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Report on the 2024 HRES calibration

DNB, July 2024

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Summary

This report assesses the appropriateness of the factors for capital requirements (standard deviations) for health non-similar to life (NSLT) premium and reserve risk for business that is subject to a health risk equalisation system (HRES) in the Netherlands.

Regular monitoring of the adequacy of the HRES-parameters is an essential part of prudential supervision. The adequacy of the parameters was assessed previously in 2015 and 2018. An assessment earlier than 2024 was not appropriate due to the Covid-19 pandemic. This assessment serves as input to DNB to decide upon a recommendation to EIOPA to update the HRES-parameters. EIOPA, successively, is mandated to propose updates.

The 2024 assessment suggests that the parameter for premium risk would be 2.6% and the parameter for reserve risk 5.3%. Overall, considering all pros and cons to the prudency of these parameters, this assessment concludes that this is an appropriate level.

Compared with the current parameters, an update reduces the total SCR by approximately 100 million per year end 2023, which equals a relative reduction of the total aggregate SCR by 1.2%. This increases the aggregate Solvency II ratio with approximately 2%.

The parameters are calculated according to the methodology specified in the Solvency II delegated regulation (art. 149) and follow the EIOPA report on the calibration of premium and reserve risk parameters. Adjustments to this methodology have been applied for the specificities of the Dutch HRES.

The calibration considered all 20 health insurers operating in the Dutch health insurance market subject to the HRES. As many years as possible were included (from 2006 up until and including 2023) in order calibrate a one in 200 year event.

The Dutch HRES is compliant with the requirements in the Solvency II Directive (art. 109a(5)). The system reduces both NSLT-health premium and reserve risk. The pan-European parameters for NSLT-health premium and reserve risk are 5.0% and 5.7%, respectively.

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1. Introduction

This report assesses the appropriateness of the factors for capital requirements (standard deviations) for health non-similar to life (NSLT) premium and reserve risk for business that is subject to a health risk equalisation system (HRES) in the Netherlands. The assessment is carried out by De Nederlandsche Bank.

1.1 Premium and reserve risk

Non-life premium and reserve risk refers to the risk of loss, or of adverse change in the value of insurance liabilities, resulting from fluctuations in the timing, frequency and severity of insured events, and in the timing and amount of claim settlements (Solvency II Directive article 105 2(a)). Thus premium and reserve risk equal the standard deviation of outcomes relative to initial expectations. Premium risk relates to the risks related to the current accident year, while reserve risk relates to the development of previous accident years.

Due to the existence of the HRES, country-specific parameters exist for the calculation of the premium and reserve risk for NSLT-health premium and reserve risk in the Netherlands. These are lower than the pan-European parameters. For health insurers subject to the Dutch HRES, the premium and reserve risk solvency capital requirement (SCR) is by far the largest contributor to the total SCR.

1.2 The Health Risk Equalisation System

Costs for care from the basic health coverage are financed from both premiums that insured persons pay to the health insurer and contributions from the Health Insurance Fund. Every insured person, regardless of their health status, pays the same premium for basic insurance. Health insurers are obliged to accept every applicant for basic insurance. Health insurers with an insured population with a high need for care have higher costs than other health insurers. In order to compensate for differences in (average) risk profiles per insured between health insurers, the contribution from the Health Insurance Fund is distributed among health insurers through a risk equalisation system. With risk equalisation, health insurers receive an equalisation contribution based on the risk profile of their insured. In this way, a level playing field is created between health insurers. The National Health Care Institute manages the Health Insurance Fund and annually distributes the contribution from the Health Insurance Fund to health insurers through risk equalisation[1].

The Dutch Healthcare Insurance Act provides for a national legislative scheme that qualifies as a health risk equalisation system (HRES) as described in article 109a(5) of the Solvency II Directive. The Dutch health risk equalisation system is the only system within the Union that meets these criteria (see Appendix II: Compliance with Solvency II Directive article 109a(5)). For such HRES, standard deviations specific to the HRES may be applied, which differ from the regular Solvency II standard formula standard deviations. Due to the stabilizing nature of the HRES, these standard deviations should be lower than the regular standard deviations.

1.3 Regulatory framework

Directive Article 109a(4) provides that the methods for the calculation of the standard deviations for the HRES premium and reserve risk ('HRES parameters') shall be developed by EIOPA in draft Technical Standards and be adopted by the European Commission. EIOPA shall take into account the calculations provided by the supervisory authorities of the Member States concerned.

[1] Risicoverevening Zvw | Fondsbeheer en analyse zorgkostenontwikkeling | Zorginstituut Nederland

The current HRES parameters have been adopted by the European Commission in 2015 following a proposal by EIOPA[2] after public consultation and taking into account the calculations by DNB. DNB reviewed the adequacy of the HRES parameters previously in 2018. This has not led to an update of the parameters. The current assessment again reviews the adequacy of the HRES parameters in 2024. An earlier assessment was not appropriate due to the Covid-19 pandemic.

Monitoring the adequacy of the HRES-parameters is an essential part of prudential supervision. Regular monitoring contributes to moderate updates of these parameters and provides for stability. In EIOPA's report on the analysis of the general standard deviations, EIOPA considers that a frequency of one or two years is appropriate. This HRES-analysis serves as input to EIOPA's considerations.

To this end, a data request has been carried out with all entities that provide basic health coverage.

2. Data

2.1 Dataset

The dataset for premium risk consists of 20 portfolios for accident years 2006-2023 and a dataset for reserve risk on 20 portfolios for financial years 2007-2023. DNB is the National Competent Agency for 19 of these entities. For one entity, DNB provides host-supervision.

The health risk equalisation system has been subject to some updates over the reporting period. For this reason, recent years could be more representative for future years than older years. However, a trade-off must always be made between representativeness and length of the dataset. Because the aim of this exercise is to calibrate a one in 200 year event and only few years were available, as many years as possible were included. Observations were only excluded by the automatic three step elimination procedure (see Section 3.2.3) and due to the covid-19 pandemic (see Section 2.3).

2.2 Variables

The following variables were provided by insurers for each accident/financial year:

- Earned premium
- Risk equalisation payouts: paid and expected
- Claims: paid and expected
- Deliberate reductions and surcharges to the premium driven by capital accumulation and reduction
- Covid-19 related cashflows
    - Solidarity cashflows between insurers
    - Cashflows from the catastrophe scheme under article 33 of the Healthcare Insurance Act

The complete data request and specification can be found in Appendix III and IV.

The following variables were provided by the National Health Care Institute (ZiNL), separately for each insurer and accident/financial year:

- Risk equalisation payouts
- Covid payments and receivables
    - Continuity payments to healthcare providers
    - Direct and indirect covid payments

[2] See Final report on public consultation No. 14/060 on the implementing technical standards with regard to standard deviations in relation to health risk equalisation systems, EIOPA-Bos-15/122, 30 June 2015

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2.3 Pandemic years

The data for the calibration of health NSLT premium and reserve risk should exclude any catastrophic events, as capital requirements for catastrophe risk are provided for by the separate catastrophe risk module. The covid pandemic qualifies as such a catastrophe, specifically for accident years 2020 and 2021. For these two years the catastrophe scheme under the Healthcare Insurance Act was activated. In 2022 it was deactivated. Covid-related payments constitute a significant share of the claims only for 2020 (±8%) and 2021 (±5%) and not for years prior or after.

The limited capacity of the healthcare system has led to crowding out non-covid-related claims. Figure 1 supports this statement, as the upward sloping aggregate loss over the years shows dips in 2020 and 2021 after which it rapidly increases back to the trend line. Therefore, the remaining claims after cleaning for covid-related payments are not representative for regular (non-catastrophe) years. That is why accident years 2020 and 2021 were eliminated entirely from the dataset, rather than only eliminating the covid-related claims for those years.

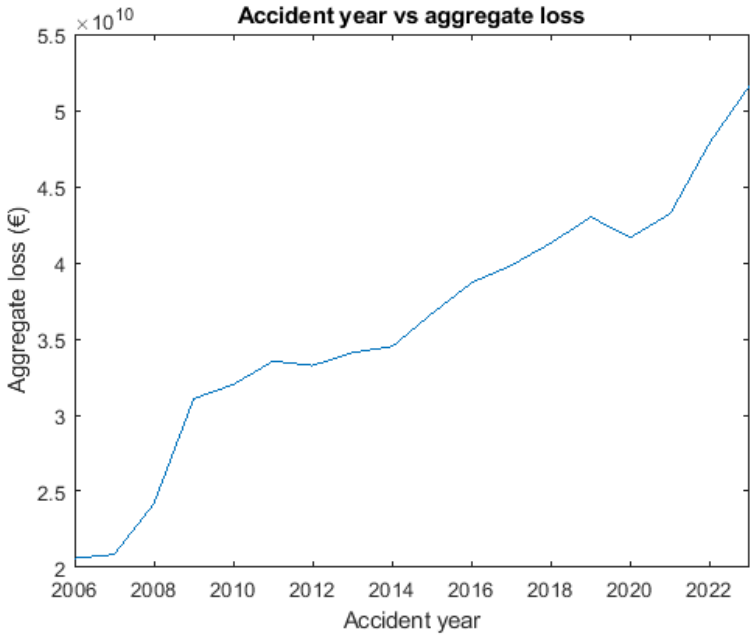

Figure 1: non-pandemic aggregate loss per accident year

As the results of claim years 2020 and 2021 first emerge in the claims provision at the start of financial years 2021 and 2022 respectively, the following adjustments were made for reserve risk.

- For financial year 2021, all observations (i.e. total claims provision at the start of financial year 2021 and the aggregate loss incurred in financial year 2021 for accident years < 2021) were omitted completely. That means that for this financial year, accident years before 2021 were also excluded. The reason for this is that only omitting accident year 2021 would lead to unreliable results, as the reserve risk in this financial year depends mostly on this accident year.
- For financial year 2022, the same method is applied as for financial year 2021 for the same reasons.
- For financial year 2023, only accident years 2020 and 2021 were omitted. As for this financial year the reserve risk does not for the most part depend on accident years 2020 and 2021, only omitting these accident years does not lead to unreliable results.

The concept of **accident year** refers to the calendar year in which the claim or loss originates. Payments are made in successive months, potentially extending over multiple **financial years**.

2.4 Data validation

2.4.1 Data validation steps

To ensure the data quality a number of data validation steps have been performed:

1. Validation by insurers: the data provided by undertakings has been validated by the actuarial key function holders who provided validation reports on the data submitted.
2. Validation by a third party: Zorgverzekeraars Nederland (ZN) consulted a third party to perform consistency checks on the data submitted by the insurance undertakings.
3. Validation by DNB: the data has been validated using other data sources:
    3.1. Annual national prudential reporting templates ("Nationale Staten")
    3.2. Relevant QRT's
    3.3. Data from the National health Care Institute (ZINL)
    3.4. Available data from HRES assessment in 2018

    A Q&A-process with the health insurers contributed to this process.

Based on the validation results it can be concluded that the data is of sufficient quality to perform the analysis.

2.4.2 Challenges around data

Several challenges in the data collection have been identified. The main challenges were:

1. Different definitions used by insurers: undertakings use different definitions for different datasources.
2. Unavailability of older years: Reliable and/or traceable data were not available for some undertakings for the years 2006-2009. These observations are left out of the calibration.
3. Treatment of mergers and/or acquisition of portfolios in the past: insurers are requested to reconstruct data taking into account mergers and acquisitions of health insurance portfolios.
4. QRT: A recent EIOPA Q&A pointed out an inconsistency in the ITS for QRTs S17 and S19 with regard to the inclusion of expenses. Such inconsistencies lead to inconsistent data reporting between insurers in the past. In the instruction template for the data request a clear treatment of expenses is described.
5. The national prudential reporting templates, which are submitted by health insurers annually, have missing observations or are reported inconsistently between insurers. Therefore, this data has been of limited use for validating the current data request.

2.4.3 Future improvements

Use of regular reporting templates for future calibrations of HRES parameters requires further improvement of the data quality. DNB will continue to cooperate with insurers to achieve this goal in the 2nd half of 2024.

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3. Methodology

This chapter describes the methodology used to obtain the unbiased estimates of the Dutch HRES premium- and reserve risk parameters. This chapter starts with a description of the high level HRES methodology in the delegated regulation in Section 3.1. Then the general methodology used by EIOPA to estimate premium reserve risk is explained in Section 3.2. Finally, the adjustments for the specificities of the Dutch HRES are provided in Section 3.3.

3.1 HRES methodology in the Delegated Regulation

The methodology of the calibration is given by Delegated Regulation 2015/35 article 149 is applied. This article explains generically how both the premium and the reserve risk parameters subject to a HRES should be calibrated.

Results for the Dutch health equalisation risk system parameters are presented in the EIOPA Implementing Technical Standard.

Furthermore, the EIOPA methodology of the Joint Working Group (JWG) of 12 December 2011 on the calibration of the premium and reserve risk factors for non-life and health NSLT insurance Risk Module was followed. As with previous calibrations, the definition of several variables was adjusted to allow for the specificities of the risk equalisation system.

3.1.1 Premium risk

The HRES parameter for premium risk regarding medical expense insurance subject to a HRES shall be the lower of:

i. The pan-European standard deviation for the NSLT health premium risk regarding medical expense insurance. The relevant pan-European parameter is equal to 5%.
ii. The higher of the following amount
    a. A third of the standard deviation for the pan-European NSLT health premium risk regarding medical expense insurance (5%).
    b. An estimate of the representative standard deviation of an insurance undertaking's combined ratio, being the ratio of the following amounts:
        - the sum of the payments, including the relating expenses, and technical provisions set up for claims incurred during the year for the business subject to the HRES, including any changes due to the HRES;
        - the earned premium of the year for the business subject to the HRES;

3.1.2 Reserve risk

The HRES parameter for reserve risk regarding medical expense insurance subject to a HRES shall be the lower of:

iii. The pan-European standard deviation for the NSLT health reserve risk regarding medical expense insurance. The relevant pan-European parameter is equal to 5.7%. In 2013, when the HRES parameters were first calculated, this parameter equaled 5.0%.
iv. The higher of the following amount
    a. A third of the standard deviation for the pan-European NSLT health reserve risk regarding medical expense insurance (5.7%).
    b. An estimate of the representative standard deviation of an insurance undertaking's run-off ratio, being the ratio of the following amounts:
        - the sum of the best estimate provision at the end of the year for claims that were outstanding at the beginning of the year and any claims and expense payments made during the year for claims that were outstanding

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at the beginning of the year: both amounts include any amendments due to the HRES;
- the best estimate provision at the beginning of the year for claims outstanding of the business subject to the HRES, including any amendments due to the HRES;

3.2 Model by EIOPA JWG on Non-Life and Health NSLT Calibration (2011)

The general methodology for the estimation of Solvency II parameters for non-life and health NSLT premium- and reserve risk is described by EIOPA3. The report provides derivations of the formulas presented in this section.

The model approximates the premium and reserve risk using combined ratio's. In this calibration, a combined ratio is defined as $g = y/x$, where x and y are defined as follows for premium- and reserve risk:

2. Premium risk (per accident year):
   - x: gross earned premium accident year t
   - y: aggregate loss accident year t
3. Reserve risk (per financial year):
   - x: total claims provision at the start of financial year t
   - y: aggregate loss incurred in financial year t for accident years $< t$.

3.2.1 Year End versus Current Estimate

The EIOPA report offers two different ways to establish the aggregate loss for premium risk: the year-end (YE) method and the current estimate (CE) method. The YE method uses the estimate of the aggregate loss for an accident year from the end of that specific year. The CE method keeps track of the development of the aggregate loss for multiple years. After every year, a new estimation of the aggregate loss can then be derived. This update modifies datapoints every year.

For the calibration the YE method is selected, because this method corresponds with the one-year horizon of SCR calculations and creates robust data. This method has been used in previous Dutch HRES-calibrations also.

3.2.2 Distribution of errors and variance specifications

EIOPA assumes that y follows either a normal or a lognormal distribution. Furthermore, the variance can be chosen to be either constant $(V1)$ or proportional $(V2)$ with respect to the combined ratio β. The data generating process can be presented as:

Normal distribution:

$$E(y_{ti}) = \beta_i x_{ti} \qquad t = 1, \dots, T \ \ and \ i = 1, \dots, I$$

$$\tilde{\pi}_{ti}^{-1} = (1-\delta)\bar{x}x_{ti} + \delta x_{ti}^2$$

$$V1(y_{ti}) = \sigma^2 \tilde{\pi}_{ti}^{-1}$$

$$V2(y_{ti}) = (\sigma\beta_i)^2 \tilde{\pi}_{ti}^{-1}$$

[3] Calibration of the Premium and Reserve Risk Factors in the Standard Formula of Solvency II (europa.eu)

$$u_{ti} = y_{ti} - \beta_i x_{ti},$$

where $\bar{x}$ is the sample mean, π is precision, T is the number of sample years, I is the number of undertakings and σ and δ are shape parameters.

Lognormal distribution: (with mean μ_{ti} and variance ω_{ti} for $\log(y_{ti})$):

$$E(y_{ti}) = \exp\left(\mu_{ti} + \frac{1}{2}\,\omega_{ti}\right) = \beta_i x_{ti}$$

$$V(y_{ti}) = \exp(2\mu_{ti} + 2\omega_{ti}) - \exp(2\mu_{ti} + \omega_{ti}) = (\beta_i x_{ti})^2 (e^{\omega_{ti}} - 1).$$

Next the mean μ and variance ω are written as:

$$\mu_{ti} = \log(\beta x) - \frac{1}{2}\omega_{ti} \qquad en \quad \omega_{ti} = \log\left(1 + \frac{V(y_{ti})}{(\beta x_{it})^2}\right) = \pi_{ti}^{-1},$$

where u_{ti} is independent from the variance specification and ω_{ti} can be replaced with either $V1$ en $V2$ from the normal distribution specification. The variance no longer depends on β when the second variance specification is applied.

3.2.3 Calibration of risk parameters

For the estimation of β, σ and δ the criterion function is maximized, which is different for all four model specifications.

Model 1: Normal distribution with first variance specification

For β and σ, there are closed form expressions conditionally on δ:

$$\hat{\beta}_i(\delta) = \frac{\sum_t x_{ti}\,\tilde{\pi}_{ti} y_{ti}}{\sum_t x_{ti}\,\tilde{\pi}_{ti} x_{ti}} \Longrightarrow \hat{u}_{ti} = y_{ti} - \hat{\beta}_i(\delta) x_{ti}, \qquad i = 1, \ldots, I$$

$$\hat{\sigma}(\delta) = \left(\frac{1}{n}\sum \tilde{\pi}_{ti}\,\hat{u}_{ti}^{\,2}\right)^{1/2}$$

where I is the number of undertakings and n the total number of observations. Finally, this results in a one-dimensional estimation criterion function:

$$\mathrm{l}(\delta|\mathrm{data}) = n\log(\hat{\sigma}) - \frac{1}{2}\sum \log(\tilde{\pi}_{ti}), \qquad 0 \le \delta \le 1$$

Model 2: Normal distribution with second variance specification

For β, there are closed form expressions conditionally on δ:

$$\hat{\beta}_i = \frac{2\sum_t \tilde{\pi}_{ti}\, y_{ti}^2}{\sum_t x_{ti}\,\tilde{\pi}_{ti} y_{ti} + \sqrt{(\sum_t x_{ti}\,\tilde{\pi}_{ti} y_{ti})^2 + 4T_i\sigma^4 \sum_t \tilde{\pi}_{ti}\, y_{ti}^2}} \qquad i = 1, \ldots, I,$$

where T_i is the number of observations for undertaking i. The concentrated criterion function is given by:

$$\mathrm{l}(\alpha\,|\mathrm{data}) = n\log(\sigma) + \sum_i T_i\, log(\hat{\beta}_i) + \frac{1}{2}\sigma^{-2}\left(y_{ti}\hat{\beta}_i^{-1} - x_{ti}\right)^2 - \frac{1}{2}\sum \log(\tilde{\pi}_{ti}).$$

The numerical procedure should take restrictions on the parameter set α into account.

Model 3: Lognormal distribution with first variance specification

The variance is given by

$$\omega = \log\left(1 + \frac{\sigma^2\left((1-\delta)\bar{x}x_{ti} + \delta x_{ti}^2\right)}{(\beta x)^2}\right) = \pi^{-1},$$

after which the estimation criterion function is formulated as:

$$l(\alpha, \beta|\text{data}) = \frac{1}{2}\sum \pi_{ti}\left(z_{ti} + (2\pi_{ti})^{-1} - \log(\beta_i)\right)^2 - \frac{1}{2}\sum \log(\pi_{ti}).$$

where $z_{ti} = \log(y_{ti}/x_{ti})$.

Model 4: Lognormal distribution with second variance specification

The variance is given by

$$\omega = log\left(1 + \sigma^2\left((1-\delta)\bar{x}x_{ti}^{-1} + \delta\right)\right) = \pi^{-1},$$

and closed form expressions for β:

$$log(\hat{\beta}_i) = \frac{\sum_t z_{ti}\pi_{ti} + \frac{1}{2}T_i}{\sum_t \pi_{ti}}.$$

After which the concentrated criterion function is defined as:

$$l(\alpha|\text{data}) = \frac{1}{2}\sum \pi_{ti}\left(z_{ti} + (2\pi_{ti})^{-1} - \log(\hat{\beta}_i)\right)^2 - \frac{1}{2}\sum \log(\pi_{ti}).$$

Numerically optimizing the four abovementioned concentrated criterion functions provides the parameter estimates.

Three step procedure to eliminate outliers

In order to achieve a more robust and reliable statistical estimation of the risk factors, the three step procedure further eliminates outliers in the data. After the calibration of parameter estimates, the standardized residuals are compared with the following threshold statistic:

$$\varphi\left(\frac{n}{n+1}\right),$$

where φ represents the standard normal cumulative function. If the absolute value of the standardized residuals is larger than the boundary statistic, the observation is removed from the calibration. After the removal, parameters are estimated again via maximization of the concentrated criterion function. The removal of observations with large standardized residuals is then repeated, after which the parameters are estimated one last time. These parameters are then used to calculate the unbiased risk parameters. The three step procedure is separately with regards to the estimation of premium and reserve risk.

It is to be expected that the automatic use of elimination of outliers results in the removal of some valid data points. The results from above analysis are therefore a lower bound for the actual risk parameters.

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Unbiased Estimator Standard Deviation

In our model specification the maximum likelihood estimator of the standard deviation is biased, because parameters are used that occur only a finite number of times in the observational process. The σ parameter resulting from the calibration thus has to be multiplied by the following correction factor to obtain the unbiased parameter estimate of premium/reserve risk:

$$c = \frac{\Gamma\left(\frac{1}{2}(n-k)\right)}{\Gamma\left(\frac{1}{2}(n-k+1)\right)}\sqrt{\frac{1}{2}n},$$

where k is the number of undertakings and Γ is the Gamma-function.

3.3 Adjustments for the specificities of the Dutch health risk equalisation system

In this section, the specificities of the HRES are included in the calculation of the Solvency Capital Requirement. Not adjusting the calculations of the standard deviations for premium risk and reserve risk for undertakings subject to HRES appropriately, would lead to an overestimation of the SCR for underwriting risk.

For the calibration, the equalisation payments are divided into two categories:

1. Ex-ante equalisation payouts: equalisation payouts communicated as the 'lenteherberekening' (spring update on equalisation payouts) of accident year t
2. Ex-post (expected) equalisation payouts: all (expected) changes of the equalisation payouts compared to the 'lenteherberekening'

These categories are then used in the specification of premium and reserve risk as below. This specification matches the methodology described in section 3.1 as well as trying to capture the dynamics of the HRES system as good as possible.

4. Premium risk (per accident year):
   - x: gross earned premium accident year t + ex-ante equalisation payouts for accident year t
   - y: aggregate loss accident year t **-/-** expected future ex-post equalisation payouts at the end of accident year t
5. Reserve risk (per financial year):
   - x: total claims provision at the start of financial year t **-/-** expected future ex-post equalisation payouts at the start of financial year t
   - y: claims paid in financial year t for accident years $< t$ + total claims provision at the end of financial year t for accident years $< t$ **-/-** expected future ex-post equalisation payouts for accident years $< t$ at the end of financial year t **-/-** realized ex-post equalisation payouts for accident years $< t$ during financial year t

4. Results

This section presents the premium and reserve risk parameters from the four models specified in Section 3.2.3. Next, for the purpose of selecting one of the models, the section assesses the adequacy of the model using goodness-of-fit tests such as scatterplots and performs a compliance analysis on the chosen model. This section concludes with robustness tests applying different data specifications.

The analysis concludes that the use of the model specification 'lognormal with proportional variance specification' is suitable, with estimated parameters of 2.6% and 5.3% for premium risk and reserve risk respectively.

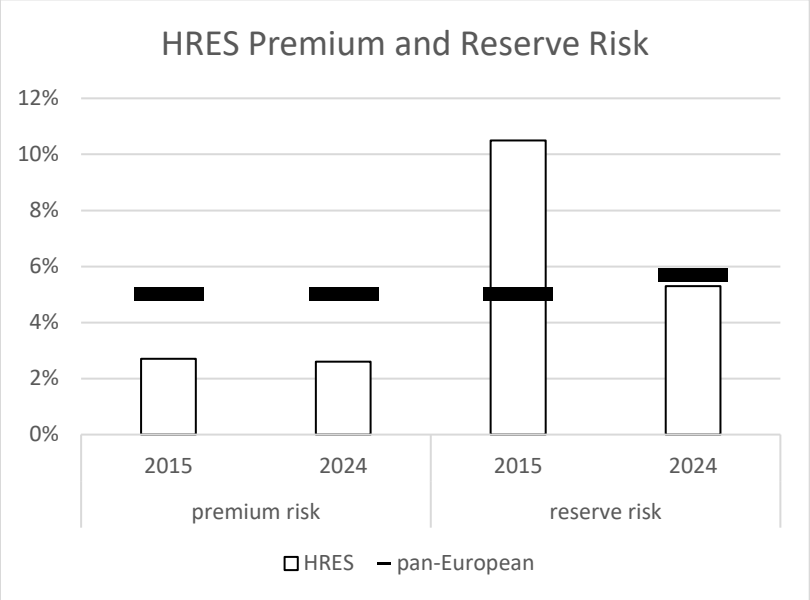

Figure 2: Premium and Reserve Risk estimates 2015 ITS and 2024. *Note that the 2015 ITS used data from 2006-2012.*

4.1 Calibration results

This section presents the calibration results for the models from Section 3.2.3. Table 1 presents the risk parameter estimates and the amount of observations that are excluded by the automatic three-step elimination procedure for each specification. Before the automatic three-step elimination procedure, the number of observations used for premium risk and reserve risk estimation are 280 and 260 respectively.

Table 1: parameter estimates*. Unbiased parameter estimates of the premium and reserve risk parameters are given for different model specifications. The variance specification can be constant or proportional with respect to the loss ratio parameter β. Furthermore, the number of outliers removed are given for each specification.*

No.	Model distribution	Variance specification	Premium risk	Reserve risk	#Outliers excl. Prem	#Outliers excl. Res
1	normal	(1) constant	2.6%	5.1%	10	12
2	normal	(2) proportional	2.6%	5.2%	10	11
3	lognormal	(1) constant	2.6%	5.1%	10	11
4	lognormal	(2) proportional	2.6%	5.3%	10	11

The calibration provides that the estimate for premium risk is 2.6% and the estimate for reserve risk lies between 5.1%-5.3%.

The automatic three-step elimination procedure removes around 10 observations for all specifications for both premium and reserve risk estimations, which corresponds to just under 4% of observations.

4.2 Goodness-of-fit

This section assesses the goodness-of-fit for the different model specifications. Figures 3 and 4 provide scatter plots that compare the portfolio specific risk parameters of an individual undertaking with the unbiased risk parameters resulting from the model. Both specifications result in a very similar fit in terms of reserve risk and premium risk. The two remaining model specifications each result in scatter plots

very similar to the one displayed. Furthermore, normality of standardized residuals cannot be rejected via a Jarque-Bera test for any of these models. Based on these plots neither of the four models can be rejected. Table 2 shows that the four models have a similar goodness-of-fit for the mean and median of the portfolio-specific volatilities.

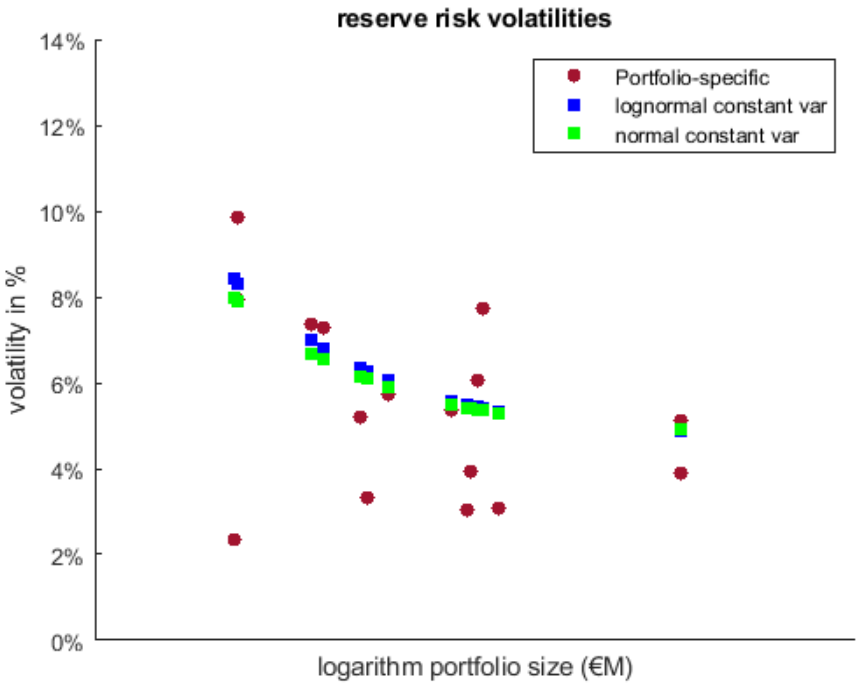

Figure 3: Scatterplot for reserve risk. *Portfolio specific volatility estimates are compared with volatility estimates from two model specifications. Portfolio-specific volatilities are estimated without the outliers that are removed during the calibration of the risk parameters. The x-axis contains no tick marks and not all portfolio's are plotted as to anonymise undertakings.*

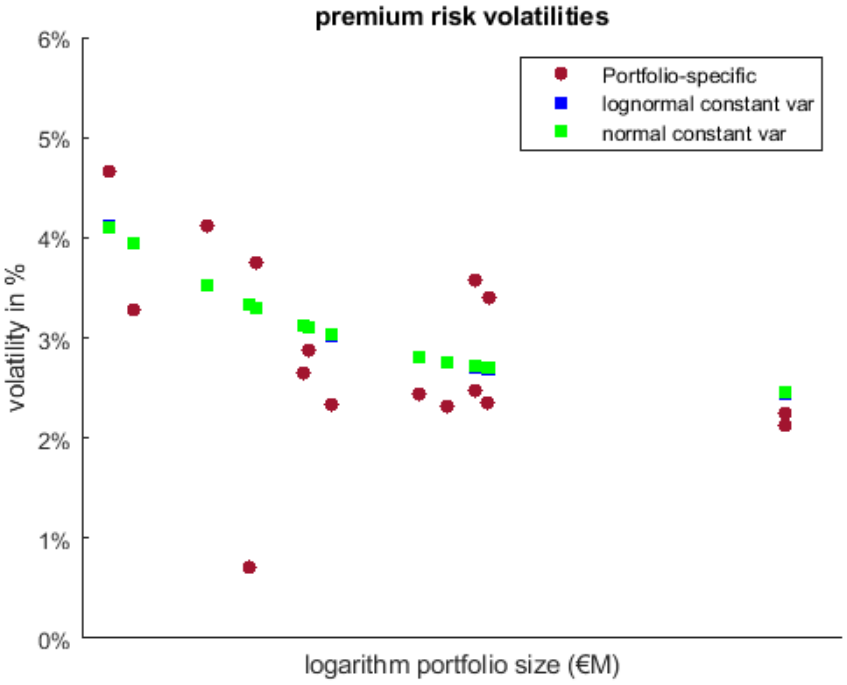

Figure 4: Scatterplot for premium risk. *Portfolio specific volatility estimates are compared with volatility estimates from two model specifications. Portfolio-specific volatilities are estimated without the outliers that are removed during the calibration of the risk parameters. The x-axis contains no tick marks and not all portfolio's are plotted as to anonymise undertakings*

Table 2: Empirical mean and median volatilities *compared to model-implied mean and median volatilities*

			Premium risk		Reserve risk	
	Model distribution	Variance specification	mean	Median	mean	median
No.	**Portfolio Specific**	**n.a.**	**2.8%**	**2.6%**	**5.4%**	**5.3%**
1	normal	(1) constant	3.0%	2.8%	5.9%	5.5%
2	normal	(2) proportional	3.1%	2.9%	6.2%	5.7%
3	lognormal	(1) constant	3.0%	2.8%	6.1%	5.5%
4	lognormal	(2) proportional	3.1%	2.8%	6.2%	5.7%

In their 2011 report, the JWG selects model 4, a lognormal specification with a proportional variance specification 4. The 2024 analysis does not provide arguments supporting a deviation from this selection.

[4] See: "Final report on public consultation No. 14/060 on the implementing technical standards with regard to standard deviations in relation to health risk equalisation systems"

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4.3 Compliance analysis

This section provides a compliance analysis on model no 4. The compliance analysis is based on the observation that the model assumes a relationship between the size of the undertakings and the risk parameters.

For this analysis the unbiased sigma is multiplied with a calibration factor κ to determine the implied properties of the combined factor with respect to the compliant share of undertakings or policyholders in the market. Given a calibration factor κ, the compliance analysis identifies the share of portfolio's and policyholders (or a mix thereof) that is insured by undertakings with a confidence level of at least 99.5% when the SCR is calculated according to $\kappa \times \sigma$.

The results are plotted in Figure 5 and 6. In absence of a κ-factor (or $\kappa = 1$), for both reserve and premium risk the compliant share is around 20% for portfolios and around 70% for policyholders. This means that for only 20% of the portfolios the capital requirement satisfies the requirements in Directive 2009/138/EC article 101. To achieve a compliant share of 90% in terms of policyholders, a κ of about 1.1 is required. Similarly, to achieve a compliant share of 95% a κ of about 1.3 to 1.4 is required.

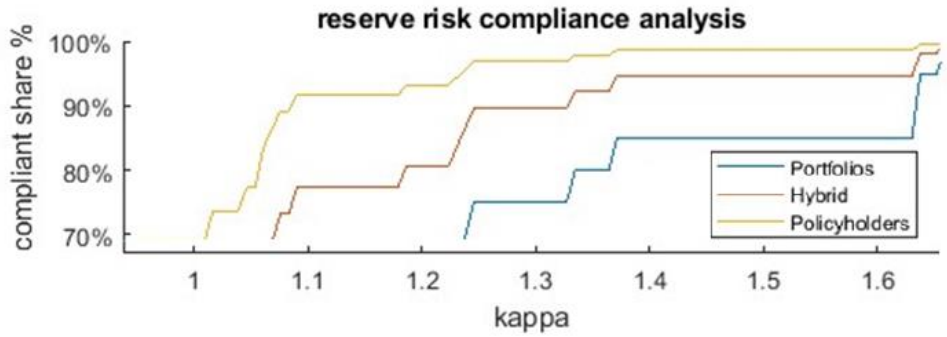

Figure 5: Compliant share analysis for reserve risk

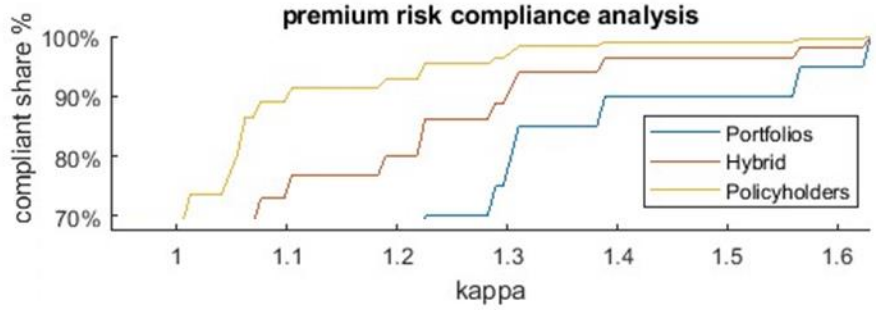

Figure 6: Compliant share analysis for premium risk

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4.4 Robustness checks

This section considers different model specifications.

4.4.1 No automatic outlier removal

Without the automatic outlier removal procedure described in section 3.2, which is expected to also eliminate some valid data points, the HRES parameters for the premium and reserve risk for model no. 4 would be 3.0% and 6.5%, respectively.

As with previous calibrations, the outlier elimination procedure from the JWG reduces the volatility of the financial results which has a large impact on the HRES-parameters. As such, the parameters from section 4.1 should be seen as a lower bound.

4.4.2 Actuarial instead of commercial premium

In the first alternative data specification the gross earned premium is adjusted with commercial premium adjustments, as reported by insurers in the data request. This results in the actuarial premium. This specification impacts the estimation of premium risk.

This sensitivity is used as qualitative input to confirm the appropriateness of the model for determining the HRES parameters. Note that article 149 DA requires the use of premium earned which does not allow this approach.

It is to be expected that the premium risk parameter would be lower, because the actuarial premium better resembles expected claims, which reduces volatility of results. The model behaves according to this expectation. Conceptually, using the actuarial premiums instead of the earned premiums better measures the premium risk insurers face.

When using the actuarial premium, the four different model specifications all result in significantly lower estimates of the premium risk parameter: 1.8% (original estimate is about 2.6%). This confirms that the difference between the actuarial and commercial premium has a significant impact on premium risk estimation.

4.4.3 Including pandemic years

The second alternative data specification extends the dataset, now including observations for the Covid-years (2020-2021). The sensitivity applies two different extended datasets, one that corrects the reported cashflows for catastrophe risk, and one that does not. The uncorrected version leads to the following unbiased parameter estimates: 2.4% for premium risk and 5.0%-5.2% for reserve risk.

Further analysis considers the uncorrected data specification for covid and corrects the data for the covid-19 "solidariteitsregeling" as this is a voluntary arrangement between the health insurers. This specification results in estimates very similar to the original unbiased parameter estimates for premium and reserve risk as presented in Table 1.

When correcting for all non-voluntary covid-related cashflows, unbiased parameter estimates increase to 3.0%-3.1% for premium risk and 5.3%-5.4% for reserve risk.

From this it appears that the Dutch National Health Risk Catastrophe Provision effectively absorbs catastrophe losses of health insurers, reducing premium risk. Correcting for all covid related cash flows is also not a realistic option as, due to the maximum capacity of the health care system, many of the non-covid treatments could not take place. This confirms the exclusion of these accident/financial years.

4.4.4 Different specification of loss ratio

As the current combined ratio specification differs from the one used in previous HRES-calibrations, this section examines the impact of the change of this specification. For premium risk the previous specification has a slightly different way of allocating equalisation payouts, while for reserve risk the previous specification did

not include any (expectations of) equalisation payouts. The previous specification leads to similar estimates of premium risk (2.6%) whereas it leads to a higher estimate of reserve risk (6.1%-6.4%).

From this it appears that the previous specification that excluded (expectations of) equalisation payouts overestimates reserve risk. The changes in the specification of premium risk have no impact on the risk parameter.

4.5 Impact assessment

This section contains the impact of the 2024 calibration assuming that all NSLT-health business is the mandatory basic health insurance cover "basiszorg". This results in a slight overestimation of the impact, as the NSLT-health business includes non-mandatory supplementary health coverage ("aanvullende zorgverzekering"). This analysis is performed on the 19 health insurers for which DNB is the National Competent Agency only.

4.5.1 Impact on aggregate level

On an aggregate level, summing the total SCR for all solo health insurers, the impact of updating the HRES parameters to 2.6% and 5.3% reduces the total SCR by approximately EUR 100 million per 2023Q4 or a reduction of the total SCR by 1.2%.

Assuming the risk margin scales proportionally with the SCR, and all other things unchanged, this would increase the Solvency II ratio of the aggregated solo undertakings by approximately 2% from 143% to 145%.

4.5.2 Impact on entity level

Updating the HRES-parameters decreases the total SCR for each individual entity, see Figure 7.

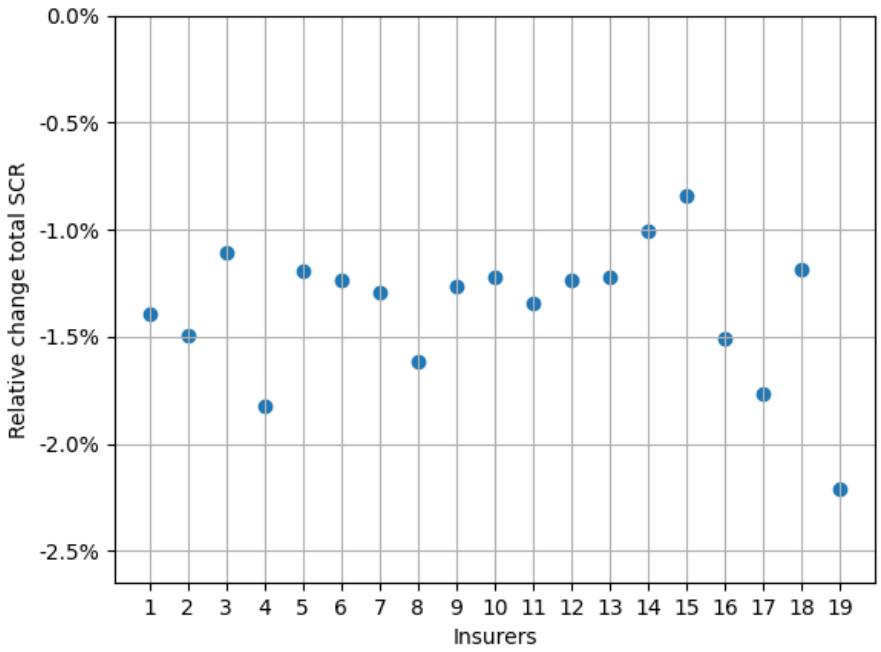

Figure 7: ***Relative impact of changing the HRES parameters to 2.6% and 5.3% on the total SCR per insurer***

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5. Conclusion

This report assesses the adequacy of the parameters for NSLT health insurance premium and reserve risk for health insurance coverage subject to the Dutch HRES.

The assessment concludes that the appropriate parameter for premium risk is 2.6% (current value: 2.7%) and the appropriate parameter for reserve risk is 5.3% (current value: 5.0%). Compared with the current parameters, an update reduces the total SCR by approximately EUR 100 million per year end 2023, which equals a relative reduction 1.2%. The effect on the aggregated Solvency II ratio is approximately +2%.

The methodology for this calibration is laid down in article 149 of the Delegated Regulation 2015/35 and follows the EIOPA report by the JWG on the calibration of the premium and reserve risk factors for non-life and health NSLT insurance Risk Module from 2011.

This methodology has both prudent and non-prudent elements. The stand-alone impact of these elements has been assessed. A prudent element in the methodology is that the commercial rather than the actuarial premium is required (section 4.4.2). Non-prudent elements in the calculation are the automatic outlier procedure (section 4.4.1) and not including a kappa factor (section 4.3). When combined, for this analysis these prudent and non-prudent elements lead to a balanced outcome.

The parameters are calibrated using the same model specification as in the previous calibration (model 4: log-normal distribution with second variance specification), as goodness-of-fit results are similar for different specifications of the distribution of premium and reserve risk. However, the definition of the combined ratio and run-off ratio for respectively the premium and reserve risk have been improved compared to the previous calibration to better measure the actual risk, while complying with Solvency II legislation.

Covid years were omitted completely, as cleaning the pandemic years for covid-related costs would result in non-representative data due to the crowding out effect on non-covid-related healthcare.

The Dutch HRES is compliant with the requirements in the Solvency II Directive and the system reduces both NSLT-health premium and reserve risk. The pan-European parameters for NSLT-health premium and reserve risk are 5.0% and 5.7% whereas the current calibration leads to 2.6% and 5.3%, respectively.

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Appendix I: Feedback from stakeholders

Prior to the data request, stakeholders provided feedback on the methodology. This feedback has been duly considered and processed. The table provides a summary of the most important feedback and the response.

Feedback table 1			
No	Provider of feedback	Feedback	Response
1	AG	In order to focus the discussion on the most material point, the AG advises to calculate alternative models and provide the results in the report.	The report provides the major results of the several models
2	AG	The definition of underwriting risks could be improved by specifying that premium risk relates to the current accident year and reserve risk relates to older accident years.	Agreed and included in the specification.
3	AG	The choice of not taking deliberate capital accumulation and reduction in the premium setting into account has the most impact on the HRES-parameters. Without picking a side whether these can or cannot legally be included, the AG advises to calculate an alternative model using "rekenpremie" set by the ministry of VWS instead of the nominal premiums.	The information from the model with the actuarial instead of the commercial premium is used as qualitative input to determine the HRES parameters. The results are consistent with expectation, confirming appropriate behavior of the model. The report does not include a model using the "rekenpremie" as another sensitivity. This would also not be in line with article 149 DR and is less accurate compared to taking deliberate capital accumulation and reduction in the premium setting into account.
4	AG	The AG states that cleaning the data for Covid-19 is not possible. Arbitrary choices should be made on including multiple Covid-19 arrangements. Regarding the reserve risk; cleaning the data only for accident years 2020 and 2021 is not correct, because an important part of the volatility in the run-off is omitted in the subsequent year (2022 and onwards).	Agreed. It is complex to disentangle all covid related from non-covid related cashflows. Financial years 2020 and 2021 are excluded from the calculation of the reserve risk completely. However, years 2022 and onwards are not omitted as the covid related run-off is relatively small.

5	ZN	ZN advises to take deliberate capital accumulation and reduction in the premium setting into account. Because of the varying capital accumulation and reduction in the premium setting, one of the most important assumptions underlying the model, namely a constant combined ratio over time, is not satisfied. ZN estimates the impact on the required capital to be more than 1 billion. Although capital requirements should be adequate for the risks taken, ZN opposes the model-based higher prudence. ZN suggests to take these account for the deliberate capital accumulation and reduction in the premium setting through the numerator of the combined ratios. That is, consider them as claim related costs.	The model specification using Deliberate capital accumulation and reduction in the premium setting is not consistent with article 149 DA. Also, these cashflows can not be considered as claim related costs. The results of the suggested model are used as qualitative information to confirm the dynamics and the appropriateness of the model specification. See also point 3.
6	ZN	ZN suggests to change the original specification of the reserve risk by omitting the ex-ante equalisation payouts from the equation.	Agreed. This specification is now used in this report.
7	ZN	ZN advises to use the ex-ante and ex-post definitions that ZN also uses. That is, ex-ante equals the equalisation payouts listed in the ZiNL spring recalculations and ex-post equals all changes to the latter.	Definitions have been applied.

Preliminary results of the assessment have been shared with stakeholders. Their feedback has been considered in the final report on the assessment as follows:

Feedback table 2			
No	Provider of feedback	feedback	Response
1	ZN	Pagina 5, paragraaf 1.3 en dan de zin 'In EIOPA's report …, EIOPA considers that a frequency of one or two years is appropriate'. Dit staat in het "Final report on public consultation No. 14/060 on the implementing technical standards with	The review shall take into account the calculation of the supervisor concerned. The analysis of DNB may require a higher frequency than the actual revision of the parameters.

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		regard to standard deviations in relation to health risk equalisation systems". Er staat echter ook bij 2.2 b dat de "review of the standard deviations for HRES will be aligned with the review of other parameters of the standard formula". Het is niet onze waarneming dat EIOPA elke 2 jaar de parameters reviewt. Kan DNB daar duidelijkheid over verschaffen?	
2	ZN	Pagina 4, paragraaf 2.1 en dan de zin 'For this reason, recent years could be more representative for future years than older years'. Wij zien ook dat reserveringsgedrag van verzekeraars is gewijzigd n.a.v. wijzigingen in de risicoverevening. Voor afschaffing van de macro neutraliteit zien we dat de afloopratio's van verzekeraars heel anders zijn dan na afschaffing. Hiermee wordt niet voldaan aan de aanname dat de afloopratio's constant over de tijd zijn. Heeft DNB dit aspect ook beoordeeld en hoe kijkt zij hier naar?	DNB does not observe a clear trend in the level of or the spread around the run-off ratio's.
3	ZN	Pagina 6, paragraaf 2.3 en dan de zin 'The limited capacity of the healthcare systems had led to crowding out non-covidrelated claims'. Bij ZN roept dit de discussie op of covid jaren als "reguliere" jaren moeten worden gezien of dat ze volledig moeten worden uitgesloten. Hier moeten we ons intern nog verder op beraden.	DNB did not receive feedback before July 1st.
4	ZN	Pagina 6, paragraaf 2.3 en dan de zin 'Only omitting accident years 2020 and 2021 …, as the reserve risk in financial years 2020 and 2021 depends mostly on the two accident years'.	This is an error in the report, not in the model. This sentence should read: 'Only omitting accident years 2020 and 2021 would lead to unreliable results, as the reserve risk in financial years 2021 and 2022 depends

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		Dit is niet correct. Het voorzieningenrisico boekjaar 2020 gaat vooral over schadejaar 2019. Dit is telefonisch en via e-mail doorgegeven aan DNB.	mostly on these two accident years.' The text in the report has been adjusted.
5	ZN	Pagina 6, paragraaf 2.4 en dan de zin 'For accident years 2022 and 2023, only the run-off of accident years 2020 and 2021 are removed from the data, as these constitute to a smaller share of the total reserve'. Graag iets meer toelichting op de wijze waarop DNB deze correctie heeft uitgevoerd. In de analyse die Milliman heeft gedaan lijkt dit conceptueel niet goed te gaan.	This is an error in the report, not in the model. This sentence should read: 'For financial years 2022 and 2023, only accident years 2020 and 2021 (including run-off) are re moved from the data, as these constitute a smaller share of the total reserve. The text in the report has been adjusted.
6	ZN	Pagina 7, paragraaf 2.4.2 en dan de zin '1. Different definitions used by Insurers: …elements'. Graag iets meer duiding. Waar zit dit in? En is dit opgelost door heraanleveringen?	This sentence should read: 'Different definitions used by insurers: undertakings use different definitions for different data sources.' This has been adjusted in the report.
7	ZN	Pagina 15, paragraaf 4.3 en dan de zin 'The results are plotted in figure 3 and 4. De verwijzing is niet juist dit moet zijn figuur 4 en 5.	This has been adjusted in the report.
8	ZN	Pagina 16, paragraaf 4.4.1 en dan de zin 'Without the automatic outlier … respectively'. In de zin staat to eliminate valid data points dat moet zijn invalid data points.	This is not a mistake. The automatic outlier removal is a pragmatic method, but has its drawbacks. Ideally, outlier removal should happen on qualitative grounds, but this would require an inspection of each individual datapoint. By removing datapoints based on outlying standardised residuals, it is likely that also some valid datapoints are removed. See also section 4.3 line 84 of the 2011 EIOPA Joint Working Group report on non-life and health NSLT calibration. The text has been adjusted as follows: 'the removal of some valid data points.'
9	ZN	Pagina 16, paragraaf 4.4.1 en dan de zin 'As such, the parameters form section 4.1 should be seen as a lower bound.	See the response to feedback number 8.

		Niet eens. Outliers verwijder je niet voor niets. Gelet op betere modellering door rekening te houden met op- en afslagen vanuit het kapitaal, zou je de uitkomsten van par.4.1 moeten zien als een bovengrens.	
10	ZN	Pagina 16, paragraaf 4.4.1 en dan de zin 'The actuarial premium is defined as the premium that is …, expenses and a profit margin. De profit margin hoort niet in de actuariële premie	This has been adjusted.
11	ZN	Pagina 16, paragraaf 4.4.1 en dan de zin 'Conceptually, using the actuarial premiums instead of the earned premiums better measures the premium risk insurers face'. Fijn dat DNB dit zo expliciet opschrijft. Misschien idee om samen met DNB dit punt met EIOPA te verkennen en te zoeken naar manier om gebruik wel mogelijk te maken.	Requirements for this adjustment include (1) consistent application to all non-life lines of business; (2) the actuarial premium is reported and checked by the external auditor. These conditions are currently not met.
12	ZN	Pagina 16, paragraaf 4.4.1 en dan de zin 'When using the actuarial premium, … risk parameter: 1.8% (original estimate is about 2.6%)'. Gelet op de opmerking dat dit model conceptueel beter is, zouden we graag in het rapport opgenomen zien wat het effect op de SCR en de SCR ratio is.	DNB has not determined the impact on the SCR of the use of an actuarial premium and of an adjusted kappa. DNB has included the impact on the parameters.
13	ZN	Pagina 17, paragraaf 4.4.4 en dan de zin 'The changes in the specification of premium risk have no impact on the risk parameter'. Wel impact op de volumemaat. Wordt nominale premie + lenteherberekening.	The SCR for premium risk is calculated by insurers before the start of the accident year. At that point in time, the spring update of the health equalisation benefit by Zorginstituut Nederland ('lenteherberekening') is not yet available. The volume measure for premium risk is based on the expected health equalisation benefit before the start of the accident year. Therefore, the volume measure does not change.

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14	ZN	Pagina 17, paragraaf 4.5 en dan de zin 'This results in a slight overestimation of the impact, …. non-mandatory supplementary health coverage ("aanvullende zorgverzekering"). Kan DNB de berekening toelichten?	The increase in the SCR was calculated as the absolute increase in the HRES parameters applied to the volume measures for all health insurance products, including basic and supplementary health insurance. In the latest version of the report the actual impact rather than the estimated impact is shown, therefore this sentence is removed.

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Appendix II: Compliance with Solvency II Directive article 109a(5)

5. The implementing technical standards referred to in paragraph 4 shall apply only to the national legislative measures of Member States which permit the sharing of claims payments in respect of health risk amongst insurance and reinsurance undertakings and which meet the following criteria:	
(a) the mechanism for the sharing of claims is transparent and fully specified in advance of the annual period to which it applies;	Annually, in September the minister of Health, Welfare and Sport informs the House of Representatives of updates of the the mechanism.
(b) the mechanism for the sharing of claims, the number of insurance undertakings that participate in the health risk equalisation system (HRES) and the risk characteristics of the business subject to the HRES ensure that for each undertaking participating in the HRES the volatility of annual losses of the business subject to the HRES is significantly reduced by means of the HRES, both in relation to premium and to reserve risk;	Both the HRES premium and reserve risk parameters are lower than pan-European parameters.
(c) health insurance subject to the HRES is compulsory and serves as a partial or complete alternative to health cover provided by the statutory social security system;	The Dutch basic health insurance scheme is compulsory and serves as a complete alternative to health cover provided by the statutory social security system (non-existent in The Netherlands);
(d) in the event of default of insurance undertakings participating in the HRES, one or more Member States' governments guarantee to meet the policy holder claims of the insurance business that is subject to the HRES in full.	In article 31, The Health Insurance Act provides a payment to policy holders by the Care Institute Netherlands, compensating for pending claims and payments of policy holders. If necessary, the government will supplement payments to the Health Care Fund to enable these payments. For an analysis, see section 2.5 of the annex to the letter of the Minister of Health, Welfare and Sport of 30 June 2015.

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Appendix III: Specifications data request

This appendix specifies the data request. It includes next to the Excel template (Appendix IV) two files:

I. Instructions for the specification of the data request
II. A Q&A in which some common questions regarding the data request are answered. For example: the main difference with the 2018 data request.

I. Instructions for the specification of the data request

Instructie en toelichting bij HRES-uitvraag 2024

Versie 7 maart 2024

1. ALGEMENE OPMERKINGEN

- De uitgevraagde gegevens zijn van belang voor de bepaling van de HRES[1]-factoren voor het premie- en reserverisico voor de basiszorgverzekeringen die behoren tot de HRES-categorie.
- De zorgverzekeraar rapporteert de schade, ex-ante vereveningsbijdrage, ex-post vereveningsbijdrage, verdiende nominale premie, premie op- en afslagen in verband met kapitaalbeleid, art. 33 bijdrage en solidariteitsbijdrage naar schadejaar (= Zvw[2] vereveningsjaar).
- Voor de Covid-jaren 2020 en 2021 worden de Covid-19 gerelateerde posten en regelingen verwerkt in de tabellen voor schade, technische voorziening of verevening conform de Notitie 'Verwerking van de Covid-19 schade en regelingen onder Solvency II' van 22 december 2020 met kenmerk N-21-19756. Met Covid-19 gerelateerde posten en regelingen wordt gedoeld op de continuïteitsbijdragen, indirecte en directe meerkosten, patiëntgebonden Covid-19-kosten, Zvw. art. 33 bijdrage en de solidariteitsbijdrage.
- Van alle Covid-19 gerelateerde posten en regelingen wordt alleen de solidariteitsbijdrage apart uitgevraagd, omdat DNB deze informatie niet via een andere databron kan verkrijgen.
- De tabellen voor de verschillende (afgekapte) driehoeken hebben de structuur schadejaar x ontwikkeljaar.
- In deze uitvraag gaat het alleen om de getallen voor de basiszorgverzekering. De aanvullende zorgverzekeringen moeten niet in deze uitvraag worden opgenomen.
- De uitvraag wordt ingevuld door alle zorgverzekeraars (per juridische entiteit) die in de periode 2006 t/m 2023 actief zijn geweest. Mocht een zorgverzekeraar in deze periode zijn gefuseerd met een andere zorgverzekeraar, dan dient met terugwerkende kracht de huidige situatie te worden gerapporteerd. Het uitgangspunt is dan dus dat de fusie al per 2006 heeft plaatsgevonden. De driehoeken met verdiende premies, (verwachte) schades en (verwachte) vereveningsbijdragen van de gefuseerde entiteiten kunnen opgeteld worden.
- Bij de uitvraag wordt naast dit instructiedocument een Q&A opgesteld met o.a. toelichting op de belangrijkste verschillen met de uitvraag van 2018 en illustratieve voorbeelden van de opgevraagde driehoeken.
- Wij verzoeken u om de inzending uiterlijk 30 april 2024 aan ons te retourneren via DLR.

2. VERSLAG ACTUARIELE FUNCTIE

DNB verzoekt om bij de inzending een verslag van de controle van deze gegevens door de actuariële functie bij te voegen. Onderdeel van dit verslag is:

- Een bevestiging dat de inzending voldoet aan de instructies in dit bestand.
- Een aansluiting met de Nationale Staat Zorg en een verklaring van eventuele afwijkingen.

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3. OPMERKINGEN TEN AANZIEN VAN DE UITGEVRAAGDE DATA-ITEMS

3.1 Tabblad `HRES uitvraag 2024'

A. Verdiende nominale premies per schadejaar

Definitie

Onder de verdiende nominale premie wordt verstaan alle verdiende nominale premie-inkomsten die betrekking hebben op de basisverzekering inclusief bijbehorende opslagen en/of kortingen in het betreffende schadejaar. Indien de wanbetalersregeling van toepassing is, moet hier de afboeking wanbetalers af worden getrokken en de compensatie wanbetalers worden toegevoegd. Oninbare premies worden niet in mindering gebracht op de verdiende premies. De verdiende premie moet worden gerapporteerd in hele euro's met een positief teken.

Doel

Geeft inzicht welk deel van de inkomsten basisverzekering voortvloeit uit de verdiende nominale premie per schadejaar.

B. Incrementeel (niet-cumulatief) ontvangen vereveningsbijdrage Zvw ter compensatie van de EX-ANTE populatiekenmerken (EX-ANTE toekenning)

Definitie

In deze driehoek wordt de ontvangen vereveningsbijdrage Zvw gerapporteerd die dient ter compensatie van de ex-ante populatiekenmerken op het moment van de ex-ante toekenning. Onder ex-ante toekenning wordt in dit geval verstaan de schriftelijke mededeling van de lenteherberekening door het ZiNL.
Conform de rapportage vanuit ZiNL zijn de bedragen:

- na aftrek van het normatief eigen risico;
- na aftrek van de te innen nominale rekenpremies;
- inclusief de uitkering in verband met de uitvoeringskosten 18-.

De driehoek moet gerapporteerd worden in hele euro's, niet-cumulatief, niet verdisconteerd en gebaseerd op de daadwerkelijk ontvangen bijdragen (exclusief interest). De ontvangen bedragen dienen met een positief teken te worden opgenomen en de uitgaande bedragen met een negatief teken.

Doel

Geeft inzicht welk deel van de inkomsten basisverzekering voortvloeit uit dit deel van de vereveningsbijdrage Zvw per schadejaar en de ontwikkeling daarvan in de tijd.

C. Incrementeel (niet-cumulatief) ontvangen of betaalde

- correcties op de vereveningsbijdrage Zvw ter compensatie van de EX-ANTE populatiekenmerken (EX-POST correctie) EN
- vereveningsbijdrage Zvw afhankelijk van de karakteristieken van de schadelast (EX-POST correctie)

Definitie

In deze driehoek worden de volgende posten gerapporteerd:

- de betaalde of ontvangen correcties op de vereveningsbijdrage Zvw die ZiNL schriftelijk mededeelt aan de verzekeraars en die dient ter compensatie van de ex-ante populatiekenmerken na het eerste ontwikkeljaar (ex- post vaststelling). Onder ex-post vaststelling wordt in dit geval verstaan alle correcties ten opzichte van de lenteherberekening die plaatsvinden na de schriftelijke mededeling van de lenteherberekening. Bedragen zoals gecommuniceerd in de lenteherberekening vallen hier dus niet onder.
- de betaalde of ontvangen vereveningsbijdrage Zvw die afhankelijk is van de karakteristieken van de schadelast (ex-post vaststelling) die verzekeraars ontvangen van het ZiNL.

In deze driehoek worden alle ex-post correctiemechanismen gerapporteerd, waaronder:

- saldo van de HKC (indien van toepassing);
- verrekening bandbreedteregeling
- macronacalculatie.

De vereveningsbijdrage Zvw is exclusief interest. De driehoek moet gerapporteerd worden in hele euro's, niet-cumulatief, niet verdisconteerd en gebaseerd op de daadwerkelijk ontvangen of betaalde bijdragen (exclusief interest). De ontvangen bedragen dienen met een positief teken te worden opgenomen en de uitgaande bedragen met een negatief teken.

Doel

Geeft inzicht welk deel van de inkomsten basisverzekering voortvloeit uit dit deel van de vereveningsbijdrage Zvw per schadejaar en de ontwikkeling daarvan in de tijd.

D. Incrementeel (niet-cumulatief) betaalde schade inclusief schade-afhandelingskosten basisverzekering

Definitie

Onder betaalde schade basisverzekering wordt verstaan alle betaalde schadebedragen die betrekking hebben op zorgprestaties die ten laste van de basisverzekering Zvw vergoed kunnen worden. Dit betreft de totale bruto schade zoals gedefinieerd door het ZiNL in het 'Handboek zorgverzekeraars informatie Zorgverzekeringswet' gepubliceerd op 16 december 2022. De verzekeraar voert vervolgens de volgende aanpassingen door op deze bruto schadelast:

- aftrek of opname van de opbrengstverrekening ziekenhuizen en GGZ-instellingen 'oude stijl' zoals door de NZa vastgesteld (m.a.w. de einduitkomst moet zijn de schade na correctie opbrengstverrekening);
- aftrek van de opbrengsten verhaal (ZiNL-code 890.1);
- aftrek van de schade ten laste van het vrijwillig eigen risico (ZiNL-code 910);
- aftrek van de schade ten laste van het verplicht eigen risico (ZiNL-code 915);
- opname van de schade-afhandelingskosten.
- opname no-claim uitkering aan verzekerde;
- opname van overige (coulance) betalingen en extra verstrekkingen buiten de Zvw die wel uit de basisverzekering voortvloeien, bijvoorbeeld via collectiviteiten.

Conversiefinanciering als gevolg van de verkorting van de DBC-looptijd wordt als betaalde schade opgenomen worden.

Conform de ZiNL definitie van bruto schade worden onverschuldigde betalingen boven plafondafspraken met zorgaanbieders in deze uitvraag niet beschouwd als betaalde schade. Hetzelfde geldt voor het terugvorderen van deze onverschuldigde betalingen op een later moment. Deze driehoek dient dus gerapporteerd te worden exclusief de onverschuldigde betalingen en het terugvorderen hiervan.

De driehoek moet gerapporteerd worden in hele euro's, niet-cumulatief en niet verdisconteerd. De betaalde bedragen dienen met een positief teken te worden opgenomen.

Doel

Geeft inzicht welk deel van betaalde schade betrekking heeft op de basisverzekering per schadejaar en de ontwikkeling daarvan in de tijd.

E. Ultimo stand van de nog niet ontvangen vereveningsbijdrage Zvw ter compensatie van de EX-ANTE populatiekenmerken (EX-ANTE toekenning)

Definitie

In deze driehoek wordt de ultimo stand van de nog niet ontvangen of betaalde vereveningsbijdrage Zvw gerapporteerd die dient ter compensatie van de ex-ante populatiekenmerken op het moment van de ex-ante toekenning. Onder ex-ante toekenning wordt in dit geval verstaan de schriftelijke mededeling van de lenteherberekening door het ZiNL.
De ex-ante vereveningsbijdrage Zvw wordt door verzekeraars ontvangen van het ZiNL. Conform de rapportage van ZiNL zijn de bedragen: :

- na aftrek van het normatief eigen risico;
- na aftrek van de te innen nominale rekenpremies;
- inclusief de uitkering in verband met de uitvoeringskosten 18-.

De ex-ante vereveningsbijdrage Zvw is exclusief interest. De driehoek moet gerapporteerd worden in hele euro's en niet verdisconteerd. De (nog niet) ontvangen bedragen dienen met een positief teken te worden opgenomen en de uitgaande bedragen met een negatief teken.

Doel

Geeft inzicht in de ontwikkeling van de verwachting van dit deel van de nog te ontvangen of te betalen vereveningsbijdrage naar schadejaar en ontwikkeljaar.

F. Ultimo stand van de nog niet ontvangen of betaalde
   - correcties op de vereveningsbijdrage Zvw ter compensatie van de EX-ANTE populatiekenmerken (EX-POST correctie) EN
   - vereveningsbijdrage ZvW afhankelijk van de karakteristieken van de schadelast (EX-POST correctie)

Definitie

In deze driehoek worden de volgende posten gerapporteerd:

- de ultimo stand van de nog niet ontvangen of betaalde correcties op de vereveningsbijdrage Zvw die ZiNL schriftelijk mededeelt aan de verzekeraars en die dient ter compensatie van de ex-ante populatiekenmerken na het eerste ontwikkeljaar (ex-post vaststelling). Onder ex-post vaststelling wordt in dit geval verstaan alle correcties ten opzichte van de lenteherberekening die plaatsvinden na de schriftelijke mededeling van de lenteherberekening. Bedragen zoals gecommuniceerd in de lenteherberekening vallen hier dus niet onder.
- de ultimo stand van de nog niet betaalde of ontvangen vereveningsbijdrage Zvw die afhankelijk is van de karakteristieken van de schadelast (ex-post vaststelling) die verzekeraars ontvangen van het ZiNL.

In deze driehoek worden alle ex-post correctiemechanismen gerapporteerd, waaronder:

- saldo van de HKC;
- verrekening bandbreedteregeling;
- macronacalculatie.

De vereveningsbijdrage Zvw is exclusief interest. De driehoek moet gerapporteerd worden in hele euro's, niet verdisconteerd en gebaseerd op de best-estimate van de verwachte te ontvangen of te betalen bijdragen. De (nog niet) ontvangen bedragen dienen met een positief teken te worden opgenomen en de uitgaande bedragen met een negatief teken.

Doel

Geeft inzicht in de ontwikkeling van de verwachting van dit deel van de nog te

ontvangen of te betalen vereveningsbijdrage naar schadejaar en ontwikkeljaar.

G. Ultimo stand technische voorziening schade basisverzekering inclusief schade-afhandelingskosten (exclusief vereveningsbijdrage Zvw)

Definitie

Onder de ultimo stand technische voorziening schade basisverzekering (exclusief vereveningsbijdrage Zvw) wordt verstaan de stand van de voorziening die is getroffen voor het betalen van de schade aan het einde van een ontwikkeljaar die voortvloeit uit de in het verleden aangegane verplichtingen in het betreffende schadejaar, inclusief afhandelingskosten. De schadedefinitie is gelijk aan de onder "*Betaalde schade basisverzekering*" weergegeven definitie.

De bedragen in de driehoek moeten gerapporteerd worden met een positief teken, in hele euro's, niet verdisconteerd en gebaseerd op de best-estimate van de verwachte nog te betalen schaden. Vorderingen in verband met onverschuldigde betalingen boven plafondafspraken worden niet opgenomen in deze driehoek.

Doel

Geeft inzicht in de ontwikkeling van de technische voorziening naar schadejaar en ontwikkeljaar exclusief vereveningsbijdrage.

H. H. Premieopslagen en premieafslagen in verband met kapitaalbeleid

Definitie

Zorgverzekeraars hebben mogelijk premieopslagen en premieafslagen gehanteerd in verband met het gevoerde kapitaalbeleid. In deze kolom rapporteert de zorgverzekeraar het totale bedrag aan premieopslagen en premieafslagen per schadejaar.
Het totale bedrag wordt berekend door de opslag/afslag zoals ingecalculeerd bij de premiestelling te vermenigvuldigen met het definitieve aantal polishouders in het schadejaar.

Doel

Geeft inzicht in welk deel van de verdiende nominale premie als opslag/afslag wordt aangemerkt per schadejaar

3.2 Tabblad Covid-19 gerelateerde posten

Bij de start van de Covid-19 pandemie zijn er in ZN-verband afspraken gemaakt en bekrachtigd door het Accountancy Platform Zorgverzekeraars over de wijze van verantwoorden van de Covid-19 posten onder Solvency II. Bij het invullen van de aan de Covid-19 gerelateerde posten is het verzoek om hierbij aan te sluiten.

I. Bijdragen uit hoofde van artikel 33 Zvw (driehoeken I1a en I1b)

- De bijdrage uit hoofde van artikel 33 betreft uitsluitend de schadejaren 2020 en 2021.
- Eind 2021 hebben zorgverzekeraars een aanvraag voor een voorlopige catastrofebijdrage door ZiNL gedaan. Deze bijdrage is door ZiNL in maart/april 2022 uitgekeerd.
- De bedragen in de driehoeken worden gerapporteerd in hele euro's en niet verdisconteerd. De (nog niet) ontvangen bedragen worden met een positief teken opgenomen en de uitgaande bedragen met

een negatief teken.
- De nog niet ontvangen of nog niet betaalde bedragen worden gerapporteerd op basis van best estimate schatting.

J. Onderlinge verrekening uit hoofde van solidariteitsafspraken (driehoeken J1a en J1b)
- Er zijn solidariteitsregelingen afgesproken voor de schadejaren 2020 en 2021. De bedragen die voorvloeien uit deze regeling worden in deze driehoek gerapporteerd. Omdat er nog geen afrekening heeft plaatsgevonden, wordt alleen de voorziening gerapporteerd.
- De bedragen in de driehoek worden gerapporteerd in hele euro's en niet verdisconteerd. De (nog niet) ontvangen bedragen worden met een positief teken opgenomen en de uitgaande bedragen met een negatief teken.
- De nog niet ontvangen of nog niet betaalde bedragen worden gerapporteerd op basis van best estimate schatting.

II. A Q&A regarding the most common questions

Q&A bij HRES-uitvraag 2024

Versie 7 maart 2024

1. Wat zijn de verschillen tussen de HRES uitvraag 2024 en 2018?

a) In 2018 werd het onderscheid tussen ex-ante en ex-post verevening gebaseerd op type verevening, in 2024 wordt onderscheid gemaakt naar moment van vaststelling. Daarom wordt de verevening in 2024 op een andere manier uitgevraagd. De onderstaande tabel geeft het verschil tussen 2018 en 2024 uitvraag weer.

	2018	2024
Verevening die dient ter compensatie van de **ex-ante** verzekerdenkenmerken, **ex-ante** toekenning	Driehoek B en E	Driehoek B en E
Verevening die dient ter compensatie van de **ex-ante** verzekerdenkenmerken, **ex-post** vaststelling	Driehoek B en E	Driehoek C en F
Verevening afhankelijk van de karakteristieken van de schadelast, **ex-post** vaststelling	Driehoek C en F	Driehoek C en F

De driehoeken hieronder geven weer hoe de verevening die dient ter compensatie van de ex-ante verzekerdenkenmerken is opgenomen in de 2018 en 2024 uitvraag. De ex-post verevening die afhankelijk is van de karakteristieken van de schadelast (onderste regel van de tabel hierboven) is niet weergegeven in onderstaande driehoeken. De verzekeraar voegt deze ex- post verevening zelf toe aan driehoeken C en F.

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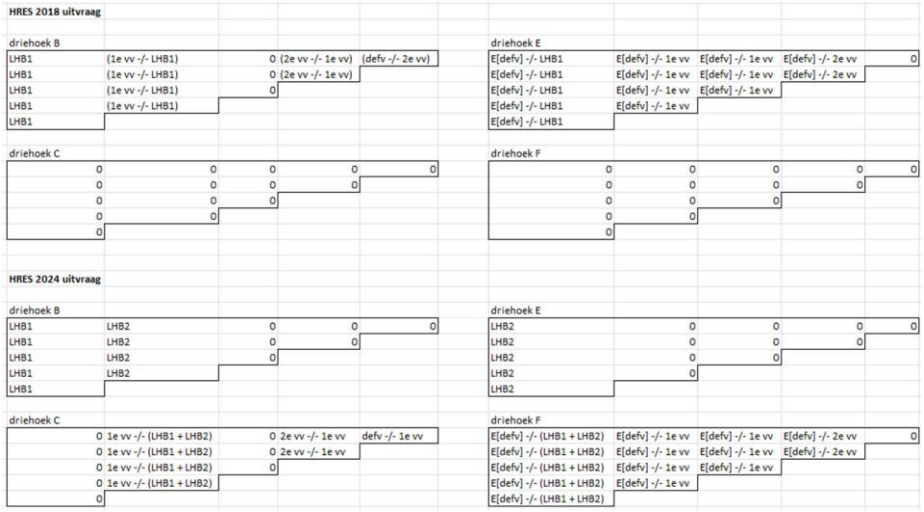

Waar de afkortingen de volgende betekenis hebben:

- LHB1: de in het eerste ontwikkeljaar betaalde vereveningsbijdrage zoals is opgegeven in de lenteherberekening
- LHB2: de in het tweede ontwikkeljaar betaalde vereveningsbijdrage zoals opgegeven in de lenteherberekening
- 1e vv = eerste voorlopige vaststelling van de vereveningsbijdragen
- 2e vv = tweede voorlopige vaststelling van de vereveningsbijdragen
- Defv = definitieve vaststelling van de vereveningsbijdragen
- E(Defv) = verwachting van de verzekeraar van de totale vereveningsbijdrage

b) De Covid-19 gerelateerde posten worden apart uitgevraagd in 2024.

2. Hoe sluit de HRES uitvraag 2024 aan op de Solvency II staten en de ZiNL specificaties?

a) Het totaal van de ontvangen en betaalde vereveningsbijdrage uit de HRES uitvraag 2024 (driehoeken B en C) en het totaal van de nog niet ontvangen of betaalde vereveningsbijdrage (driehoeken E en F) sluiten aan op de Nationale Staat Zorg tabel 1A.

b) De technische voorziening schade basisverzekering uit de HRES uitvraag (driehoek G) minus de nog niet ontvangen of betaalde ex-post vereveningsbijdrage (driehoek F) sluit aan op de Nationale Staat Zorg tabel 1B kolommen 180 t/m 320. Merk hierbij op dat de technische voorziening in beide rapportages inclusief schade-afhandelingskosten wordt gerapporteerd.

c) De eerste kolom van de HRES uitvraag 2024 driehoek B sluit aan op de uitbetalingen van de lenteherberekening door ZiNL in het eerste ontwikkeljaar. De tweede kolom van de HRES uitvraag 2024 driehoek B sluit aan op de uitbetalingen van de lenteherberekening door ZiNL in het tweede ontwikkeljaar.

3. Hoe worden de verschillende Covid-19 gerelateerde posten verwerkt in de tabellen A t/m H?

De tabellen in tabblad ‘HRES uitvraag 2024’ zijn genummerd van A t/m H. In een deel van de tabellen geldt voor de Covid-19 jaren (2020 t/m 2023) dat de bijbehorende tabellen

gerapporteerd moeten worden in lijn met in 2020 opgestelde notitie over de accounting van de Covid-19 schade en regelingen onder Solvency II[1].

In de driehoeken in het tabblad “HRES uitvraag 2024” worden de verschillende regelingen als volgt geclassificeerd:

	Schadejaar 2020	Schadejaar 2021	Schadejaar 2022	Schadejaar 2023
Continuïteitsbijdragen	Geboekte schade en technische voorziening (D & G)	Geboekte schade en technische voorziening (D & G)	n.v.t	n.v.t.
Indirecte meerkosten en Covid-19-toeslagen (meerkosten)	Geboekte schade en technische voorziening (D & G)	Geboekte schade en technische voorziening (D & G)	Geboekte schade en technische voorziening (D & G)	Geboekte schade en technische voorziening (D & G)
Patiëntgebonden Covid- 19-kosten	Geboekte schade en technische voorziening (D & G)	Geboekte schade en technische voorziening (D & G)	n.v.t.	n.v.t.
Artikel 33 bijdrage	Ex-post vereveningsbijdrage (C & F)	Ex-post verevenings-bijdrage (C & F)	n.v.t.	n.v.t.
Solidariteitsbijdragen	Technische voorziening (G)	Technische voorziening (G)	n.v.t.	n.v.t.

[1] ZN notitie: ‘Verwerking van de COVID 19 schade en regelingen onder Solvency II’, Kenmerk N 21 19756

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Appendix IV: Data request

The following screenshots are made from the Excel template which is used for the data request. There are basically two tabs:

III. 'HRES uitvraag 2024': The data fields are not corrected for any covid-19 specific data elements.
IV. 'Covid-19 gerelateerde posten': The data fields contain covid-19 specific data elements which were not present in the datareports from the Zorginstituut Nederland.

Tab 'HRES uitvraag 2024'

A. Verdiende nominale premie per schadejaar

schadejaar	verdiende nominale premie
2006	
2007	
2008	
2009	
2010	
2011	
2012	
2013	
2014	
2015	
2016	
2017	
2018	
2019	
2020	
2021	
2022	
2023	

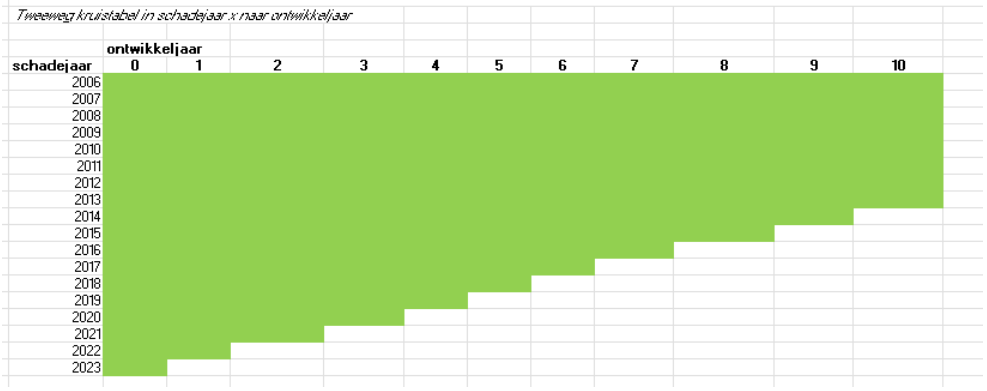
B.Incrementeel (niet-cumulatief) ontvangen vereveningsbijdrage Zvw ter compensatie van de EX-ANTE populatiekenmerken (EX-ANTE toekenning)

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar

	ontwikkeljaar										
schadejaar	0	1	2	3	4	5	6	7	8	9	10
2006											
2007											
2008											
2009											
2010											
2011											
2012											
2013											
2014											
2015											
2016											
2017											
2018											
2019											
2020											
2021											
2022											
2023											

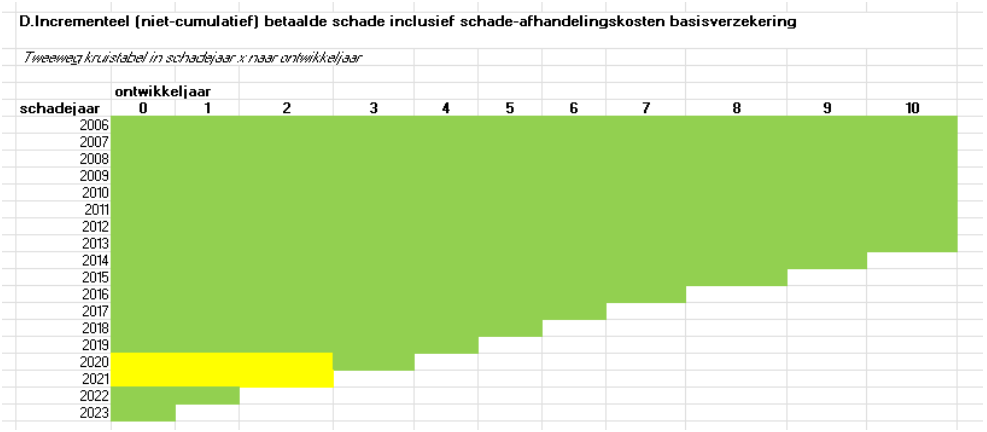
C.Incrementeel (niet-cumulatief) ontvangen of betaalde
-correcties op de vereveningsbijdrage Zvw ter compensatie van de EX-ANTE populatiekenmerken (EX-POST correctie) EN
-vereveningsbijdrage Zvw afhankelijk van de karakteristieken van de schadelast (EX-POST correctie)

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar



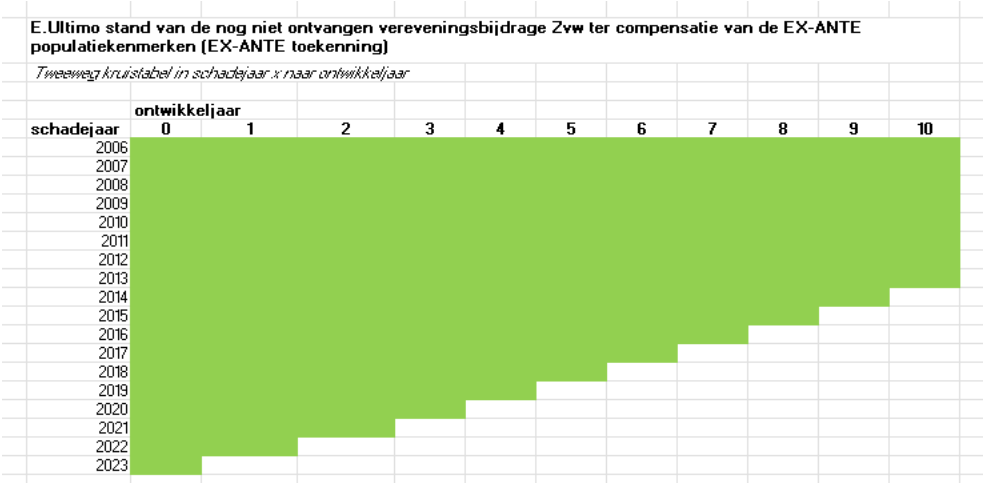
D.Incrementeel (niet-cumulatief) betaalde schade inclusief schade-afhandelingskosten basisverzekering

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar



E.Ultimo stand van de nog niet ontvangen vereveningsbijdrage Zvw ter compensatie van de EX-ANTE populatiekenmerken (EX-ANTE toekenning)

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar



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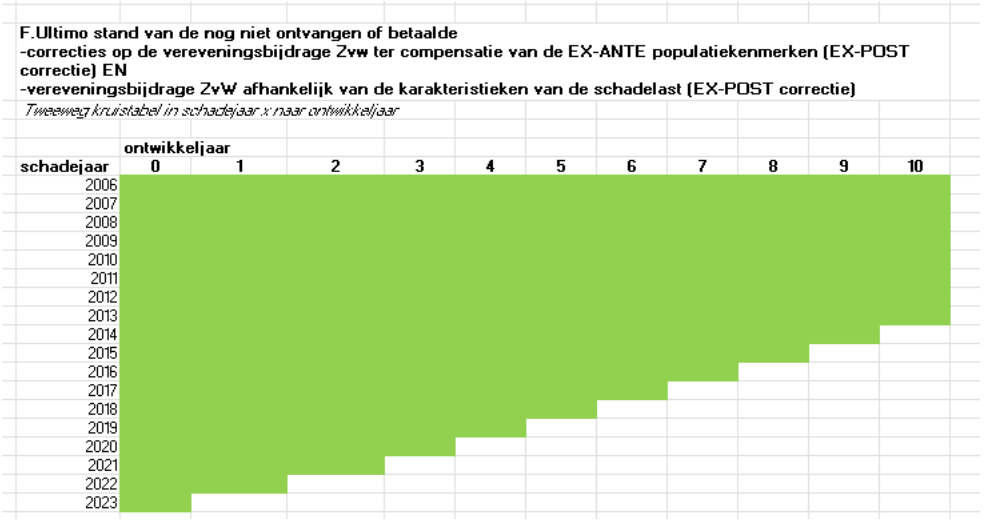
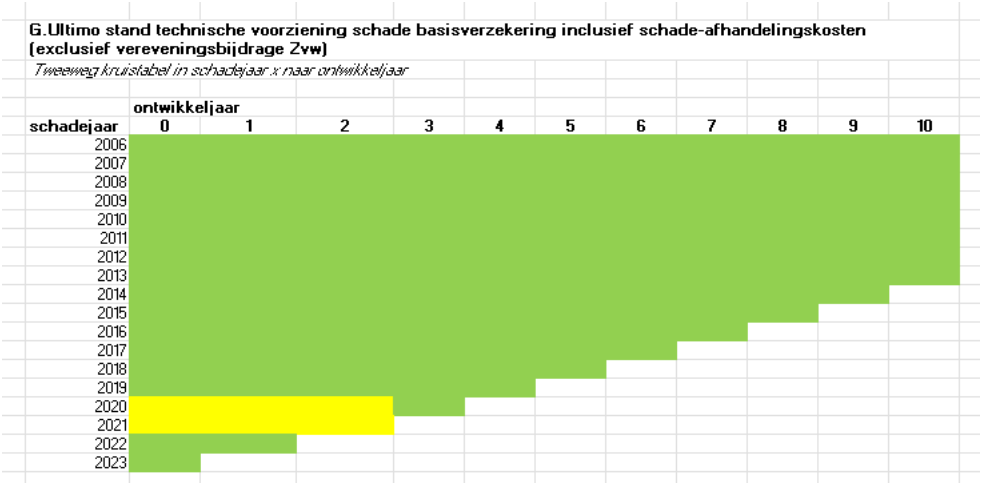
F.Ultimo stand van de nog niet ontvangen of betaalde
-correcties op de vereveningsbijdrage Zvw ter compensatie van de EX-ANTE populatiekenmerken (EX-POST correctie) EN
-vereveningsbijdrage ZvW afhankelijk van de karakteristieken van de schadelast (EX-POST correctie)

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar



G.Ultimo stand technische voorziening schade basisverzekering inclusief schade-afhandelingskosten (exclusief vereveningsbijdrage Zvw)

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar



Premieopslagen en premieafslagen i.v.m. kapitaalbeleid

H. Premieopslagen en premieafslagen i.v.m. kapitaalsturing

Opslagen zijn positieve bedragen en afslagen negatief

Tab ‘Covid-19 gerelateerde posten’

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Covid-19 gerelateerde posten

I **I1a. Incrementeel (niet cumulatief) betaalde of ontvangen bijdrage uit hoofde van de Catastropheregeling Zvw art.**

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar

	ontwikkeljaar			
schadejaar	0	1	2	3
2020				
2021				
2022				
2023				

I1b. Ultimo stand van de nog niet betaalde of ontvangen bijdrage uit hoofde van de Catastropheregeling Zvw art. 33

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar

	ontwikkeljaar			
schadejaar	0	1	2	3
2020				
2021				
2022				
2023				

J **J1a. Incrementeel (niet cumulatief) betaalde of ontvangen solidariteitsbijdragen**

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar

	ontwikkeljaar			
schadejaar	0	1	2	3
2020				
2021				
2022				
2023				

J1b. Ultimo stand van de nog niet ontvangen of betaalde solidariteitsbijdrage

Tweeweg kruistabel in schadejaar x naar ontwikkeljaar

	ontwikkeljaar			
schadejaar	0	1	2	3
2020				
2021				
2022				
2023				