

MILLIMAN RESEARCH REPORT

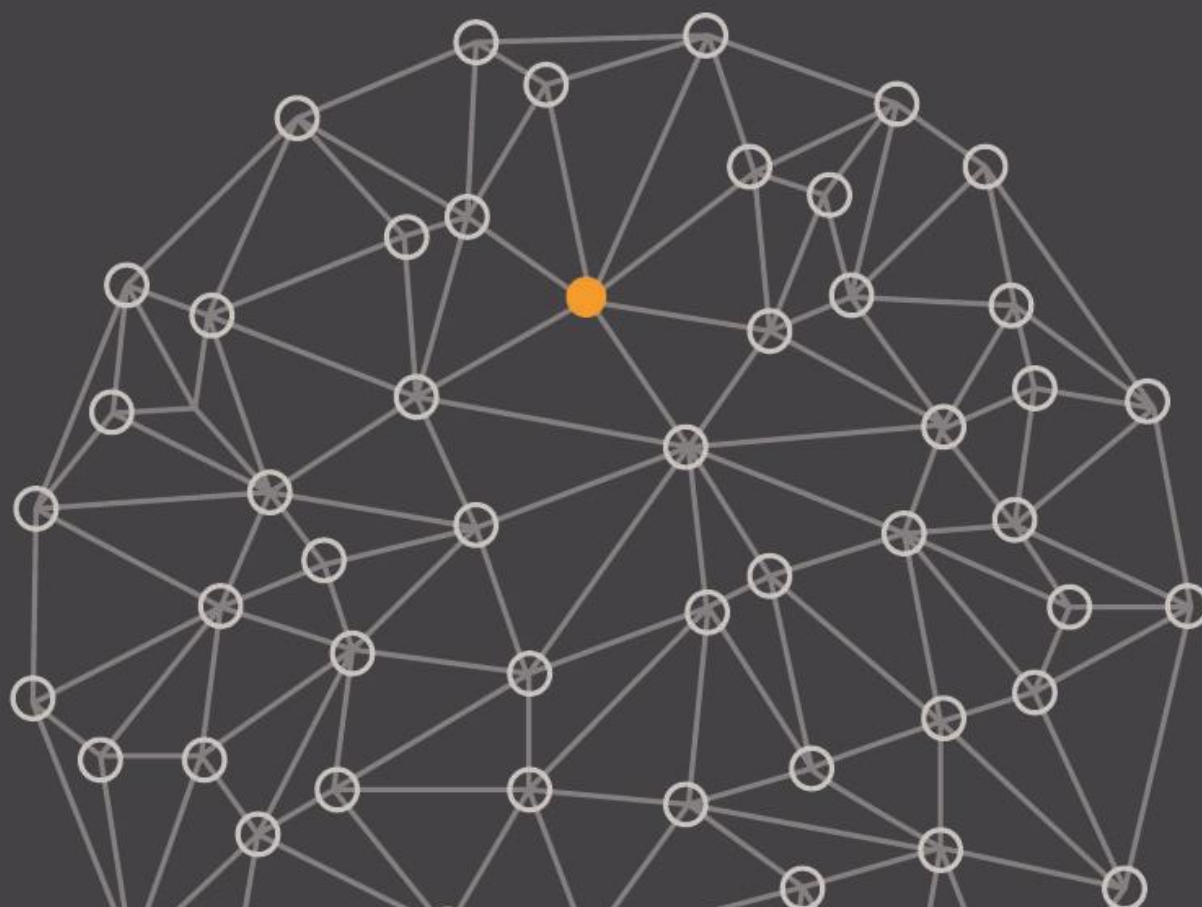
# Analysis of non-life insurers' Solvency and Financial Condition Reports

European and Polish non-life insurers

Year-end 2016

March 2018

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## Introduction

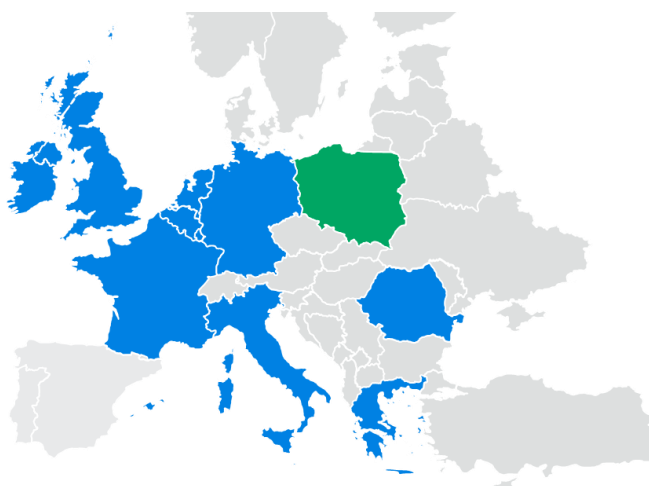
Solvency II went live on 1 January 2016 and introduced a number of new disclosure requirements for European insurers. Each insurer is now required to publish annually a Solvency and Financial Condition Report (SFCR), including some Quantitative Reporting Templates (QRTs). The aim of these SFCRs is to give some details of the insurer's financial strength and risk profile and, more generally, how it manages its respective businesses. The SFCRs released in 2017 were the first such publications. No detailed guidance was provided by the regulators regarding how the SFCRs should be put together. Hence, there is considerable variation among insurers in the quality and the quantity of the information provided.

The analysis underlying this report focuses on the quantitative information contained in the QRTs within the SFCRs, but we have also studied the text within SFCRs in order to gain some additional insights into various companies, in particular those that displayed characteristics that differed materially from the market average. Our focus is on solo entities rather than groups.

### EUROPEAN MARKET COVERAGE

Our European analysis of the non-life market covers 140 companies from the 11 countries listed below, which together comprise more than €141 billion of gross written premium (GWP) and nearly €224 billion of gross technical provisions:

- Belgium (BE)
- France (FR)
- Germany (DE)
- Greece (GR)
- Ireland (IE)
- Italy (IT)
- Luxembourg (LU)
- Netherlands (NL)
- Poland (PL)
- Romania (RO)
- United Kingdom (UK)



### POLISH MARKET COVERAGE

Our analysis is based on 14 solo companies pursuing non-life business in Poland, representing circa 89% of the GWP of the Polish non-life market in 2016.

Appendix A contains a list of all of the Polish companies that were included in our analysis.

Unless otherwise noted, all amounts in this report are provided in PLN. As of March 2018, EUR 1 is approximately PLN 4.20.

## Analysis of European non-life companies

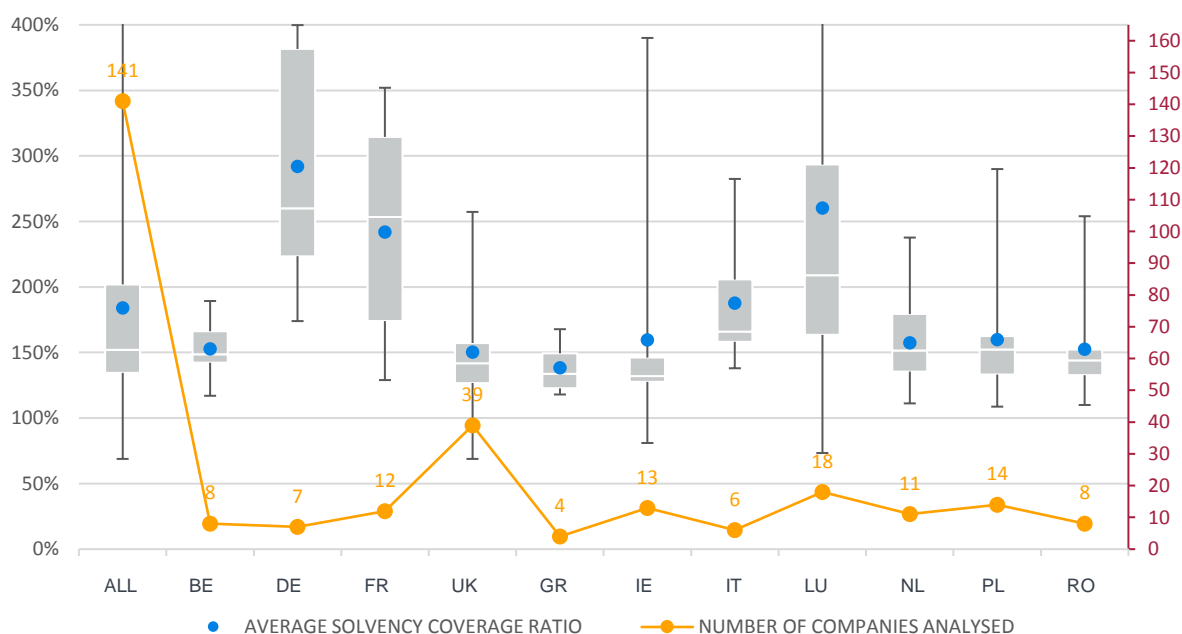
### SOLVENCY COVERAGE RATIOS: HOW DID THE EUROPEAN COMPANIES DO?

On an aggregated basis, European non-life insurers that were within the sample that we analysed are sufficiently capitalised, with an average solvency coverage ratio of 184%. The average solvency coverage ratio is defined as the eligible own funds as a proportion of the Solvency Capital Requirement (SCR).

Figure 1 shows how the solvency coverage ratios are distributed throughout the 11 European countries included in our panel. The back lines for each country represent the range of solvency coverage ratios within the insurers analysed for that country, with the grey box representing the 25th to 75th percentiles of the range, the blue dot the mean of the range and the white line the median of the distribution. This shows that there is a wide range of solvency coverage ratios: on average, insurers in some countries that were included in our review, such as Luxembourg, France and Germany, were very well capitalised, with solvency ratios of over 250%, whereas insurers in other European countries were on average much less well capitalised as at the 2016 year-end.

The notable variation across European countries suggests that, in addition to the disparities among European markets (e.g., legislation, product offerings, etc.), the underlying methodologies used to assess the capital requirements might differ from one country to another.

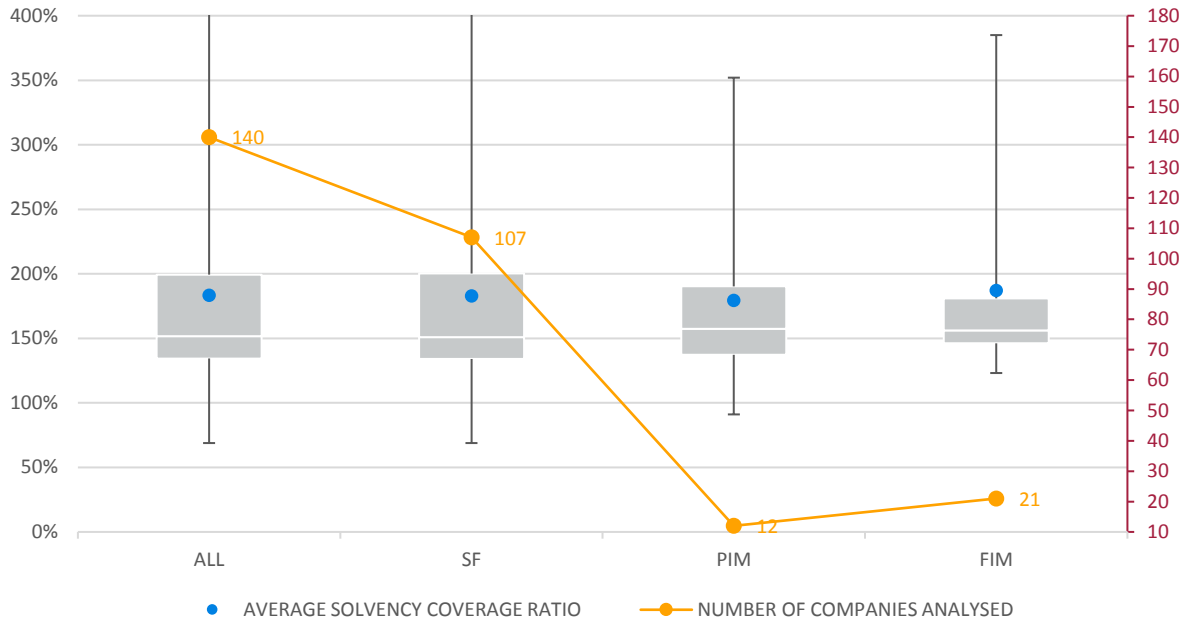
FIGURE 1: DISTRIBUTION OF THE SOLVENCY COVERAGE RATIOS BY COUNTRY



Not surprisingly, for this first live annual reporting cycle, most insurers have used the standard formula (SF) to calculate their SCRs (107 out of 140 insurers included in our sample). Of those that did not use the SF, 21 have used a full internal model (FIM) and 12 a partial internal model (PIM).

Figure 2 shows that the averages of the solvency coverage ratios are quite similar whether using the SF (184%), a PIM (162%) or a FIM (187%).

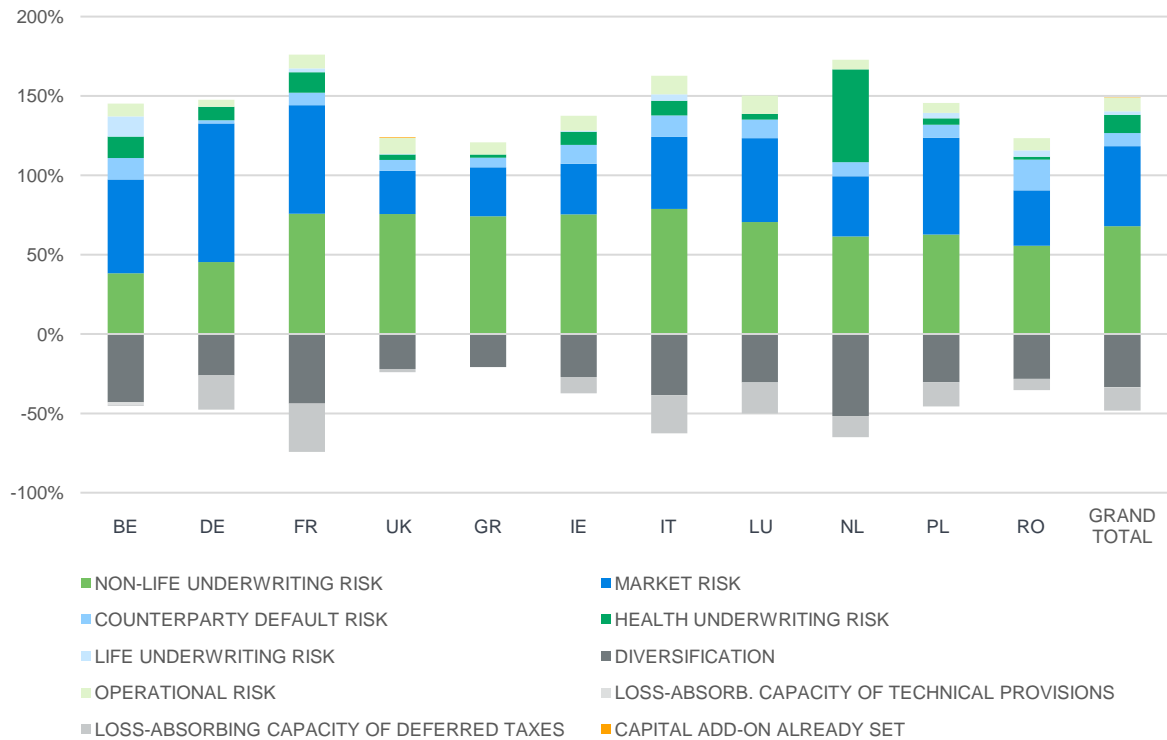
FIGURE 2: SCR RATIOS AND SCR CALCULATION METHODS ACROSS EUROPE



ANALYSIS OF SCR AND MCR: WHERE IS THE RISK?

We present in Figure 3 the breakdown of the SCR, by country, for the insurers that calculated their SCR's using the SF.

FIGURE 3: SCR BREAKDOWN BY COUNTRY



Except for Germany and Belgium, where market risk is the predominant risk, non-life underwriting risk is the biggest risk area for non-life firms across Europe. In the Netherlands, the health underwriting risk is as important as the non-life underwriting risk, whereas in some other countries, such as the UK, Greece and Romania, the health risk component is almost nonexistent. To some extent, this highlights differences among countries in the types of product sold by non-life insurers within Europe, but it also reflects the fact that in some countries (such as the UK and the Netherlands) there are standalone health insurance providers not included within our analysis of non-life insurers.

### ANALYSIS OF OWN FUNDS

As shown in Figure 4, the average structure of the own funds is very similar across European countries, with an aggregate of 92% of items classified as Tier 1. This highlights the general good quality of firms' own funds across the market.

FIGURE 4: STRUCTURE OF OWN FUNDS

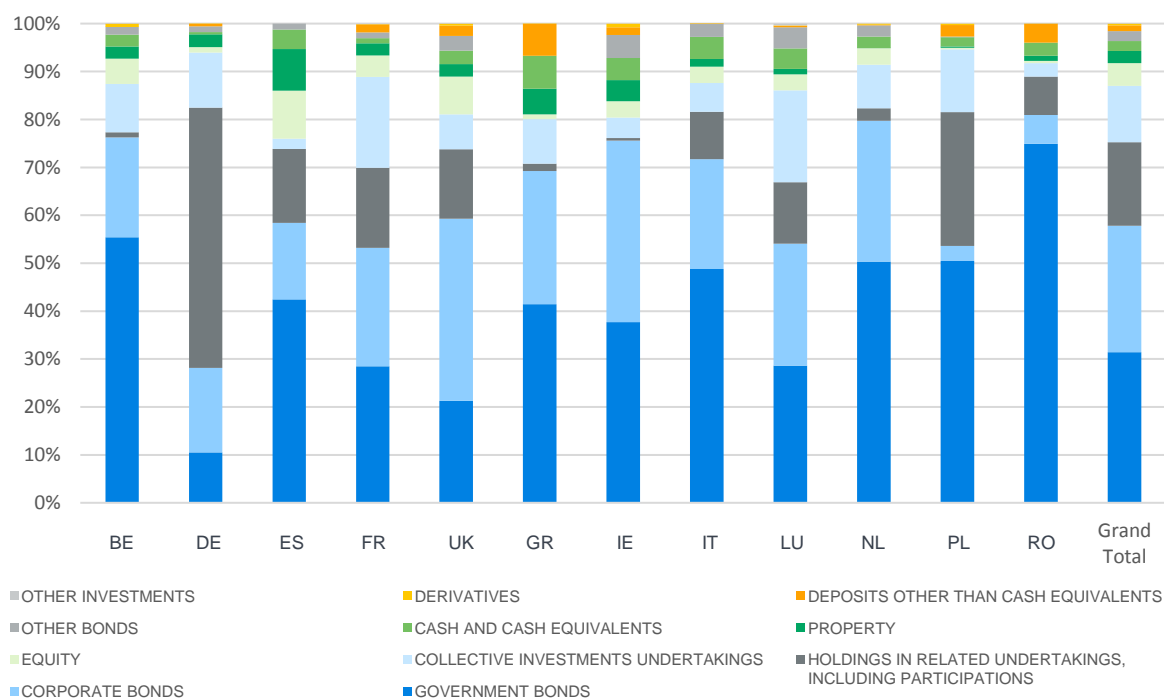
	BEL	DEU	ESP	FRA	GBR	GRC	IRL	ITA	LUX	NLD	POL	ROU	GRAND TOTAL
<b>ELIGIBLE OWN FUNDS TO MEET THE SCR</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
TIER 1 - UNRESTRICTED	89%	98%	100%	91%	88%	98%	93%	97%	96%	93%	98%	91%	92%
TIER 1 - RESTRICTED	0%	0%	0%	4%	1%	0%	0%	0%	0%	2%	0%	1%	2%
TIER 2	7%	2%	0%	5%	8%	0%	4%	0%	3%	5%	1%	6%	5%
TIER 3	4%	0%	0%	0%	2%	2%	3%	3%	1%	0%	0%	2%	1%

### ANALYSIS OF MAIN BALANCE SHEET ITEMS

#### Assets

Figure 5 shows the breakdown of companies' investments per country. One can observe that investments in bonds (both government and corporate) dominate the firms' portfolios. Germany is an exception to this—in that market holdings in related investments tend to dominate balance sheets and, in aggregate, make up nearly 54% of the total investments.

FIGURE 5: INVESTMENT BREAKDOWN, AGGREGATED BY COUNTRY

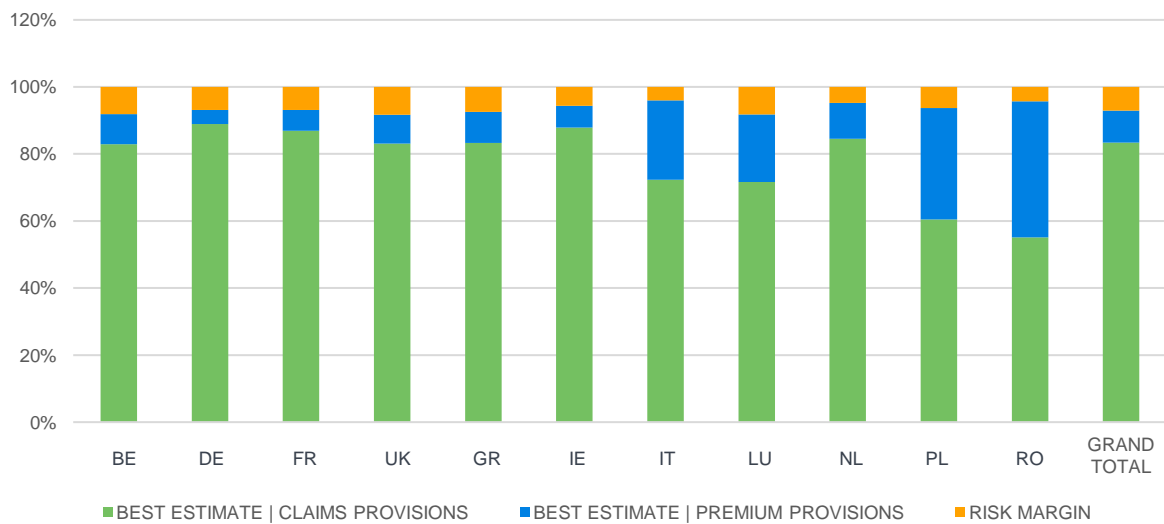


Technical provisions

Figure 6 shows the composition of the technical provisions across European countries as at the 2016 year-end. We observe that, on an aggregated basis, claims provisions make up to more than 80% of the net technical provisions. Claims provisions comprise lower proportions in Italy, Luxembourg, Poland and Romania.

The share of the technical provisions attributable to the risk margin is also steady, with an average proportion of 7% of the net technical provisions.

FIGURE 6: COMPONENTS OF NET TECHNICAL PROVISIONS





## Polish non-life undertakings

### SOLVENCY COVERAGE RATIOS: HOW DID THE MARKET DO? HOW SOLVENT IS THE MARKET?

FIGURE 7: POLISH SOLVENCY COVERAGE RATIOS AS AT THE 2016 YEAR-END

2016 YEAR-END	
RATIO OF ELIGIBLE OWN FUNDS TO SCR	232%
RATIO OF ELIGIBLE OWN FUNDS TO MCR	712%
MCR AS A % OF THE SCR	32%

On an aggregated basis, non-life insurers from our sample are sufficiently capitalised, with the overall solvency coverage ratio (eligible own funds/SCR) at 232%, above the European average of 184% (see section above). The market figures however are dominated by PZU, and the same ratio without the largest insurer would amount to 150%. These are significantly lower levels compared to life companies for which the solvency ratios with and without PZU were 327% and 276% respectively. The reason for that is, that the contrary to life companies the non-life insurers saw their solvency ratios dropped sharply at the Solvency II outset and with relatively strict regulatory recommendation governing the dividend distribution the solvency ratios for the whole insurance market were maintained until the end of 2016.

By design, the Minimum Capital Requirement (MCR) is 'calibrated' to be the 85<sup>th</sup> percentile of the own funds distribution over a one-year period. It means that technically the firms have a 15% chance of suffering a loss equal to the MCR. Should such a situation occur, four of the firms from our panel would see their solvency coverage ratios falling under 100%, as shown in Figure 8.

FIGURE 8: SOLVENCY COVERAGE RATIO AFTER A LOSS EQUAL TO THE MCR

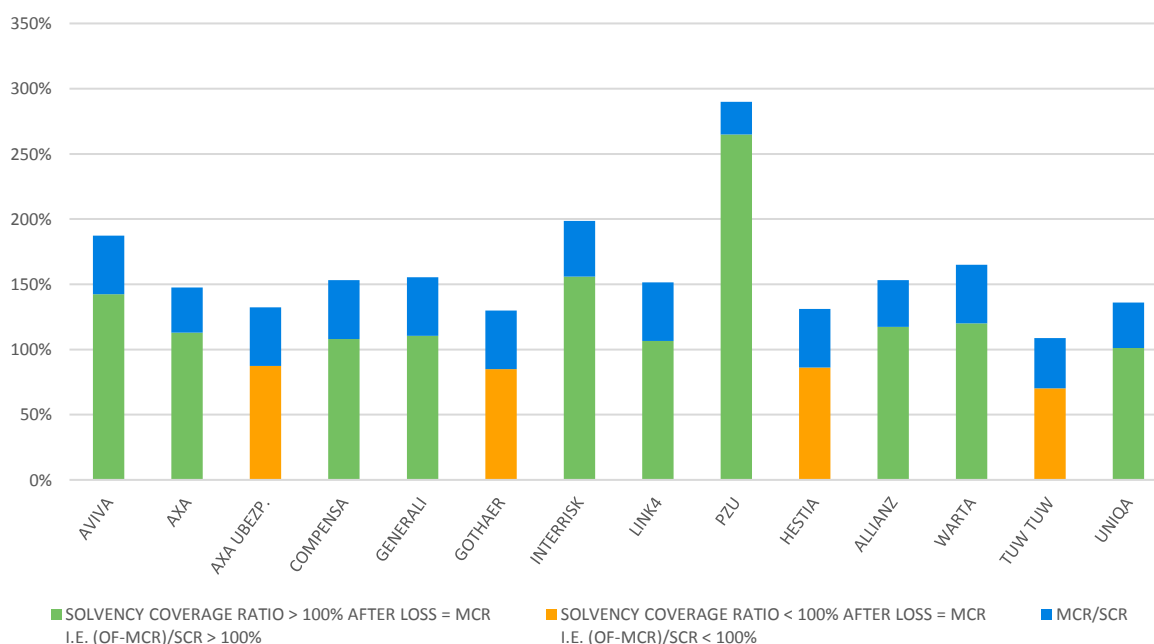
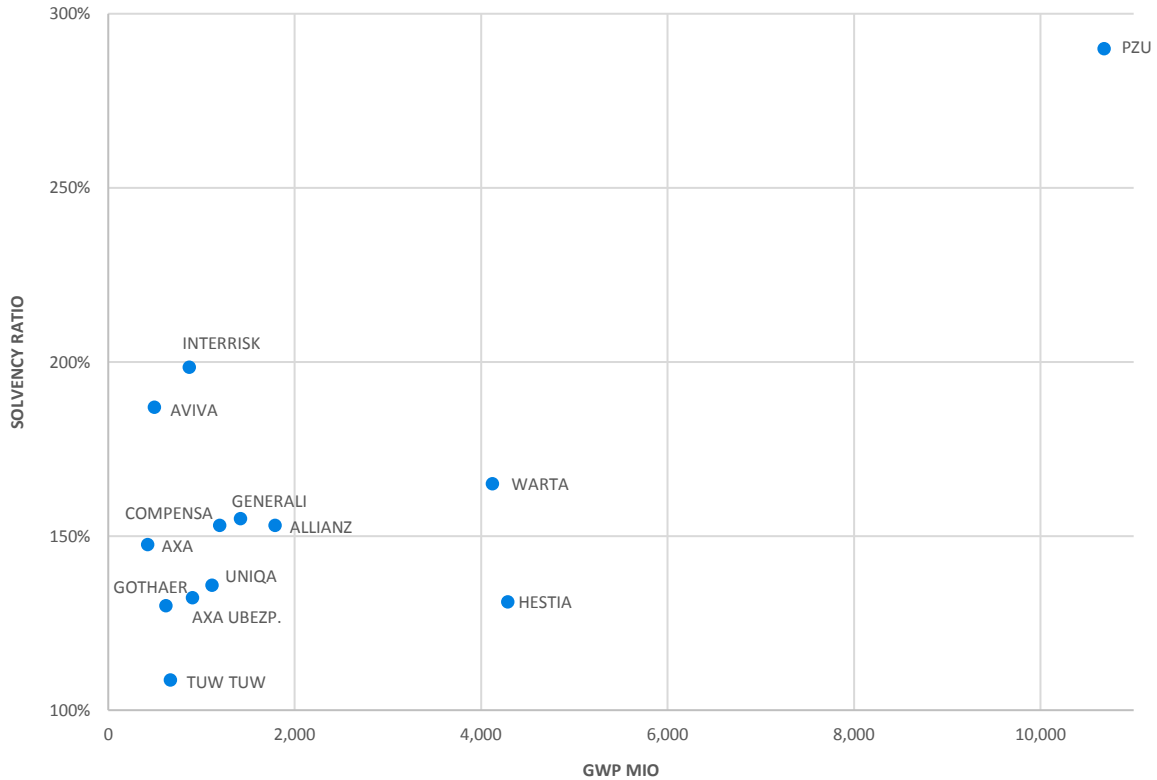


Figure 9 shows the solvency coverage ratio and GWP for each insurer included in our sample (Link 4 is not included due to incomplete premium data). We note that only one company (PZU) writing over PLN 10 billion of premium has exhibited a solvency coverage ratio over 200% and no undertaking has fallen below the 100% threshold. There is a high concentration of the insurers (nine companies) in the 125% to 175% range.

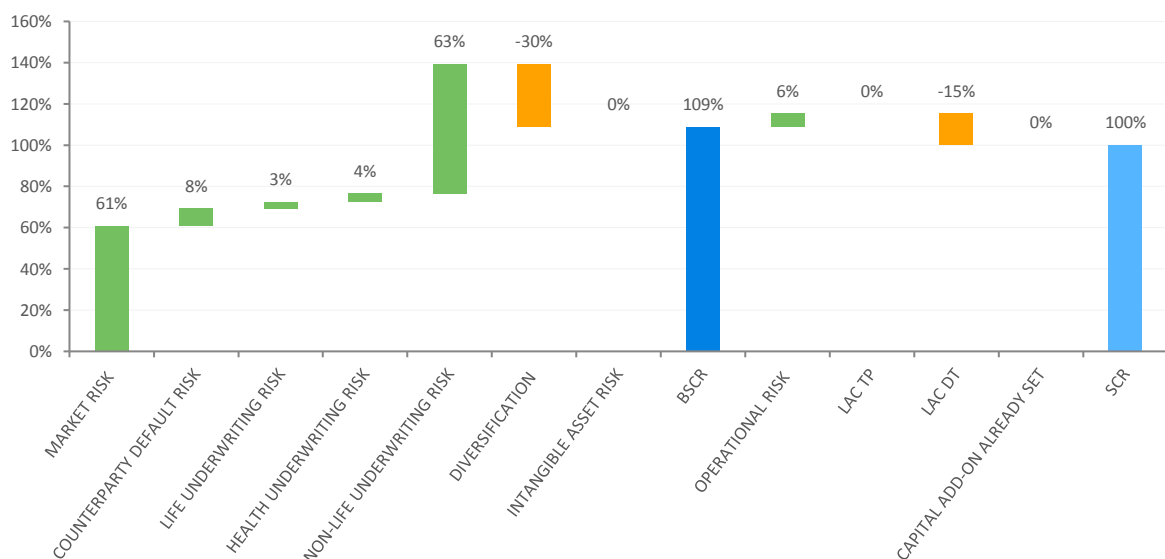
FIGURE 9: SOLVENCY COVERAGE RATIOS



ANALYSIS OF SCR AND MCR: WHERE IS THE RISK?

When conducting their SCR calculations, the firms have to cover all the risks that may affect their balance sheets and, consequently, their solvency positions. Figure 10 shows, on an aggregated basis, the breakdown of the SCR for the companies in our sample.

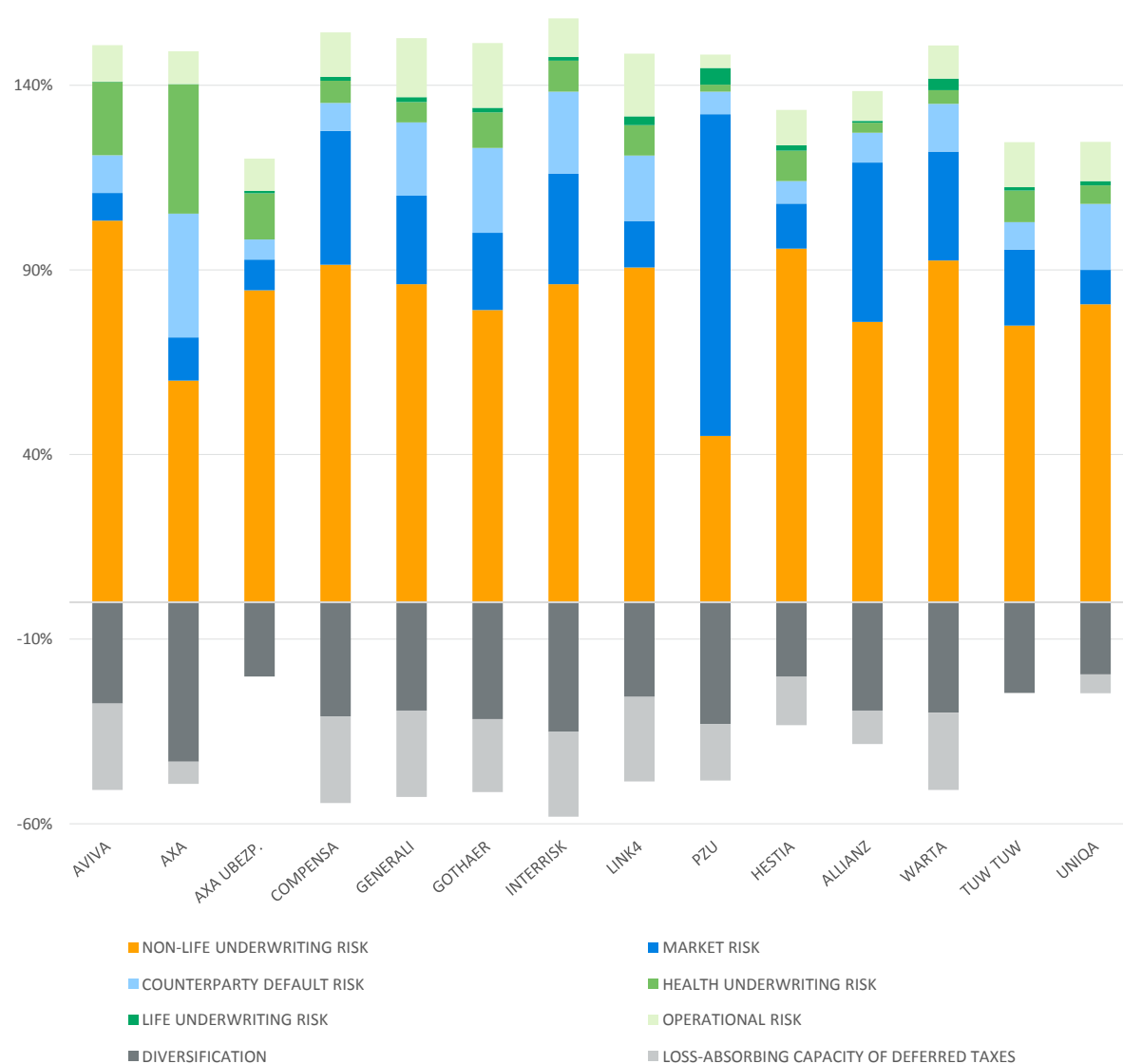
FIGURE 10: SCR BREAKDOWN BY RISK MODULE



As expected, underwriting risk is the greatest risk, amounting to 63% of the overall SCR (before any diversification effect has been applied), but market risk is also strongly present, with 61% of the overall SCR. We note that no capital add-ons have been imposed and that in some cases the adjustment for deferred tax is higher than the net deferred tax liabilities from the balance sheet, suggesting that some firms are using future profits to justify their loss-absorbing capacity of deferred taxes (LACDT) positions.

In Figure 11, we show for each company in our sample the breakdown of their SCRs.

FIGURE 11: SCR BREAKDOWN BY RISK MODULE AND BY COMPANY



The underwriting risk is largely predominant for all the companies but PZU. Market risk is the second most important risk for most insurers. The counterparty default risk remains quite a low risk for non-life insurers, indicating well rated reinsurers and few bad debts.

### ANALYSIS OF OWN FUNDS

Own funds are divided into three tiers based on their quality. Tier 1 capital is the highest ranking with the greatest loss-absorbing capacity, such as equity or bonds. Tier 2 own funds are composed of hybrid debt and Tier 3 of deferred tax assets. As shown in Figure 12, insurers' own funds are considered of good quality, with 98% classified in Tier 1.

**FIGURE 12: TIERING OF OWN FUNDS**

<b>ELIGIBLE OWN FUNDS TO MEET THE SCR</b>	
TIER 1 UNRESTRICTED	98%
TIER 1 RESTRICTED	0%
TIER 2	1%
TIER 3	0%
<b>ELIGIBLE OWN FUNDS TO MEET THE MCR</b>	
TIER 1 UNRESTRICTED	99%
TIER 1 RESTRICTED	0%
TIER 2	1%

In Figure 13 we look at the split of basic own funds by type. It appears that basic own funds are dominated by the reconciliation reserve (80%), with ordinary share capital, subordinated liabilities and deferred tax assets making up the rest.

**FIGURE 13: COMPONENTS OF OWN FUNDS**

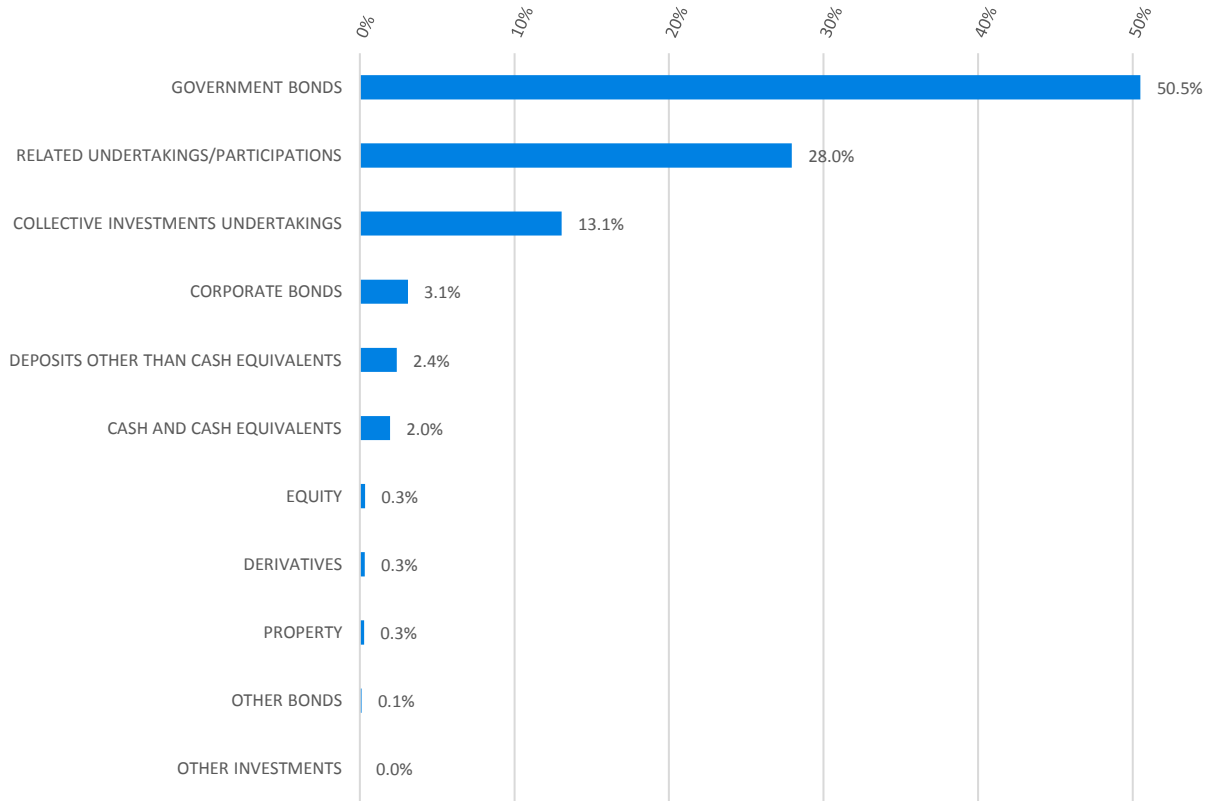
<b>2016 YEAR-END</b>	
<b>BASIC OWN FUNDS</b>	
ORDINARY SHARE CAPITAL	18%
RECONCILIATION RESERVE	80%
SUBORDINATED LIABILITIES	2%
DTA	0%
<b>OTHER BASIC OWN FUNDS</b>	0%

**ANALYSIS OF MAIN BALANCE SHEET ITEMS**

**Assets**

Investments in government bonds dominate the companies' portfolios, accounting for a little over 50% of total investments. Beyond their attractive structure—regular payments allowing insurers to match the future claims payments—they are also less expensive in terms of capital than more volatile assets such as equities.

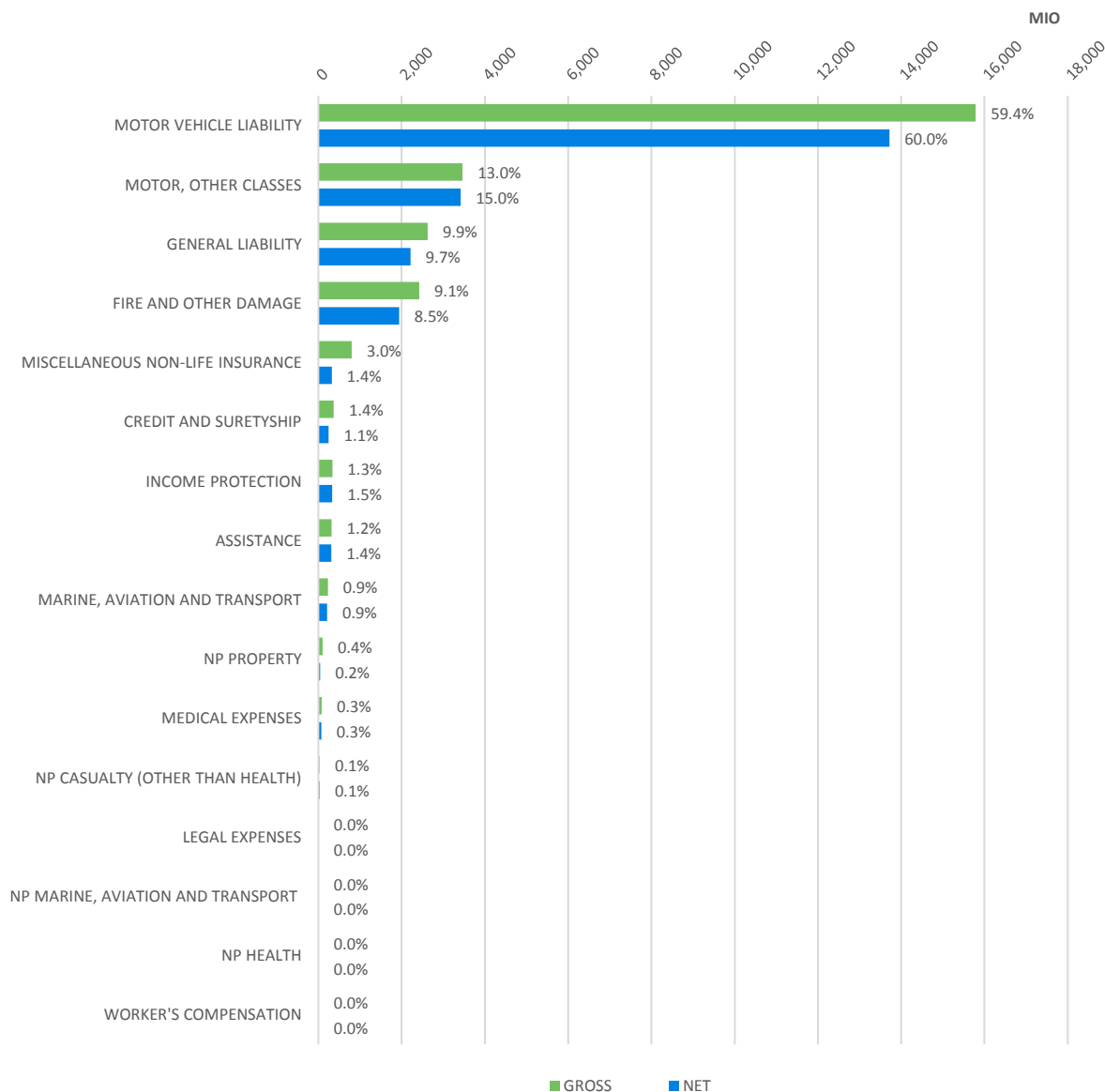
**FIGURE 14: SPLIT OF INVESTMENTS BY ASSET CLASS**



Technical provisions

Figure 15 shows the repartition of technical provisions across non-life Solvency II lines of business as at 2016 year-end.

FIGURE 15: TECHNICAL PROVISIONS SPLIT BY SOLVENCY II SEGMENTS

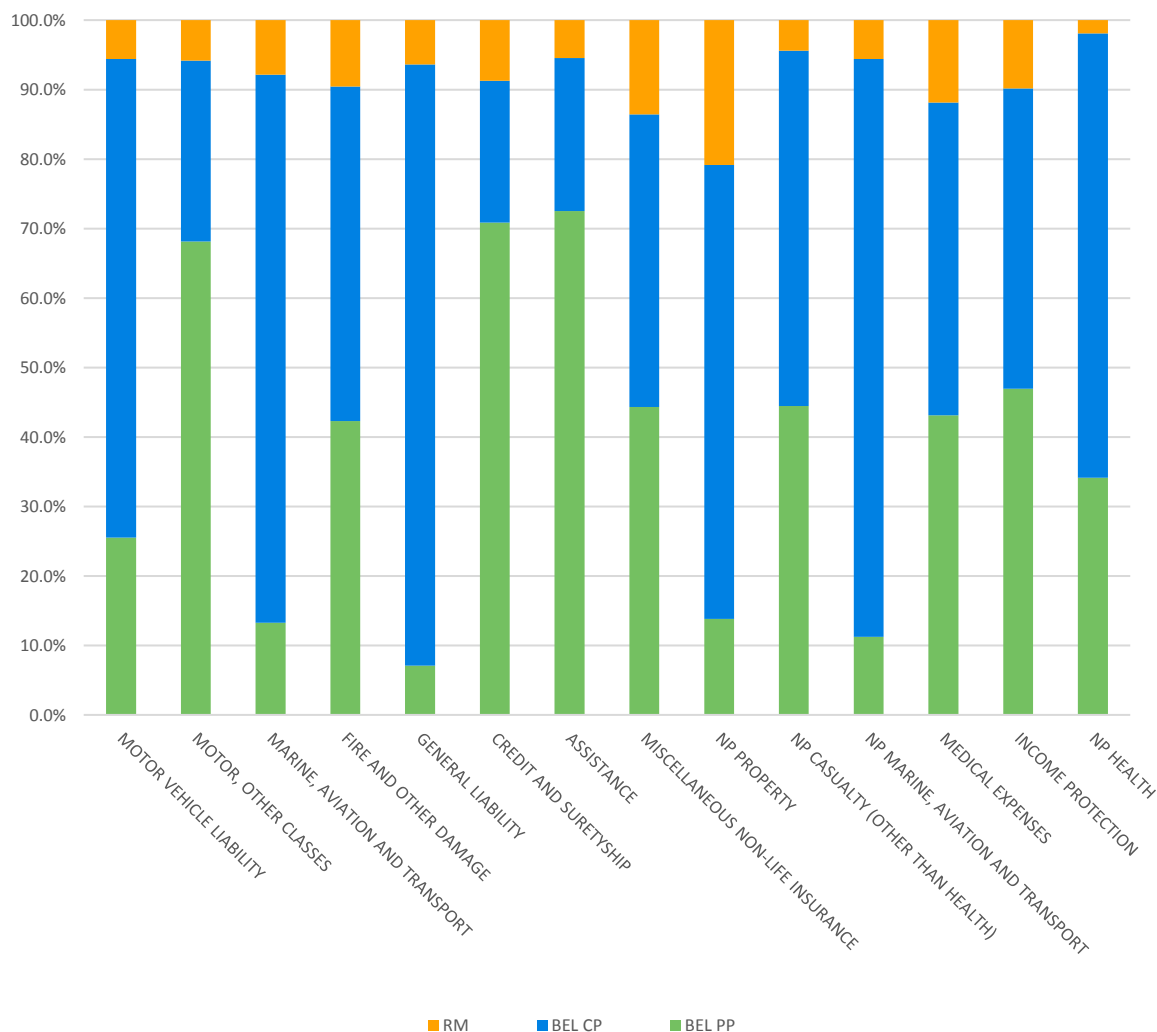


On a gross basis, the 14 insurers included in our panel have reserved PLN 26.5 billion of technical provisions gross of reinsurance and nearly PLN 22.9 billion on a net basis. Nearly 70% of the reserves are in respect of the long-tail businesses—general and motor third-party liability (MTPL).

Annuities stemming from non-life insurance contracts (not included above) reached nearly PLN 7 billion as at 2016 year-end and are a key component of non-life firms' long-tail liabilities.

In Figure 16, we present the split of the net technical provisions into premium, claim and risk margin components.

FIGURE 16: COMPONENTS OF NET TECHNICAL PROVISIONS



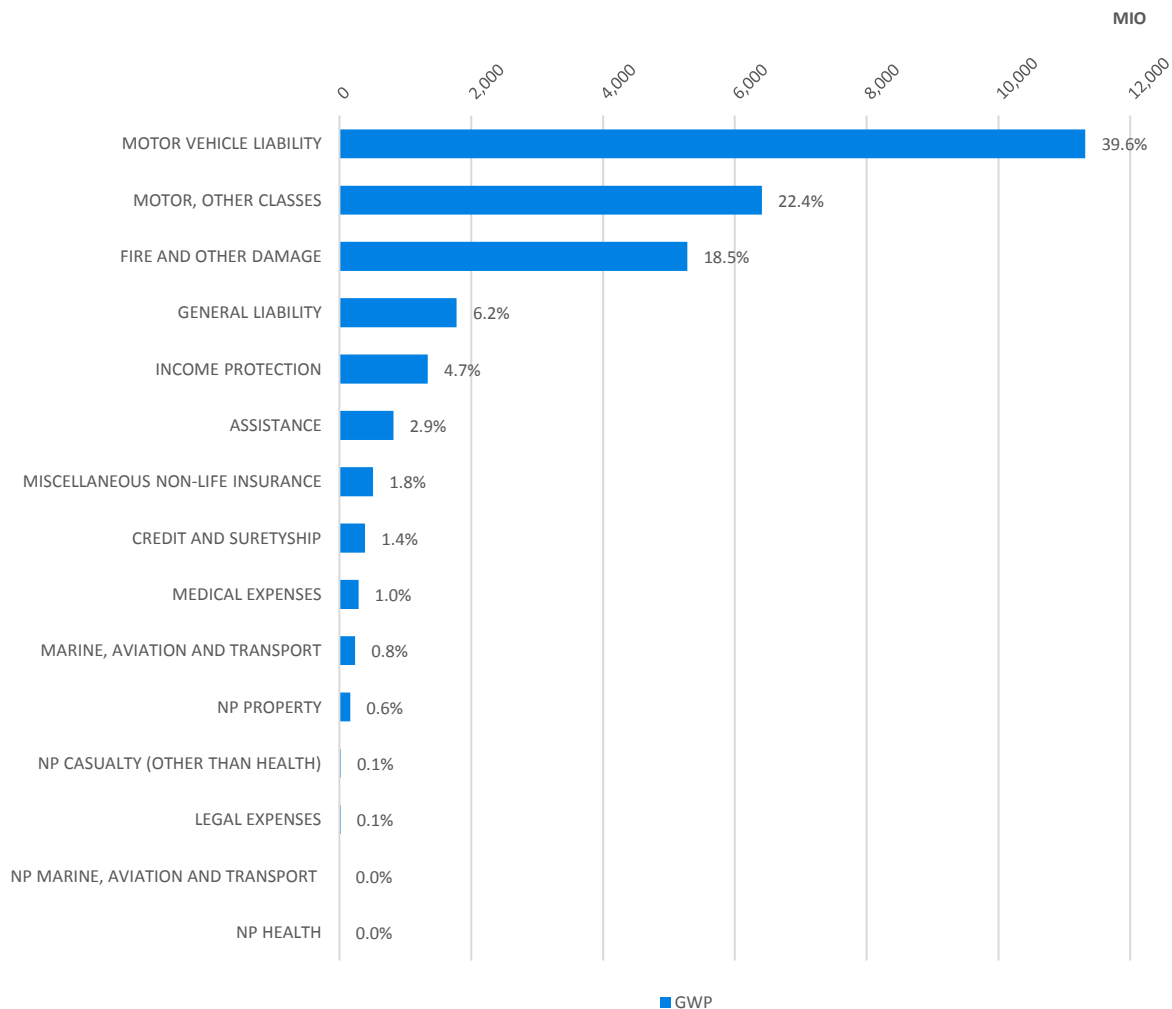
The legal expenses line (not shown) exhibits negative premium provisions best estimates, whereas the lines of business motor other classes, credit and suretyship, assistance and income protection due to short tail nature are displaying a best estimate of premium provisions higher than the best estimate of claims provisions.

The risk margin (RM) is coming on top of the best estimate of claims and premiums provisions to form the technical provisions to be held by the company as part of its economic balance sheet. The concept as well as the methodology used to assess this risk margin has been a much debated topic over the past few years. On an aggregated basis the RM represents 6.7% of the net best estimate liability (BEL).

**ANALYSIS OF UNDERWRITING**

In 2016, our sample wrote more than PLN 28 billion of gross premiums, of which nearly 40% is related to motor liability policies, which together with general liability were also key contributors to technical provisions.

**FIGURE 17: GROSS WRITTEN PREMIUMS BY LINE OF BUSINESS**



In Figure 18, we show the gross and net of reinsurance loss ratios (without expenses but including run-off) by Solvency II lines of business (sorted by gross written premium volumes). Apart from the relatively small marine aviation line, the two motor insurance lines of business exhibit the highest loss ratios. The MTPL tariffs have increased sharply in 2016 (50%-60% compared to 2015 based on Milliman estimates) after a long period of rising claim cost and stagnant prices. The MTPL loss ratios however remain high with negative operating margin (as demonstrated in Figure 19) which could be attributed partially to negative run-offs and partially to the fact that in 2016 the newly increased tariffs have yet been fully earned.



FIGURE 18: GROSS AND NET LOSS RATIOS BY LINE OF BUSINESS

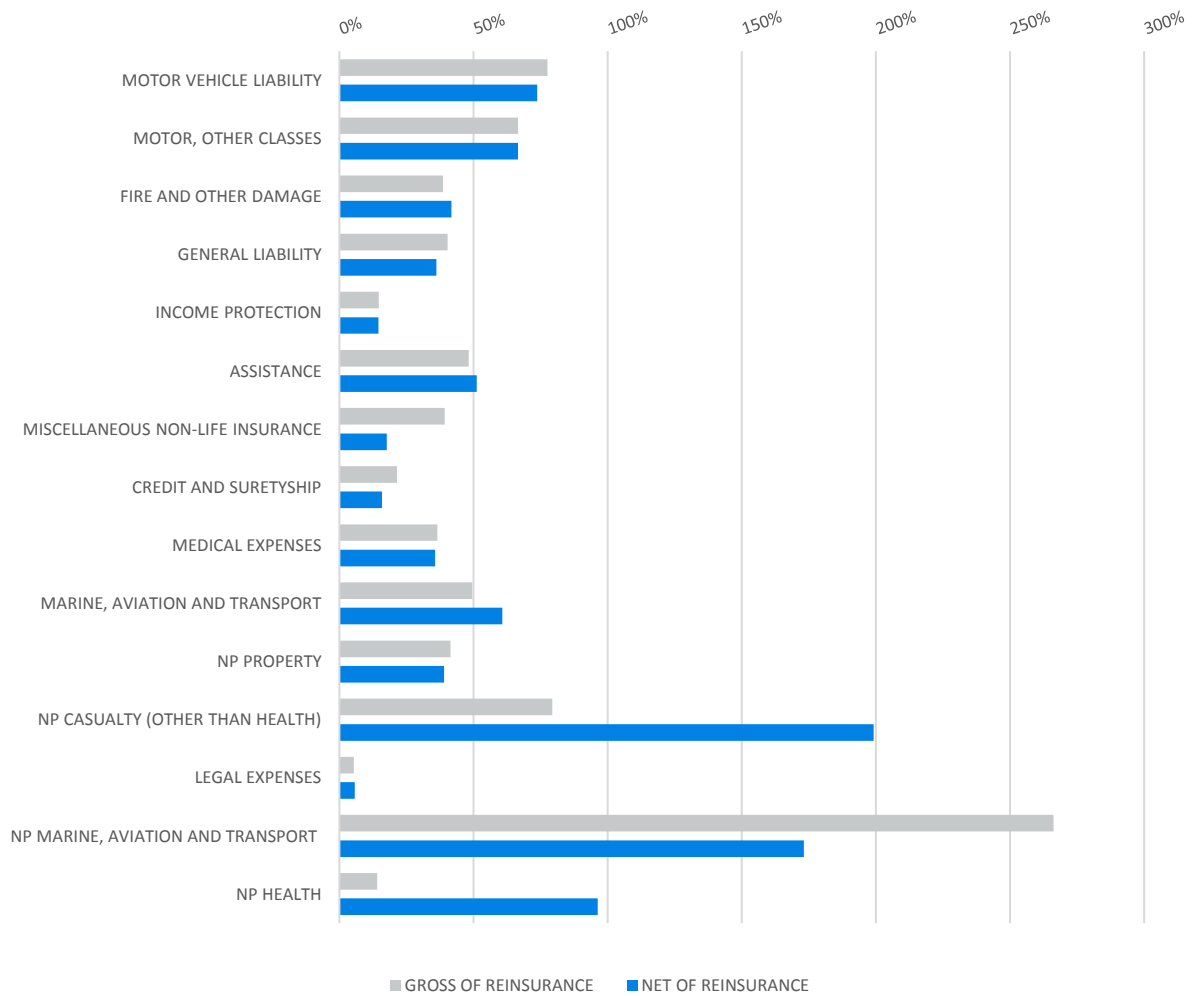
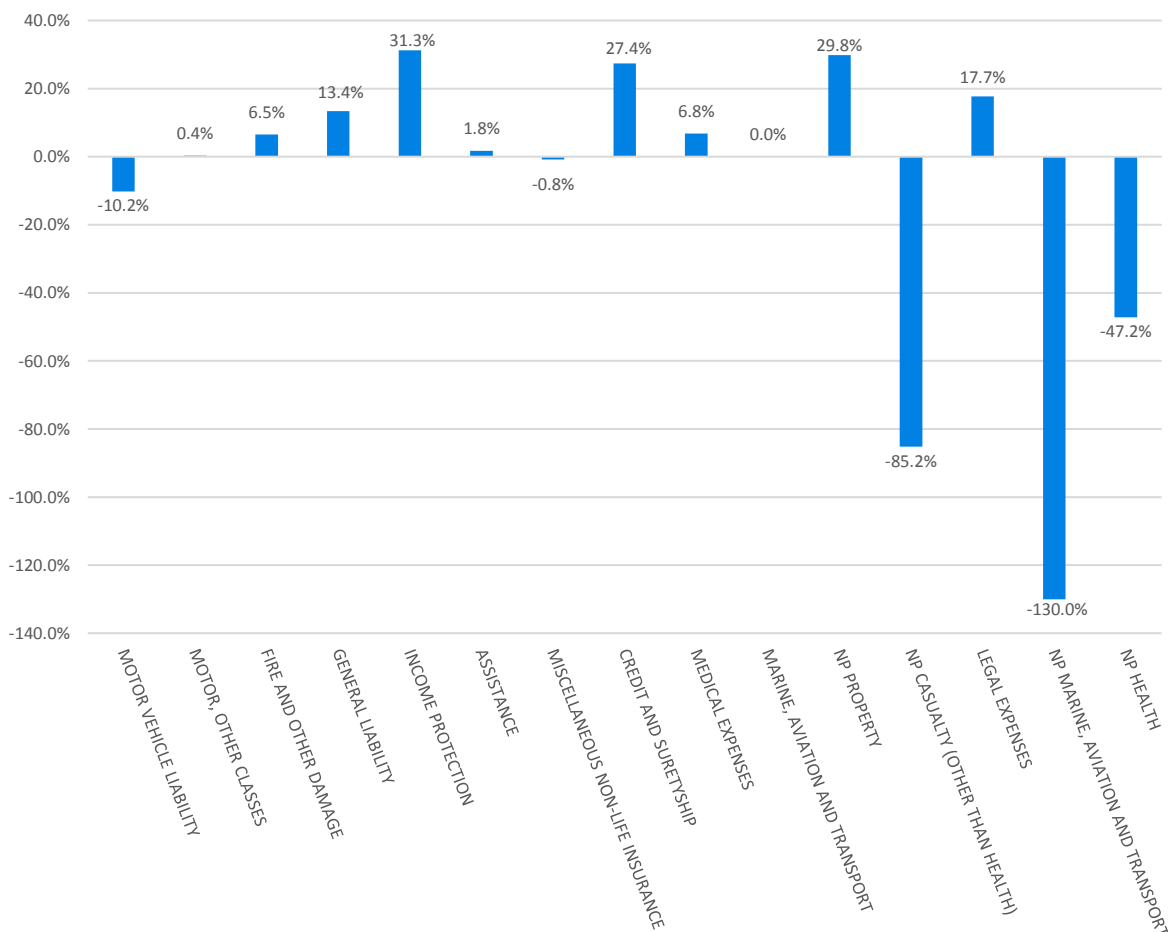


Figure 18 also indicates that, for most Solvency II lines of business, the purchase of reinsurance makes economic sense (in addition to protecting against extreme events), with the net of reinsurance loss ratios being lower than or close to the gross loss ratios in addition to reduced capital requirements.

In Figure 19 we show the operating margin for each of the Solvency II lines of business on an aggregated basis for the insurers included in our sample. We define (and derive) the operating margin as  $(\text{net earned premium} - \text{net incurred claims} - \text{expenses incurred}) / (\text{gross earned premium})$ . We note that the operating margin as defined includes movements in prior year reserves (part of the net incurred) but does not include investment income. In particular, negative run-offs on prior accident years' reserves could be behind the some of the negative margins.

**FIGURE 19: OPERATING MARGIN FOR SOLVENCY II LINES OF BUSINESS, AGGREGATED**



## Appendix A: List of Polish companies analysed

FULL NAMES	SHORT NAMES USED IN THE REPORT
AVIVA TU OGÓLNYCH S.A.	AVIVA
AXA TUIR S.A.	AXA
AXA UBEZPIECZENIA TUIR S.A.	AXA UBEZP.
COMPENSA TU S.A. VIENNA INSURANCE GROUP	COMPENSA
GENERALI T.U. S.A.	GENERALI
GOTHAER TU S.A.	GOTHAER
INTERRISK TU S.A. VIENNA INSURANCE GROUP	INTERRISK
LINK4 TU S.A.	LINK4
PZU SA	PZU
STU ERGO HESTIA SA	HESTIA
TUIR ALLIANZ POLSKA S.A.	ALLIANZ
TUIR WARTA S.A.	WARTA
TUW	TUW
UNIQA TU S.A.	UNIQA



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