are provided, one for reporting by UWY and another for AY.

The presentation of information here is split by line of business, which is the foremost difference between it and the previous template, S.29.03. The information is split by:

- Risks covered during the period;
- Risks accepted prior to period;
- And, for AY reporting, risks covered after the period.

All information in R0010 to R0050 and from R0080 to R0120 should include amounts relating to index-linked and unit-linked business.

FIGURE 2: OVERVIEW OF VARIATION ANALYSIS TEMPLATE S.29.04



EIOPA has noted that the task of splitting the assets between risks covered during the period and risks accepted previously is expected to be quite complex, and have therefore suggested that undertakings can use approximate methods in deriving this split, provided the two columns reconcile to the total movement in unit-linked assets over the period.

Since this template includes some of the information reported in S.29.03, some of the lines should reconcile to the figures shown there.

This template does not disclose the variation in risk margin split by line of business. The change in risk margin should not be reported in S.29.04. Therefore the aggregation of the figures in S.29.03 and S.29.04 will be different by the amount related to the change risk margin.

How Milliman can help

Our consultants have been involved in advising our clients on Solvency II issues since its conception. We have undertaken a range of work for clients across all three pillars of Solvency II, including the population and review of the quarterly and annual reporting templates.

Milliman also has a range of services and software available to support companies in the ongoing Solvency II requirements including:

- Independent review of QRTs
- Preparation and review of SFCR and RSR
- Solvency II Compliance Assessment Tool ([link](#))
- Milliman Star Solutions - Vega®: An automated Pillar 3 reporting and standard formula aggregation system ([link](#))
- Milliman Star Solutions - Navi®: A liability proxy modelling tool ([link](#))
- Solvency II training

As a result, we have a wide range of experience that can be brought to bear to benefit your business.



Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

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APPENDIX 1: DETAILED DESCRIPTION OF ROWS R0010 – R0120 IN TEMPLATE S.29.03 (BEL ANALYSIS OF MOVEMENT)

Row	Description
R0010	Opening Best Estimate: This is the reported BEL at the end of the previous year.
R0020	Exceptional elements triggering restating of opening Best Estimate: This item should reflect any model changes or methodology changes over the year in respect of BEL models.
R0030	Changes in perimeter: The impact of purchasing new blocks of business or portfolios from other companies within the year should be reflected in this row.
R0040	Foreign exchange variation: This line is intended to show the impact on BEL of changes in currency exchange rates. This is relevant for any lines of business that are not in balance sheet currency. Undertakings should ignore the revaluation of assets in determining this impact. For example, for unit-linked business, our understanding is that undertakings are not required to recalculate the BEL as a result of exchange rate impacts on assets held for these contracts.
R0050	Best Estimate on risk accepted during the period: This line shows the BEL in respect of new business sold over the period, and should reflect the actual model points and methodology basis at the closing valuation date. Therefore, the value reported in this line should be a subset of the overall closing BEL reported in R0120.
R0060	Variation of Best Estimate due to unwinding of discount rate - risks accepted prior to period: This is the first of two steps in deriving the expected impact on BEL of moving forward the valuation date by twelve months. This line shows the expected impact on BEL of shifting forward (by one year) the risk free interest rate term structure applied at the previous valuation date. To calculate this line, undertakings should take the risk-free spot rates at the previous valuation date and convert them to forward rates. These forward rates are then used to derive expected forward rates at the current valuation date by stepping forward in time by one year. These rates should then be converted back into spot rates and used as an input into the BEL model.
R0070	Variation of Best Estimate due to year N projected in and out flows - risks accepted prior to period: The second step in determining the expected impact on BEL of moving forward the valuation date by twelve months is to isolate the first year of expected cashflows in the model used to determine line R0060. Thus, this line shows the expected change in BEL over the first year (i.e. the run-off), as determined by the cashflow projections at the previous valuation date (allowing for the shifted interest rate term structure).
R0080	Variation of Best Estimate due to experience - risks accepted prior to period: In this line, undertakings should recalculate the BEL, allowing for any changes in experience over the year. Our understanding is that this line should include any changes in the model point file over the year for the business that was in force at the previous valuation date. For example, for unit-linked business, this line should reflect changes in policyholder fund values, fund margins, offs, and changes to other policyholder details. An adjustment will need to be applied so as to not double-count the impact of the previous line, R0070.
R0090	Variation of Best Estimate due to changes in non-economic assumptions - risks accepted prior to period: This line should reflect any change to assumptions since the previous valuation, not considered to economic assumptions. EIOPA consider assumptions on lapse rates, inflation rates and any other basis items directly related to insurance risks to be non-economic assumptions. Our understanding is that undertakings can apply some degree of judgement here as to which basis items should be reflected in this line. Thus, the scope of what constitutes a non-economic assumption could reasonably vary from company to company. As noted in the introduction to this section, undertakings should adopt an appropriate methodology and use it consistently moving forward.
R0100	Variation of Best Estimate due to changes in economic environment - risks accepted prior to period: This line shows the impact on BEL of updating the remaining assumptions. This line should reflect changes in assumptions not directly linked to insurance risks. For example, changes to interest rates and other changes in the economic environment. Again, undertakings will need to consider which basis items they perceive to be economic-related, and use this approach consistently over time.
R0110	Other changes not elsewhere explained: This line should reflect other changes in the BEL not captured in previous lines. Our understanding is that this item is intended to be zero or close to zero, but can be used as a balancing item to ensure exact reconciliation to the closing BEL.
R0120	Closing Best Estimate: This is the reported BEL at the current valuation date.