Eidgenössische Finanzmarktaufsicht FINMA
Autorité fédérale de surveillance des marchés financiers FINMA
Autorità federale di vigilanza sui mercati finanziari FINMA
Swiss Financial Market Supervisory Authority FINMA

SST 2021 Survey

FINMA Report on the Swiss Insurance Market

30. September 2021

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Contents

1 Introduction

This report provides an overview of the 2021 SST results and is based on data collected from 133 insurers (16 life insurers, 51 general insurers, 19 health insurers, 24 reinsurers and 23 reinsurance captives). It does not include insurance groups.

The survey was carried out at peer-group level according to sector: life, general insurance, health, reinsurance and reinsurance captives. The survey shows breakdowns of various key indicators such as total assets or liabilities, or target capital.

Unless otherwise stated, the scenario analysis only considers data of those companies where the specific scenario has an impact on the RBC. This avoids distortion due to companies for which a given scenario has no relevance. Note that scenarios are excluded from the analysis when less than five companies are concerned.

Quality and completeness checks were carried out for each key indicator, resolving most of the errors and obvious deficiencies. The Fundamental Data Sheets (FDS) completed by companies are the data source for this survey. The FDS contains detailed quantitative information such as the decomposition of risk-bearing capital and target capital. All supervised insurers are requested to fill in the FDS and submit it to FINMA, regardless of whether they use a standard model or an internal model.

2 Solvency overview

This report is divided into five sections according to sector: life, general insurance, health, reinsurance and reinsurance captive. Table 1 shows the breakdown of the 133 insurers into sector and category.[1] All supervised insurers are assigned to categories 2 to 5; categories 1 and 6 are not relevant for insurers.

	Category 2	Category 3	Category 4	Category 5	Total
Life	2	10	3	1	16
General insurance	2	9	19	21	51
Health	0	7	10	2	19
Reinsurance	1	11	10	2	24
Re Captive	0	0	7	16	23
Total	5	37	49	42	133

Table 1: Breakdown of all insurers subject to SST reporting requirements according to sector and supervisory category.

[1] finma.ch>Supervision>Insurers>Categorization

The figures presented below show the aggregated SST results of all the participants, after a formal review by FINMA (SST 2021 in Table 2, SST 2020 in Table 3).

	RBC	TC	MVM	SST ratio
Life	76,621	41,382	8,551	207%
General insurance	82,287	43,009	10,550	221%
Health	24,591	8,974	2,437	339%
Reinsurance	53,811	33,030	8,551	185%
Re Captive	3,333	1,268	42	269%
Total	240,643	127,663	30,130	216%

Table 2: Risk-bearing capital (RBC, in CHF million), target capital (TC, in CHF million), market value margin (MVM, in CHF million) and SST ratios as of 1 January 2021, broken down by sector.

	RBC	TC	MVM	SST ratio
Life	73,532	40,882	8,555	201%
General insurance	82,880	38,540	11,296	263%
Health	22,494	8,960	2,275	302%
Reinsurance	54,460	31,694	7,425	194%
Re Captive	3,549	1,231	64	299%
Total	236,915	121,307	29,616	226%

Table 3: Risk-bearing capital (RBC, in CHF million), target capital (TC, in CHF million), market value margin (MVM, in CHF million) and SST ratios as of 1 January 2020, broken down by sector.

3 Model overview

Of the 133 companies included in this report, 35 use an internal model for at least one module. Most frequently (in 27 cases) internal models come to pass to determine their NatCat risks, in 16 cases exclusively so. 98 companies are users of the standard model without any internal model components (cf. Table 4 and Figure 1).

	2016	2017	2018	2019	2020	2021
IM	69	61	29	19	20	19
SM	76	85	103	108	101	98
SM + IM NatCat	0	1	13	12	16	16

Table 4: Total number of (partial) internal models (IM), standard models (SM) and standard models with an internal model component to capture NatCat risks exclusively (SM + IM NatCat) over the past years and by legal entity.

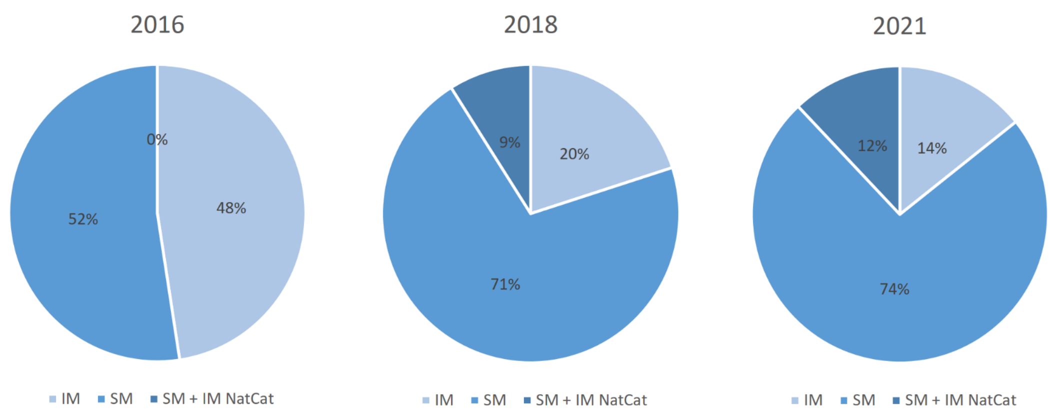

Figure 1: Percentage number of (partial) internal models (IM), standard models (SM) and standard models with an internal model component to capture NatCat risks exclusively (SM + IM NatCat) over the past years and by legal entity.

Accordingly, the remaining (partial) internal models are predominantly needed for the calculation of the insurance risk. Frequently, when the standard model ”out of the box” is not adequate to capture the company specific risk situation, a so-called company specific adjustment can be applied. In 2021 this was the case for 16 companies for their market or credit risk module; and in 21 cases for the insurance risk module (cf. Table 5).

	Aggregation	Market- and credit risk	Insurance risk without NatCat risk
IM	8	10	15
SM	125	107	97
SM-cA	0	16	21

Table 5: Split by module. Total number of partial internal models (IM), standard models (SM) and SM with company-specific adjustments (SM-cA) in 2021.

With the introduction of the new model approval process in 2016, all companies still in need of a (partial) internal model had to resubmit their model application, starting with the so-called proof of need. The number of summary reviews is still high: some models had to be re-submitted, other companies needed more time to prepare their application.

	2016	2017	2018	2019	2020
PoN	58	48	3	3	2
SR	0	65	77	48	44
... thereof SM-cA	0	10	33	19	13
... thereof IM	0	55	35	17	18
... thereof MCh	0	0	9	12	13
MR	0	0	6	8	4

Table 6: Total number of submitted proofs of need (PoN), model applications followed by a summary review (SR) (split into adjustments to the standard model (SM-cA), (partial) internal models (IM) and model changes (MCh)) and material reviews (MR) over the past years all by legal entity and module.

4 Goals of the analyses

The analyses presented in this section give a deeper insight into:

- investment structure;
- liability structure;
- best estimate of liabilities and target capital in relation to the total assets;
- split of target capital into its components, e.g. market, credit and insurance risk;
- split of market risk into interest rate risk, equity risk, etc.;
- split of interest rate risk into different currencies;
- scenarios and their impact on risk-bearing capital; indication of whether the SST capital requirements after scenario impacts are still met.

Two types of graph are shown:

- waterfall diagrams;
- box plots providing information on data dispersion.

To avoid conclusions that can be drawn about an insurers individual risk profile, the data are pooled by insurance sector. The graphs illustrate a breakdown of the indicators into their components.

Assets

The total assets in the market-consistent balance sheet are shown as the sum of the different asset types (e.g. bonds, real estate, shares, etc.).

Liabilities

The total liabilities in the market-consistent balance sheet are split according to liability type.

Best estimate of liabilities and target capital in relation to the balance sheet total

The market value of assets (MV(A)) is decomposed into:

- best estimate of liabilities (BEL);
- market value margin (MVM);
- one-year capital requirement (SCR), which is computed as the difference between the target capital (TC) and the market value margin. The TC, SCR and MVM are linked through

$$\mathrm{TC} = \mathrm{SCR} + \mathrm{MVM} \tag{1}$$

- excess capital (EC), which is defined as the difference between the risk-bearing capital (RBC) and the target capital (TC), which gives

$$\mathrm{RBC} = \mathrm{TC} + \mathrm{EC} \tag{2}$$

- supplementary capital (SC);
- deductions (D).

More precisely:

$$\text{MV(A)} = \text{BEL} + \text{MVM} + \text{SCR} + \text{EC} - \text{SC} + \text{D}.$$

To show this, note that the core capital (CC) and the risk-bearing capital (RBC) are related through

$$\text{RBC} = \text{CC} + \text{SC}. \tag{3}$$

For the purpose of this analysis, the temporary adjustment term, where relevant, has been included in the supplementary capital. CC can now be expressed as:

$$\text{CC} = \text{MV(A)} - \text{BEL} - \text{D},$$

from which the following relation is derived by means of (3):

$$\text{MV(A)} = \text{BEL} + \text{RBC} - \text{SC} + \text{D}.$$

By means of (1) and (2) we conclude that

$$\begin{aligned}\text{MV(A)} &= \text{BEL} + \text{EC} + \text{TC} - \text{SC} + \text{D} \\ &= \text{BEL} + \text{MVM} + \text{SCR} + \text{EC} - \text{SC} + \text{D}.\end{aligned}$$

Target capital decomposition

Target capital is the sum of the one-year capital requirement (SCR) and the market value margin (MVM). In turn, the SCR key components are market risk, credit risk, insurance risk and effect of the scenarios and diversification.

Market risk analysis

Market risk plays an important role in an economic, risk-based solvency regime. A number of risk factors, such as interest rates, credit spreads, exchange rates, real estate, to name but a few, contribute to market risk. Waterfall and box plot diagrams are used to present the most important market risk factors.

Interest rate risk analysis

Insurers with assets and liabilities denominated in different currencies are exposed to currency risk and generally also to interest rate risk. In such cases, the total interest rate risk comprises the interest rate risk of each currency. We have shown the decomposition of the total interest rate risk into four currencies CHF, EUR, USD and GBP, including the effect of diversification.

Scenarios

For each scenario, we compute and show the impact ratio, which is defined as below:

$$\text{Impact ratio} = \frac{\text{RBC} - \text{MVM} + c}{\text{RBC} - \text{MVM}}.$$

Typically, a scenario impact c with a negative value represents a loss. To concentrate only on relevant scenarios, scenarios with no impact (i.e. $c = 0$) are ignored.

Furthermore, a reference scenario called excess capital loss was introduced. The loss of this scenario is the *excess capital* (EC), i.e. $c = -\mathrm{EC}$. This loss is understood as the maximum loss an insurer can endure and still remain solvent. It should be noted that the impact ratio of this reference scenario can be expressed with the help of the target capital (TC). To obtain the corresponding impact ratio, we used relation (2), i.e. RBC $=$ TC $+$ EC,:

$$\text{Impact ratio} = \frac{\mathrm{RBC} - \mathrm{MVM} - \mathrm{EC}}{\mathrm{RBC} - \mathrm{MVM}} = \frac{\mathrm{TC} - \mathrm{MVM}}{\mathrm{RBC} - \mathrm{MVM}}.$$

To facilitate the comparison of general scenarios with this reference scenario, the impact ratio of the latter is illustrated in a different colour.

5 Life

The overall SST ratio calculated over all life insurers increased by 6 percentage points from 201% in 2020 to 207% in 2021. The risk bearing capital increased by 4.2% to CHF 76,621 million, while target capital went up by 1.2% to CHF 41,382 million. The comparison is based on aggregate numbers obtained by summing over all life insurers (16 in total).

With regard to the individual analysis, in order to avoid that companies with larger volume dominate the results, an average over the percentages for each company is shown.

5.1 Comments on results

The asset portfolios of life insurers are dominated by bond investments (48%) followed by investment in real estate (18%) and unit-linked life insurance (14%), as illustrated in Figure 2 Assets. A further breakdown[2] of the investment categories bonds and real estate is shown in Table 7.

Life	FDS component	
Bonds	Investment funds: bonds	1.7%
	Fixed income securities, loans	98.3%
Real estate	Mortgages	29.5%
	Real estate	64.2%
	Investment funds: real estate	6.3%

Table 7: Breakdown of investment categories *bonds* and *real estate* as reported in the "Fundamental Data Sheets" (FDS) as of 1 January 2021.

As shown in Figure 4 Liabilities, the liabilities of life insurers are dominated by individual life liabilities (48%) followed by group life liabilities (27%) and unit-linked liabilities (17%).

In Figure 8 Target capital decomposition it is shown that the one-year capital and market value margin correspond to 83% and 17% of the target capital, respectively. The one-year capital is driven (before diversification) by the market risk (58%) followed by the insurance risk (21%) and credit risk (19%).

The main drivers of the market risk (before the diversification) are the interest rate risk (48%) and spread risk (45%). As shown in Figure 12, interest rate risk is dominated by the CHF interest rate risk (113% before diversification).

[2] A further decomposition is shown only for the dominating categories that have at least two different components.

5.2 Assets

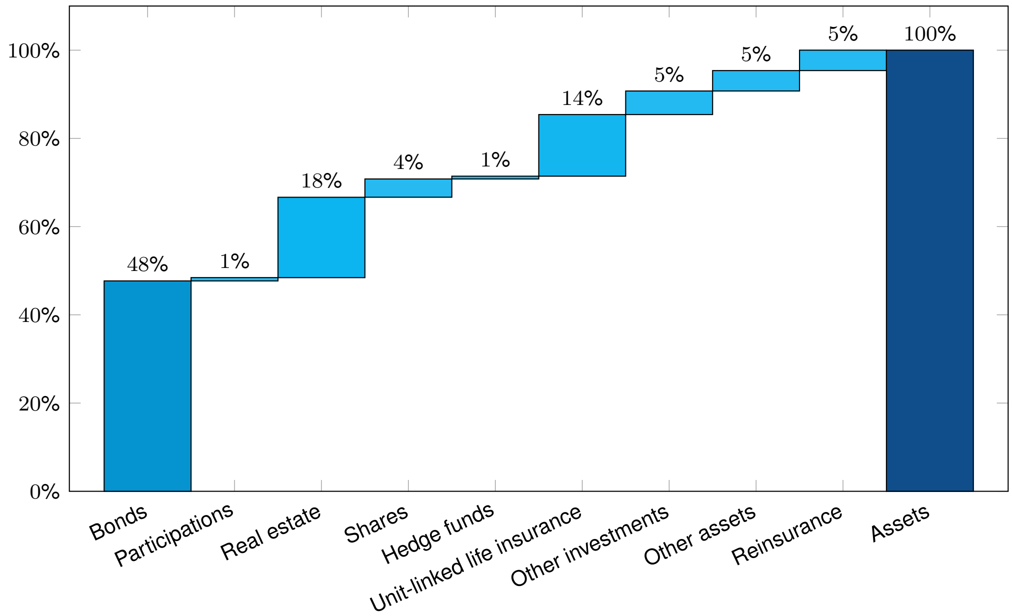

Figure 2: Life (mean values by sector)

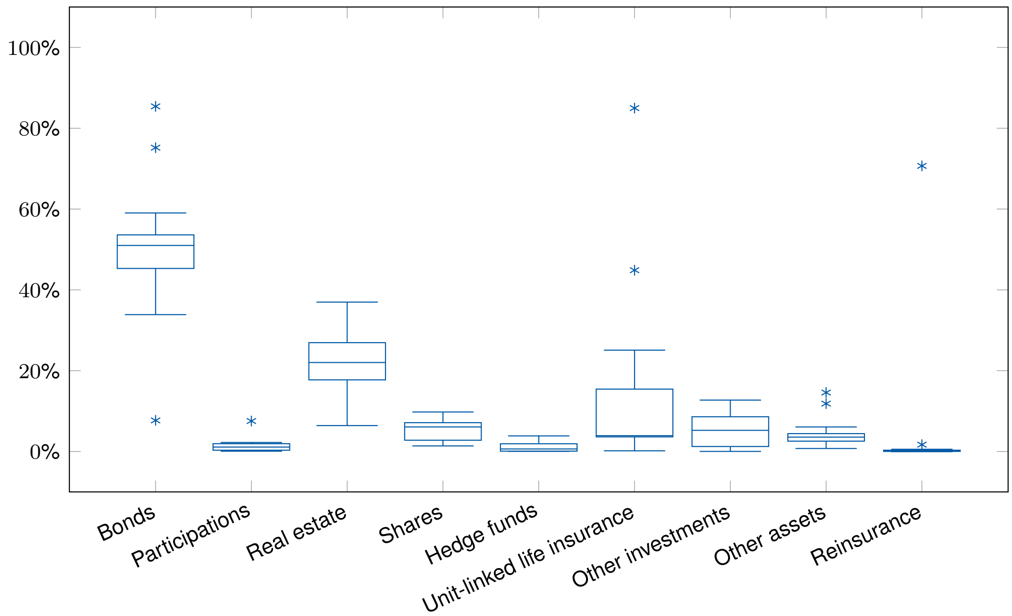

Figure 3: Life (distribution as box-plot)

5.3 Liabilities

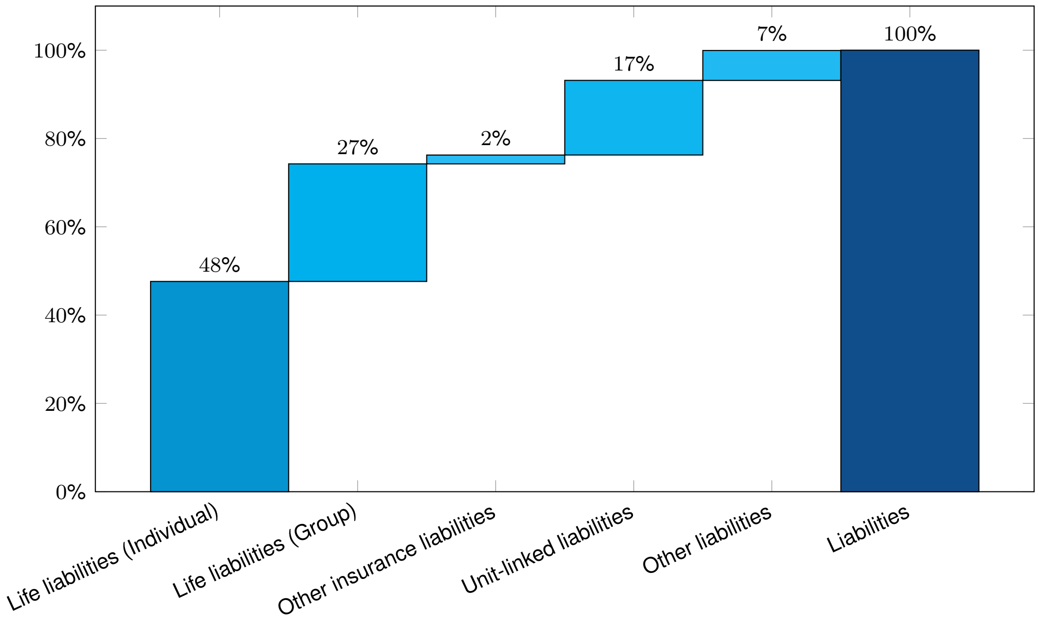

Figure 4: Life (mean values by sector)

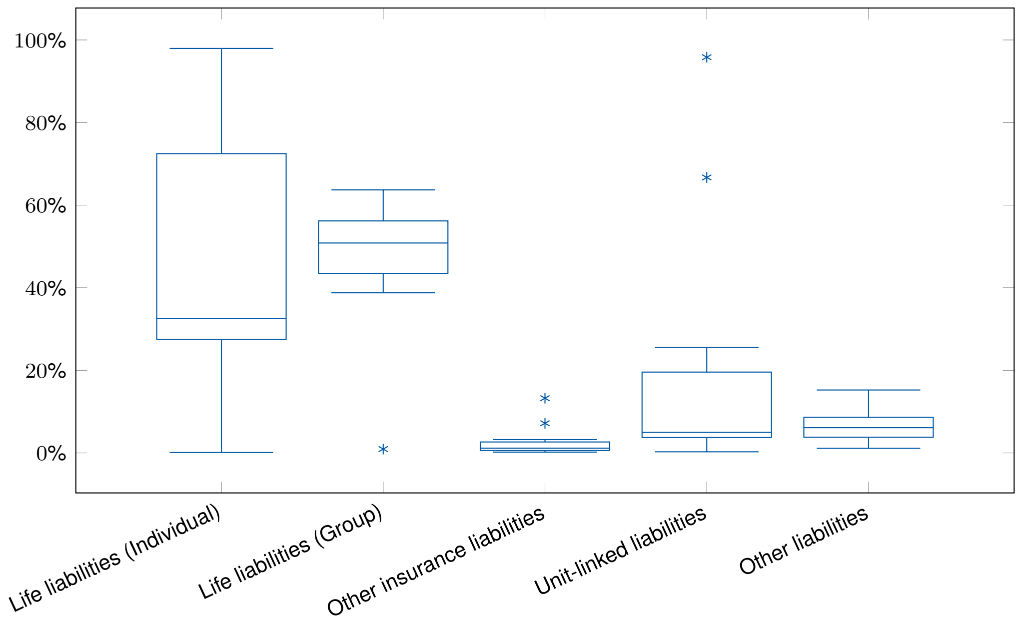

Figure 5: Life (distribution as box-plot)

5.4 Best estimate of liability and target capital in relation to the balance sheet total

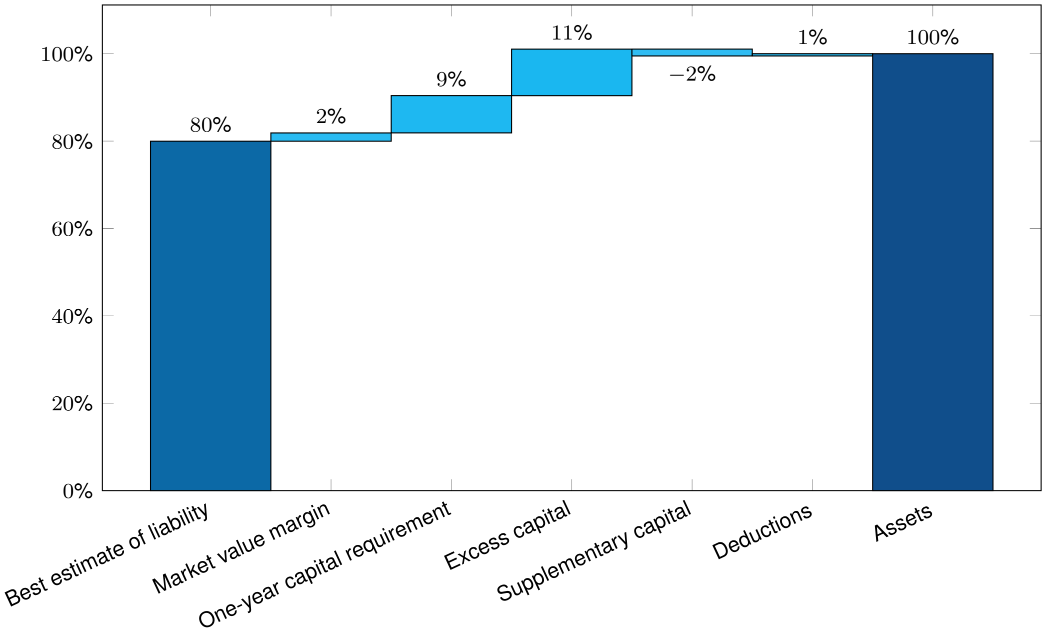

Figure 6: Life (mean values by sector)

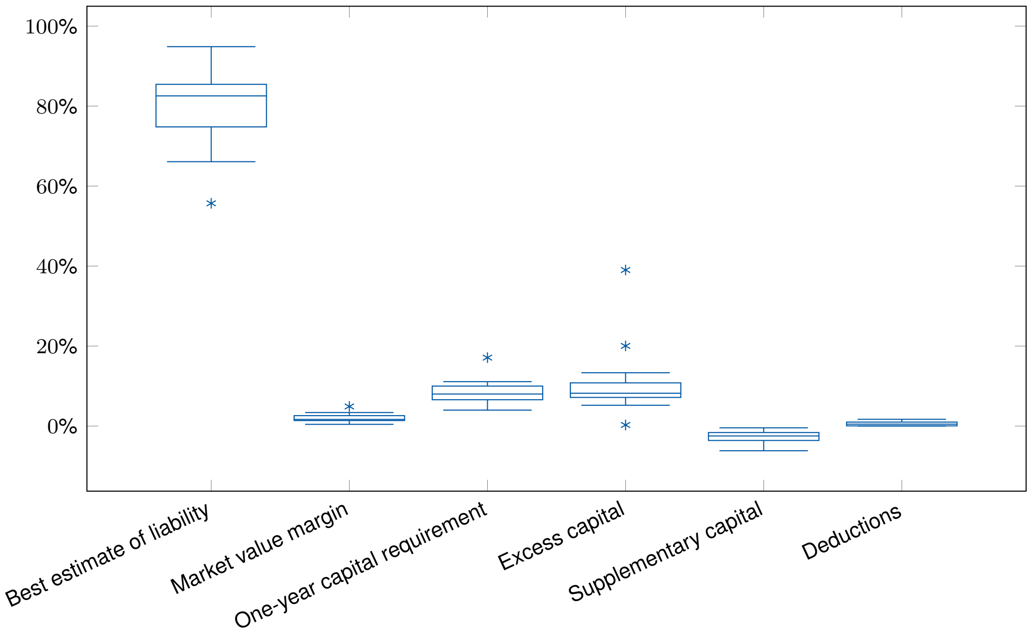

Figure 7: Life (distribution as box-plot)

5.5 Target capital decomposition

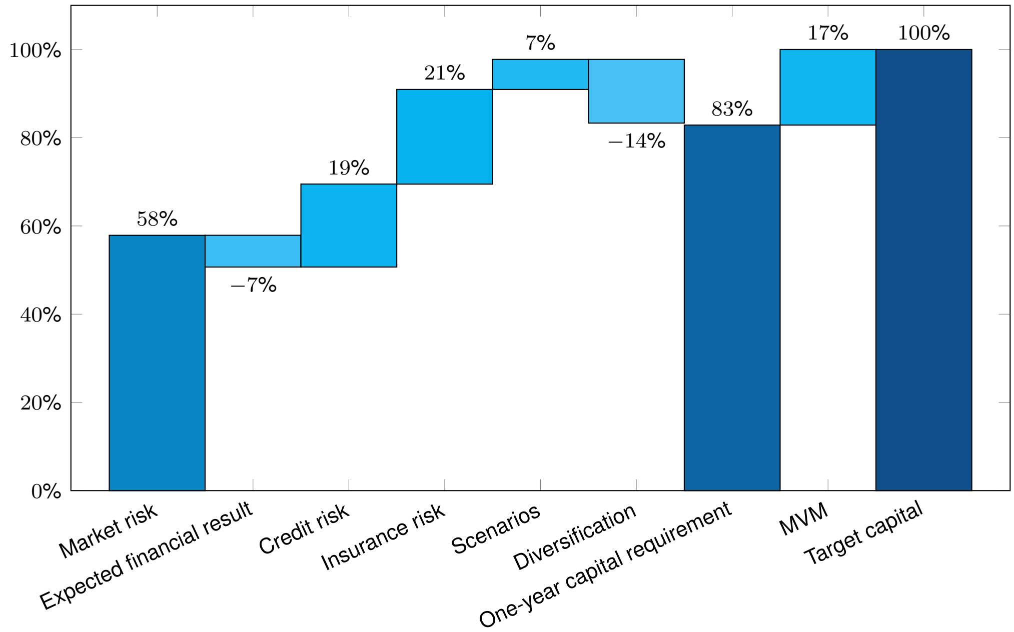

Figure 8: Life (mean values by sector)

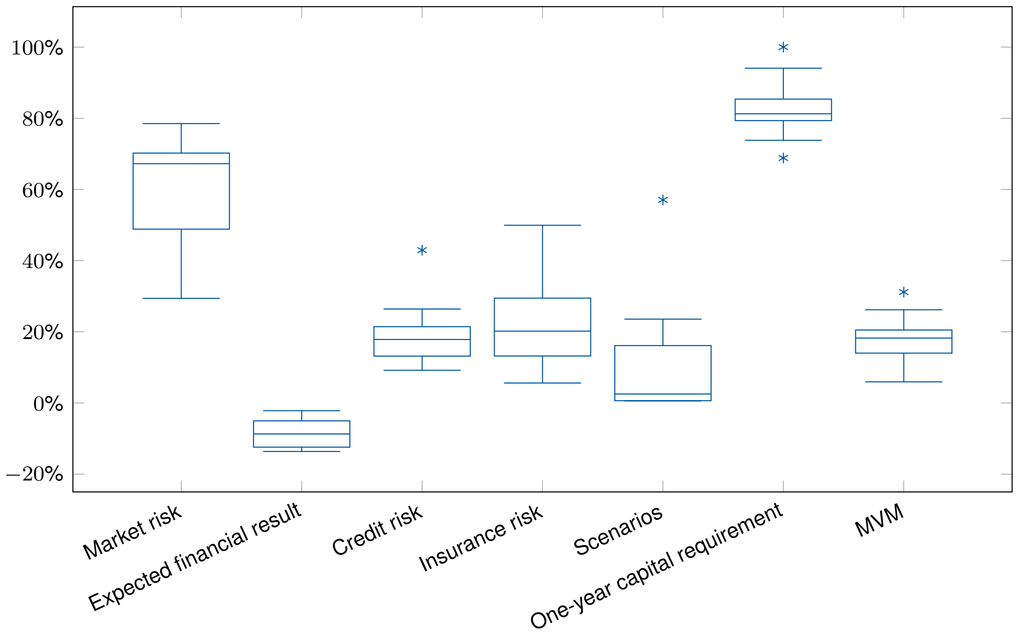

Figure 9: Life (distribution as box-plot)

5.6 Market risk analysis

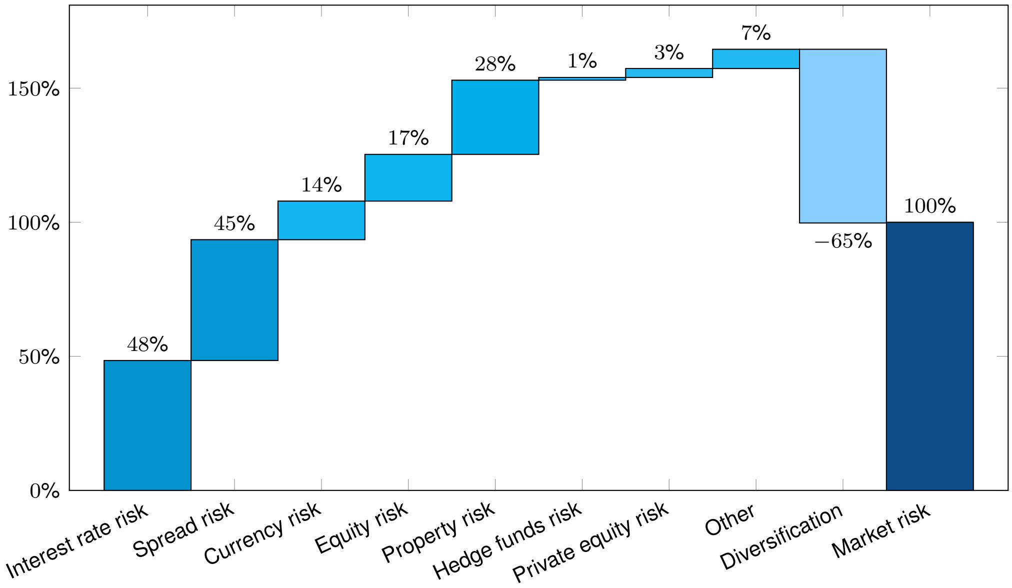

Figure 10: Life (mean values by sector)

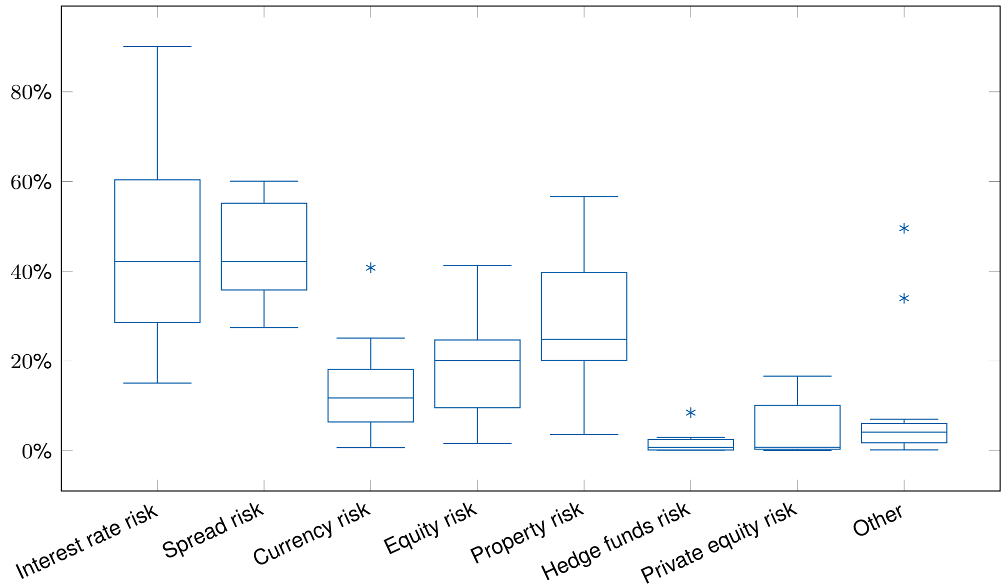

Figure 11: Life (distribution as box-plot)

5.7 Interest rate analysis

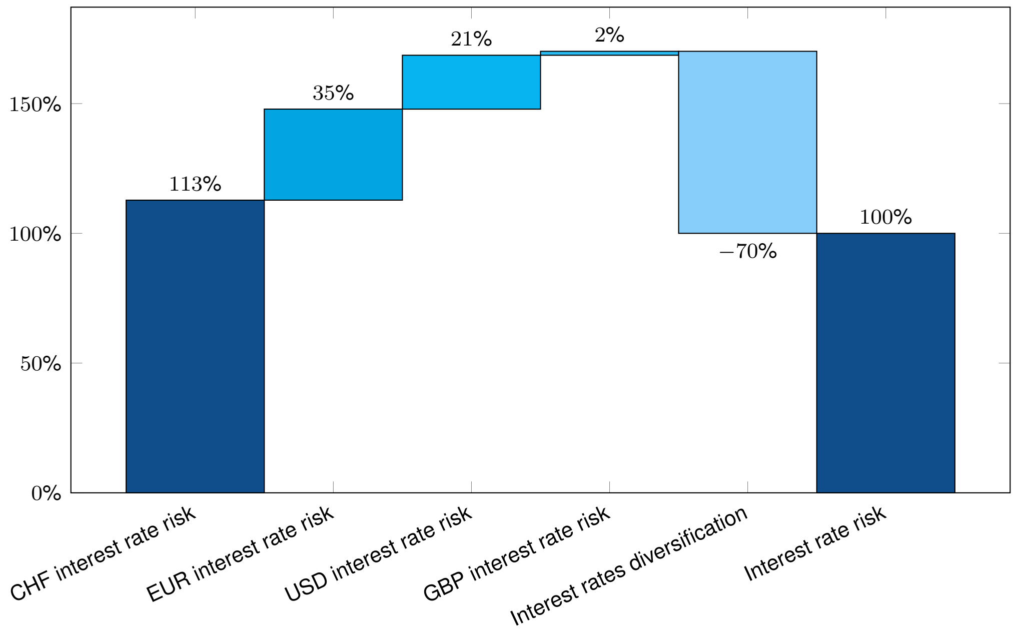

Figure 12: Life (mean values by sector)

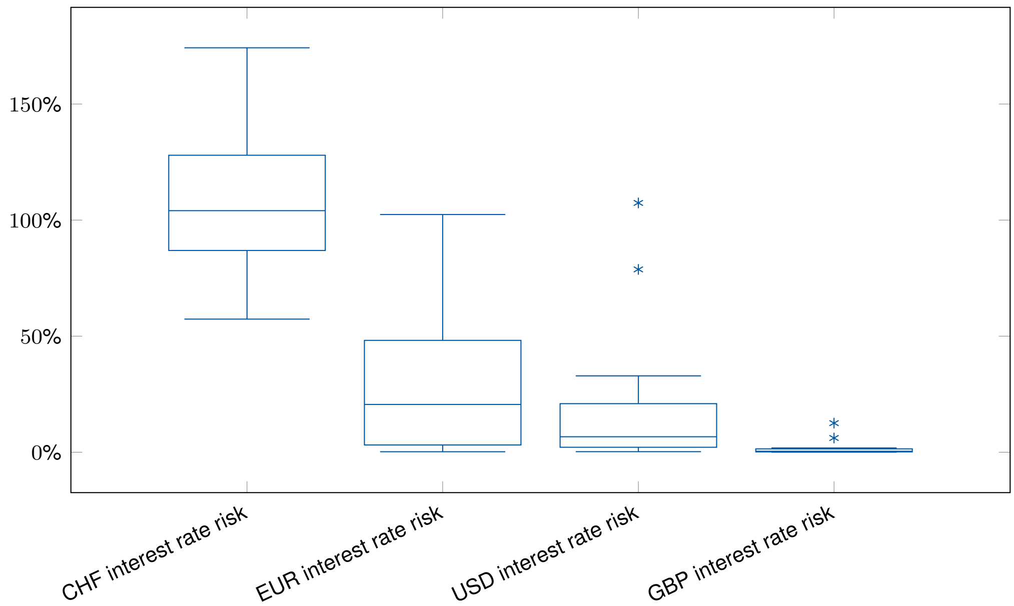

Figure 13: Life (distribution as box-plot)

5.8 Market and credit risk scenarios

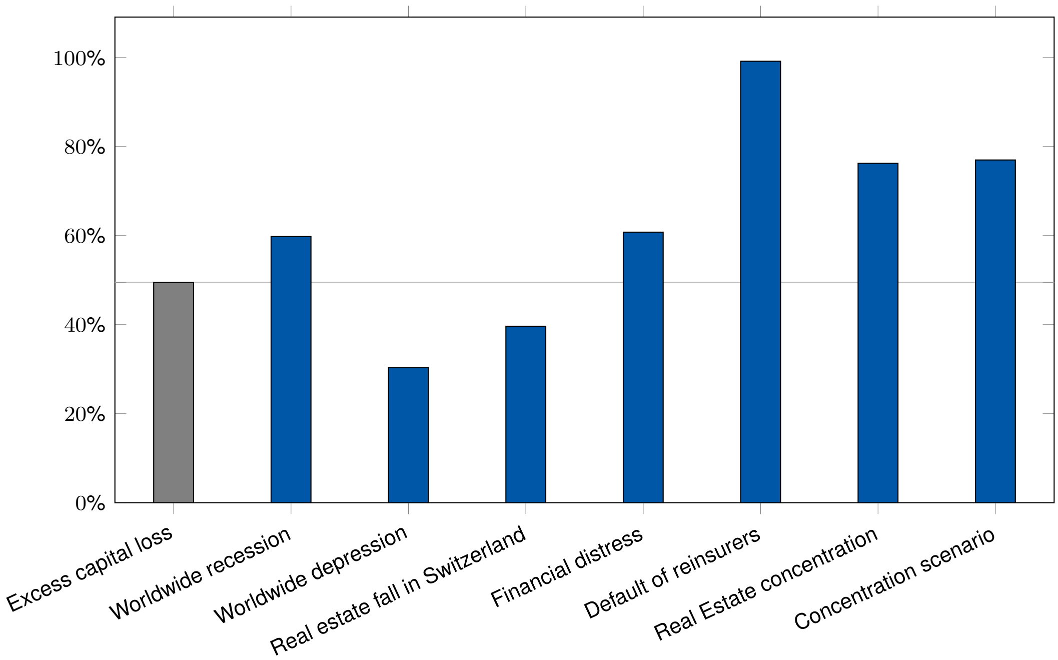

Figure 14: Life (mean values by sector)

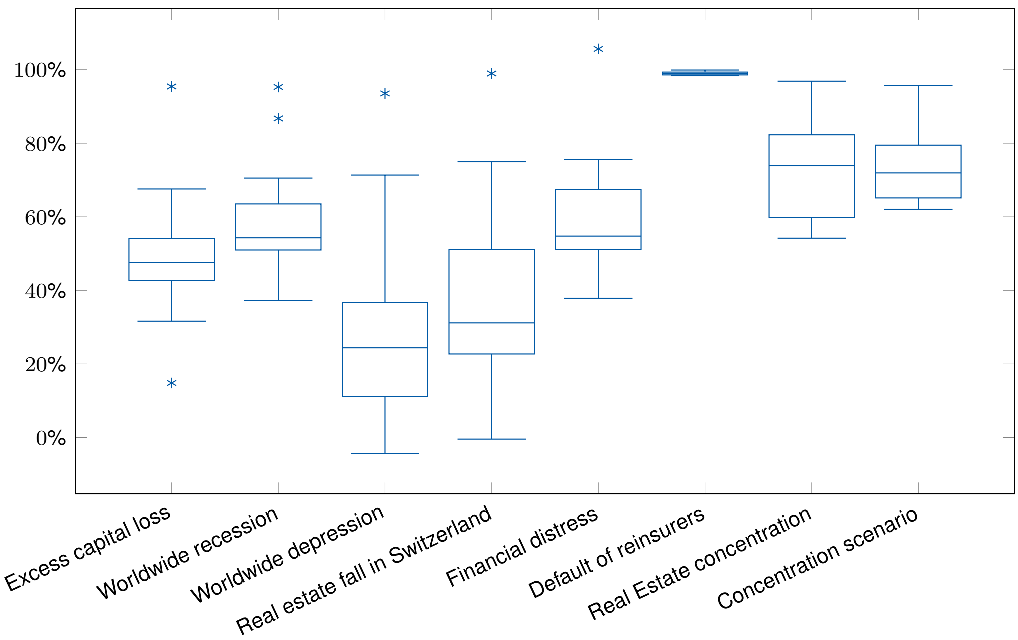

Figure 15: Life (distribution as box-plot)

5.9 Insurance risk and global scenarios

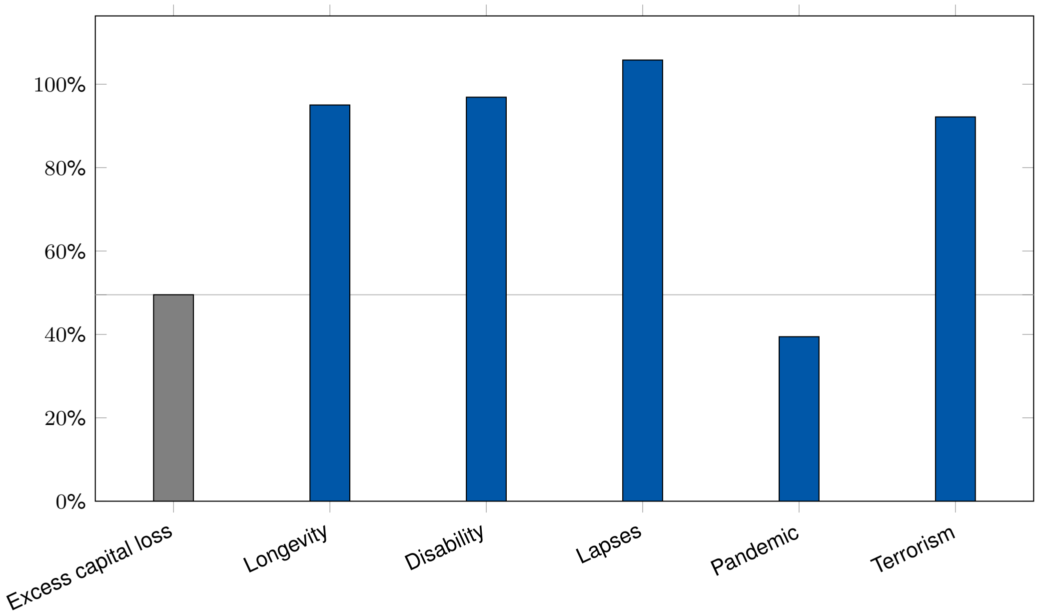

Figure 16: Life (mean values by sector)

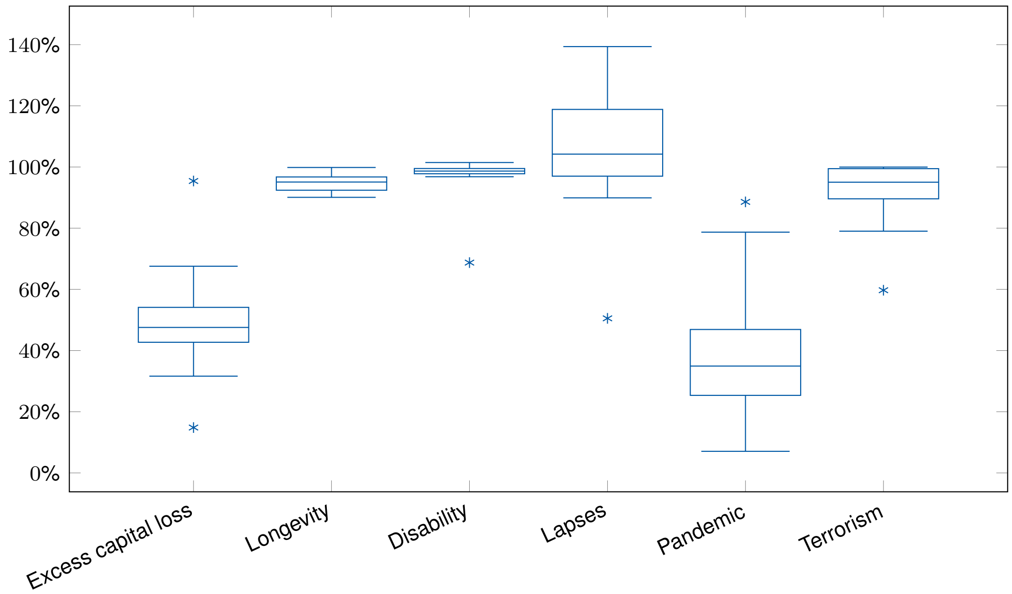

Figure 17: Life (distribution as box-plot)

6 General insurance

The overall SST ratio calculated over all general insurers decreased by 42 percentage points from 263% in 2020 to 221% in 2021. The risk bearing capital decreased by 0.7% to CHF 82,287 million, while target capital went up by 11.6% to CHF 43,009 million. The comparison is based on aggregate numbers obtained by summing over all general insurers (51 in total).

With regard to the individual analysis, in order to avoid that companies with larger volume dominate the results, an average over the percentages for each company is shown.

6.1 Comments on results

The asset portfolios of general insurers are mainly concentrated in bond investments (34%) followed by other assets (30%), as illustrated in Figure 18 Assets. A further breakdown[3] of the investment category bonds is shown in Table 8.

General Insurance	FDS component	
Bonds	Investment funds: bonds	30.7%
	Fixed income securities, loans	69.3%

Table 8: Breakdown of investment category *bonds* as reported in the "Fundamental Data Sheets" (FDS) as of 1 January 2021.

As shown in Figure 20 Liabilities, the liabilities of general insurers are dominated by the loss reserves (58%) followed by the other liabilities (27%). In Table 9, a breakdown of loss reserves and other liabilities into their components is shown.

General Insurance	FDS component	
Loss reserves	Best estimate of insurance liabilities (non-life): gross	85.5%
	Best estimate of insurance liabilities (health): gross	0.6%
	Active reinsurance (indirect business)	14.0%
Other liabilities	Reserves for surplus funds	0.6%
	Deposit liabilities from ceded reinsurance	0.1%
	Liabilities from derivative financial instruments	0.2%
	Non-technical provisions	7.4%
	Liabilities from insurance business	38.0%
	Other liabilities	41.9%
	Interest-bearing liabilities	7.7%
	Subordinated liabilities	4.0%

Table 9: Breakdown of *loss reserves* and *other liabilities* as reported in the "Fundamental Data Sheets" (FDS) as of 1 January 2021.

[3]A further decomposition is shown only for the dominating categories that have at least two different components.

In Figure 24 Target capital decomposition it is shown that the one-year capital and the market value margin correspond to 88% and 12% of the target capital, respectively. The one-year capital is driven (before diversification) by the insurance risk (55%) followed by the market risk (44%).

The main drivers of the non-life insurance risk (before diversification) are the reserve risk (55%) and the normal claims (42%). The main drivers of market risk (before diversification) are the equity risk (39%) and interest rate risk (38%). As shown in Figure 28 the interest rate risk is dominated by the CHF interest rate risk (74% before diversification).

6.2 Assets

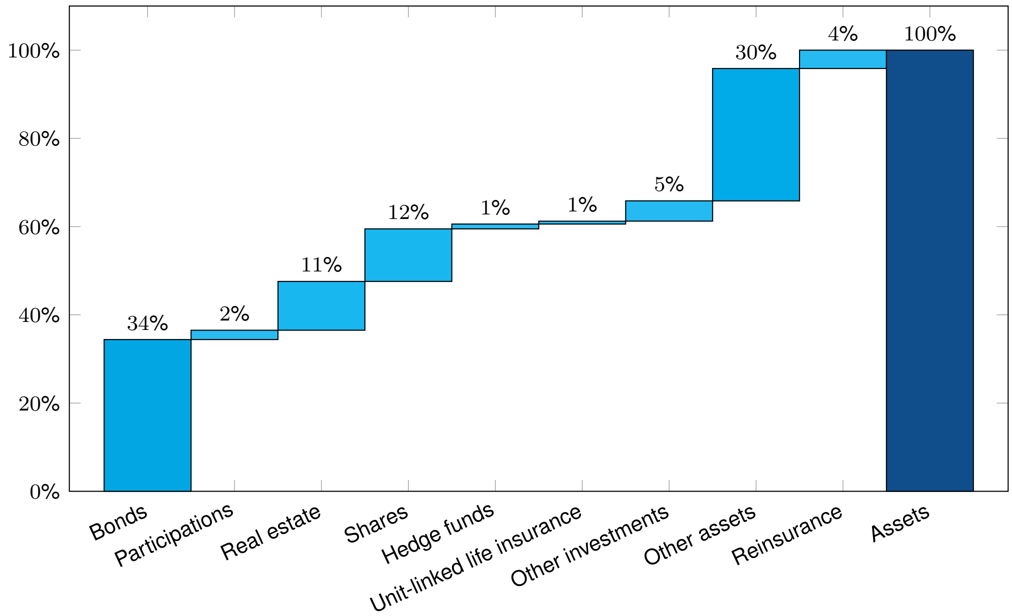

Figure 18: General insurance (mean values by sector)

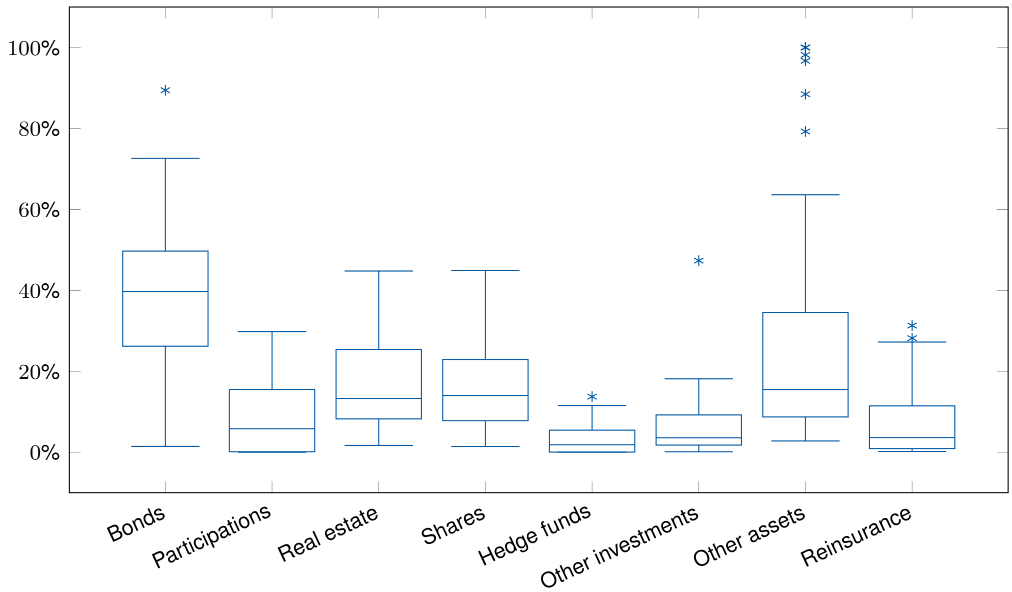

Figure 19: General insurance (distribution as box-plot)

6.3 Liabilities

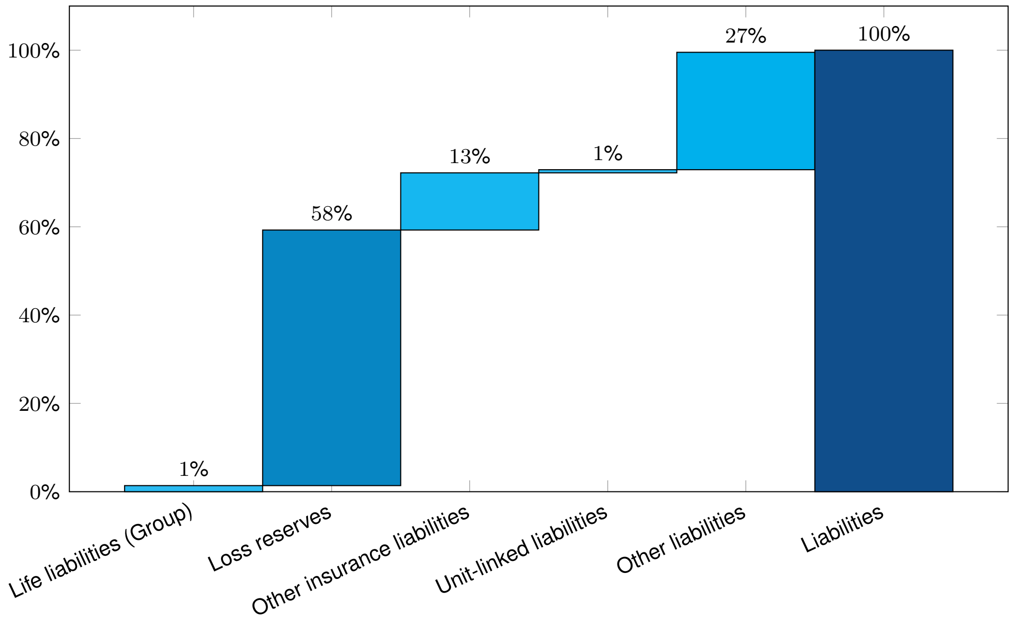

Figure 20: General insurance (mean values by sector)

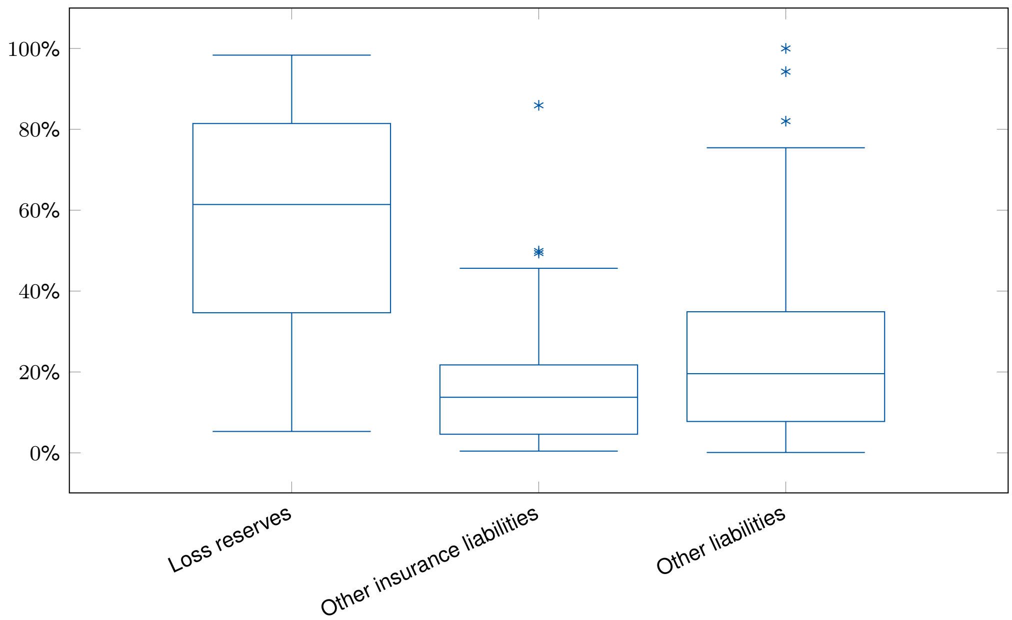

Figure 21: General insurance (distribution as box-plot)

6.4 Best estimate of liability and target capital in relation to the balance sheet total

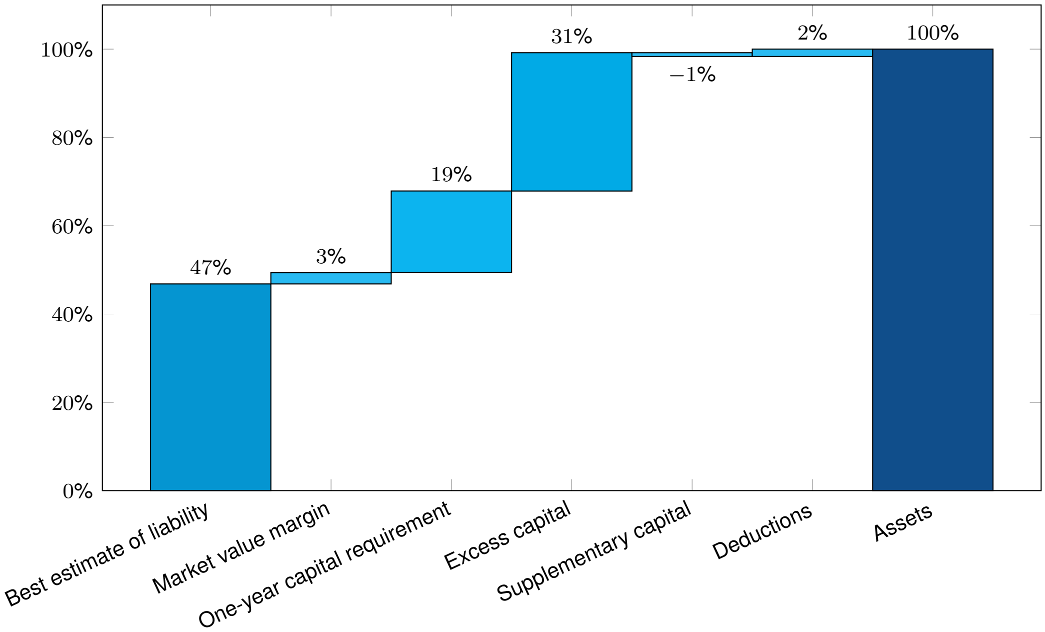

Figure 22: General insurance (mean values by sector)

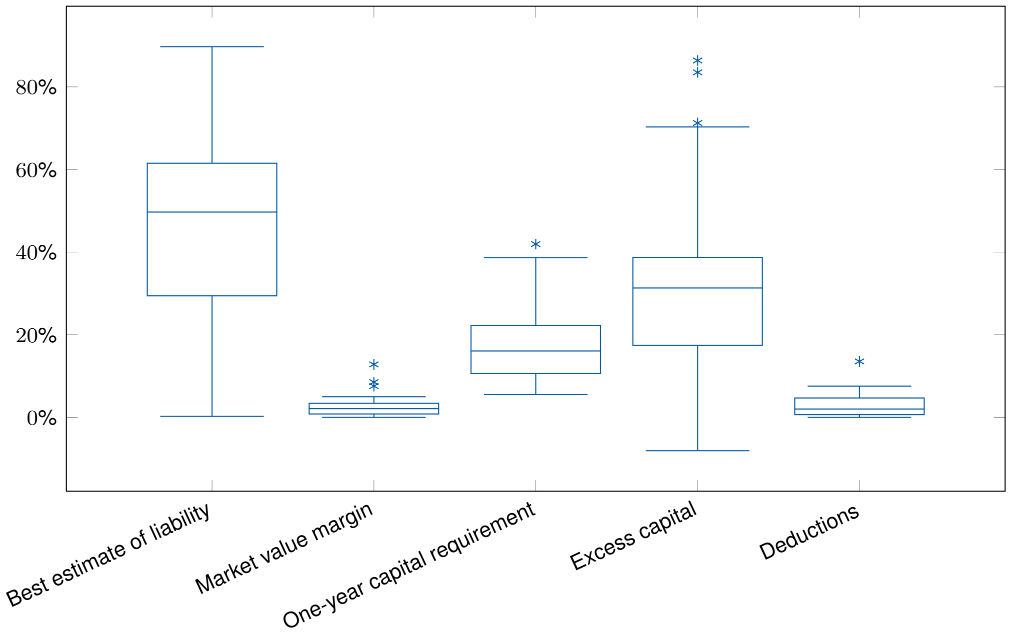

Figure 23: General insurance (distribution as box-plot)

6.5 Target capital decomposition

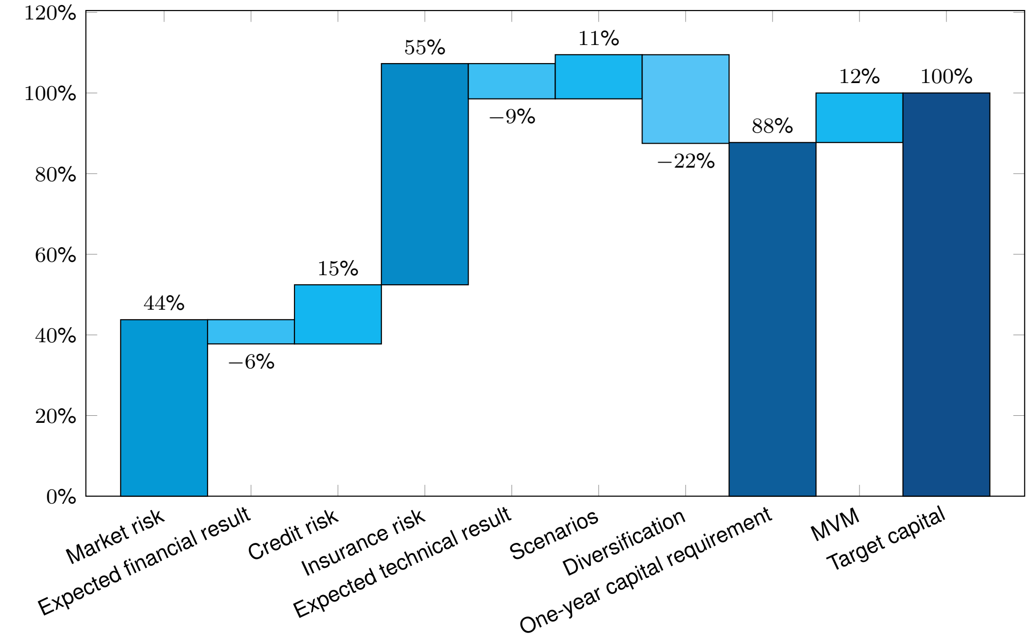

Figure 24: General insurance (mean values by sector)

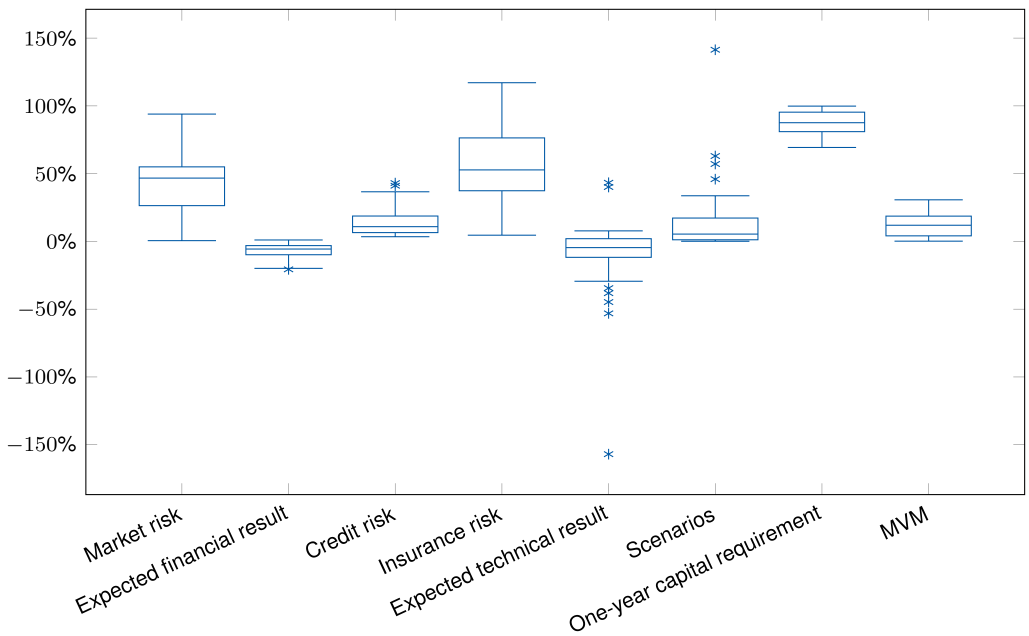

Figure 25: General insurance (distribution as box-plot)

6.6 Market risk analysis

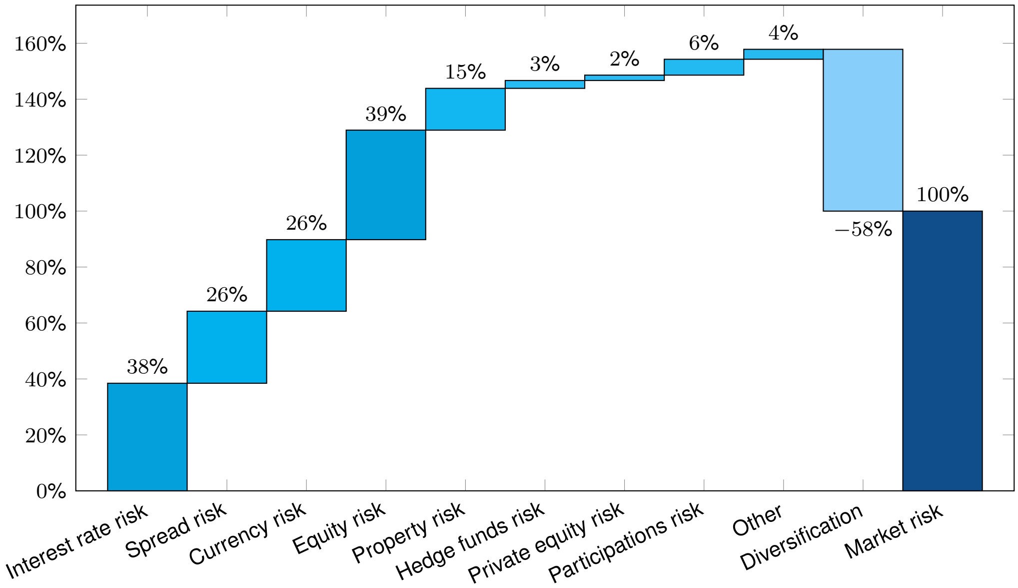

Figure 26: General insurance (mean values by sector)

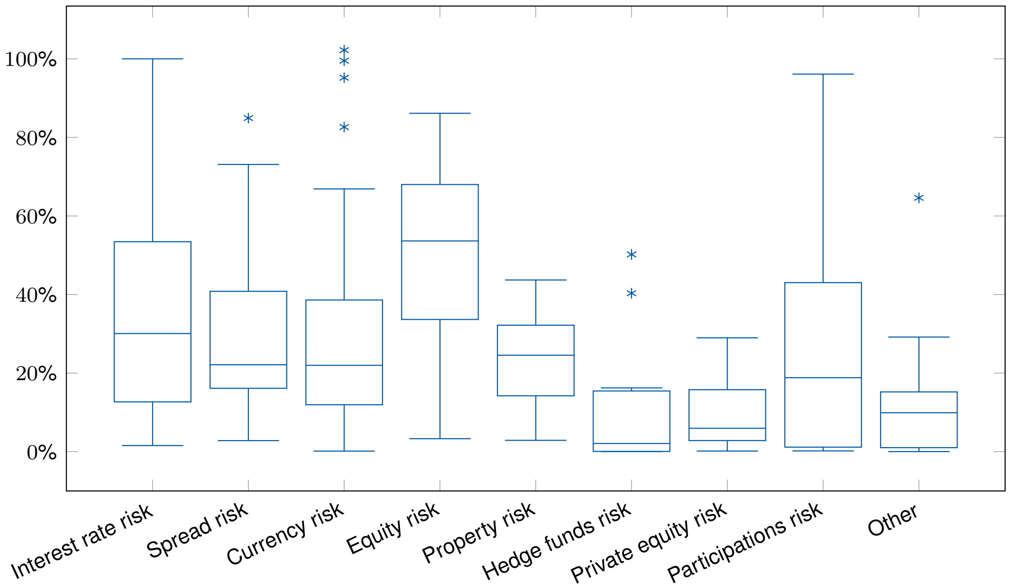

Figure 27: General insurance (distribution as box-plot)

6.7 Interest rate analysis

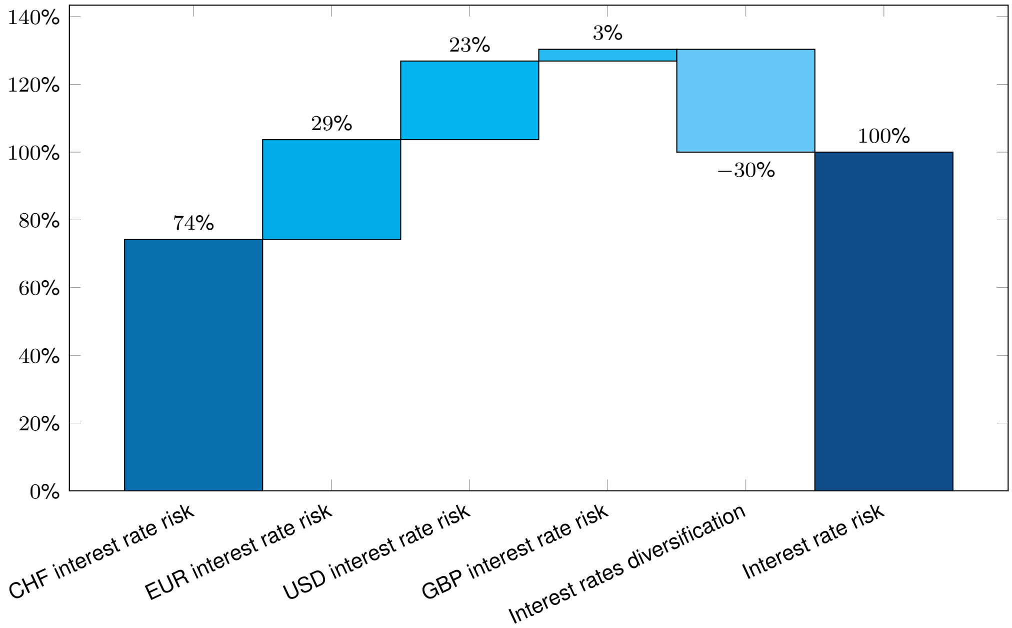

Figure 28: General insurance (mean values by sector)

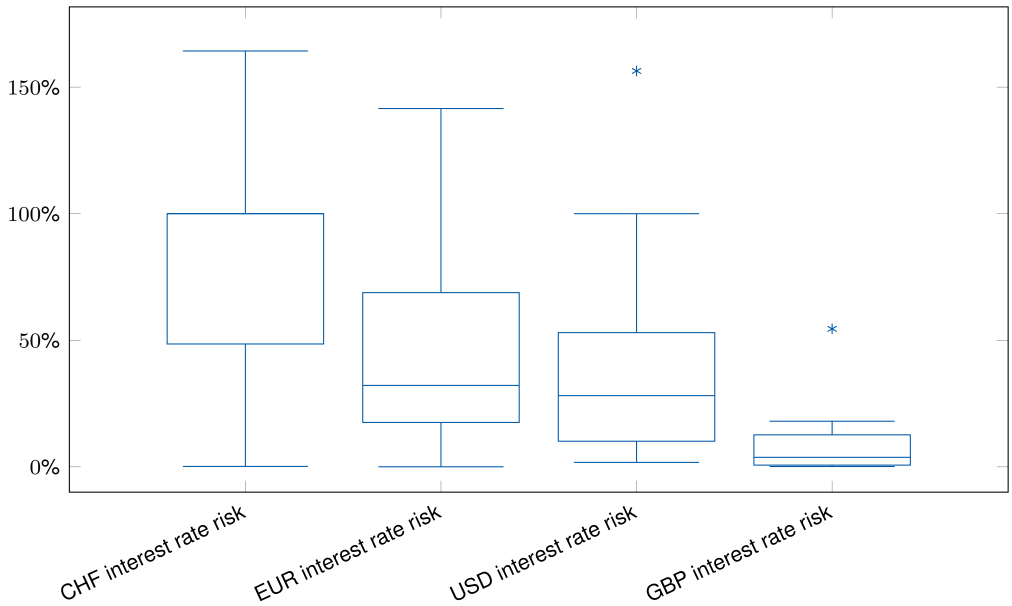

Figure 29: General insurance (distribution as box-plot)

6.8 General insurance risk analysis

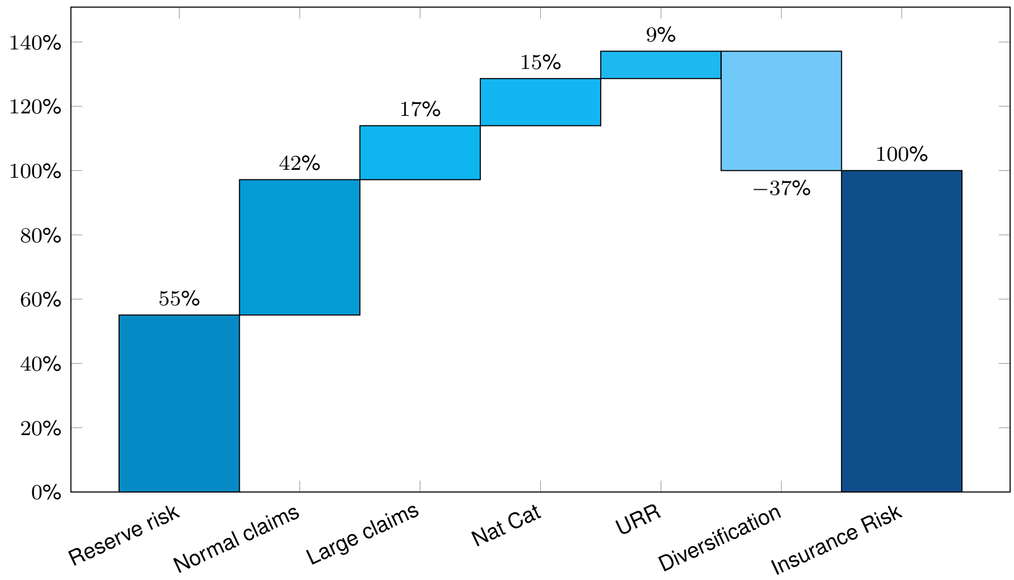

Figure 30: General insurance (mean values by sector)

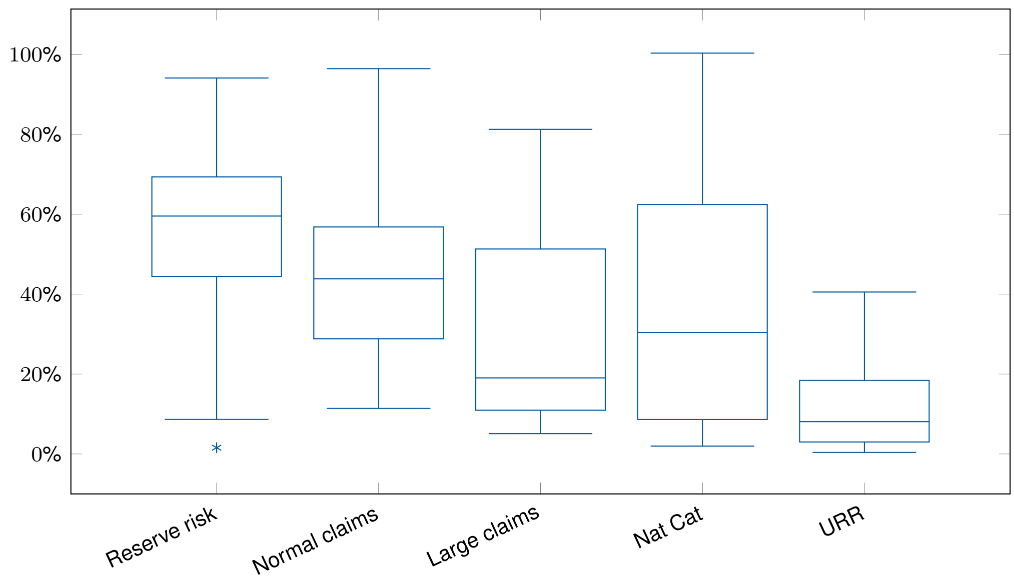

Figure 31: General insurance (distribution as box-plot)

6.9 Market and credit risk scenarios

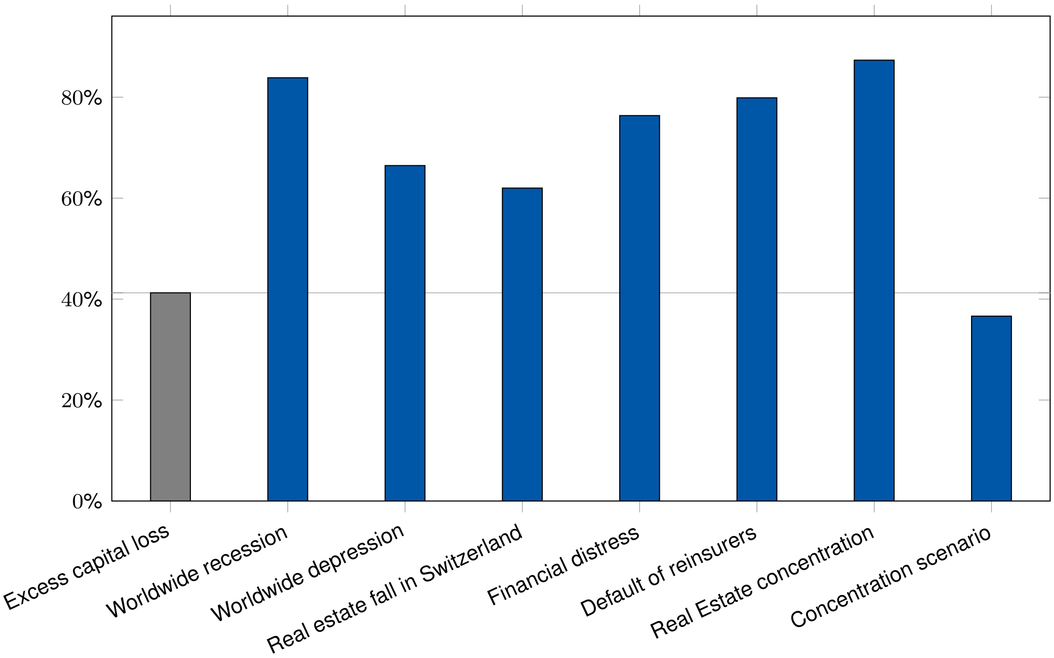

Figure 32: General insurance (mean values by sector)

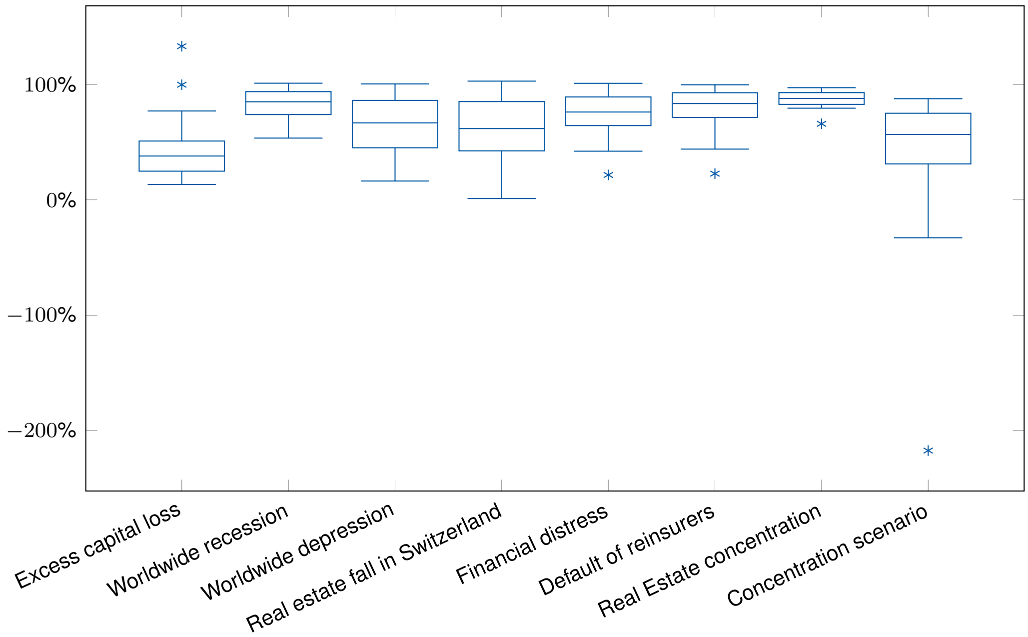

Figure 33: General insurance (distribution as box-plot)

6.10 Insurance risk and global scenarios

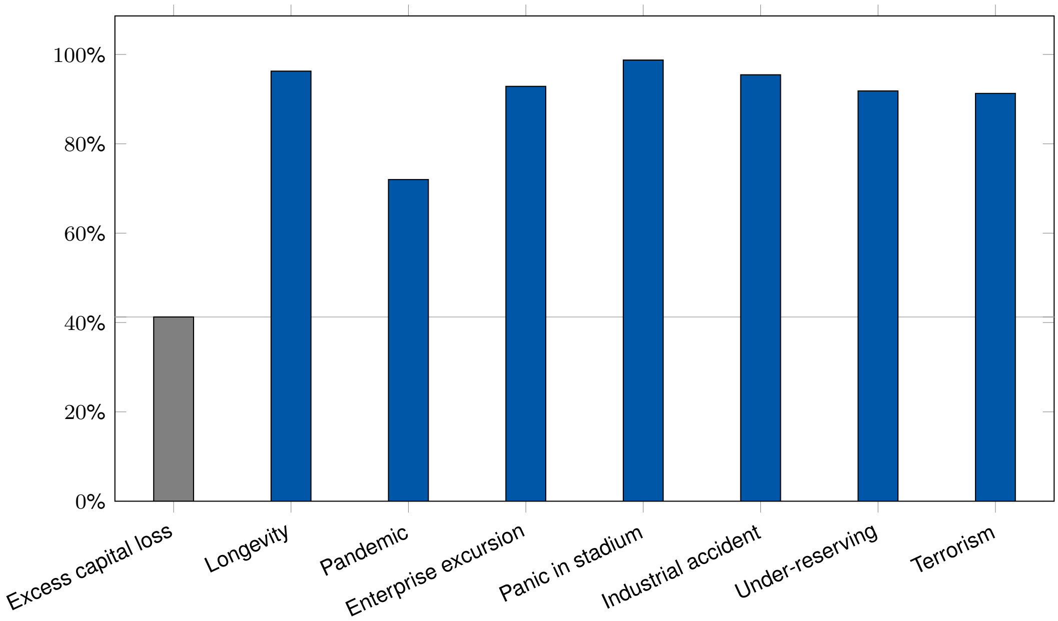

Figure 34: General insurance (mean values by sector)

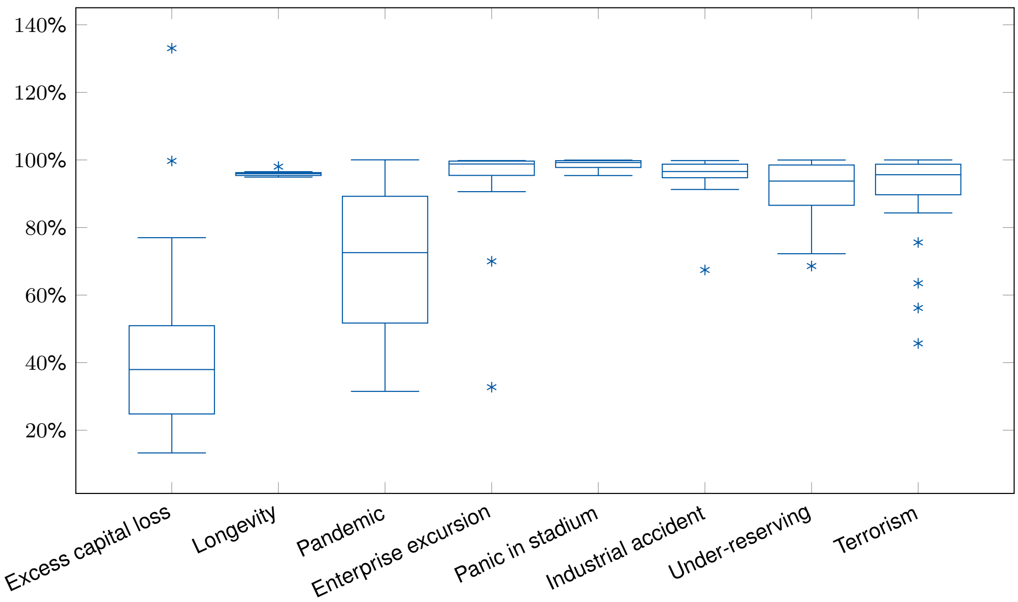

Figure 35: General insurance (distribution as box-plot)

7 Health

The overall SST ratio calculated over all health insurers increased by 37 percentage points from 302% in 2020 to 339% in 2021. The risk bearing capital increased by 9.3% to CHF 24,591 million, while target capital went up by 0.2% to CHF 8,974 million. The comparison is based on aggregate numbers obtained by summing over all health insurers (19 in total).

With regard to the individual analysis, in order to avoid that companies with larger volume dominate the results, an average over the percentages for each company is shown.

7.1 Comments on results

The asset portfolios of health insurers are mainly concentrated in bond investments (49%) followed by share investments (19%), as illustrated in Figure 36 ”Assets”. A further breakdown[4] of the investment categories bonds and shares is shown in Table 10.

Health	FDS component	
Bonds	Investment funds: bonds	19.7%
	Fixed income securities, loans	80.3%
Shares	Investment funds: equities	61.7%
	Equities	38.3%

Table 10: Breakdown of investment categories *bonds* and *shares* as reported in the ”Fundamental Data Sheets” (FDS) as of 1 January 2021.

As shown in Figure 38 Liabilities, the liabilities of health insurers are dominated by the other liabilities (90%) followed by the loss reserves (73%). In Table 11, a breakdown of other liabilities and loss reserves into their components is shown.

Health	FDS component	
Other liabilities	Liabilities from derivative financial instruments	6.0%
	Non-technical provisions	9.1%
	Liabilities from insurance business	50.9%
	Other liabilities	23.9%
	Interest-bearing liabilities	8.1%
	Subordinated liabilities	2.0%
Loss reserves	Best estimate of insurance liabilities (non-life): gross	24.4%
	Best estimate of insurance liabilities (health): gross	72.9%
	Active reinsurance (indirect business)	2.6%

Table 11: Breakdown of *other liabilities* and *loss reserves* as reported in the ”Fundamental Data Sheets” (FDS) as of 1 January 2021.

[4] A further decomposition is shown only for the dominating categories that have at least two different components.

In Figure 42 Target capital decomposition it is shown that the one-year capital and market value margin correspond to 75% and 25% of the target capital, respectively. The one-year capital is driven (before diversification) by the insurance risk (61%) followed by the market risk (31%).

The main drivers of the market risk (before diversification) are the interest rate risk (56%) followed by the equity risk (53%), and the spread risk (25%). As shown in Figure 46, interest rate risk is dominated by the CHF interest rate risk (103% before diversification).

7.2 Assets

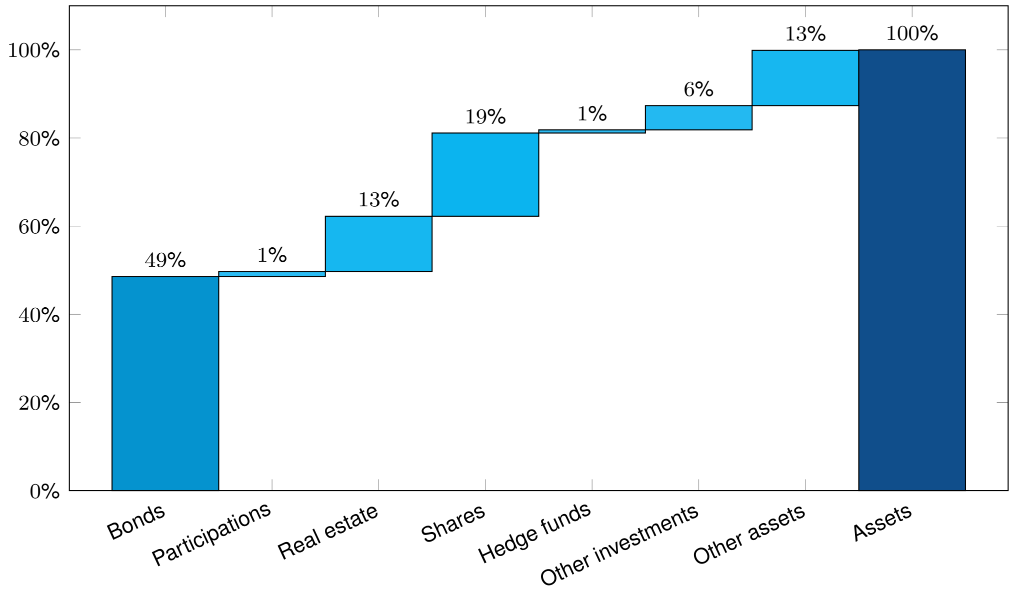

Figure 36: Health (mean values by sector)

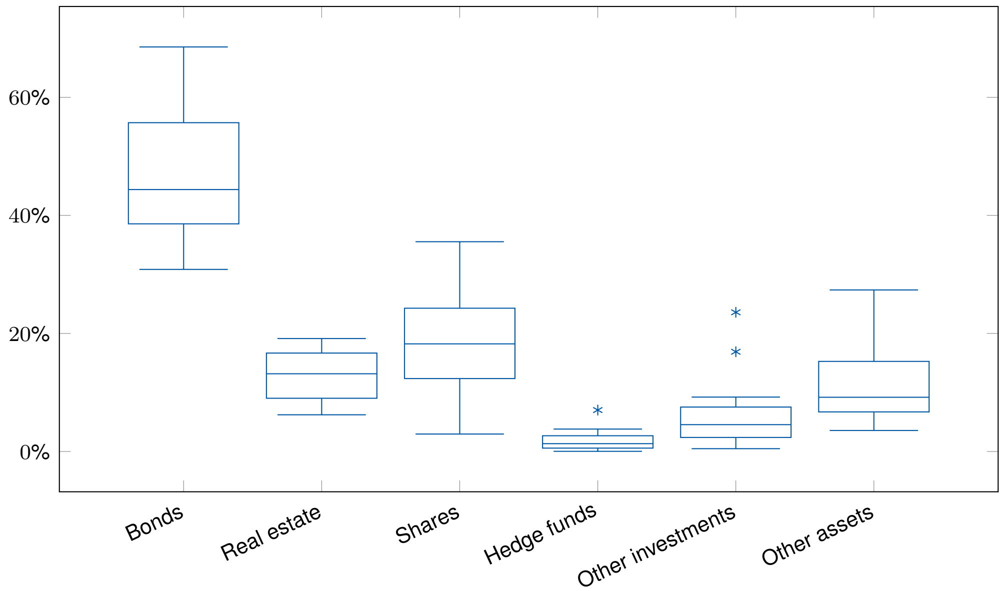

Figure 37: Health (distribution as box-plot)

7.3 Liabilities

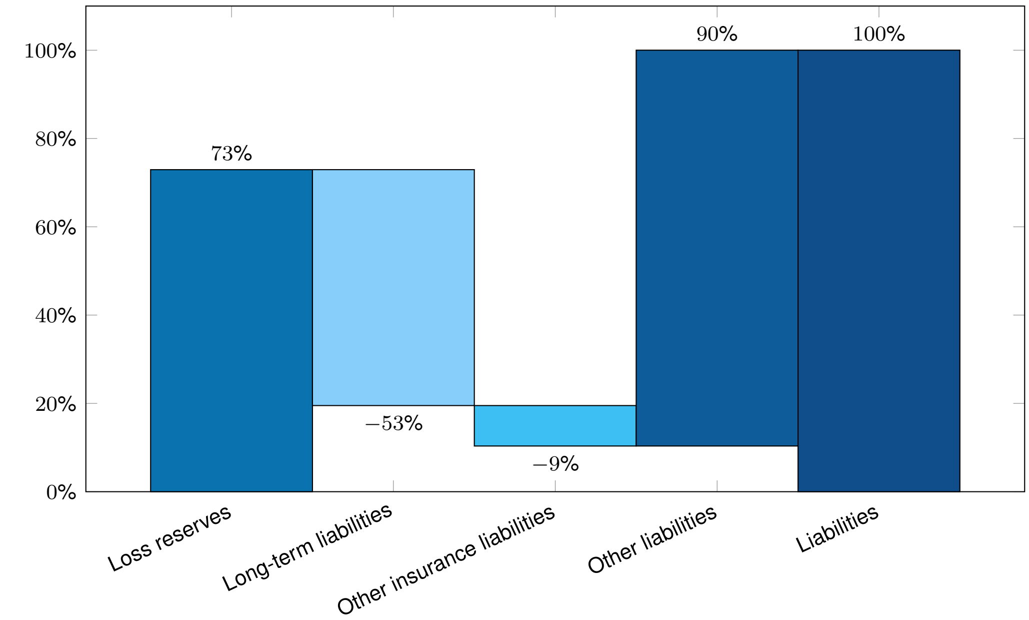

Figure 38: Health (mean values by sector)

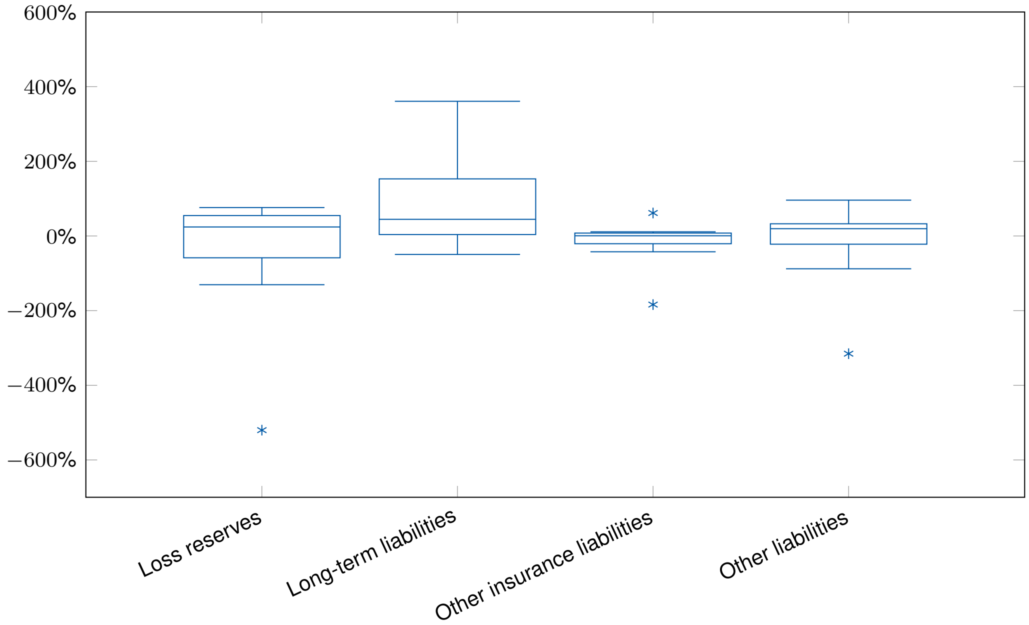

Figure 39: Health (distribution as box-plot)

7.4 Best estimate of liability and target capital in relation to the balance sheet total

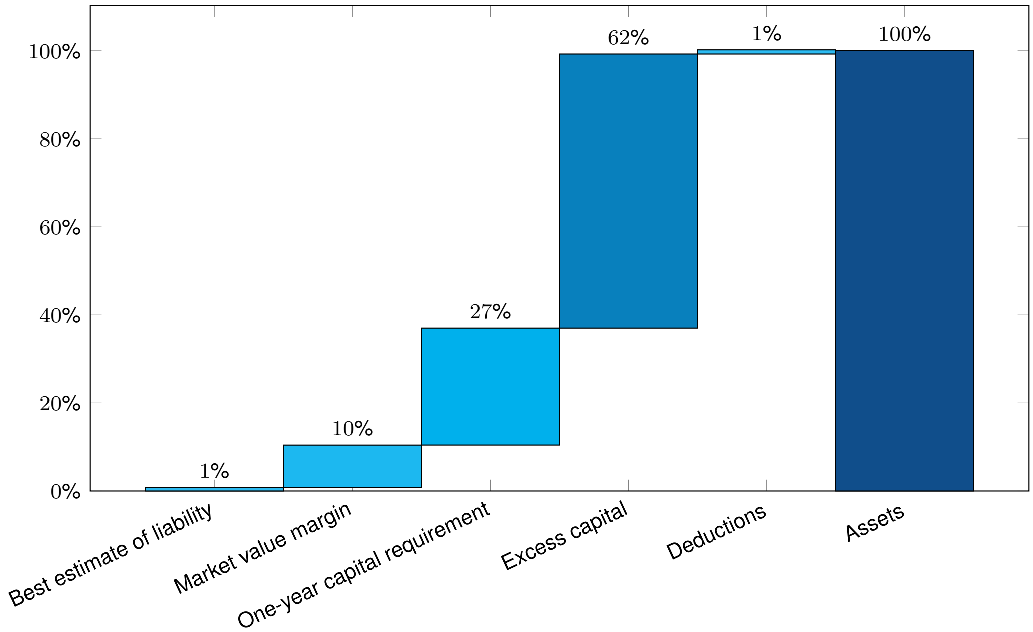

Figure 40: Health (mean values by sector)

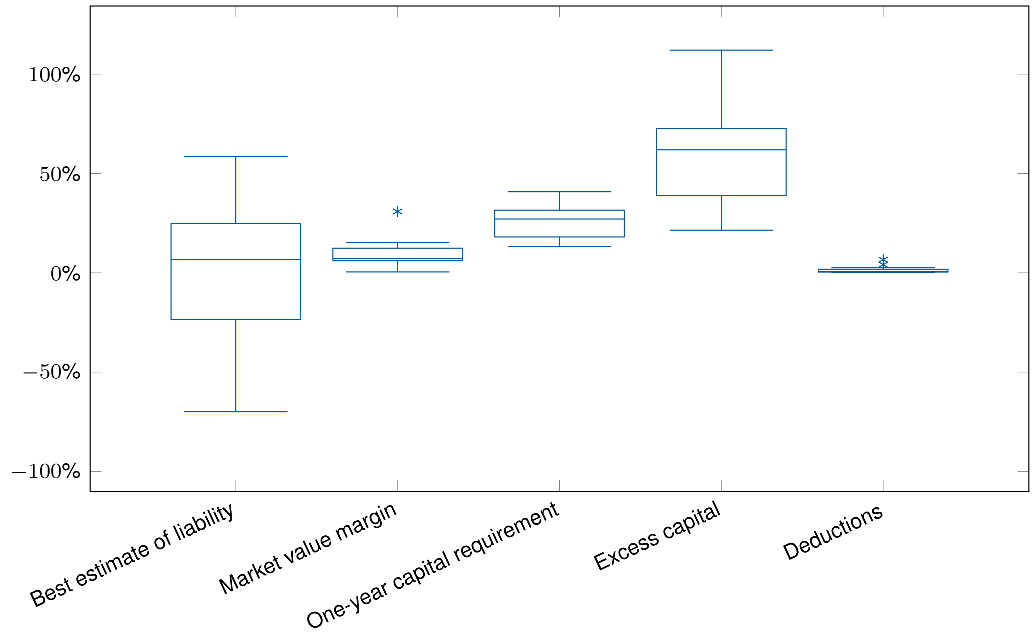

Figure 41: Health (distribution as box-plot)

7.5 Target capital decomposition

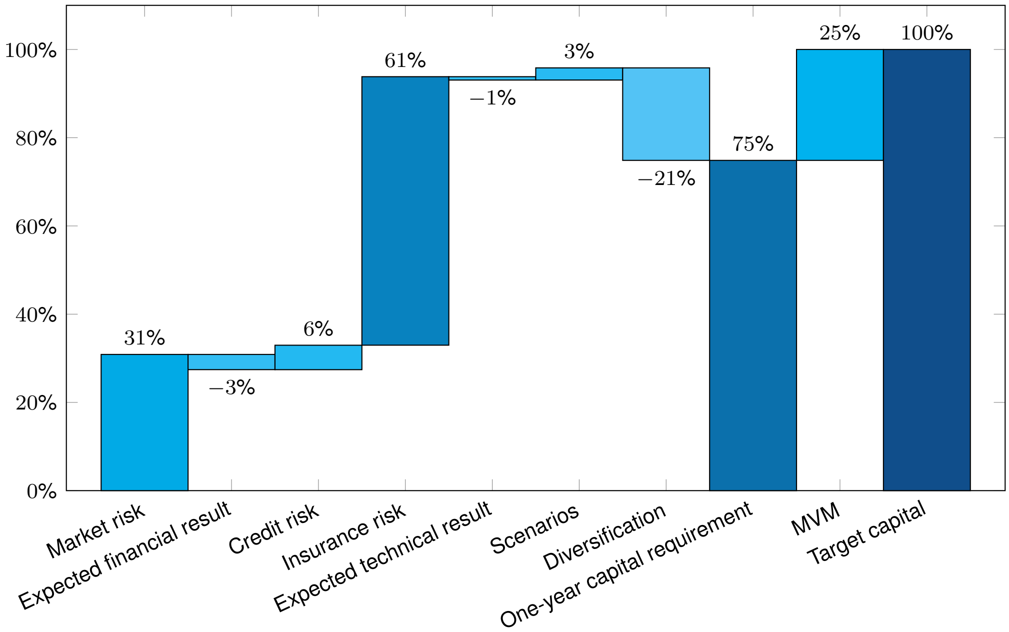

Figure 42: Health (mean values by sector)

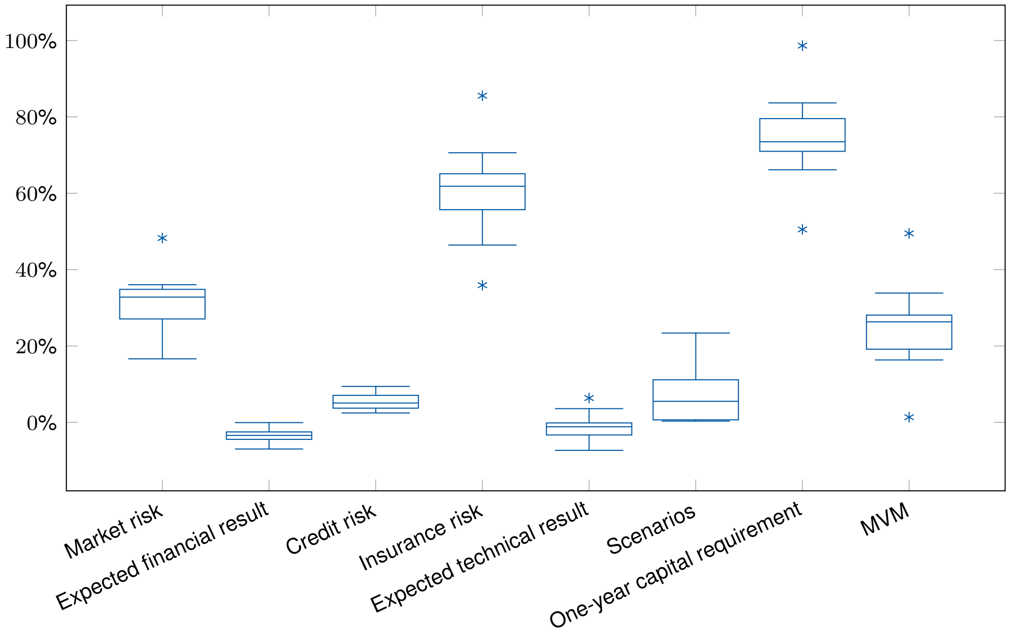

Figure 43: Health (distribution as box-plot)

7.6 Market risk analysis

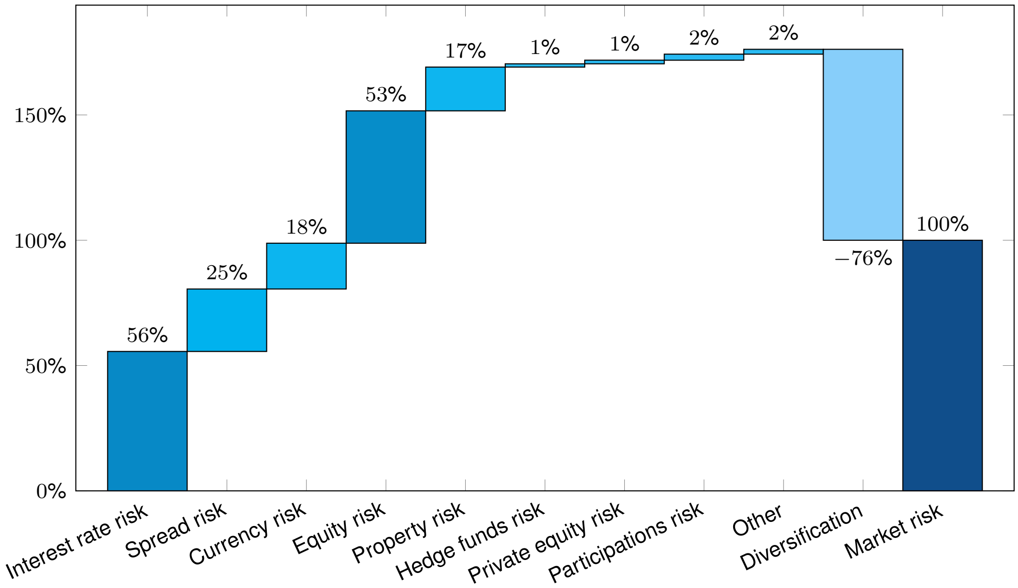

Figure 44: Health (mean values by sector)

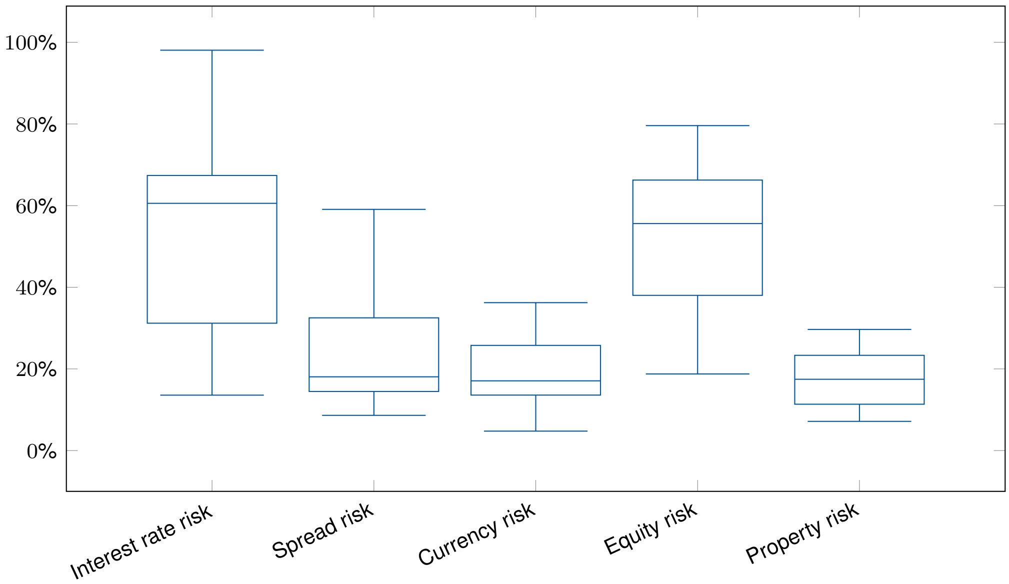

Figure 45: Health (distribution as box-plot)

7.7 Interest rate analysis

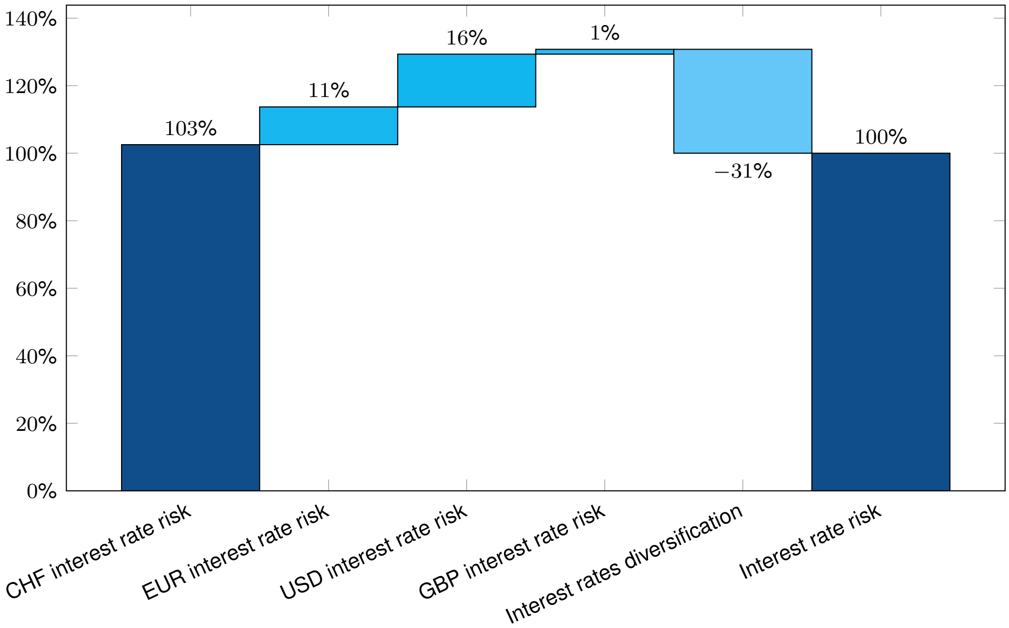

Figure 46: Health (mean values by sector)

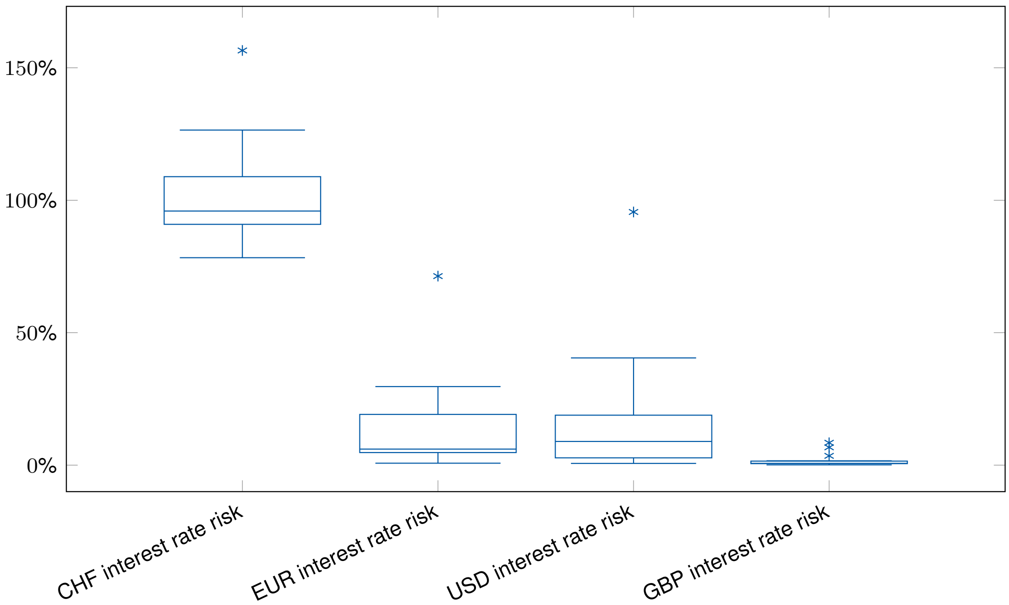

Figure 47: Health (distribution as box-plot)

7.8 Market and credit risk scenarios

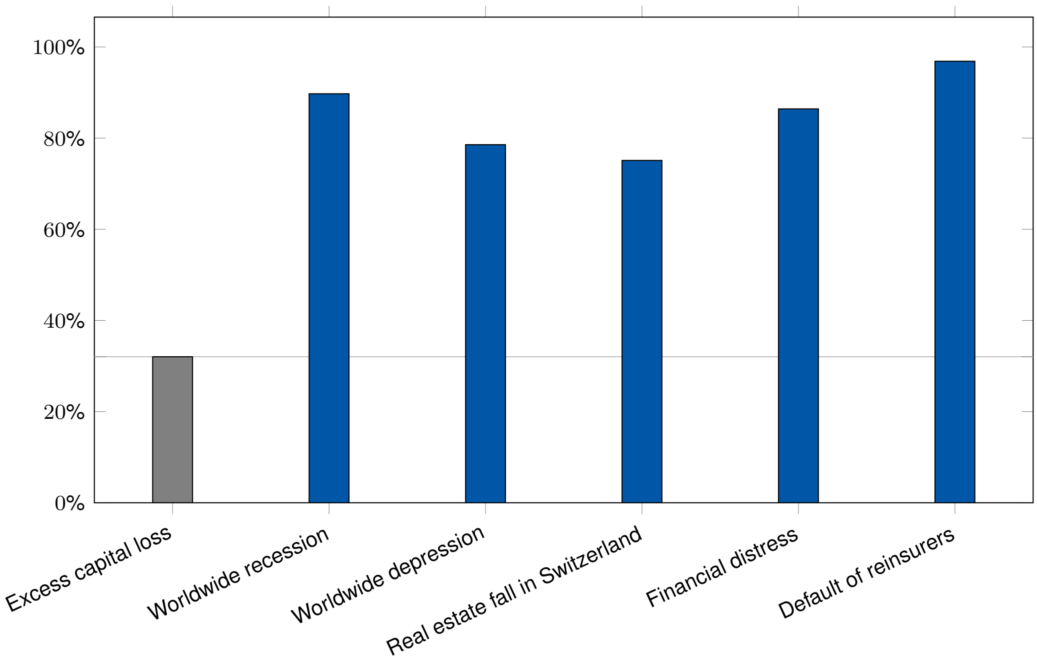

Figure 48: Health (mean values by sector)

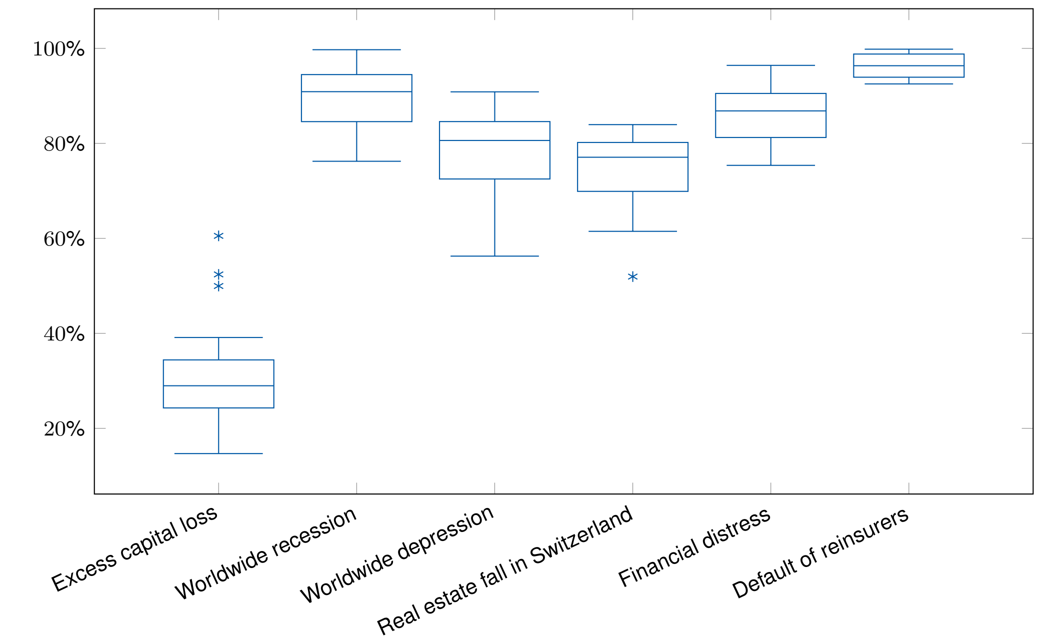

Figure 49: Health (distribution as box-plot)

7.9 Insurance risk and global scenarios

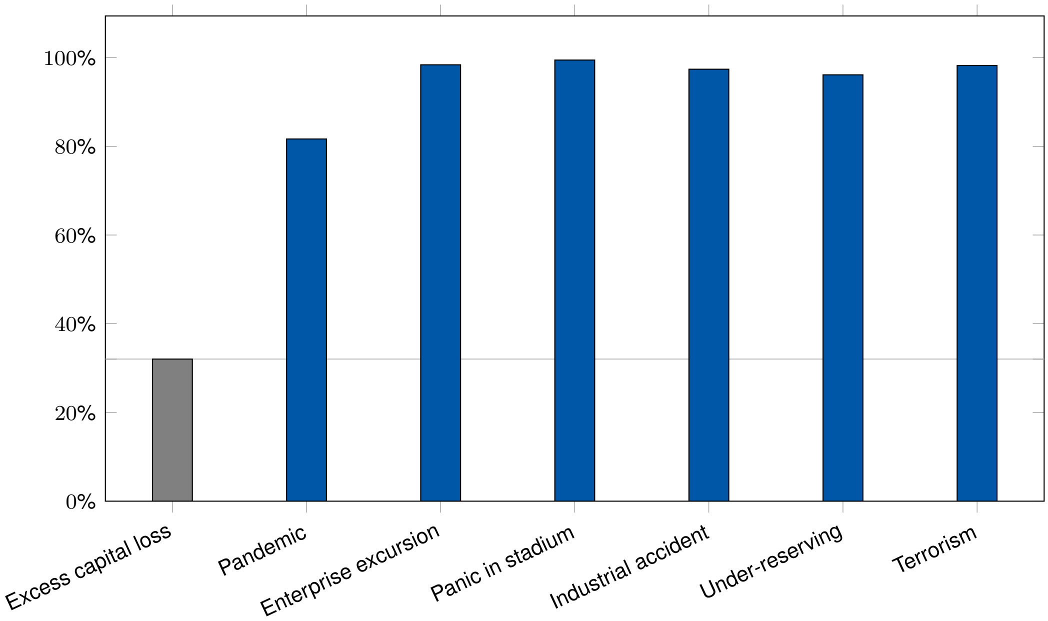

Figure 50: Health (mean values by sector)

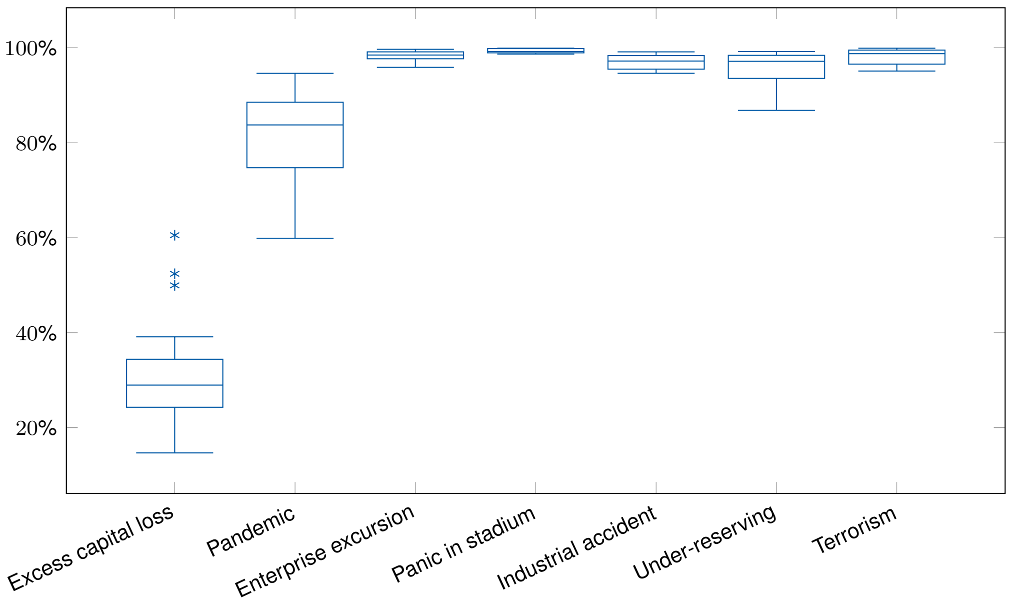

Figure 51: Health (distribution as box-plot)

8 Reinsurance

The overall SST ratio calculated over all reinsurers decreased by 9 percentage points from 194% in 2020 to 185% in 2021. The risk bearing capital decreased by 1.2% to CHF 53,811 million, while target capital went up by 4.2% to CHF 33,030 million. The comparison is based on aggregate numbers obtained by summing over all reinsurers (24 in total).

With regard to the individual analysis, in order to avoid that companies with larger volume dominate the results, an average over the percentages for each company is shown.

8.1 Comments on results

The asset portfolios of reinsurers are mainly concentrated in bond investments (38%) followed by other assets (32%). A further breakdown[5] of the investment category bonds is shown in Table 12.

Reinsurance	FDS component	
Bonds	Investment funds: bonds	28.6%
	Fixed income securities, loans	71.4%

Table 12: Breakdown of investment category *bonds* as reported in the "Fundamental Data Sheets" (FDS) as of 1 January 2021.

As shown in Figure 54 Liabilities, the liabilities of reinsurers are dominated by the loss reserves (77%) and the other liabilities (20%). In Table 13, a breakdown of loss reserves and other liabilities into their components is shown.

Reinsurance	FDS component	
Loss reserves	Best estimate of insurance liabilities (non-life and health): gross	4.3%
	Active reinsurance (indirect business)	95.7%
Other liabilities	Deposit liabilities from ceded reinsurance	5.1%
	Liabilities from derivative financial instruments	3.4%
	Non-technical provisions	7.4%
	Liabilities from insurance business	59.8%
	Other liabilities	13.6%
	Interest-bearing liabilities	1.2%
	Subordinated liabilities	9.5%

Table 13: Breakdown of *loss reserves* and *other liabilities* as reported in the "Fundamental Data Sheets" (FDS) as of 1 January 2021.

In Figure 58 "Target capital decomposition" it is shown that the one-year capital and market value margin correspond to 84% and 16% of the target capital, respectively. The one-year

[5] A further decomposition is shown only for the dominating categories that have at least two different components.

capital is driven (before diversification) by insurance risk (71%) followed by the market risk (32%).

The main drivers of the market risk (before diversification) are the spread risk (58%) followed by the interest rate risk (43%) and the currency risk (37%). As shown in Figure 62, interest rate risk is dominated (before diversification) by the USD interest rate risk (54%) followed by EUR interest rate risk (45%).

8.2 Assets

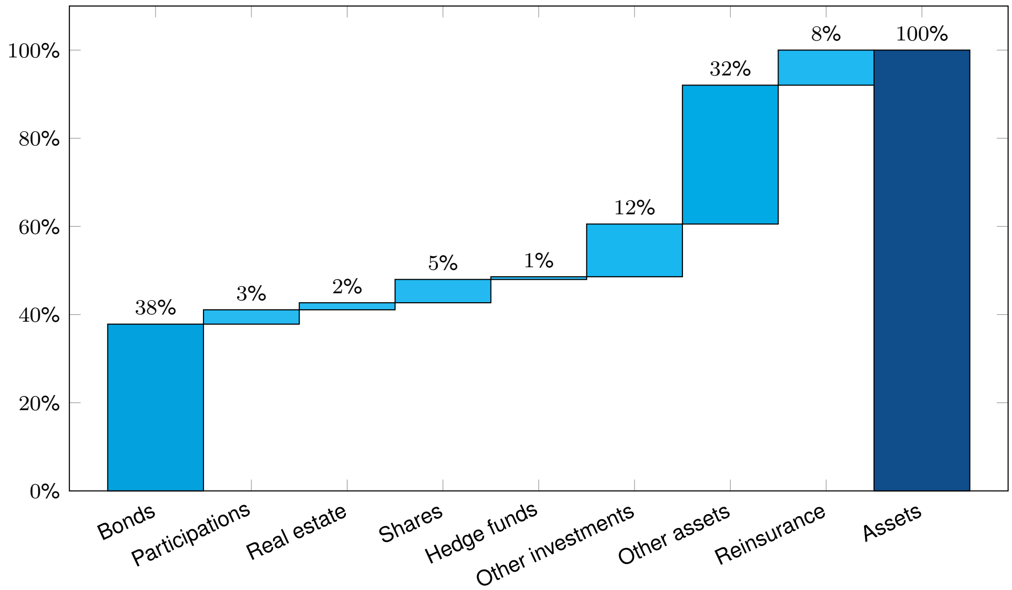

Figure 52: Reinsurance (mean values by sector)

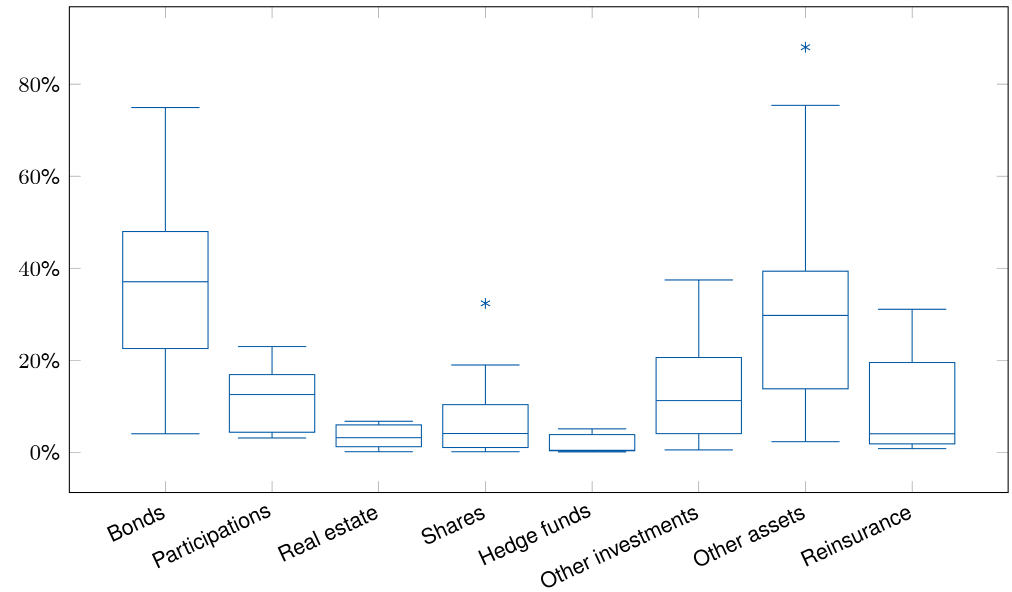

Figure 53: Reinsurance (distribution as box-plot)

8.3 Liabilities

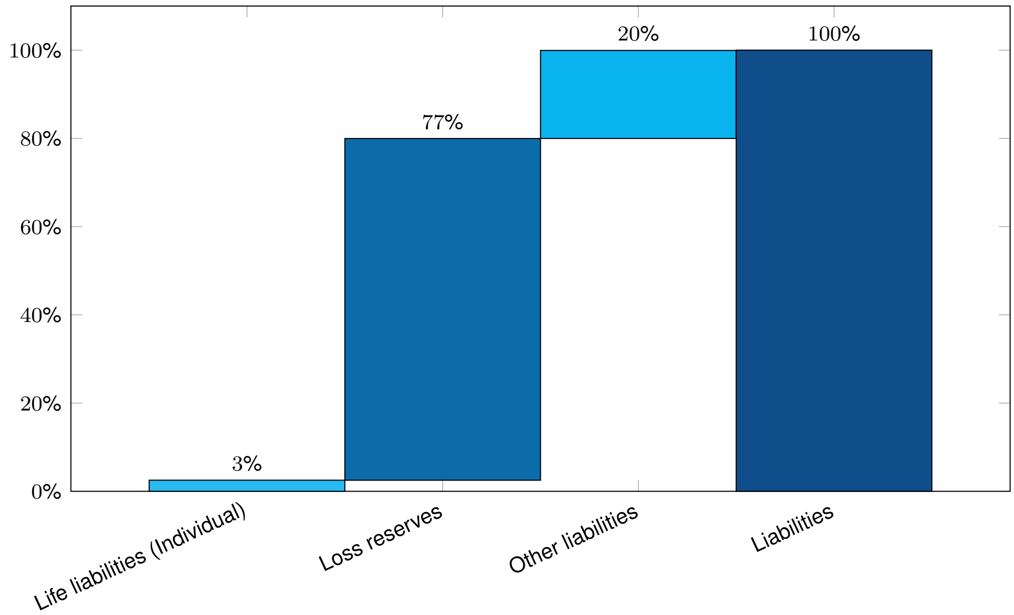

Figure 54: Reinsurance (mean values by sector)

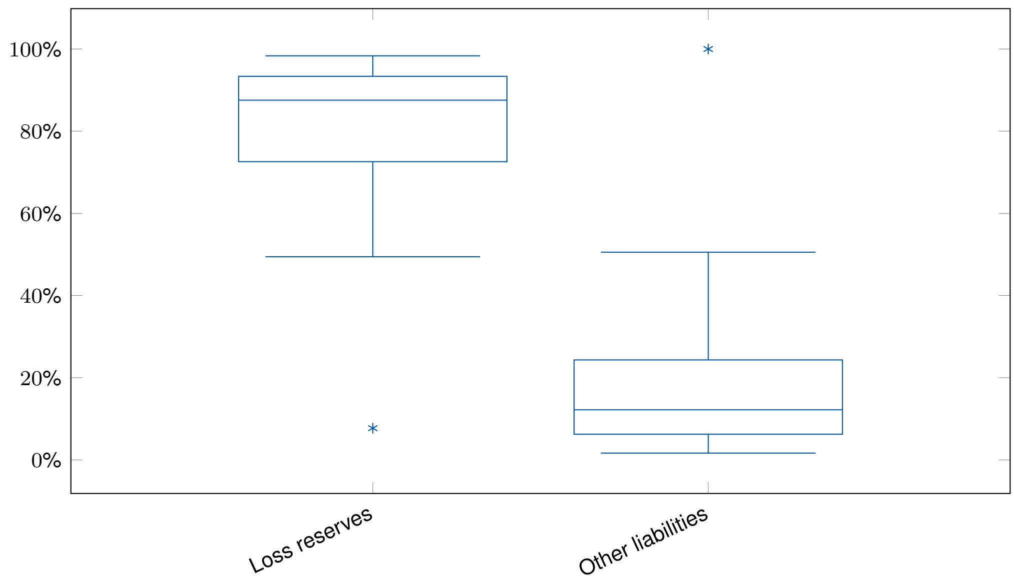

Figure 55: Reinsurance (distribution as box-plot)

8.4 Best estimate of liability and target capital in relation to the balance sheet total

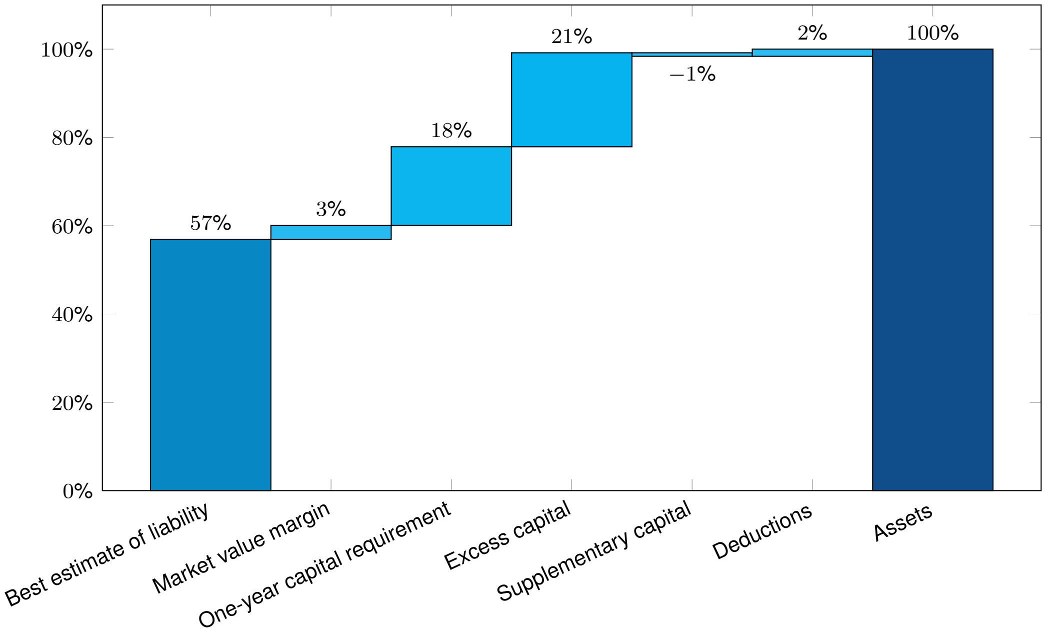

Figure 56: Reinsurance (mean values by sector)

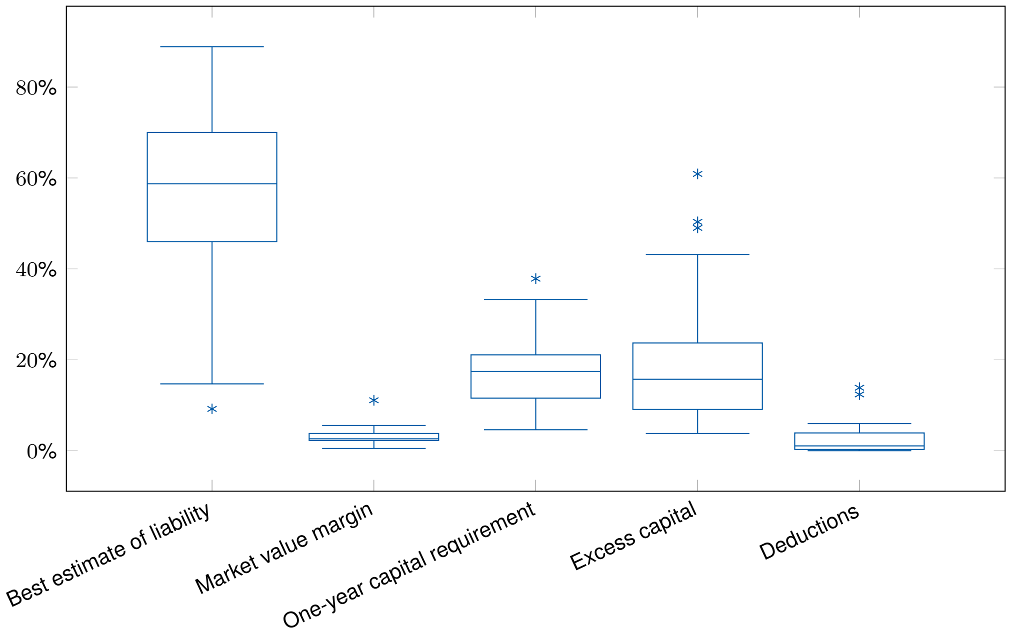

Figure 57: Reinsurance (distribution as box-plot)

8.5 Target capital decomposition

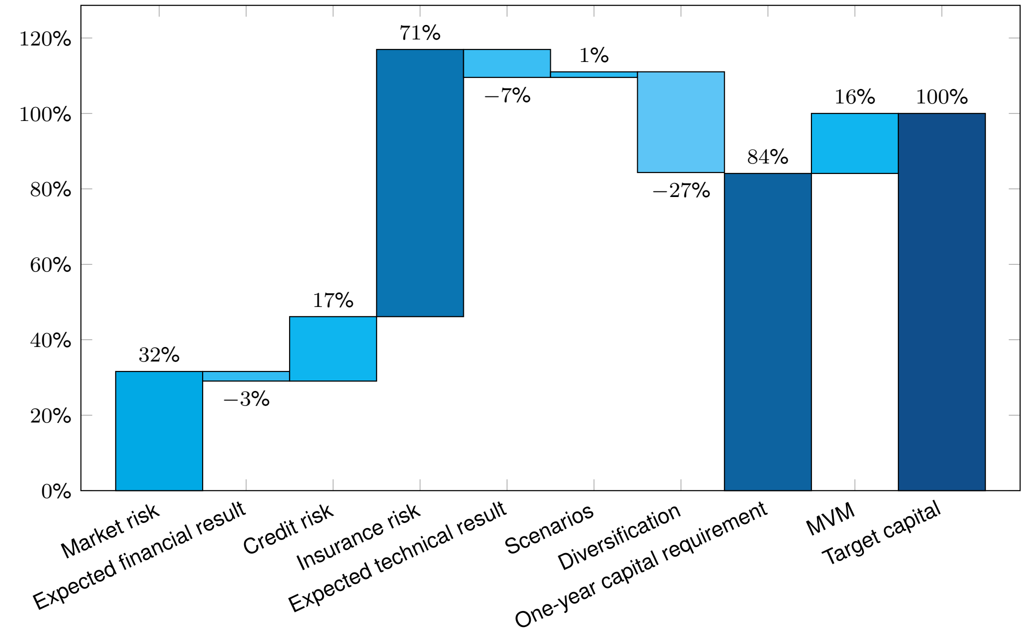

Figure 58: Reinsurance (mean values by sector)

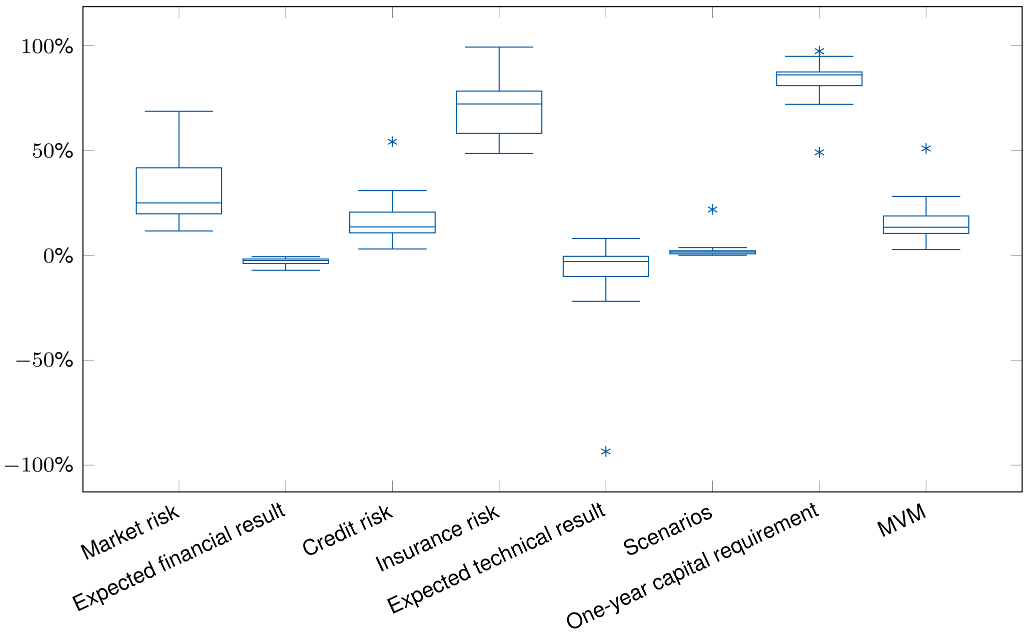

Figure 59: Reinsurance (distribution as box-plot)

8.6 Market risk analysis

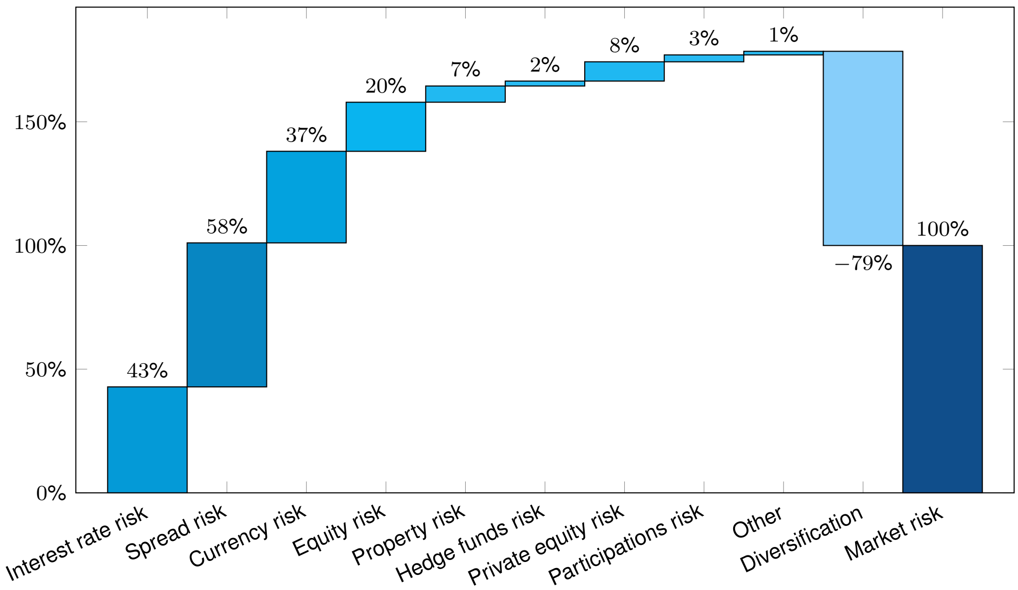

Figure 60: Reinsurance (mean values by sector)

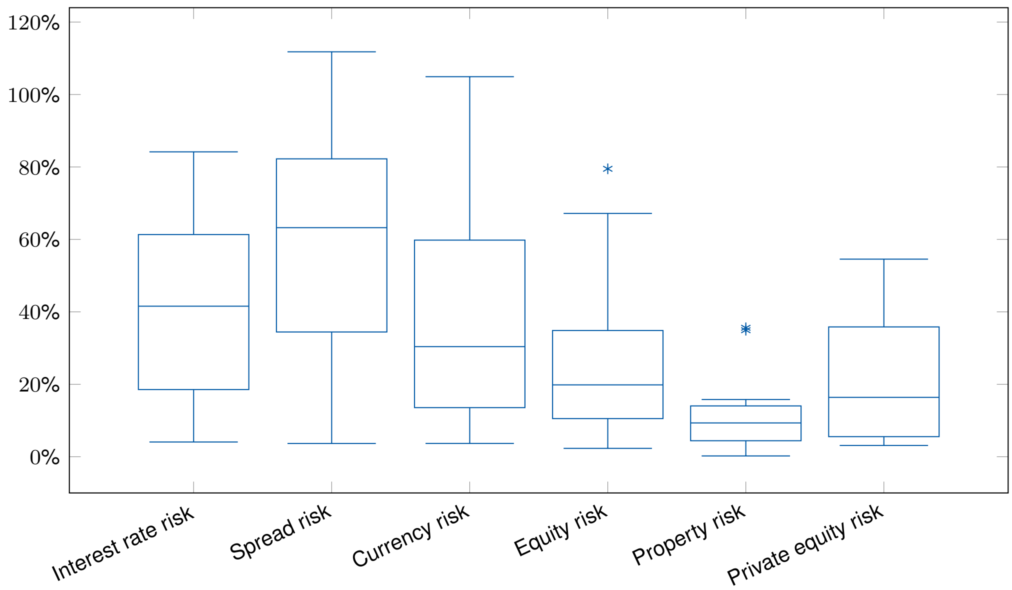

Figure 61: Reinsurance (distribution as box-plot)

8.7 Interest rate analysis

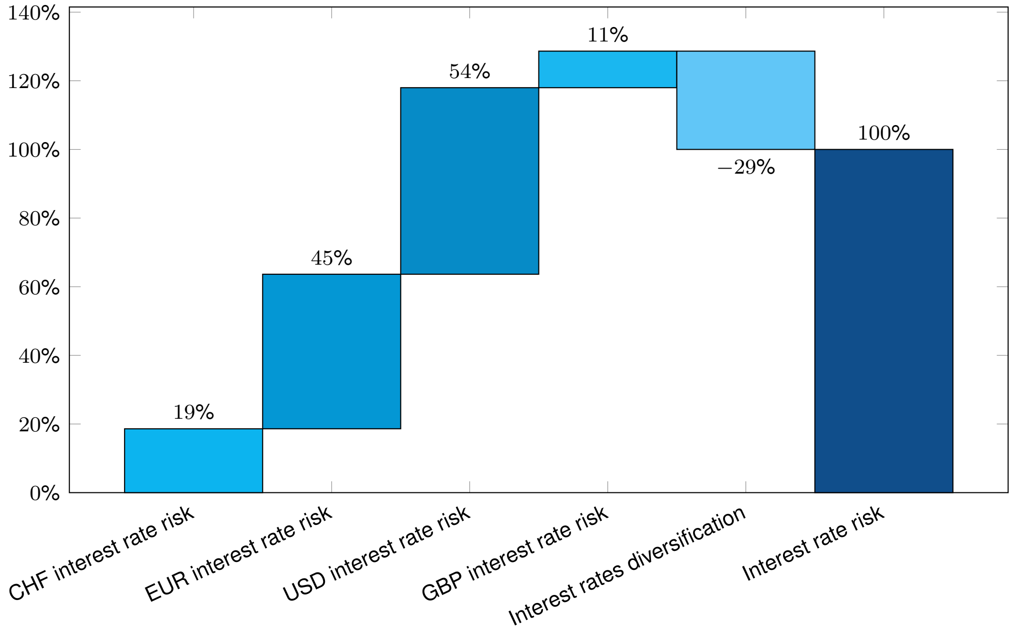

Figure 62: Reinsurance (mean values by sector)

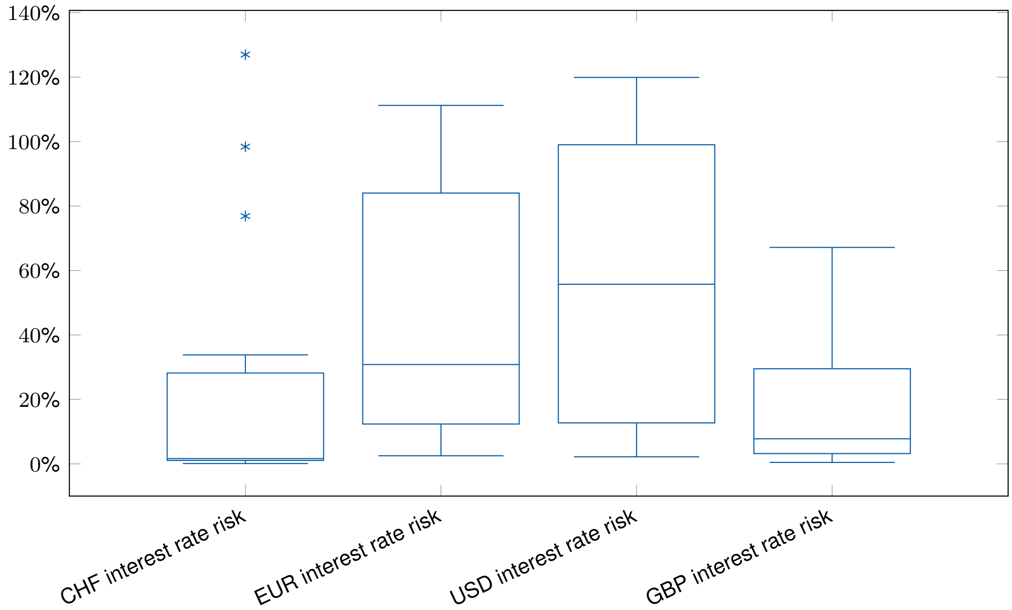

Figure 63: Reinsurance (distribution as box-plot)

8.8 Market and credit risk scenarios

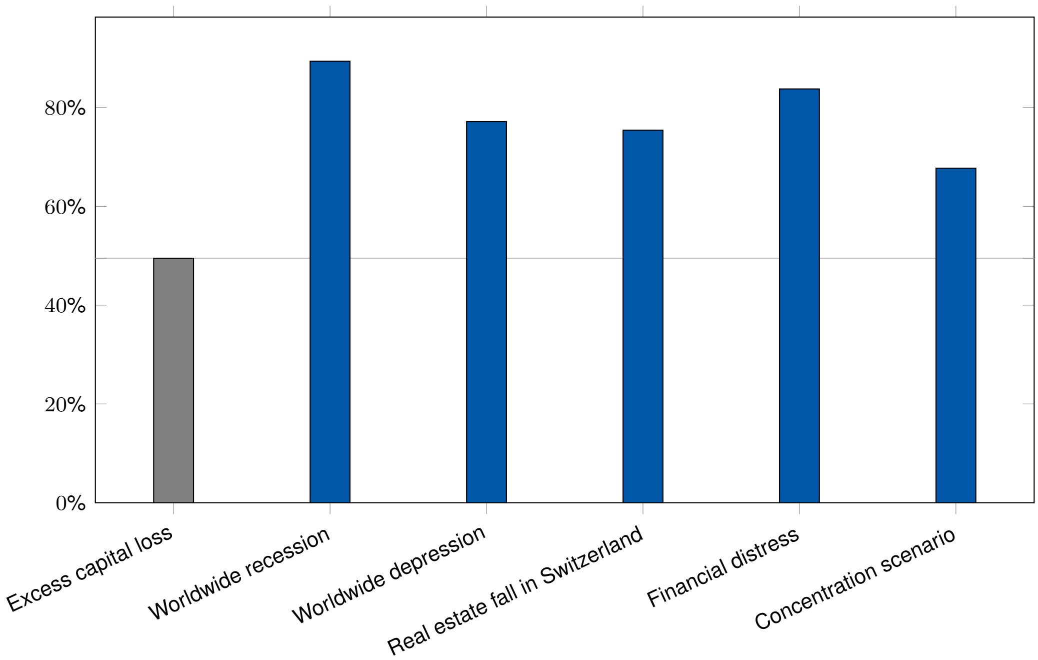

Figure 64: Reinsurance (mean values by sector)

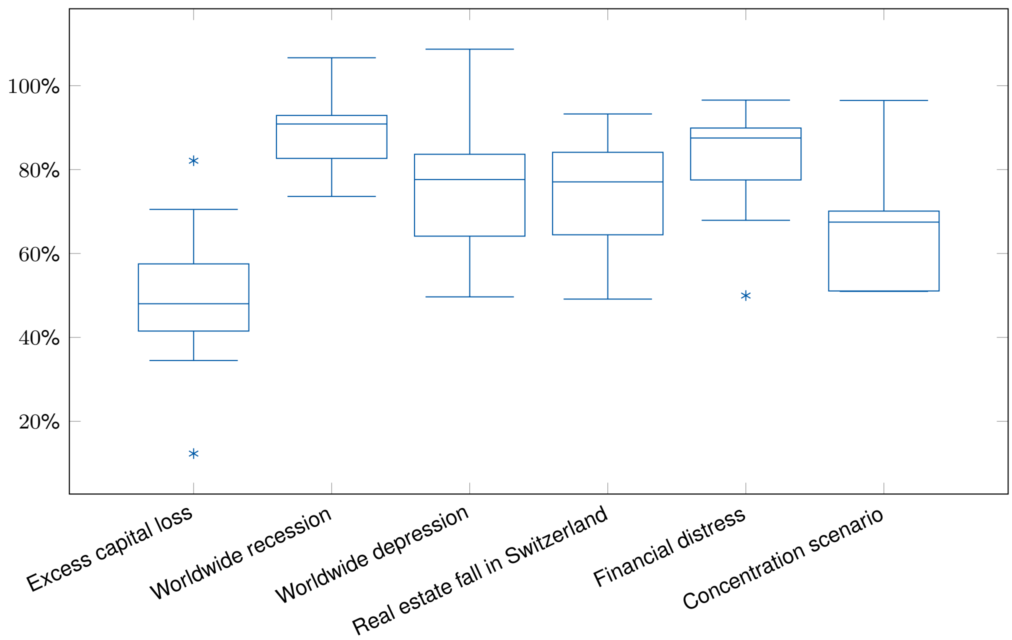

Figure 65: Reinsurance (distribution as box-plot)

8.9 Insurance risk and global scenarios

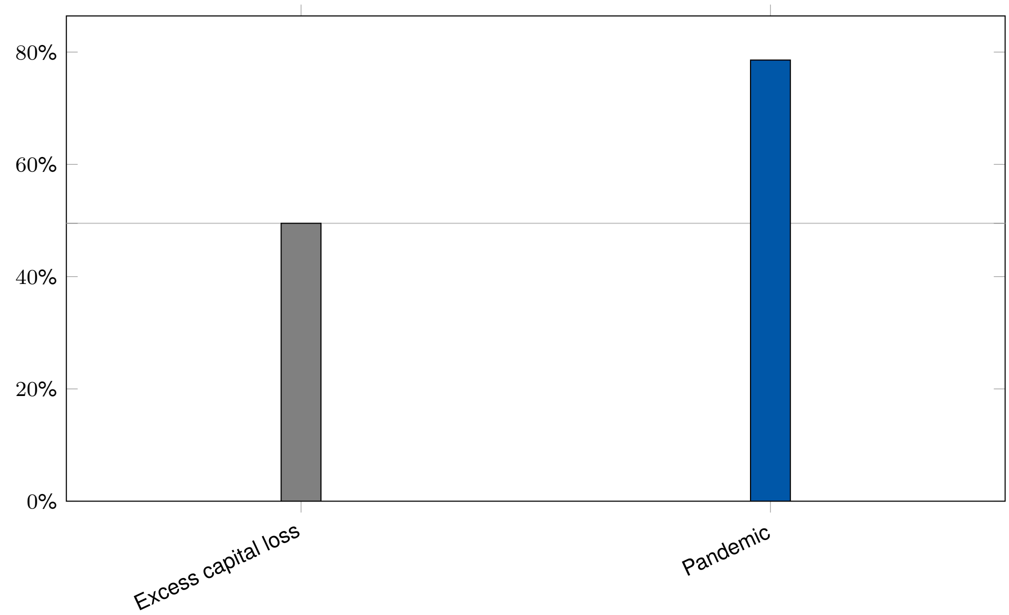

Figure 66: Reinsurance (mean values by sector)

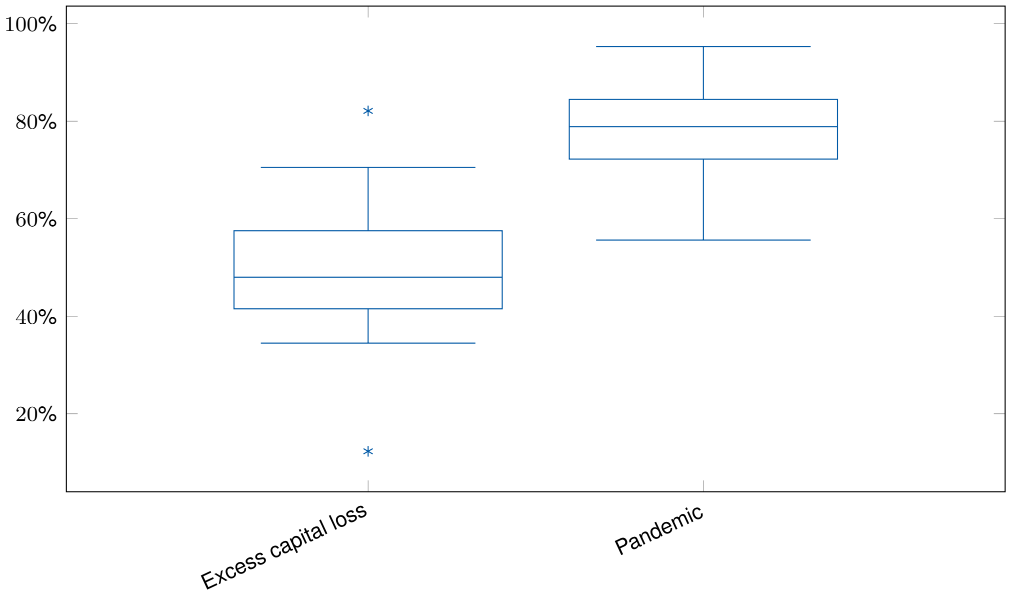

Figure 67: Reinsurance (distribution as box-plot)

9 Re Captive

The overall SST ratio calculated over all reinsurance captives decreased by 30 percentage points from 299% in 2020 to 269% in 2021. The risk bearing capital decreased by 6.1% to CHF 3,333 million, while target capital went up by 3.0% to CHF 1,268 million. The comparison is based on aggregate numbers obtained by summing over all reinsurance captives (23 in total).

With regard to the individual analysis, in order to avoid that companies with larger volume dominate the results, an average over the percentages for each company is shown.

9.1 Comments on results

The asset portfolios of reinsurance captives are mainly concentrated in other assets (59%) followed by other investments (29%) and bond investments (7%). A further breakdown[6] of the investment category bonds is shown in Table 14.

Re Captive	FDS component	
Bonds	Investment funds: bonds	16.7%
	Fixed income securities, loans	83.3%

Table 14: Breakdown of investment category *bonds* as reported in the "Fundamental Data Sheets" (FDS) as of 1 January 2021.

As shown in Figure 70 Liabilities, the liabilities of reinsurance captives are dominated by the loss reserves (85%) and the other liabilities (15%). In Table 15, a breakdown of loss reserves and other liabilities into their components is shown.

Re Captive	FDS component	
Loss reserves	Best estimate of insurance liabilities (non-life and health): gross	0.0%
	Active reinsurance (indirect business)	100.0%
Other liabilities	Non-technical provisions	5.4%
	Liabilities from insurance business	35.1%
	Other liabilities	55.5%
	Subordinated liabilities	4.0%

Table 15: Composition of *other liabilities* into the respective components of the "Fundamental Data Sheet" (FDS) for reinsurers captives as of 1 January 2021.

In Figure 74 Target capital decomposition it is shown that the one-year capital and the market value margin correspond to 97% and 3% of the target capital, respectively. The one-year capital is driven (before diversification) by the insurance risk (77%) followed by the market risk (15%) and the credit risk and scenarios (14% each) .

[6]A further decomposition is shown only for the dominating categories that have at least two different components.

The main drivers of market risk (before diversification) are the interest rate risk (54%) and the currency risk (49%). As shown in Figure 78 the interest rate risk is dominated by the EUR interest rate risk (57% before diversification).

9.2 Assets

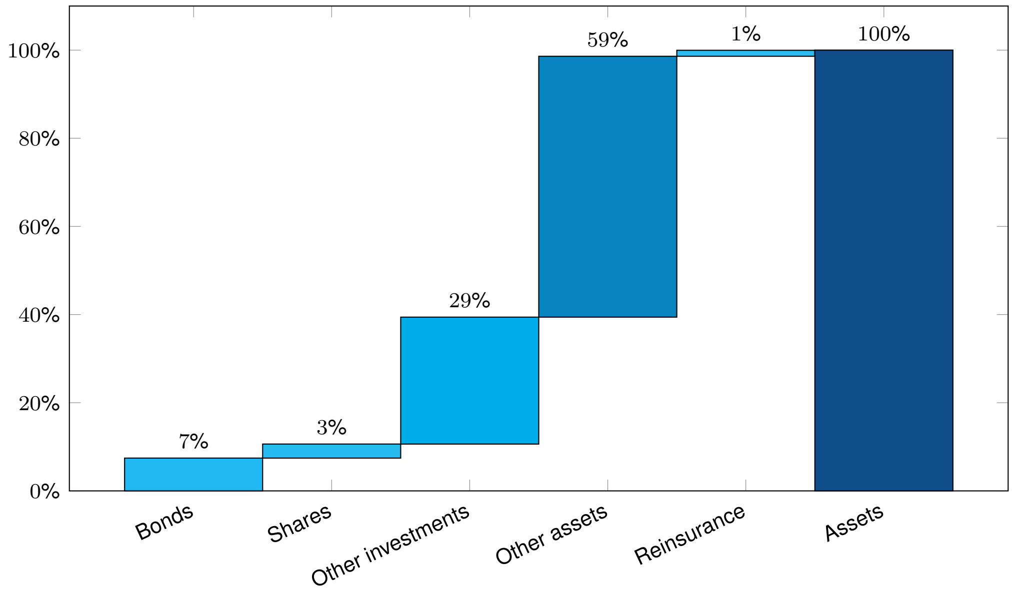

Figure 68: Re Captive (mean values by sector)

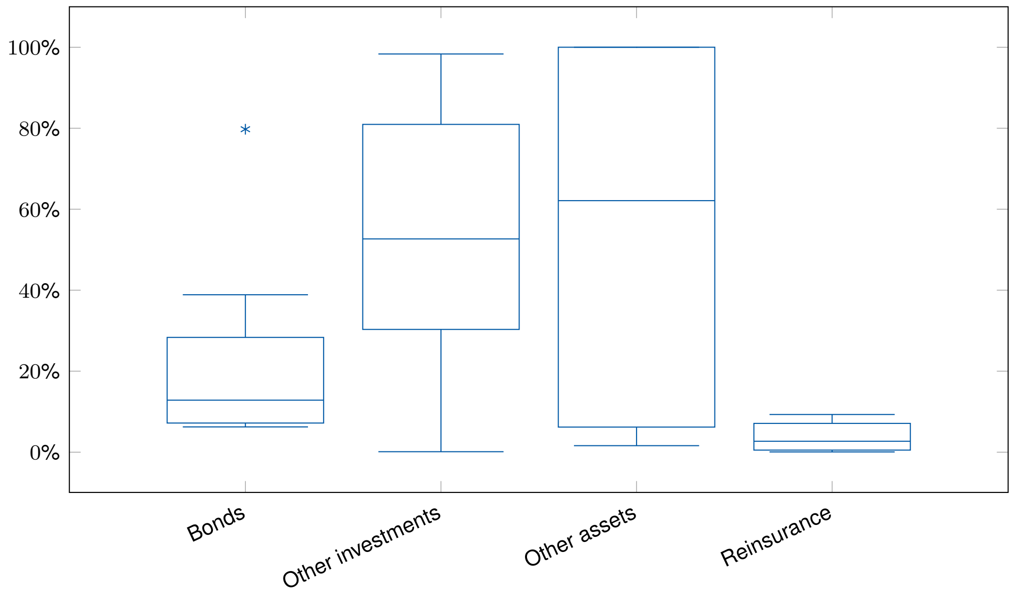

Figure 69: Re Captive (distribution as box-plot)

9.3 Liabilities

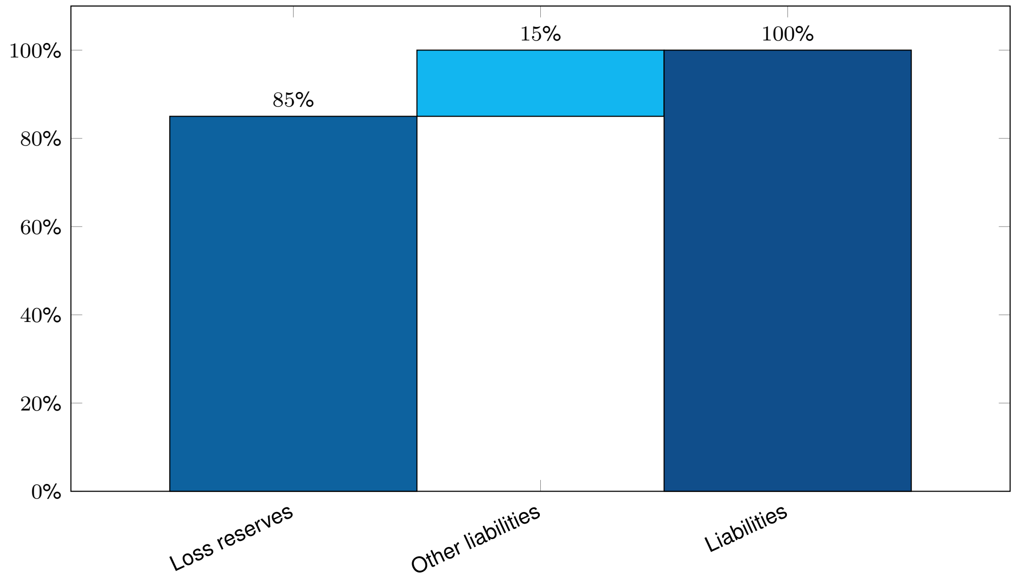

Figure 70: Re Captive (mean values by sector)

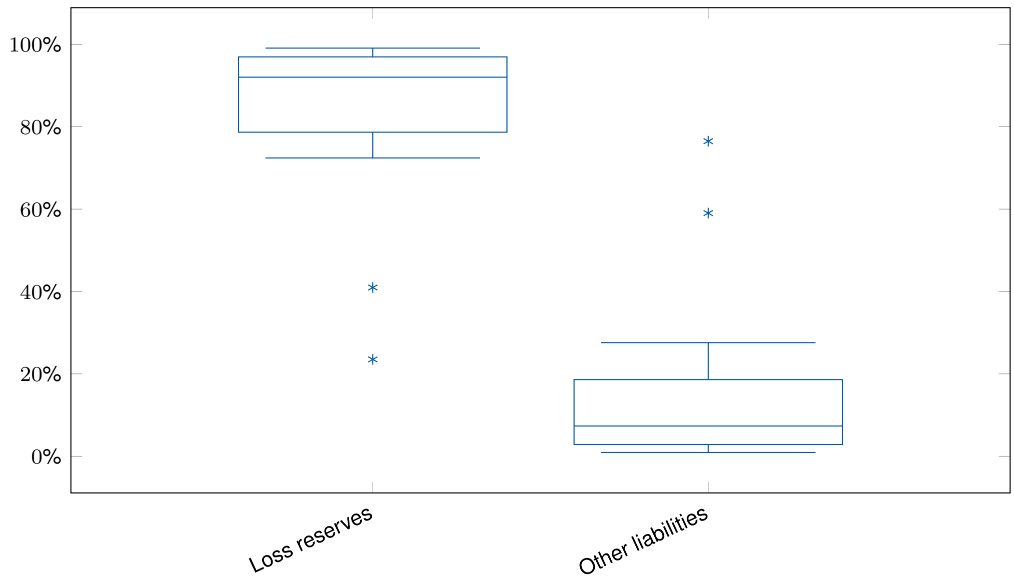

Figure 71: Re Captive (distribution as box-plot)

9.4 Best estimate of liability and target capital in relation to the balance sheet total

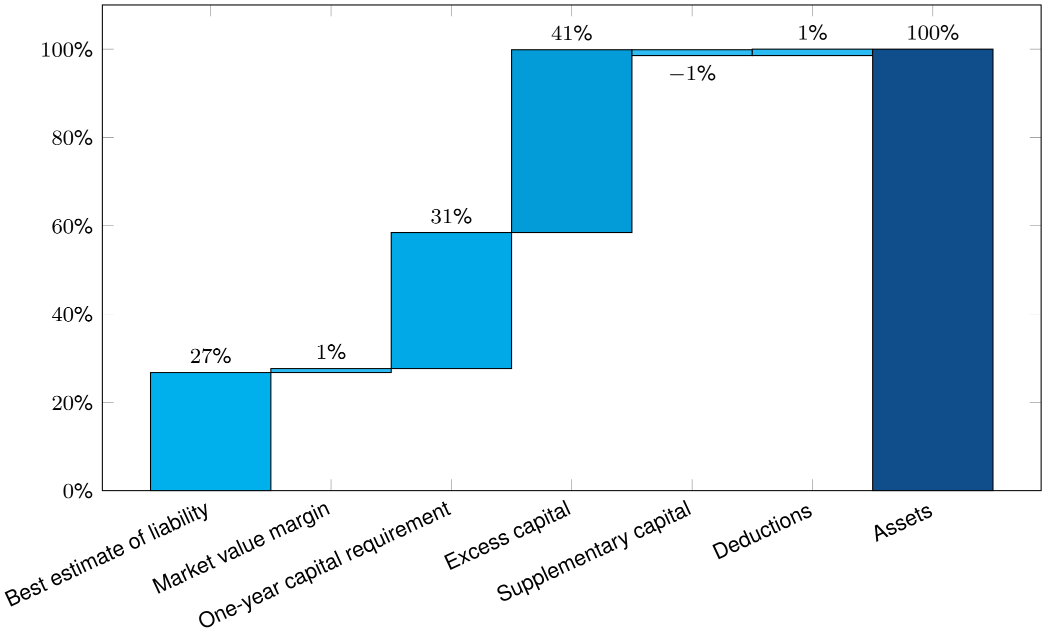

Figure 72: Re Captive (mean values by sector)

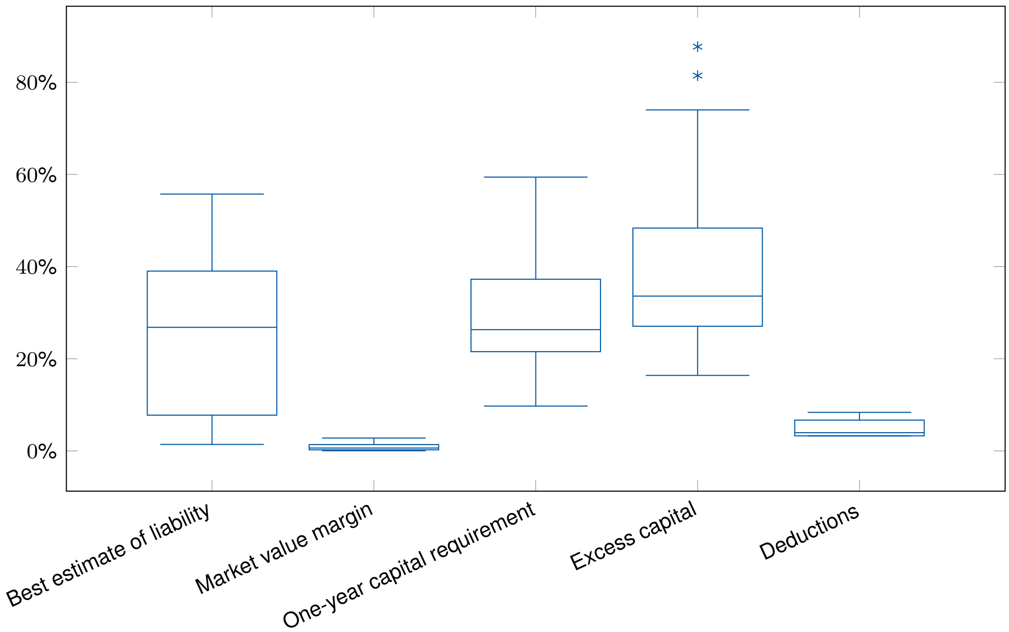

Figure 73: Re Captive (distribution as box-plot)

9.5 Target capital decomposition

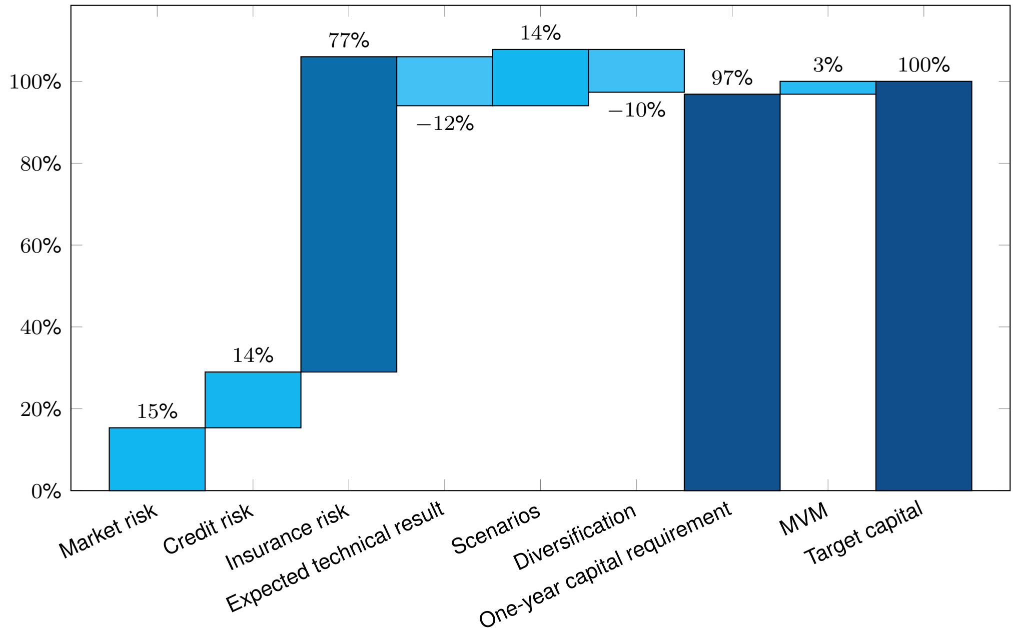

Figure 74: Re Captive (mean values by sector)

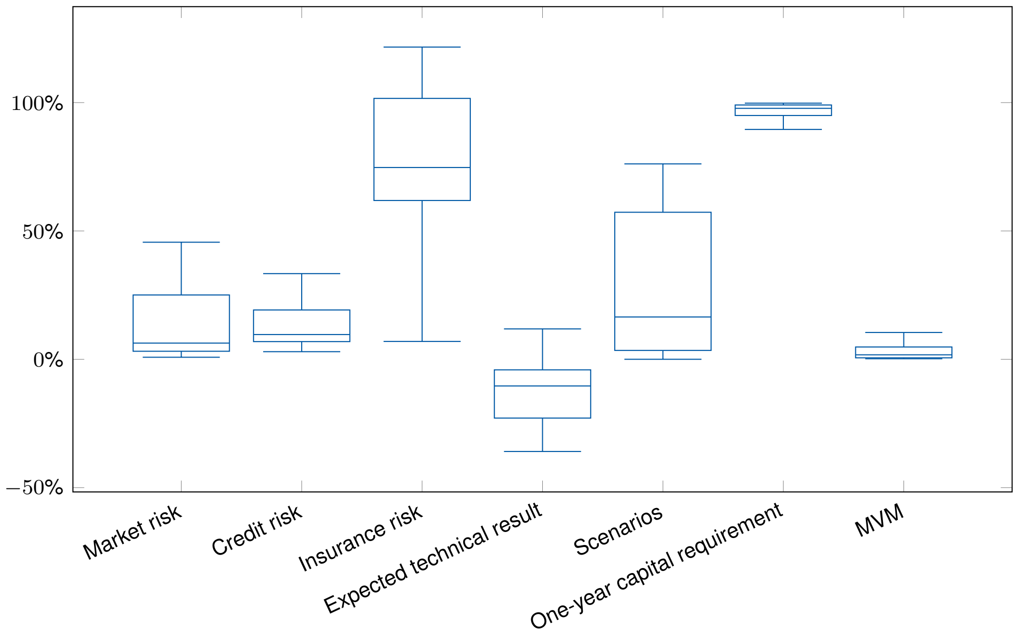

Figure 75: Re Captive (distribution as box-plot)

9.6 Market risk analysis

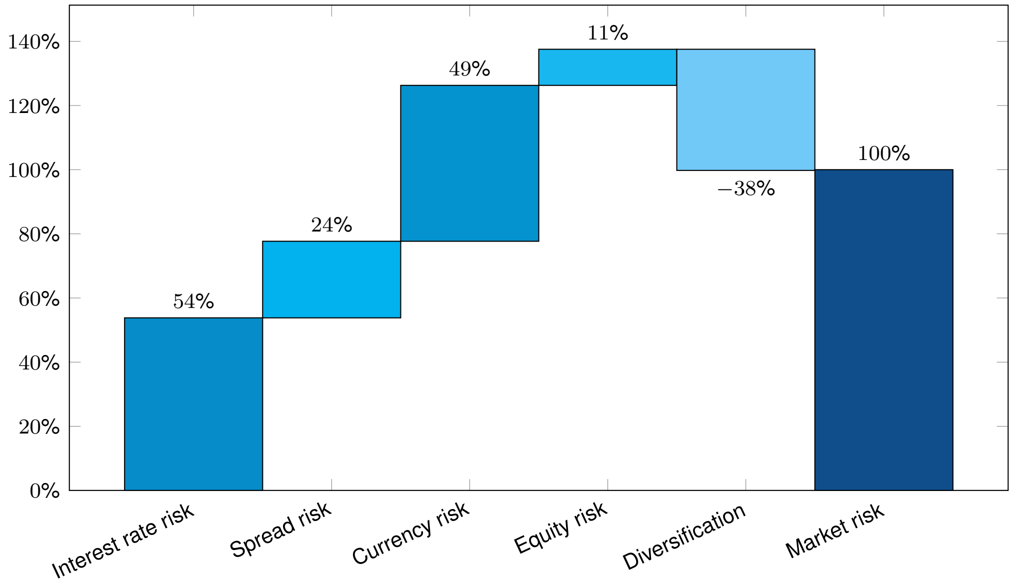

Figure 76: Re Captive (mean values by sector)

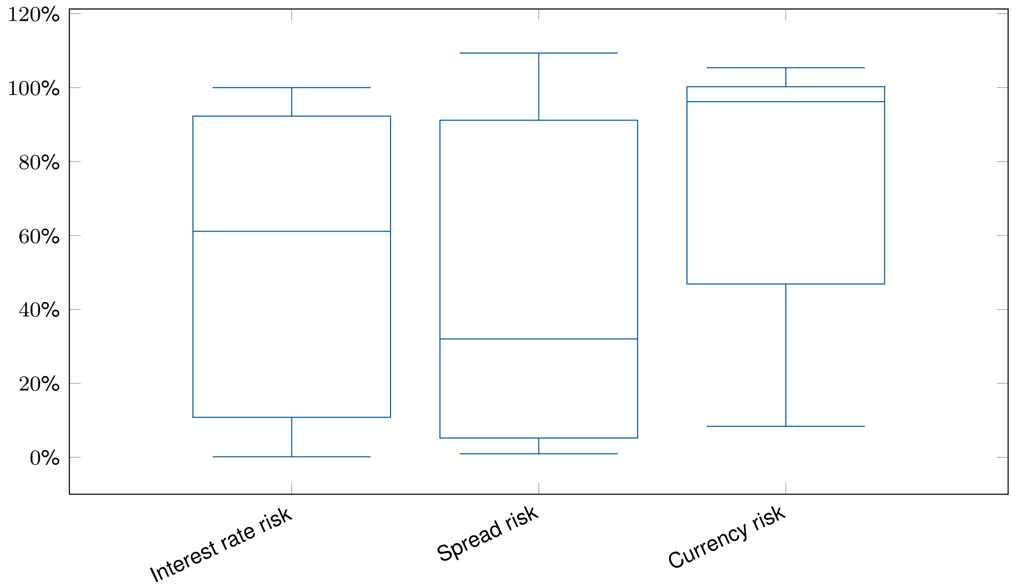

Figure 77: Re Captive (distribution as box-plot)

9.7 Interest rate analysis

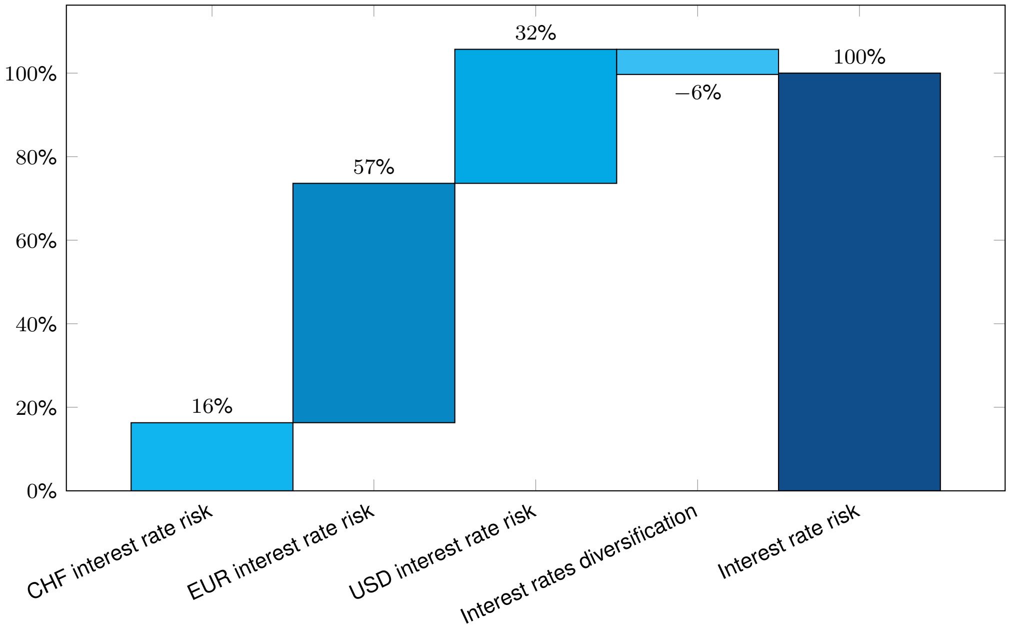

Figure 78: Re Captive (mean values by sector)

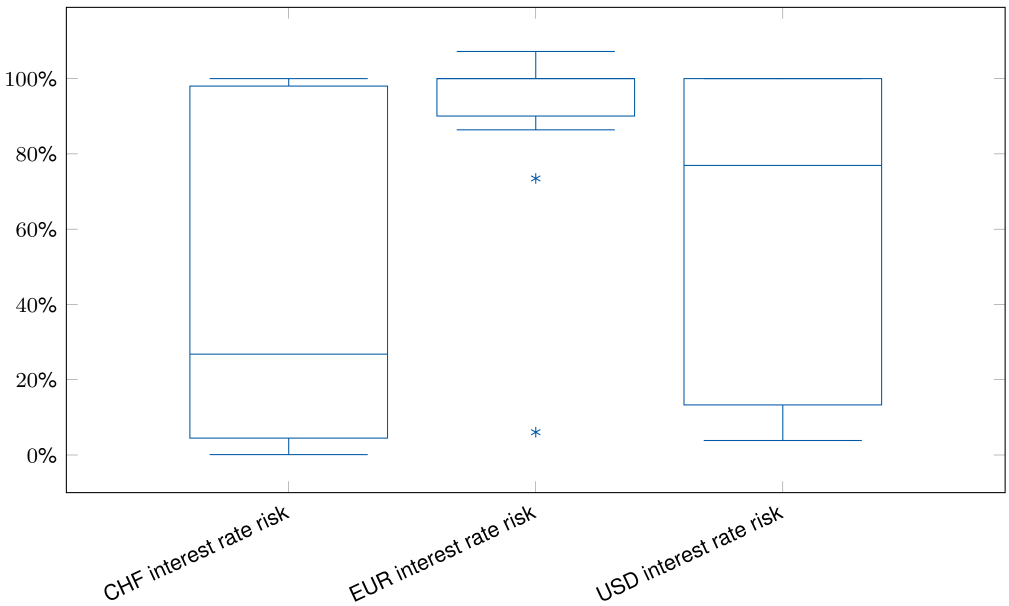

Figure 79: Re Captive (distribution as box-plot)

9.8 Insurance risk and global scenarios

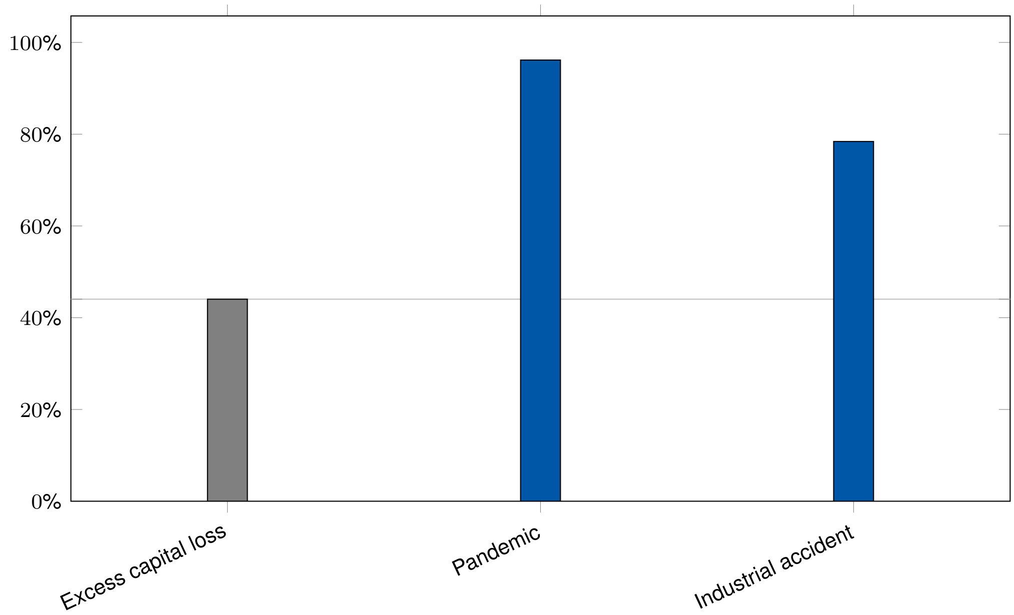

Figure 80: Re Captive (mean values by sector)

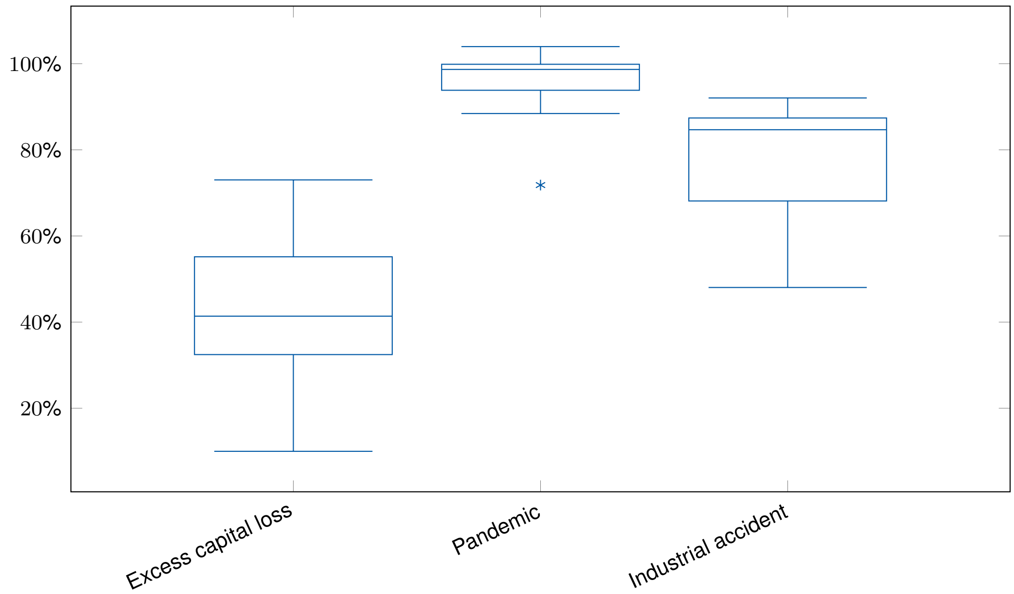

Figure 81: Re Captive (distribution as box-plot)

A Glossary for figures

In the following appendix, risk is measured by the 99% expected shortfall.

A.1 Waterfall chart

Waterfall charts explain the quantitative decomposition of an entity by revealing the cumulative positive and negative effects of its components in the form of bars. The waterfall charts in this report show unweighted mean values.

A.2 Box-plot

Each box-plot graphic consists of a box and two lines extending vertically from the box, called whiskers. The box is defined through the lower quartile, the 0.25-quantile of the input data, and the upper quartile, the 0.75-quartile of the input data. The horizontal line inside the box is the median, i.e. half of the points are less and half of the points are larger than the median.

The whiskers indicate variability outside the upper and lower quartiles within a defined ”interquantile range”. Any data outside of the whisker range is supposed to be an outlier and is denoted with a star (individual points).

The box plots in this report exclude all data points equal to zero.

A.3 Assets

Bonds	Bonds and bonds from open-end funds.
Participations	Participations in enterprises which are not admitted for official quotation.
Real estate	Residential and commercial real estate.
Shares	Shares and own shares.
Hedge funds	Hedge funds and private equity.
Unit-linked life insurance	Assets covering unit-linked life insurance products.
Other investments	Other invested assets.
Other assets	Remaining assets, e.g. liquid assets, various claims, etc.
Reinsurance	Share of the insurance liabilities assumed by reinsurance contracts.

A.4 Liabilities

Loss reserves	Best estimate of liabilities, gross of reinsurance, for claims in general insurance or treatments in health insurance which happened prior to the reference date of the balance sheet.

Life liabilities (Individual)	Best estimate of liabilities, gross of reinsurance, for individual life insurance contracts, excluding unit-linked liabilities.
Life liabilities (Group)	Best estimate of liabilities, gross of reinsurance, for group life insurance contracts, excluding unit-linked liabilities.
Long-term liabilities	Best estimate of liabilities, gross of reinsurance, for health insurers owing to the fact that the insurer is obliged to renew the health insurance contract until the death of the insured.
Other insurance liabilities	Best estimate of other insurance liabilities, gross of reinsurance.
Unit-linked liabilities	Best estimate of liabilities, net of reinsurance, for unit-linked insurance contracts.
Other liabilities	Remaining liabilities, e.g. surplus funds, bonds/loans, various obligations, etc.

A.5 Best estimate of liabilities and target capital in relation to the balance sheet total

Best estimate of liabilities	Best estimate value of liabilities at the reference date of the SST.
Market value margin	Expected cost of the risk-bearing capital to be held for the settlement of the insurance liabilities over their lifetime.
One-year capital requirement	Risk arising from the one-year change in risk-bearing capital. The sum of the one-year capital requirement plus the market value margin equals the target capital.
Excess capital	Commonly used to refer to that part of the risk-bearing capital that is held by an insurer in excess of the target capital, i.e. risk-bearing capital minus target capital.
Supplementary capital	Additional capital eligible to cover an insurers target capital such as hybrid capital or subordinated debt.
Deductions	Regulatory adjustments for determining an insurers core capital. Deductions include, among others, own shares, goodwill and other intangibles, planned dividend payments or repayments of debt.

A.6 Target capital decomposition

Market risk Expected financial result	Standalone risk from financial market risk factors. Negative of the expected financial result on the assets in excess of the risk-free rate.
Credit risk	Standalone credit risk (default and migration).
Insurance risk	Standalone insurance risk.
Expected technical result	Negative of the expected result on the new insurance business, excluding the financial result.
Scenarios	Impact of the scenarios (prescribed and company-specific) on the target capital.
Other	Impact on the target capital of risks not included elsewhere (e.g. guarantee).
One-year capital requirement	Risk arising from the one-year change in risk-bearing capital. The sum of the one-year capital requirement and the discounted market value margin is equal to the target capital.

Market value margin	Expected cost of the risk-bearing capital to be held for the settlement of the insurance liabilities over their lifetime.

A.7 Market risk analysis

Spread risk	Risk arising from corporate and governmental spreads over the risk-free rate.
Currency risk	Risk arising from the foreign exchange market.
Equity risk	Risk arising from quoted shares and share funds.
Property risk	Risk arising from real estate investments and real estate funds.
Hedge funds risk	Risk arising from hedge funds.
Private equity risk	Risk arising from private equity investments.
Participations risk	Risk arising from participations in enterprises not recognised for official quotation that is not private equity.
Other	Risk arising from market risk but not covered by above categories.

A.8 Interest rates analysis

CHF interest rate risk	Risk arising from Swiss risk-free interest rates.
EUR interest rate risk	Risk arising from euro risk-free interest rates.
USD interest rate risk	Risk arising from US risk-free interest rates.
GBP interest rate risk	Risk arising from British risk-free interest rates.

A.9 General insurance risk analysis

Reserve risk	Risk that ultimate costs relating to incurred claims (existing claims) vary from those assumed when the liabilities were estimated. Reserve risk arises from claim sizes being greater than expected or differences in timing of claims payments from expected.

Normal claims	Risk from claims with loss amounts below a certain threshold value, typically characterized by high frequencies and low severities. Related terms: frequency claims, small claims, attritional claims
Large claims	Risk from claims with loss amounts above a certain threshold value, typically characterized by low frequencies and high severities.
Nat Cat	Risk from claims triggered by a single event, or a series of events (natural hazards such as earthquake, flood, hail, storm, etc.), of major magnitude, usually over a short period (often 72 hours) that lead to a significant deviation in actual claims from the total expected claims.

B Global glossary

Core capital	Core measure of an insurer's strength from a regulatory perspective. Core capital equals the market-consistent value of assets minus the market-consistent value of liabilities minus deductions plus the market value margin. Related terms: market-consistent valuation, market value margin, deductions
Cost of capital charge	Cost rate used to determine the costs expected for all future one-year capital requirements until run-off.
Economic balance sheet	Balance sheet statement based on market-consistent values for all assets and liabilities relating to in-force business, including off-balance sheet items. Related terms: market-consistent valuation, total balance sheet approach
Expected shortfall	A coherent risk measure. For a given confidence level of $1 - \alpha$, it measures the average losses over the threshold defined (typically set as the value-at-risk for a percentile given), i.e. the conditional mean value, given that the loss exceeds the $1 - \alpha$ percentile. Related term: value-at-risk
Fundamental data sheet	Form to report figures for the annual SST reporting process. It needs to be filled in by all insurers, regardless of whether they use an internal model or the SST standard model.
Market-consistent valuation	The practice of valuing assets and liabilities on market values, where observable, with a given quality (mark-to-market); where not, on market-consistent valuation techniques (mark-to-model).

Premium risk	Risk that ultimate costs relating to *future* claims vary from those assumed when the obligations were estimated. Premium risk arises from claim sizes being greater than expected or differences in claims frequency from those expected. Premium risk is composed of frequency claims, large claims and catastrophe claims. Synonyms: current year risks, underwriting risks, pricing risk Related terms: reserve risk
Risk-bearing capital	Capital which may be taken into account when determining the insurers available capital for SST purposes. Risk-bearing capital is defined as the sum of the core capital with the supplementary capital. Related terms: core capital, supplementary capital
Risk-free interest rate	Risk-free interest rate is the theoretical rate of return of an investment with no credit risk. Related term: risk-free yield curve
Risk-free yield curve	Curve that shows the relation between the risk-free interest rate (or cost of borrowing) and the time to maturity (the term) of the debt for a given borrower in a given currency. The yield curves corresponding to the bonds issued by governments in their own currency are called the government bond yield curves and considered as risk-free in the context of the SST. Related terms: risk-free interest rate
Supervisory category	System of six risk categories to which each supervised institution is assigned. Categorisation is based on the risks posed to creditors, investors and policyholders, as well as to the entire system, and to Switzerland's reputation as a financial centre. Supervised institutions in category 1 are characterised by their size and global relevance, and the associated significant risks posed at various levels. In the other categories, the institutions' risk potential decreases incrementally to category 5, while those in category 6 are not subject to prudential supervision. Reference: FINMA Newsletter 19 (2011) "Overhaul of FINMA's supervisory approach"

Supplementary capital	Additional capital eligible to cover an insurer's target capital. Supplementary capital is split between lower supplementary capital and upper supplementary capital, depending on how well the capital can absorb losses. Supplementary capital includes instruments with risk-absorbing properties such as hybrid capital or subordinated debt. For instance, perpetual subordinated loans qualify as upper supplementary capital, whereas subordinated bonds with a fixed maturity date qualify as lower supplementary capital. Related terms: risk-bearing capital, target capital
Target capital	The amount of capital to be held by an insurer to meet the quantitative requirements under the SST. The target capital equals the sum of the one-year capital requirement plus the market value margin. Related terms: one-year capital requirement, market value margin
Total balance sheet approach	Principle which states that the determination of the amount of capital an insurer has available and needs for solvency purposes should be based upon all assets and liabilities, as measured in the insurers regulatory balance sheet (e.g. market-consistently), and how they interact. Related terms: economic balance sheet, market-consistent valuation
Value-at-risk	Value-at-risk is a percentile of a distribution and is used as a (non-coherent) risk measure. Related term: expected shortfall