

MILLIMAN RESEARCH REPORT

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

European non-life insurers

Year-end 2018

November 2019

Derek Newton, FIA

Marc Smillie

Flavien They, IA, FIA

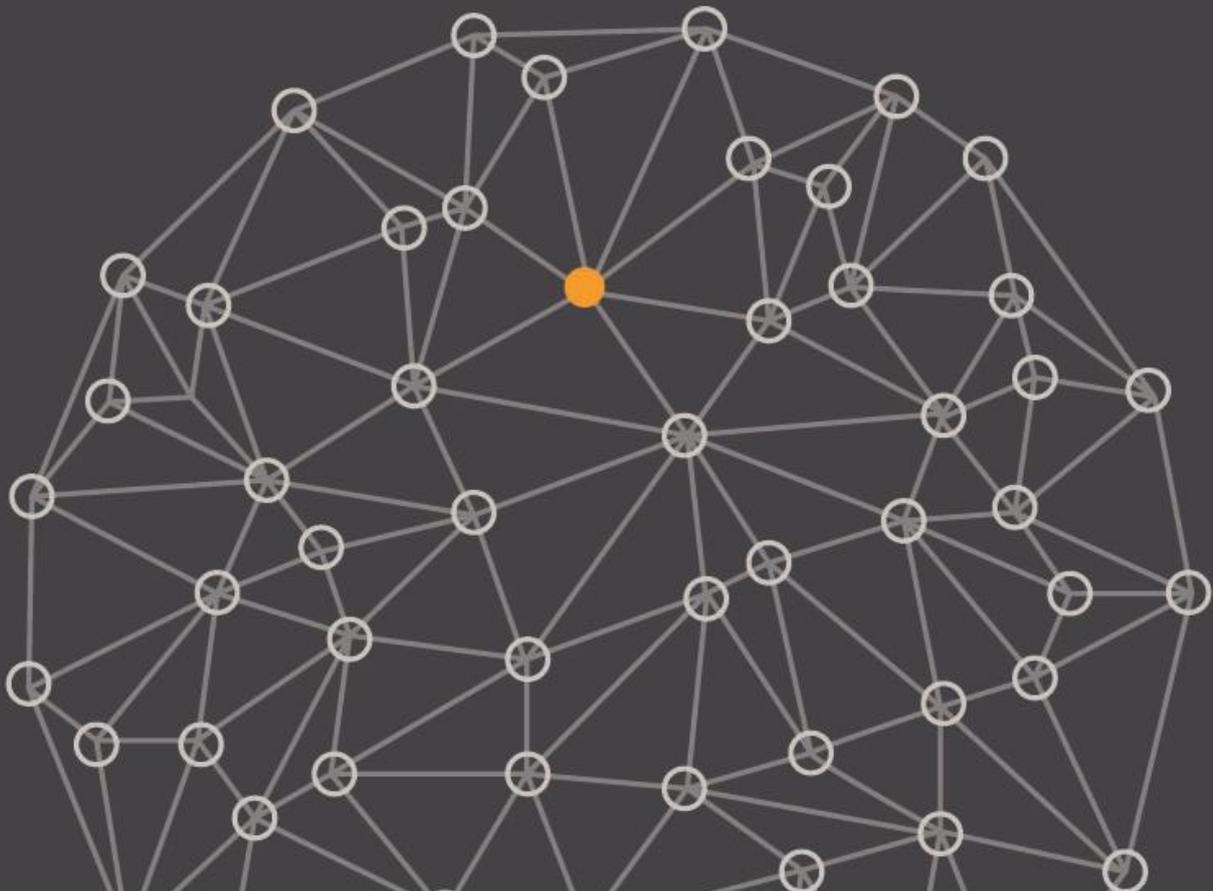


Table of Contents

INTRODUCTION.....	1
EUROPEAN MARKET COVERAGE	1
UNDERLYING DATA	1
ANALYSIS OF EUROPEAN NON-LIFE COMPANIES	3
SOLVENCY COVERAGE RATIOS: HOW DID THE EUROPEAN COMPANIES DO?	3
ANALYSIS OF SCR AND MCR: WHERE IS THE RISK?	5
ANALYSIS OF OWN FUNDS.....	6
ANALYSIS OF MAIN BALANCE SHEET ITEMS	6
ANALYSIS OF UNDERWRITING	10

Introduction

Three years have passed: Where are we?

In 2019, (re)insurance undertakings across the EU published their third set of Solvency II public reports, the Solvency and Financial Condition Reports (SFCRs). These SFCRs were as at the 2018 year-end.

The analyses underlying this research report focus on the quantitative information contained in the Quantitative Reporting Templates (QRTs) within the SFCRs and draw conclusions about the balance sheets and risk exposures of European non-life insurers. Our focus is on solo entities rather than groups and includes comparisons of the 2018 year-end SFCRs with the 2017 year-end SFCRs.

EUROPEAN MARKET COVERAGE

Our European analysis of the non-life¹ market covers 918 companies from the 15 countries listed below, which, together, comprise more than £361 billion of gross written premium (GWP) and over £512 billion of gross non-life technical provisions:

- Austria (AT)
- Belgium (BE)
- Germany (DE)
- Denmark (DK)
- Spain (ES)
- France (FR)
- Gibraltar (GI)
- Ireland (IE)
- Italy (IT)
- Luxembourg (LU)
- Netherlands (NL)
- Poland (PL)
- Romania (RO)
- Sweden (SE)
- United Kingdom (UK)



We note that the UK numbers quoted in the rest of this research report exclude those relating to the Society of Lloyd's, which represents £37 billion of GWP and £55 billion of gross technical provisions (compared with a total £66 billion of GWP and £99 billion of gross technical provisions for the 135 UK solo companies that we have included within our analysis) and exhibits a solvency coverage ratio of 148% (made up of £26 billion of eligible own funds and over £18 billion of Solvency Capital Requirement [SCR]).

UNDERLYING DATA

In carrying out our analysis and producing this research report, we relied on the data and information provided in the SFCRs and QRTs of our sample companies, as obtained from the Solvency II Wire Tool. The data is available via subscription from: <https://solvencyiiwiredata.com/about/>. We have not audited or verified this data or other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

¹ Undertakings identified as primarily health insurers have been removed from the analysis. For example, undertakings for which medical expenses accounted for more than 85% of their gross written premium were considered as health insurers and excluded from the European markets analysis.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. It should be noted that, in some cases, errors were spotted in the underlying data. We have made minor adjustments to the data and calculated certain parameters to make the information consistent across all the insurers. However, we have not made any material changes to the underlying data. We have not made any changes to the data to reflect additional information or changes following the reporting date.

Our analysis focuses only on non-life insurers and we have excluded, when identifiable, any major insurers writing predominantly health and life business from the 'Composite' companies.

This research report is intended solely for educational purposes and presents information of a general nature.

The underlying data and analysis have been reviewed on this basis. This research report is not intended to guide or determine any specific individual situation, and readers should consult qualified professionals before taking specific actions.

Note that all of the figures published in this report are converted into GBP, by the Solvency II Wire Tool, using exchange rates as at the report date of each SFCR.

Analysis of European non-life companies

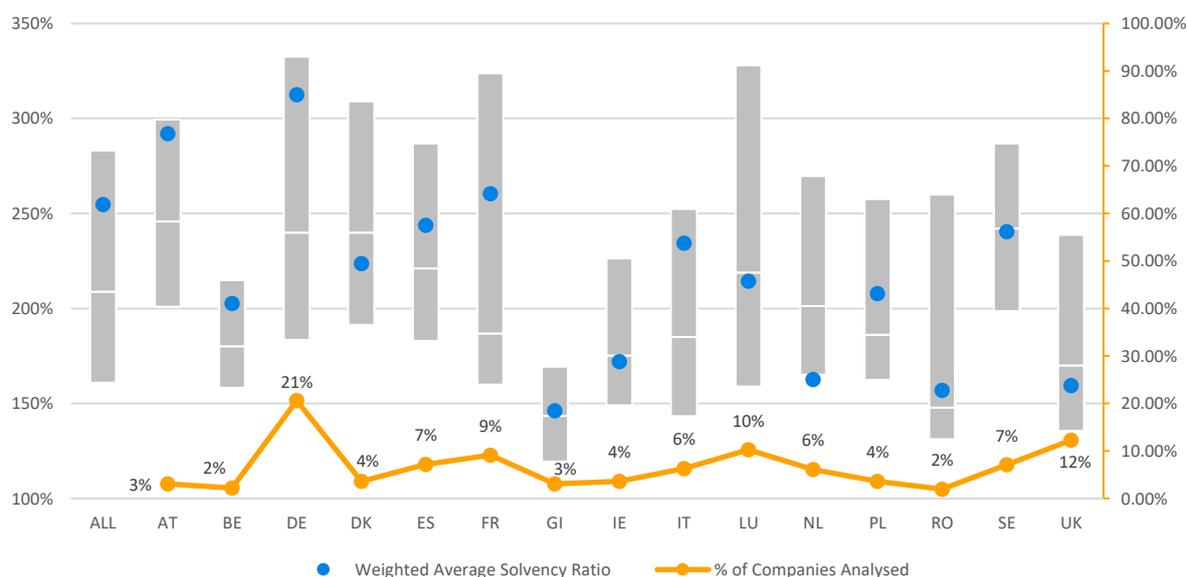
SOLVENCY COVERAGE RATIOS: HOW DID THE EUROPEAN COMPANIES DO?

On an aggregated basis, as at the 2018 year-end, European non-life insurers that were within the sample that we analysed are sufficiently capitalised, with an average (weighted by eligible own funds) solvency coverage ratio of 255%. This remains in line with the equivalent figure of 257%, reported in the previous set of SFCRs as at the 2017 year-end.

Figure 1 shows how the average solvency coverage ratios are distributed throughout the 15 European countries included in our sample. It sets out the median, 25th and 75th percentiles and weighted average of the distribution of the solvency coverage ratios for the market as a whole and then separately for each country analysed. 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 Germany, were very well capitalised, with average solvency ratios of over 300%.

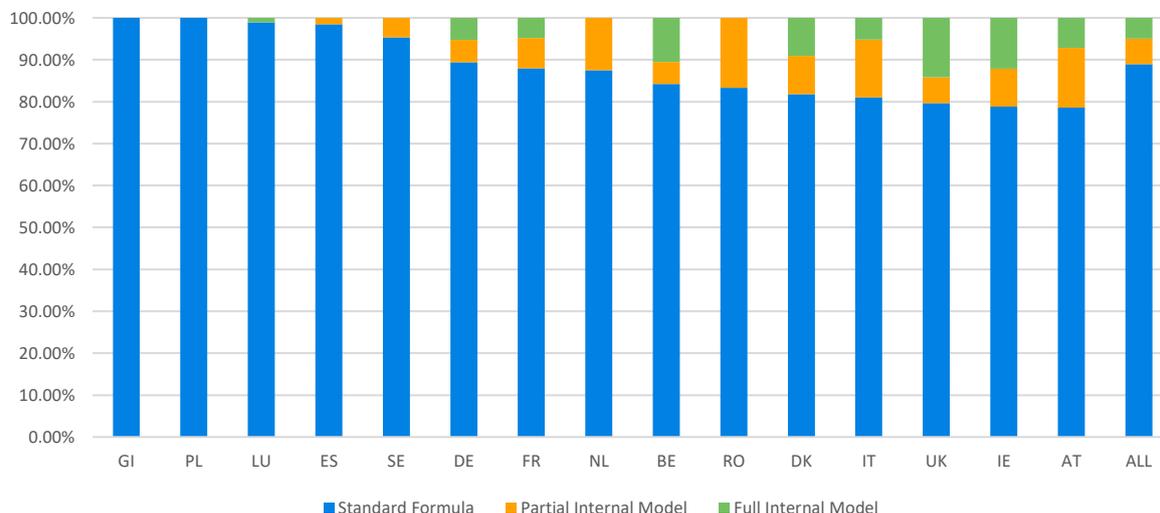
The notable variations across the European countries suggest that, in addition to the disparities among European markets (e.g. legislation, product offering etc.), the underlying methodologies—or interpretations of the regulations—used to assess the capital requirements might differ from one country to another.

FIGURE 1: DISTRIBUTION OF THE SOLVENCY COVERAGE RATIOS BY COUNTRY



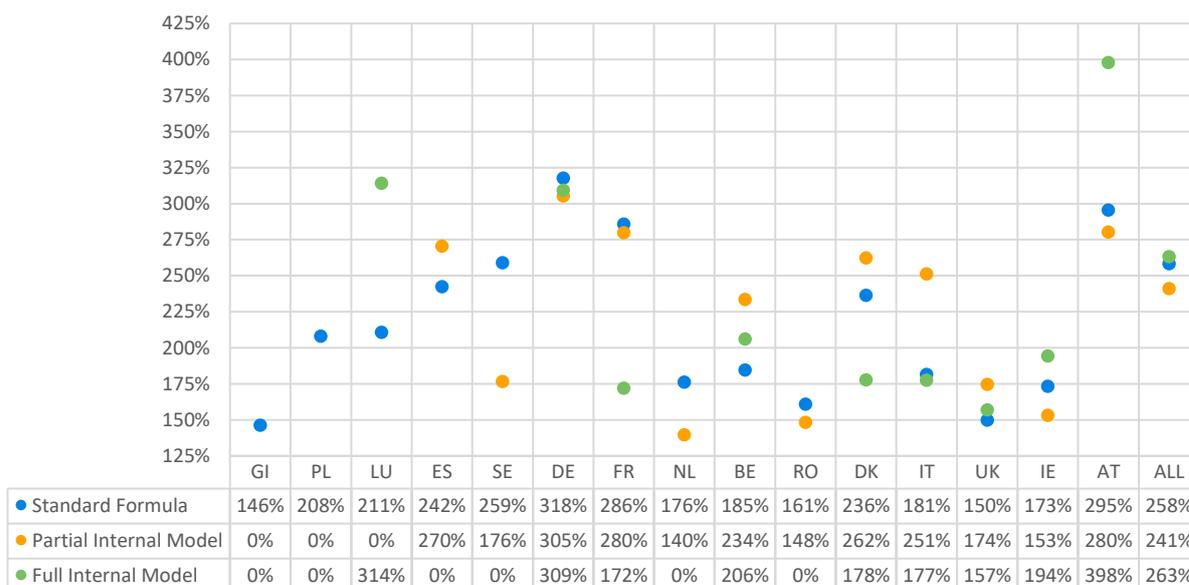
Not surprisingly, and as highlighted in Figure 2, 89% of the undertakings have used the Standard Formula (SF) to calculate their SCRs. At the two ends of the spectrum, all undertakings regulated in Poland and Gibraltar use only the Standard Formula whereas 20% of undertakings regulated in Austria, Ireland and the UK use either a Partial Internal Model (PIM) or Full Internal Model (FIM).

FIGURE 2: CAPITAL MODEL BY COUNTRY RANKED BY % OF COMPANIES USING SF



Our analysis has indicated that the weighted average of the solvency coverage ratios is lower for companies using a PIM (at 241%), compared to 258% for companies using SF and 263% for companies using a FIM. Using an internal model allows companies to capture their own specific risks not covered in the Standard Formula (e.g. pension risk, inflation risk, equity implied volatility etc.) and to reflect better their risk and business profiles when assessing the SCR (e.g. mitigation from non-proportional outwards reinsurance, dependencies between risks, recognition of operating profits/losses within underwriting risk etc.). Figure 3 shows the weighted average solvency coverage ratio for each country, split by the method used to calculate the SCR. For the countries in which at least one company used an internal model, Germany and Netherlands are the only countries where the weighted average solvency coverage ratio for companies using the SF produced the highest percentage.

FIGURE 3: WEIGHTED AVERAGE SCR RATIOS² BY SCR CALCULATION METHODS ACROSS EUROPE



² 0% means capital model not used.

Figure 4 shows that, for all countries, the weighted average of the solvency coverage ratios as at the 2018 year-end remain relatively similar to the equivalent figure as at the 2017 year-end (for those countries above the line, the weighted average of the solvency coverage ratios as at the 2018 year-end is greater than that as at the 2017 year-end, and vice versa for those below the line).

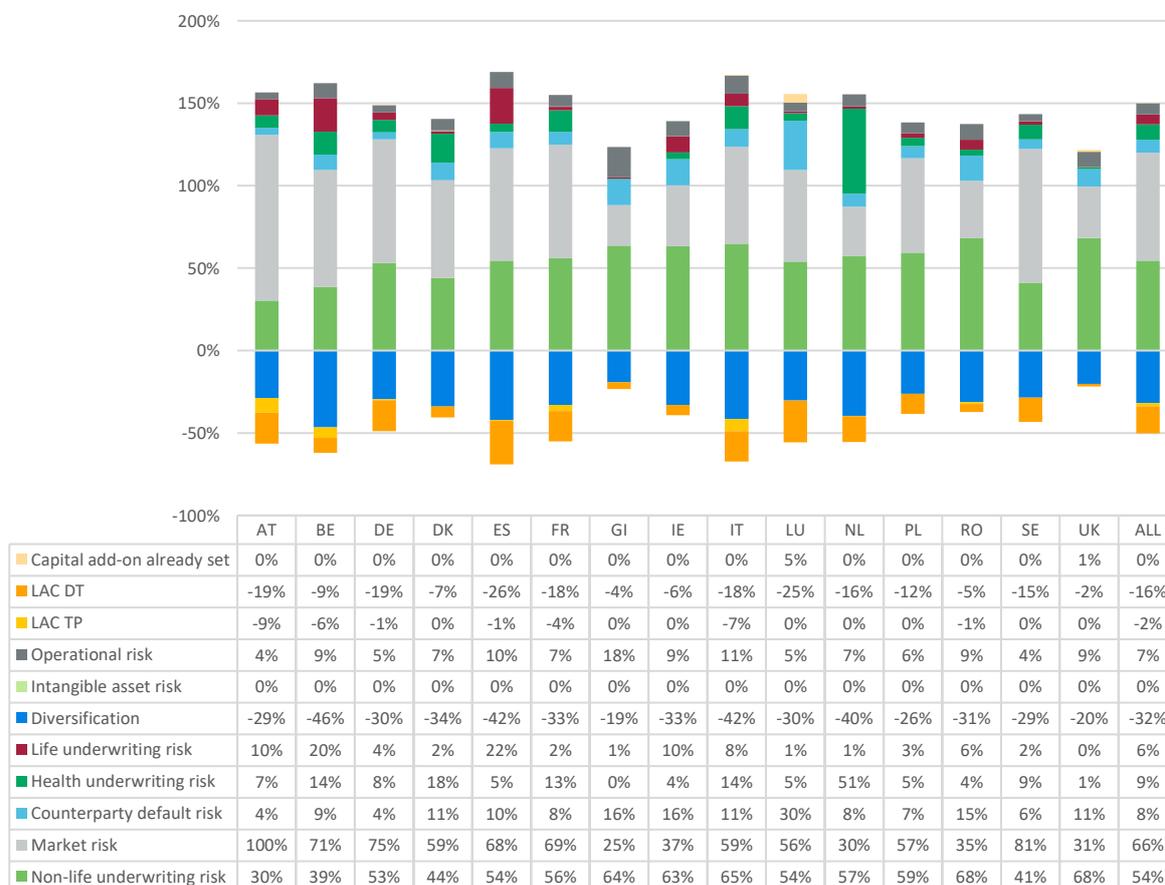
FIGURE 4: CHANGE IN SOLVENCY COVERAGE RATIO



ANALYSIS OF SCR AND MCR: WHERE IS THE RISK?

In Figure 5, we present the breakdown of the SCR, by country, for the insurers that calculated their SCRs using the SF.

FIGURE 5: SCR BREAKDOWN BY COUNTRY



Market risk is the biggest risk area for non-life firms across Europe (with eight of the 15 countries analysed presenting this as their predominant risk). The largest risk of all of the other countries was non-life underwriting risk. Overall, the market SCR represents 66% of the SCR but the non-life underwriting risk is also a substantial proportion of total risk for all countries (54%).

In Austria, Germany and France, firms have a substantial portion of their investments allocated to collective investments, and holdings in related undertakings including participations, which might explain the higher market risk charge.

In the Netherlands, the health underwriting risk is almost as important as the non-life underwriting risk, whereas in other countries, such as the UK and Gibraltar, the health risk component is almost non-existent. To some extent, this highlights differences among countries in the types of product sold by non-life insurers within Europe, but it would also reflect the fact that, in some countries (such as the UK), there are stand-alone health insurance providers not included within our analysis of non-life insurers.

The significant contribution of life underwriting risk in Belgium and Spain is a consequence of some of the large players in their markets being composite insurers (i.e. writing both life and non-life insurance). It possibly distorts the comparison but, because of the size of their non-life business relative to their markets, we have decided to keep these companies in our analysis.

ANALYSIS OF OWN FUNDS

Own funds are divided into three tiers based on quality: Tier 1 capital is the highest ranking with the greatest loss-absorbing capacity, such as equity or bonds; Tier 2 funds are composed of hybrid debt; and Tier 3 comprises deferred tax assets. As shown in Figure 6, insurers' own funds are considered to be of good quality, with 93% classified in Tier 1.

FIGURE 6: STRUCTURE OF ELIGIBLE OWN FUNDS

	AT	BE	DE	DK	ES	FR	GI	IE	IT	LU	NL	PL	RO	SE	UK	ALL
ELIGIBLE OWN FUNDS TO MEET THE SCR	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
TIER 1 - UNRESTRICTED	92%	87%	92%	95%	99%	92%	90%	95%	83%	98%	96%	91%	87%	96%	93%	91%
TIER 1 - RESTRICTED	2%	2%	1%	0%	0%	3%	1%	0%	6%	0%	1%	0%	3%	0%	0%	2%
TIER 2	6%	10%	6%	4%	1%	5%	7%	4%	10%	2%	3%	9%	8%	4%	5%	6%
TIER 3	0%	1%	1%	1%	0%	0%	2%	1%	1%	0%	0%	0%	2%	0%	2%	1%

ANALYSIS OF MAIN BALANCE SHEET ITEMS

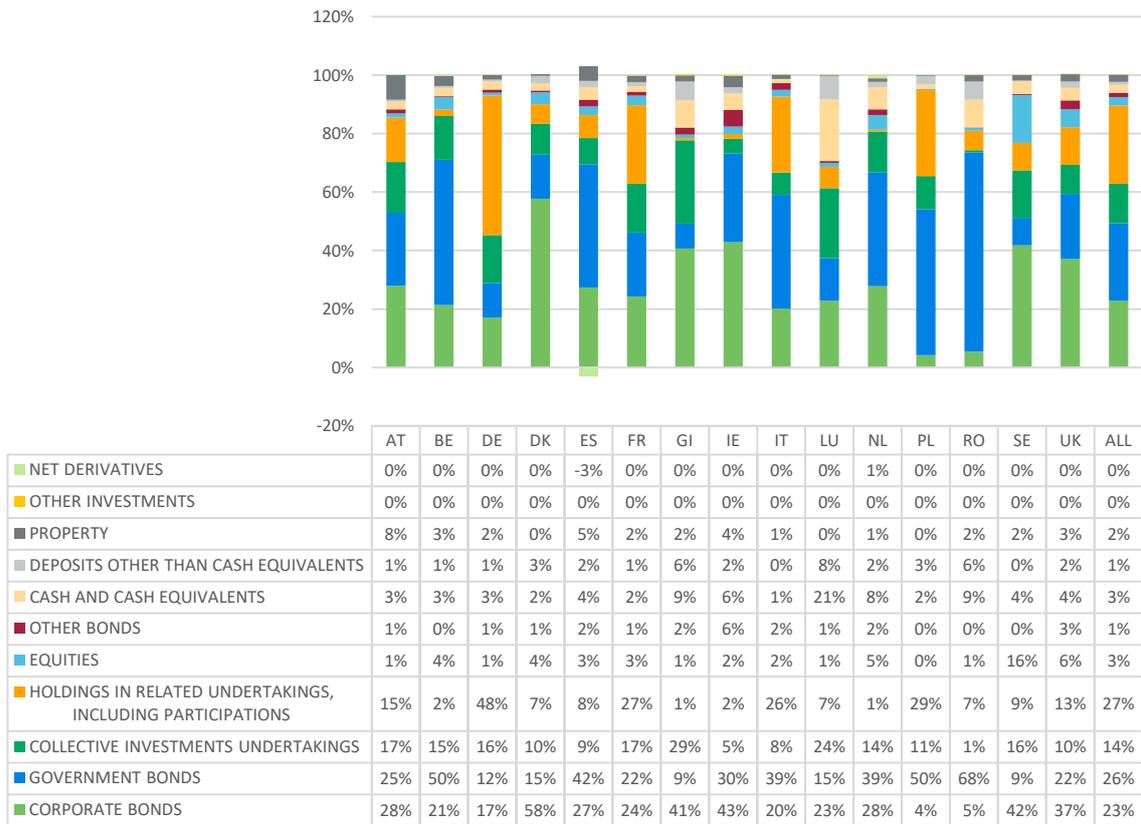
Assets

Across all countries, investments form the majority of total assets in the balance sheet. Except for Gibraltar, Ireland, Luxembourg, Romania and the UK, all countries have more than 70% of total assets in investments. These countries with lower percentages of assets in investments exhibit a greater proportion of reinsurance recoverables (over total assets), which is not unexpected, given the extensive use made of reinsurance in some of these countries that domicile numerous captives. For the UK, the deposits to cedants make a substantial proportion of the assets (25%) and relate almost exclusively to Aviva International Insurance Limited, which acts as an internal reinsurer for various companies within the Aviva Group.

Figure 7 shows the breakdown of companies' investments (including cash) per country. Investments in bonds (both government and corporate) dominate the firms' portfolios. Bonds are attractive to insurers due to the regular payment streams, which complement duration matching strategies, reduced volatility and the associated capital requirements relative to equities.

Germany is an exception to this in that holdings in related undertakings tend to dominate balance sheets and, in aggregate, make up 48% of the total investments.

FIGURE 7: INVESTMENT BREAKDOWN, AGGREGATED BY COUNTRY



Technical provisions

Figure 8 shows that, for most countries, technical provisions constitute the largest liability in non-life insurers' balance sheets, making up approximately 77% of the total liabilities in aggregate. Germany is an exception, with only 61% of the liabilities allocated to technical provisions and the remaining 39% being dominated by pension benefit obligations, subordinated liabilities, deferred tax liabilities and financial liabilities other than to credit institutions.

FIGURE 8: SPLIT OF LIABILITIES BY COUNTRY

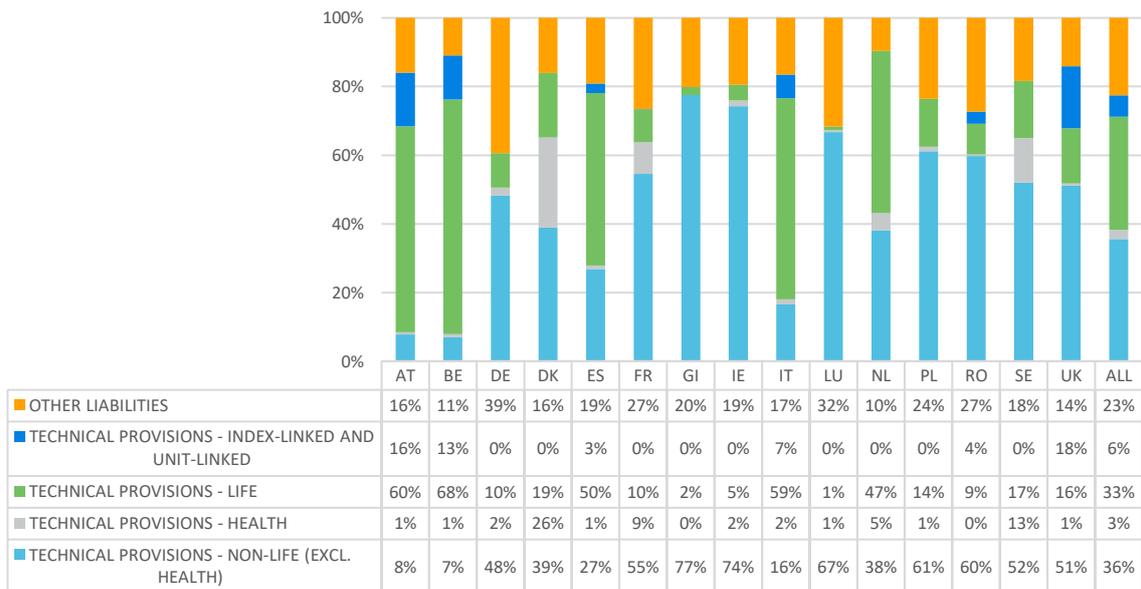


Figure 9 illustrates the split of gross technical provisions across the 15 European countries analysed as at the 2018 year-end. Germany, France and the UK, on aggregate, make up 67% of the technical provisions, with the other 12 countries comprising much lower proportions of technical provisions.

FIGURE 9: SPLIT OF NON-LIFE (INC. HEALTH SIMILAR TO NON-LIFE) GROSS TECHNICAL PROVISIONS BY COUNTRY

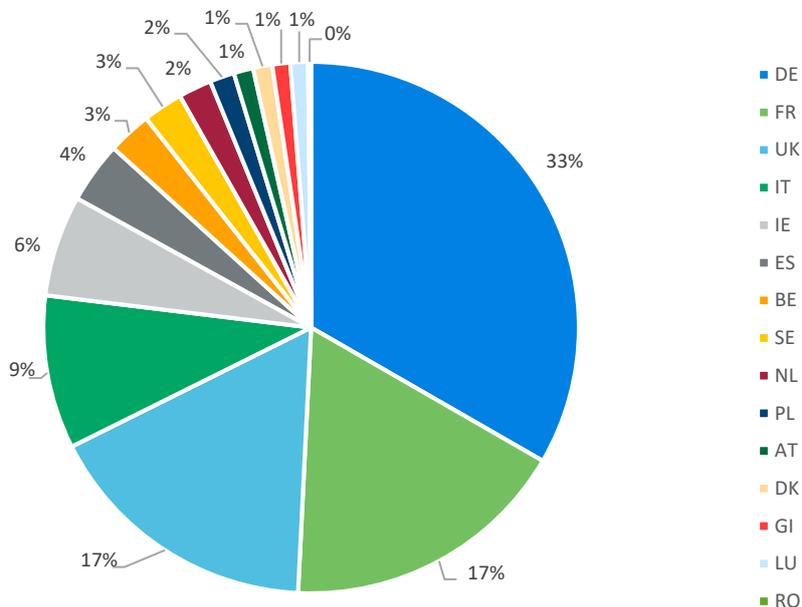
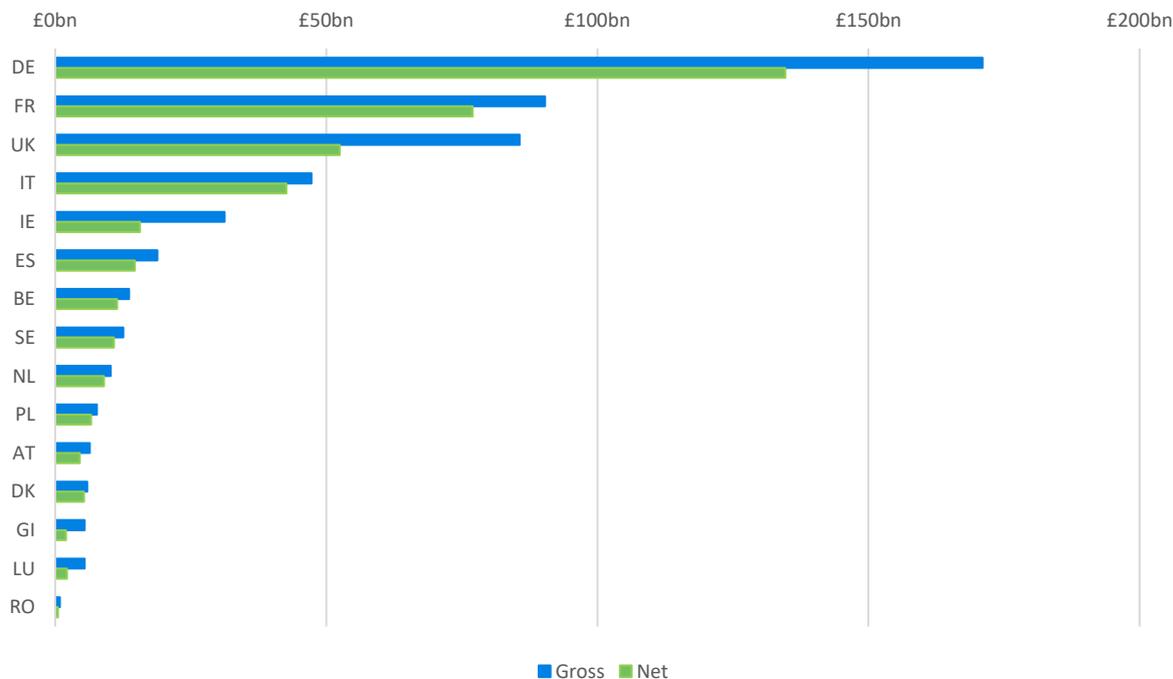


Figure 10 shows the non-life gross and net technical provisions for each country as at the 2018 year-end.

FIGURE 10: GROSS AND NET NON-LIFE (INC. HEALTH SIMILAR TO NON-LIFE) TECHNICAL PROVISIONS BY COUNTRY



The 918 insurers included in our sample have reserved over £512 billion of non-life technical provisions gross of reinsurance, and almost £390 billion net of reinsurance.

From Figure 11 we note that the liability lines of business account for 56% of insurers' total non-life best estimate. We also note that, across all countries, the proportion of non-life gross technical provisions for each line of business in 2018 remains almost identical to the proportion of non-life gross technical provisions during 2017.

FIGURE 11: NON-LIFE (INC. HEALTH SIMILAR TO NON-LIFE) GROSS TECHNICAL PROVISIONS BY LINE OF BUSINESS

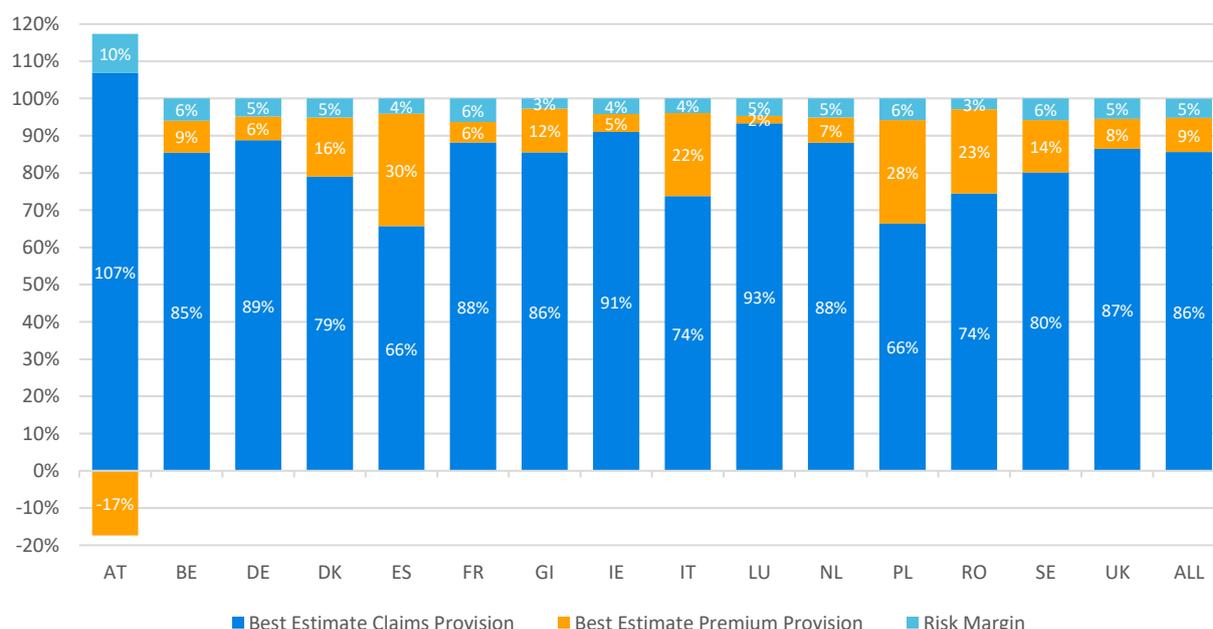


Figure 12 shows the composition of the non-life technical provisions across European countries as at the 2018 year-end. We observe that, on an aggregated basis, claims provisions make up to 86% of the gross technical provisions. Claims provisions comprise lower proportions in Spain, Italy, Romania and Poland.

We observe that premium provisions are negative for Austria, implying that, in aggregate, firms regulated there expect unearned and bound but not incepted business to be profitable in aggregate.

The share of the technical provisions attributable to the risk margin is broadly consistent among countries, with an average proportion of 5% of the gross technical provisions (noting a high proportion of 10% for Austria).

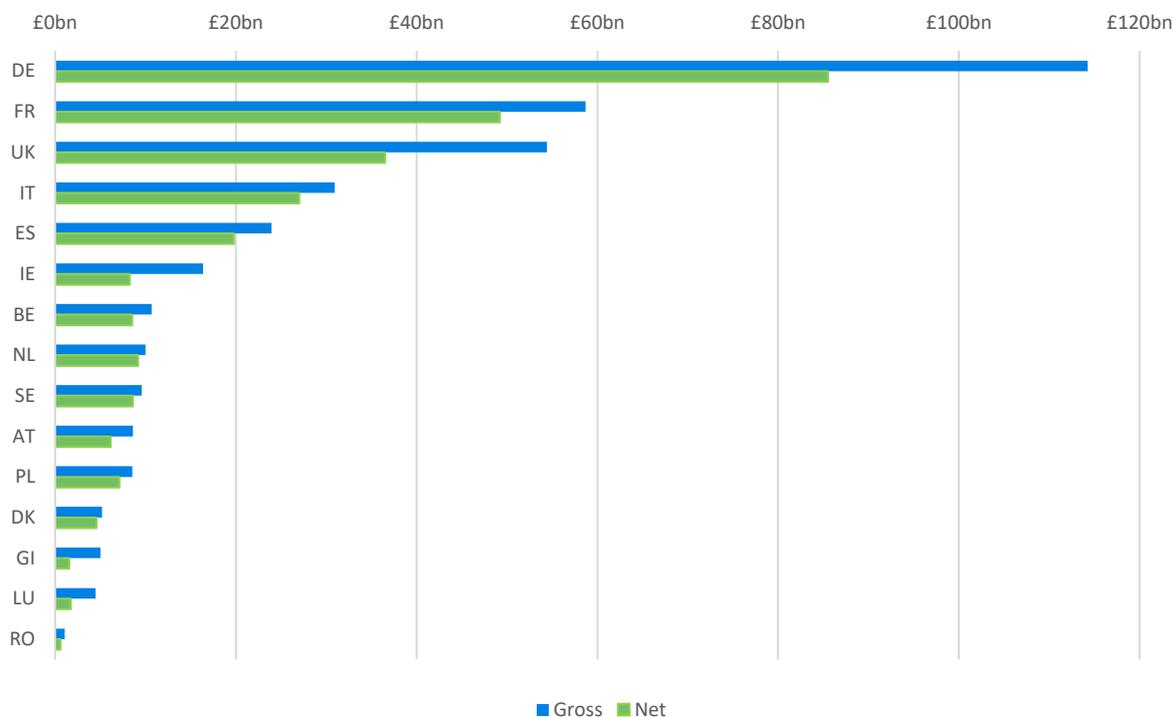
FIGURE 12: COMPONENTS OF NON-LIFE (INC. HEALTH SIMILAR TO NON-LIFE) NET TECHNICAL PROVISIONS



ANALYSIS OF UNDERWRITING

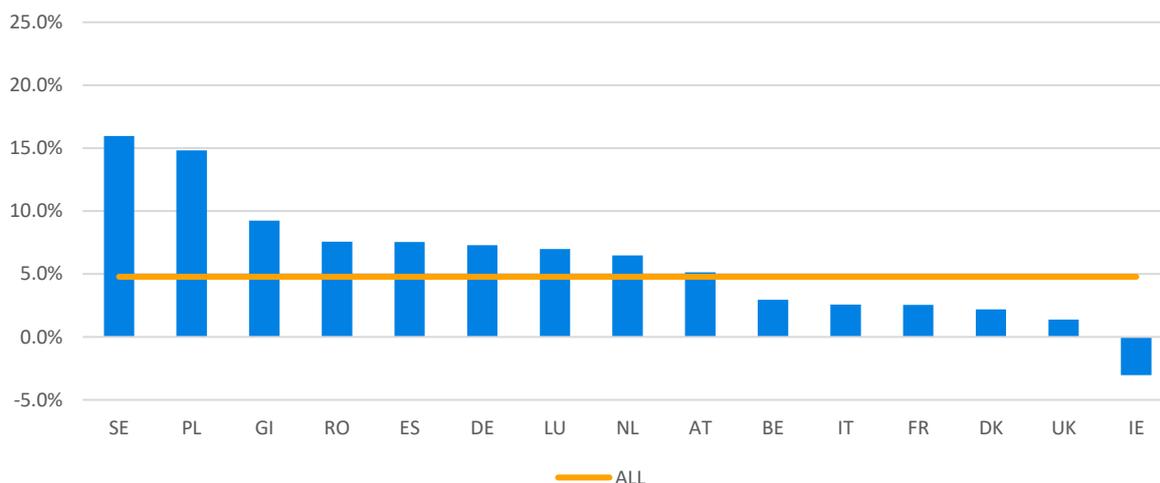
In 2018, our sample of European non-life insurers wrote almost £362 billion of non-life premiums gross of reinsurance, with a net of reinsurance amount of more than £274 billion.

FIGURE 13: GROSS AND NET NON-LIFE WRITTEN PREMIUMS BY COUNTRY



In Figure 14, we observe that only one out of the 15 countries displays a substantial decrease in its GWP between 2017 and 2018.

FIGURE 14: 2017-2018 GROWTH IN NON-LIFE (INC. HEALTH SIMILAR TO NON-LIFE) GROSS WRITTEN PREMIUMS BY COUNTRY³



³ For this chart we have only included companies where we have SFCRs in both 2017 and 2018—this is a total of 791 companies.

In Figure 15, we show the gross and net of reinsurance loss ratios (incurred claims / premiums earned) by country for the 2018 financial year.

FIGURE 15: GROSS AND NET NON-LIFE (INC. HEALTH SIMILAR TO NON-LIFE) LOSS RATIOS BY COUNTRY

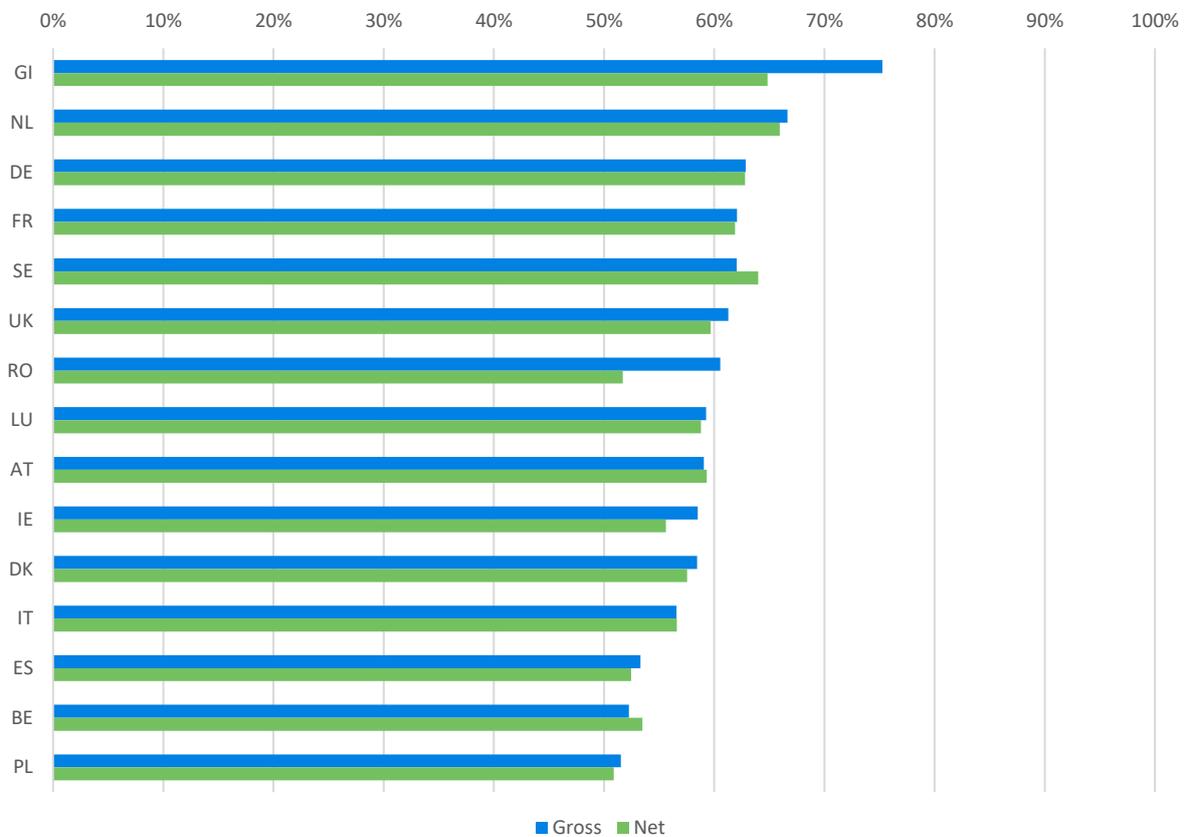


Figure 15 also indicates that, in most cases, the purchase of reinsurance makes economic sense (in addition to protecting against extreme events), with the net of reinsurance loss ratios being lower than the gross loss ratios for 11 out of the 15 countries analysed.



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

milliman.com

CONTACT

Derek Newton
derek.newton@milliman.com

Marc Smillie
marc.smillie@milliman.com

Flavien Thery
flavien.thery@milliman.com