

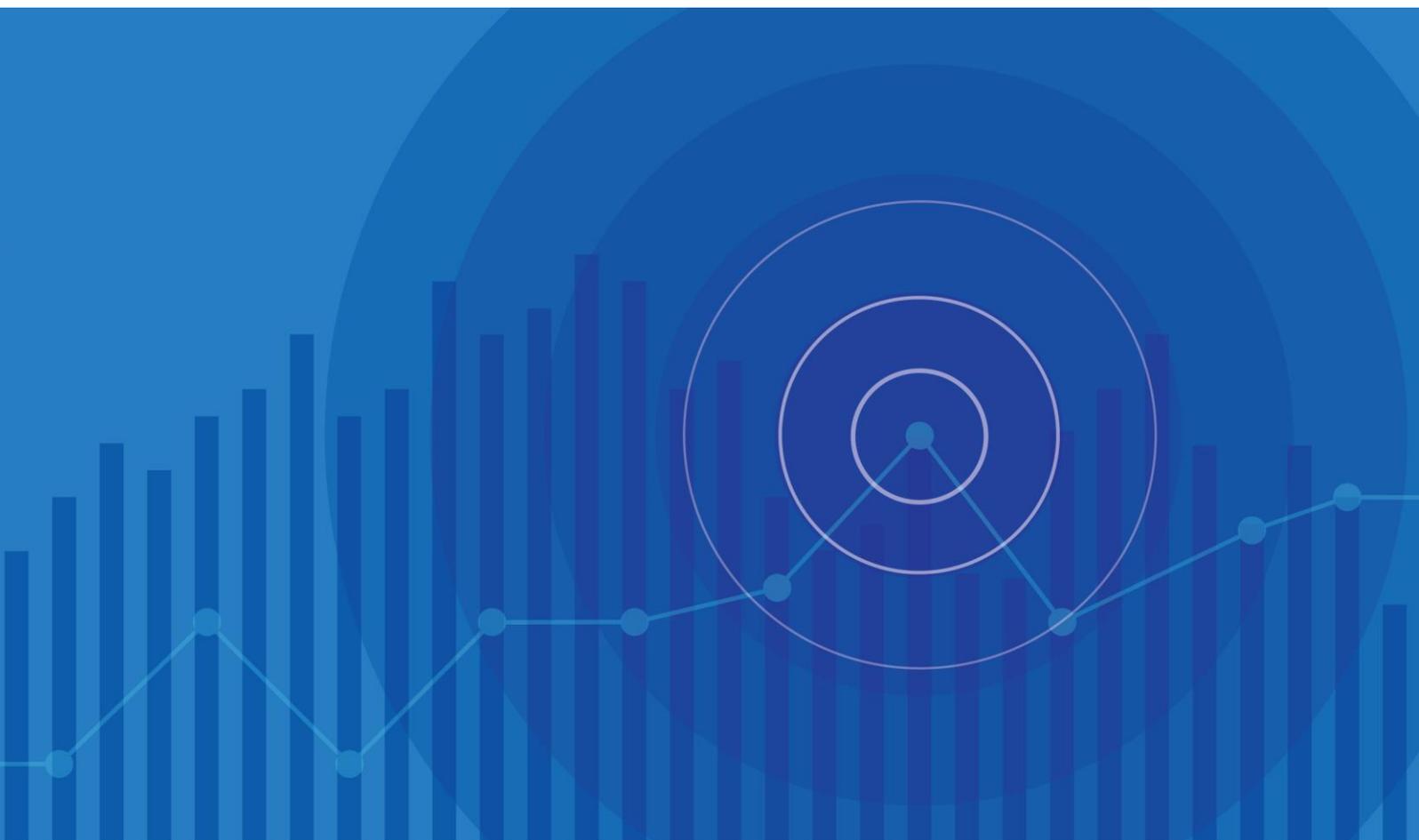
MILLIMAN RESEARCH REPORT

# Analysis of life insurers' solvency and financial condition reports year-end 2019

European life insurers

September 2020

Neil Christy, FIA, CERA  
Stuart Reynolds, FIA  
Sam Burgess





## Table of Contents

<b>INTRODUCTION.....</b>	<b>4</b>
EFFECTS OF COVID-19 .....	4
EUROPEAN MARKET COVERAGE .....	4
UNDERLYING DATA .....	1
FUTURE CHANGES .....	2
<b>ANALYSIS OF EUROPEAN LIFE INSURERS.....</b>	<b>3</b>
<b>ANALYSIS OF BALANCE SHEET.....</b>	<b>3</b>
ASSETS .....	3
LIABILITIES .....	4
REINSURANCE .....	5
<b>ANALYSIS OF PREMIUMS.....</b>	<b>7</b>
<b>ANALYSIS OF OWN FUNDS.....</b>	<b>8</b>
<b>ANALYSIS OF SOLVENCY COVERAGE.....</b>	<b>9</b>
<b>ANALYSIS OF SCR .....</b>	<b>12</b>
<b>LONG-TERM GUARANTEE MEASURES .....</b>	<b>14</b>
<b>CONCLUSION .....</b>	<b>15</b>

## Introduction

This report focuses on the solvency and financial condition reports (SFCRs) published in 2020 which refer to year-end 2019.<sup>1</sup> The SFCRs contain a significant amount of information on the insurance companies, including details on business performance, risk profile, balance sheet and capital position, amongst other things. Insurers are also required to publish a great deal of quantitative information in the public quantitative reporting templates (QRTs) included within the SFCRs.

### EFFECTS OF COVID-19

The data in this report reflects the published data from the SFCRs as at 31 December 2019, and we have not made any allowance for events subsequent to this date where individuals firms have not. In particular, this means that the majority of the data in the report does not reflect the effects of the COVID-19 pandemic on firms' balance sheets and results.

### EUROPEAN MARKET COVERAGE

Our analysis of the European life insurance market covers more than 690 companies from 31 countries and one territory, representing approximately €824 billion of gross written premium (GWP) and approximately €7,981 billion of gross technical provisions (TPs). This represents an increase in the number of companies and gross TPs relative to our year-end 2018 report on the SFCRs of life insurers. There has, however, been a decrease in the level of GWP written in 2019 relative to that written in 2018.

The countries and territories included in the analysis are:

- Austria (AT)<sup>ROE</sup>
- Belgium (BE)
- Bulgaria (BG)<sup>CEE</sup>
- Croatia (HR)<sup>CEE</sup>
- Cyprus (CY)<sup>ROE</sup>
- Czechia (CZ)<sup>CEE</sup>
- Denmark (DK)<sup>NOR</sup>
- Estonia (EE)<sup>CEE</sup>
- Finland (FI)<sup>NOR</sup>
- France (FR)
- Germany (DE)
- Gibraltar (GI)<sup>ROE</sup>
- Greece (EL)<sup>ROE</sup>
- Hungary (HU)<sup>CEE</sup>
- Iceland (IS)<sup>NOR</sup>
- Ireland (IE)
- Italy (IT)
- Latvia (LV)<sup>CEE</sup>
- Liechtenstein (LI)<sup>ROE</sup>
- Lithuania (LT)<sup>CEE</sup>
- Luxembourg (LU)
- Malta (MT)<sup>ROE</sup>
- Netherlands (NL)
- Norway (NO)<sup>NOR</sup>
- Poland (PL)<sup>CEE</sup>
- Portugal (PT)<sup>ROE</sup>
- Romania (RO)<sup>CEE</sup>
- Slovakia (SK)<sup>CEE</sup>
- Slovenia (SI)<sup>CEE</sup>
- Spain (ES)
- Sweden (SE)<sup>NOR</sup>
- United Kingdom (UK)

NOR – countries included in the Nordics category

CEE – countries included in the Central and Eastern Europe category

ROE – countries included in the Rest of Europe category

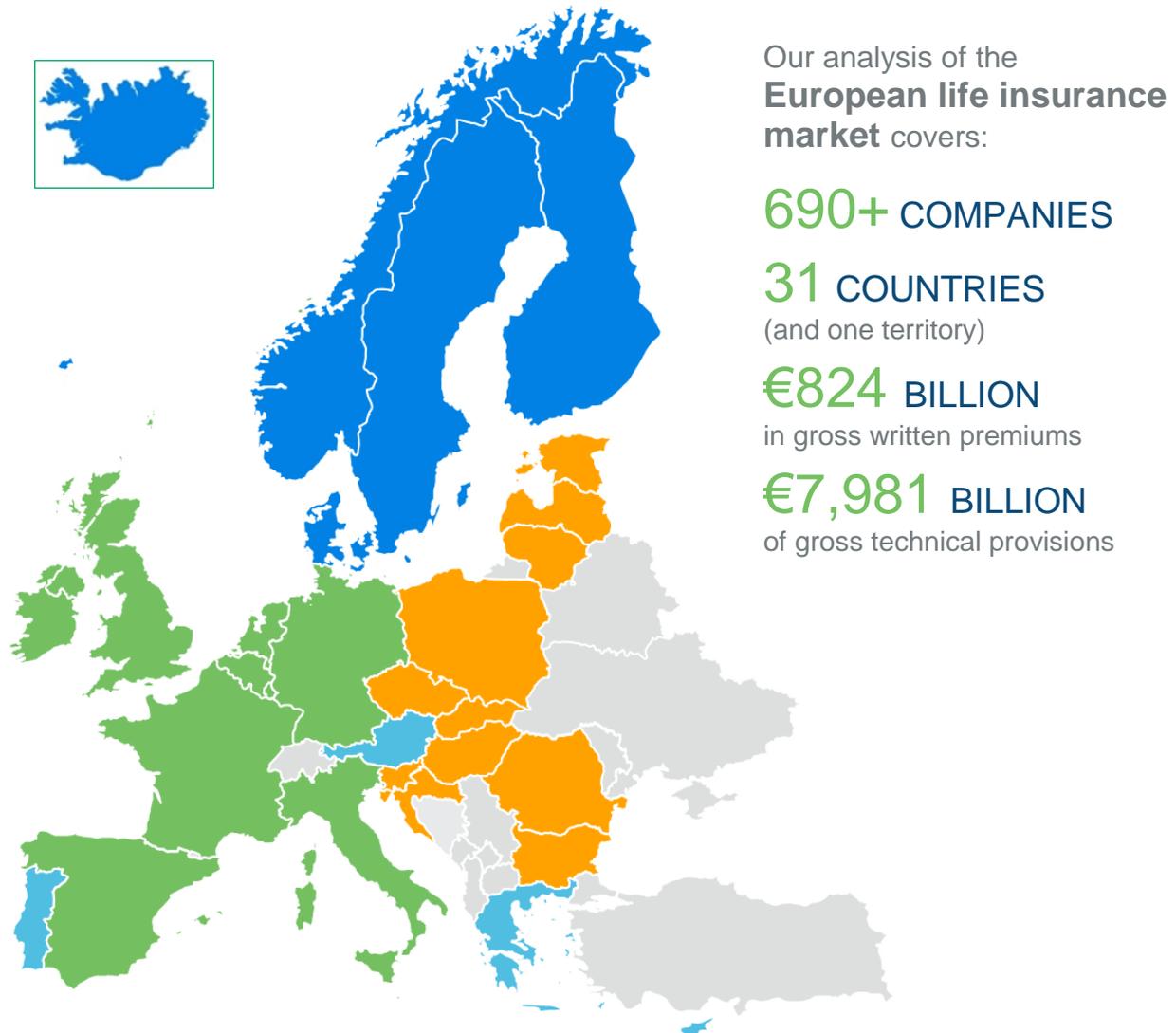
Our analysis is based on a sample of insurers that are primarily focused on selling life insurance business, and as a result, some composite companies have been excluded from the analysis. Reinsurers have been included in the analysis where their business has been deemed to be predominantly life reinsurance.

The charts and results in this report focus on nine of the largest European life insurance markets by the total volume of TPs. The top nine markets selected cover approximately 90% of the total European life insurance market. The remainder of the nations are split into three categories: the Nordics (NOR), Central and Eastern Europe (CEE) and the Rest of Europe (ROE), which captures the remaining nations.

Figure 1 shows the geographical coverage of this report. The large European markets are shown in green and the remaining categories are shown as dark blue for the NOR, orange for CEE and light blue for the ROE.

<sup>1</sup> These SFCRs are referred to as the year-end 2019 SFCRs throughout this report as the reporting date for the majority of companies included in the samples is 31 December 2019. There are a small number of companies included in the sample that had a reporting date other than 31 December 2019.

FIGURE 1: EUROPEAN COUNTRIES INCLUDED IN THE ANALYSIS



#### UNDERLYING DATA

The analysis underlying this report focuses on the quantitative information contained in the public QRTs. Where relevant, we have also studied the SFCRs to gain additional insights into some companies, in particular if they displayed characteristics that differed from market norms. Our focus is on solo entities rather than groups.

In carrying out our analysis and producing this research report, we relied on the data provided in the SFCRs and QRTs of our sample companies. 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.

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 to correct known errors such as inconsistencies between QRTs in order to better inform our analysis; 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.

This research report is intended solely for informational purposes and presents information of a general nature. The underlying data and analysis have been reviewed on this basis. This report is not intended to guide or determine any specific individual situation, and persons should consult qualified professionals before taking specific actions.

The data analysed in this report has been sourced from Solvency II Wire Data and companies' disclosed SCFRs. The data is available via subscription from: <https://solvencyiiwiredata.com/about>.

## FUTURE CHANGES

The Solvency II Directive requires a full review of the Solvency II rules by the end of 2020 (the 2020 review). As part of its Solvency II 2020 Review, the European Commission (EC) has issued a call for advice to the European Insurance and Occupational Pensions Authority (EIOPA) on the review of the Solvency II Directive.

One of the areas EIOPA has been asked to assess is the current supervisory reporting and public disclosure requirements, including the QRTs and the SFCR. At the time of publication, EIOPA has an ongoing consultation with regard to proposed changes to the QRTs and SFCRs. These changes, if implemented, will have an impact on future SFCRs published and on the data contained within them.

The recommendations proposed by EIOPA are intended to ensure that the SFCR remains fit for purpose by all stakeholders that use the document. Some of the highlights from the consultation in relation to the SFCR are:

- To take into account the needs of different stakeholders and the different levels of expertise of professional and non-professional readers, EIOPA proposes to split the SFCR into two sections that are addressed to:
  - **Policyholders** – This section must be short, limited in scope and easy to read, focusing on areas of Solvency II that are relevant to policyholders.
  - **Non-policyholders** – This section should broadly follow the current form of the SFCR and should target professional readers only. It should contain less information than currently provided in some areas, and more detailed, structured, harmonised information in others.
- In the section addressed to professionals, EIOPA proposes changes to require more complete quantitative information in the SFCR, potentially resulting in additional QRTs and/or narrative information on sensitivities and own funds variations over the year.
- EIOPA proposes changes to the external audit requirements of the SFCR, such that as a minimum the Solvency II balance sheet is subject to external auditing by a qualified auditor.
- EIOPA proposes that the SFCR is to be presented in a machine-readable format and is considering options that would allow easy public access to all published SFCRs (e.g., creating a centralised repository).

As EIOPA is expected to make its recommendations on proposed changes to the European Commission by December 2020, any changes to the SFCR and QRTs are unlikely to take effect until at least year-end 2021, to provide firms with an opportunity to implement any required changes ahead of the first reporting date that the additional information is required. However, the exact date of implementation has yet to be confirmed.

The UK is currently in a transition period as part of the UK's exit from the EU that will end on 31 December 2020. At the end of the transition period, the UK regulators may choose to continue implementing Solvency II in its current form or to begin moving to a new regime. What the UK regulators will do is currently unknown and may have an impact on future SFCRs for UK life insurers.

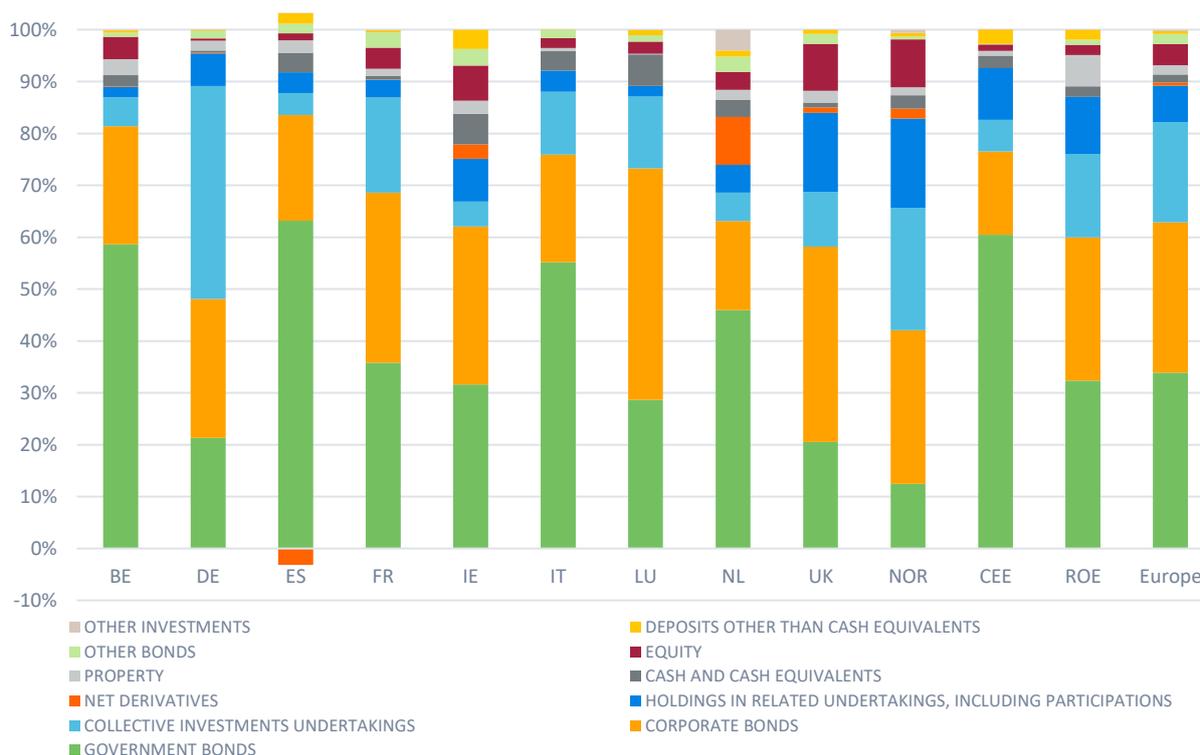
# Analysis of European life insurers

## Analysis of balance sheet

### ASSETS

The chart in Figure 2 shows the split of financial investments held by life insurers across European countries as at year-end 2019, with the total EU figures represented in the last bar on the chart, labelled as 'Europe.' This chart comprises financial investments classified as 'Investments (Other Than Assets Held for Index-linked and Unit-linked Contracts)' and 'Cash and cash equivalents' on the Solvency II balance sheet.<sup>2</sup>

FIGURE 2: SPLIT OF NON-LINKED ASSETS ACROSS EUROPE



In general, investments in government bonds and corporate bonds make up the majority of financial investments on European life insurers' balance sheets.

In aggregate, across our sample of European insurers, government bonds and corporate bonds make up 34% and 29% of total financial investments, respectively. Government bonds make up a significant proportion of investments in most of the countries, including over 60% of total investments in Spain as well as over 70% in Iceland and some countries in CEE (Hungary, Croatia, Poland and Romania).

Investments in collective investment schemes is the next largest category, accounting for a further 19% of total financial investments. In particular, the level of holdings is due to large volumes in Germany (41%) and to a lesser extent in the NOR (24%).

## GOVERNMENT AND CORPORATE BONDS

account for **34% AND 29%**  
of **all financial investments**, respectively

<sup>2</sup> The liability side of derivatives is also included to give the net derivative position.

Holdings in related undertakings, including participations, make up only 7% of total European financial investments, but make up a much higher percentage within the UK (15%) and the NOR (17%). The NOR percentage is driven by large holdings in related undertakings in the Danish market, accounting for 25% of all assets in Denmark.

The derivatives shown in Figure 2 represent the net derivative position. Based on the companies in our sample, a few have net negative positions, meaning that on average the value of derivative liabilities is greater than the value of derivative assets on the Solvency II balance sheet. This is particularly prevalent in Spain.

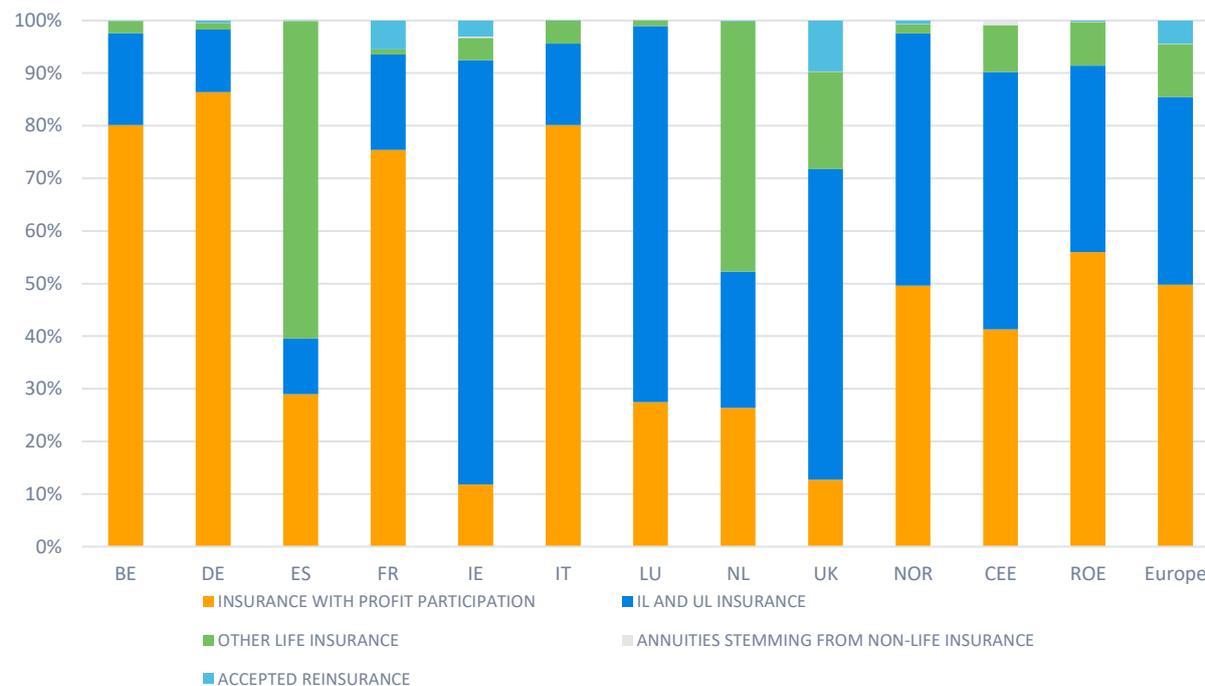
Cash and cash equivalents on average account for only 2% of the investments across European life insurers; however, it is notable that this percentage is as high as 70% of total financial investments for the life insurers in Gibraltar (included in ROE). This represents a decrease relative to year-end 2018, where 76% of assets for life insurers in Gibraltar was held as cash and cash equivalents.

The remaining asset classes, such as equity, property and other bonds, only total around 9% of all assets held by European life insurers.

### LIABILITIES

The chart in Figure 3 shows the split of TPs by line of business held by life insurers across European countries as at year-end 2019.

FIGURE 3: SPLIT OF TECHNICAL PROVISIONS BY LINE OF BUSINESS ACROSS EUROPE



**50%** OF TOTAL TPs for European life insurers are 'insurance with profit participation'

The TPs for many large European insurance markets including the Belgian, French, German and Italian markets, are dominated by 'Insurance With Profit Participation,' whereas in the markets of Ireland, Luxembourg and the UK the TPs are predominantly in respect of 'Index-linked (IL) and Unit-linked (UL) Insurance' business. The markets in the NOR, CEE and ROE also show similar dominance by these two lines of business. As a result, these two lines of business represent the largest portion of TPs across Europe on average. In aggregate, across our sample of European countries, 'Insurance With Profit Participation' makes up half of the total TPs for life insurers (50%). 'IL and UL Insurance' makes up the second-largest portion of TPs (36%).

'Other Life Insurance' (10%), which includes products such as non-profit annuities and traditional protection business, has the largest share of the market in only two of the individual countries considered in our analysis: the Netherlands and Spain.

'Accepted Reinsurance' (4%) makes up the bulk of the remaining TPs, while 'Annuities Stemming From Non-Life Insurance Contracts' accounts for less than 0.1% of total TPs.

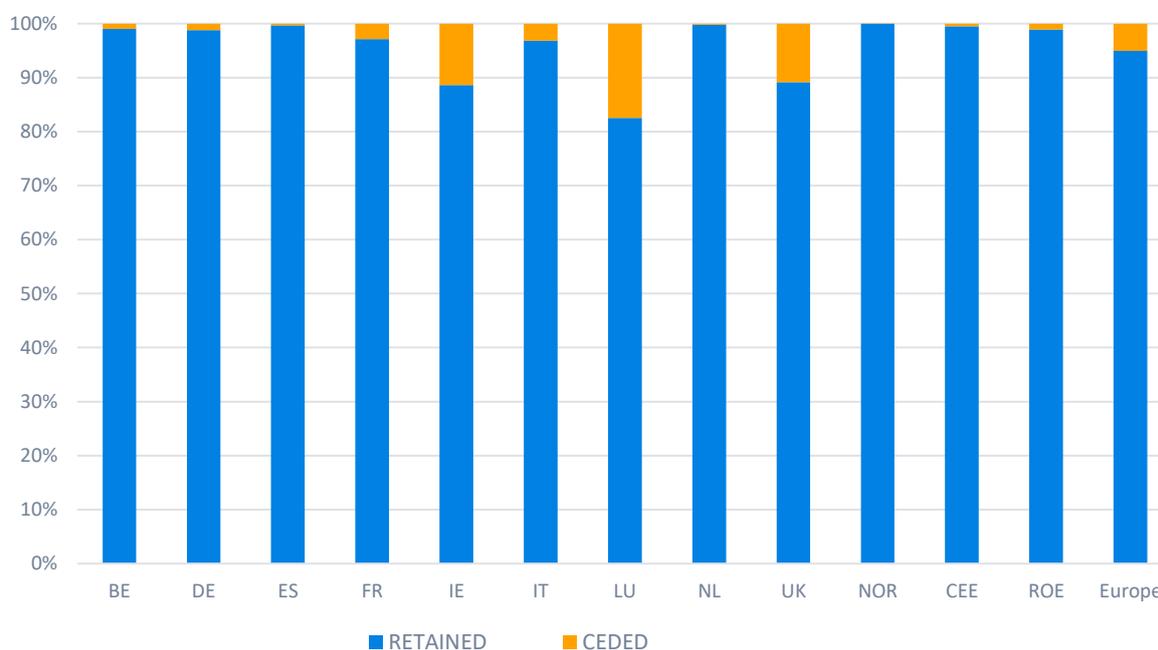
TPs in respect of 'Health Similar to Life Techniques' (HSLT) business have been excluded from Figure 3, as these lines of business are very small on average across the sample of companies considered in the analysis.

Since the previous set of SFCRs was published, the market shares of the five lines of businesses outlined above has remained relatively unchanged.

## REINSURANCE

The chart in Figure 4 shows how the use of reinsurance varies across European countries as at year-end 2019. The ceded rates represent the difference in the best estimate liability (BEL) gross and net of reinsurance recoverables.

FIGURE 4: ANALYSIS OF USE OF REINSURANCE ACROSS EUROPE



On average,

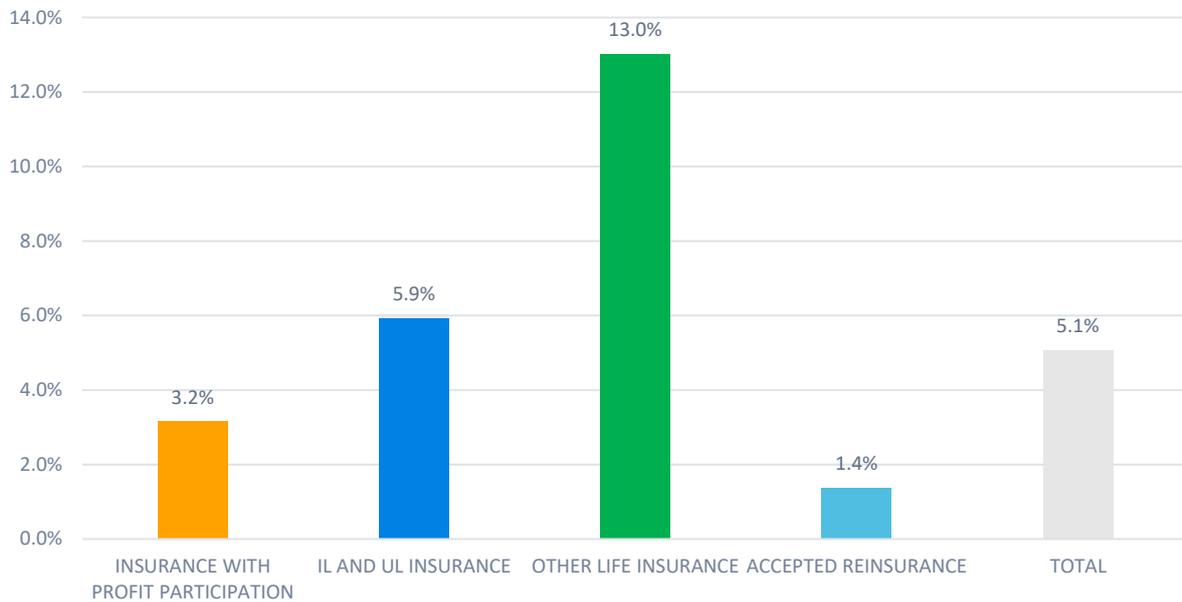
**5.1%** of the BEL of life insurers is REINSURED ACROSS EUROPE

On average, about 5.1% of the BEL is reinsured across Europe based on the companies in our sample, which also include reinsurers. This varies by country, with Luxembourg, the UK, France and Ireland being the most reliant on reinsurance of the individual countries analysed. Overall, the percentage of the BEL that is reinsured has increased marginally since the last set of SFCRs were published, with previously 4.5% of the BEL reinsured across European life insurers.

It is important to note that the impact of reinsurance on the BEL may not always provide insight on the full impact of reinsurance on the Solvency II balance sheet. For example, a longevity swap could potentially lead to a slight increase in the BEL, but will be offset by a larger impact on the solvency capital requirement (SCR) and RM.

Figure 5 shows the proportion of each line of business which is reinsured by European life insurers.

**FIGURE 5: PERCENTAGE OF TECHNICAL PROVISIONS WITH REINSURANCE**



The line of business with the highest ceded level of reinsurance is 'Other Life Insurance' at 13.0%. This is more than double the second-largest ceded percentage, which is 'IL and UL Insurance' at 5.9%. 'Insurance With Profit Participation' and 'Accepted Reinsurance' reinsure 3.2% and 1.4%, respectively.

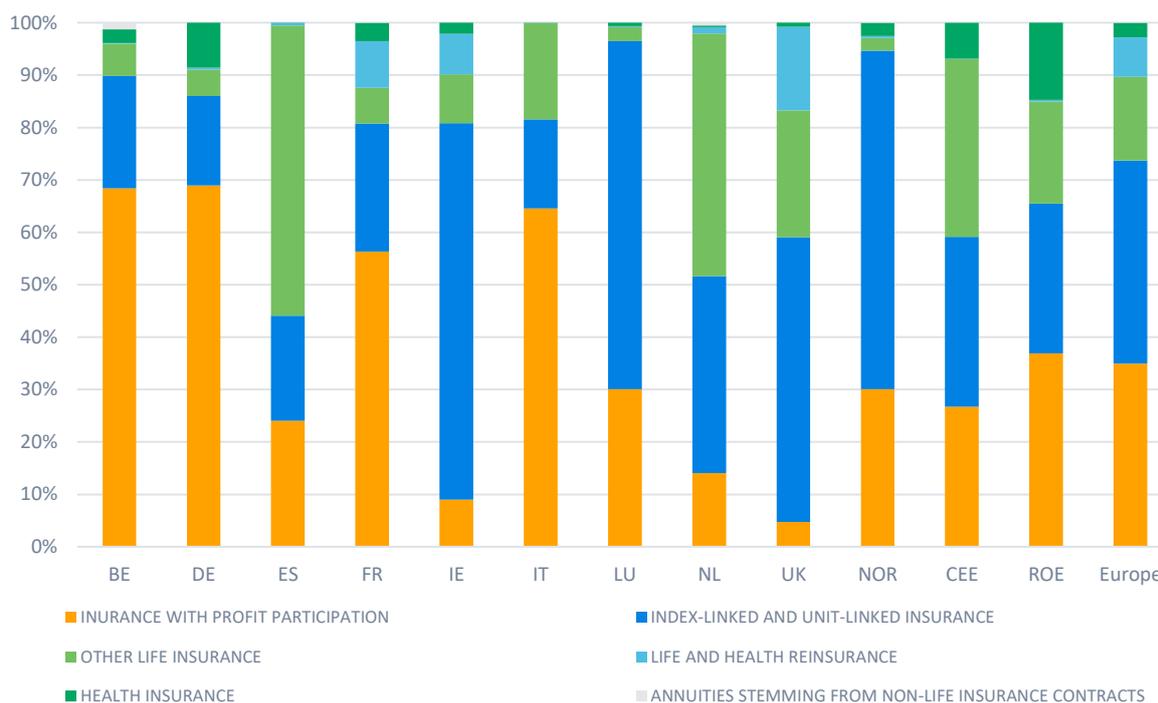
Overall, the European life insurance industry has reinsurance recoverables of €413 billion across all life TPs in our sample, an increase of 16% relative to our report on year-end 2018 SFCRs. This change is most noticeable in the Irish market, where the reinsured proportion was 5.2% as at year-end 2018, increasing to 11.4% at year-end 2019. This is primarily driven by the transfer of business from the UK over 2018 and 2019 as part of a number of UK groups' Brexit planning. In some cases, Irish subsidiaries reinsured some of the transferred business to group entities, resulting in an increase in the overall rate of reinsurance in the Irish market relative to year-end 2018.

## Analysis of premiums

Comparing to the life insurance GWP figures quoted by EIOPA in 2019 (€917 billion) to those for 2018 (€891 billion) we see that there has been an increase in Euro denominated premium levels relative to last year. The Sterling figures show a slight reduction in premium volumes, as a result of Euro / Sterling interest rate movements, comparing the EIOPA figures to our sample shows that c. 90% of all GWP in 2019 is captured in our sample.

The chart in Figure 6 shows the split of GWP by line of business held by life insurers across European countries as at year-end 2019. GWP includes premiums payable on in-force business and on any new sales over the reporting period.

FIGURE 6: SPLIT OF GROSS WRITTEN PREMIUMS BY LINE OF BUSINESS ACROSS EUROPE



The split of premium volumes by line of business is broadly consistent with the split of TPs by line of business shown in Figure 3 above. On average across our entire sample, 'Insurance With Profit Participation' (35%) and 'IL and UL Insurance' (39%) make up the largest portions of premium volumes. There are notable differences in the Spanish and Dutch markets, with 'Other Life Insurance' making up the majority of sales in these countries.

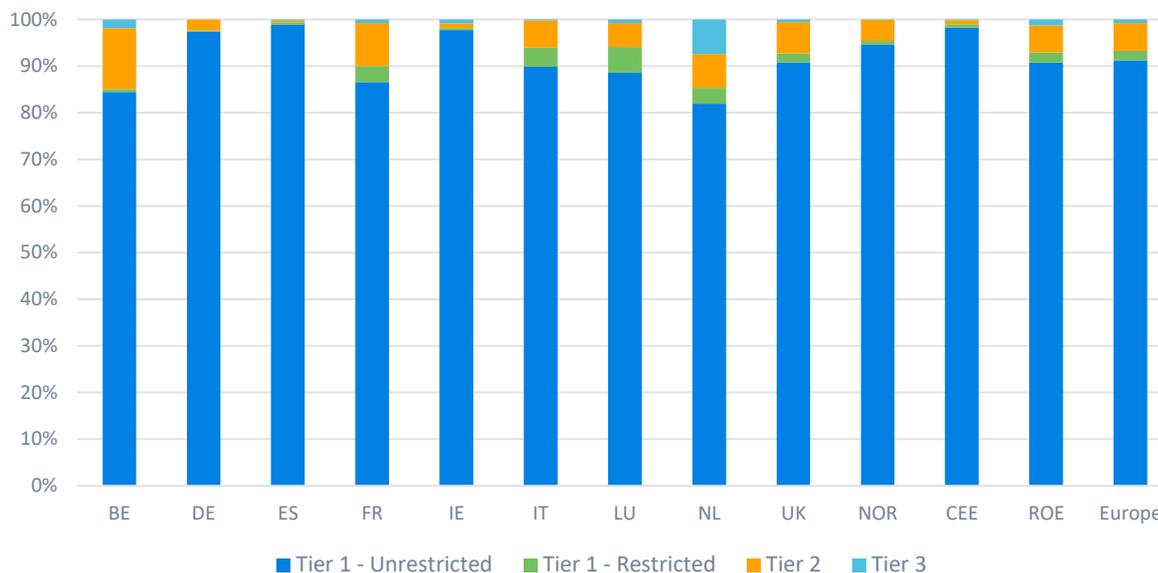
**'INDEX-LINKED AND UNIT-LINKED INSURANCE'** **39%**  
account for the largest volume of gross written premiums

In the year-end 2018 SFCRs, 34% of GWP was attributable to 'Insurance With Profit Participation,' while 43% was for 'IL and UL Insurance' showing that there has been a slight decrease in the proportion of 'IL and UL Insurance' premiums over 2019 based on the companies included in our sample.

## Analysis of own funds

The chart in Figure 7 shows the split of own funds across European countries as at year-end 2018.

FIGURE 7: SPLIT OF OWN FUNDS ACROSS EUROPE



The majority of own funds (91%) held by EU life insurers in our sample are classified as tier 1 unrestricted own funds. This is the highest form of capital in terms of quality and loss absorbency as defined under Solvency II. Whilst the split of own funds varies by country, in general the majority of European insurers have a very high portion of tier 1 unrestricted own funds, with all countries reporting at least 80% of their own funds as tier 1 unrestricted.

**91% OF OWN FUNDS** held by  
European life insurers are  
**UNRESTRICTED TIER 1**

Tier 1 restricted own funds make up 2% of own funds on average across Europe. Tier 2 own funds make up 6% of total own funds, and tier 3 own funds make up just 1% of total own funds on average.

Belgium has the highest amount of tier 2 own funds compared to other European countries, with tier 2 own funds accounting for 13% of total own funds in Belgium. The Belgian tier 2 own funds are primarily in respect of hybrid debt and subordinated loans.

Tier 3 own funds are held predominantly in the Netherlands and France, which together account for 65% of all tier 3 own funds. Net deferred tax assets represent the main item categorised as tier 3 own funds.

There has been little to no change in the breakdown of the own funds by tier when compared to the previous set of SFCRs.

## Analysis of solvency coverage

The table in Figure 8 shows the weighted average solvency coverage ratios<sup>3</sup> for the solvency capital requirement (SCR) and the minimum capital requirement (MCR) across European countries.

**FIGURE 8: SOLVENCY COVERAGE RATIOS BY COUNTRY**

	BE	DE	ES	FR	IE	IT	LU	NL	UK	NOR	CEE	ROE	EUROPE
<b>RATIO OF ELIGIBLE OWN FUNDS TO SCR</b>	191%	377%	247%	261%	172%	212%	168%	191%	157%	271%	250%	228%	232%
<b>RATIO OF ELIGIBLE OWN FUNDS TO MCR</b>	385%	869%	655%	548%	478%	437%	462%	402%	534%	821%	713%	648%	582%

Overall, the average solvency coverage ratios for European life insurers is more than double the SCR requirement, with the weighted averages significantly in excess of the required solvency coverage ratio of 100% in all of the regions considered. The European average SCR coverage ratio is 232% (an increase on the previous year's 226%), based on the companies included in our sample. The increases were driven by large increases in average SCR coverage ratios in France (+54% versus year-end 2018), Spain (+32%) and CEE (+16%). In France, this large increase was driven by some of the largest firms seeing significant increases in eligible own funds through increases in available capital over the year relative to small changes in the SCR over the same period.

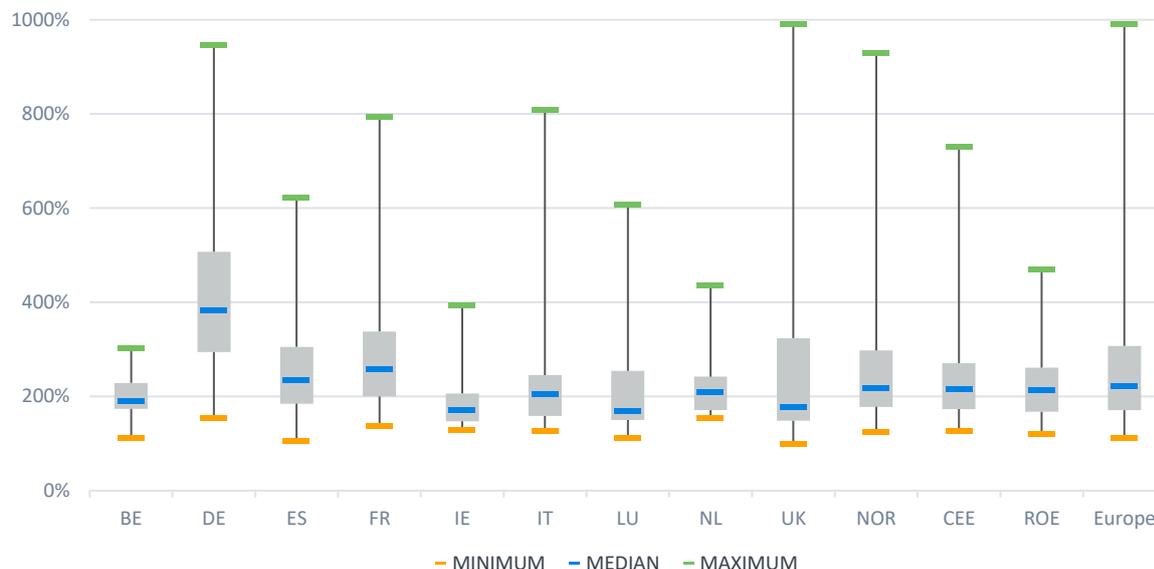
The increase in French available capital is likely due to a change in the treatment of surplus assets for with-profits funds. Previously surplus expected to be used to pay future bonuses on 'Insurance With Profit Participation' business could not be included in the eligible own funds for French insurers. This has now been changed allowing French firms to include this surplus as part of their eligible own funds and driving an increase in solvency coverage for those firms. Both approaches are allowable under Solvency II and each country can opt for either approach e.g. in Germany all undeclared surplus can be used to cover the SCR whereas in the UK surplus attributable to the 'Insurance With Profit Participation Business' in excess of the SCR attached to this business should not be included in the eligible own funds of the firm as this is ring-fenced for future bonus distributions.

In some regions, the SCR coverage ratio did fall over the year, including in Germany (-73%), the Netherlands (-23%) and ROE (-22%). In Germany, this fall was driven by an increase in overall SCR relative to the level of eligible own funds. The increase in SCR was driven by a rise in the level of market risk exposure of German life insurers over the year.

The average MCR coverage ratio for year-end 2019 is 582%. This has moved similarly to the SCR coverage ratio over the year.

The chart in Figure 9 shows the distribution of the SCR coverage ratio by country as at year-end 2019. The chart shows the maximum coverage ratio in green, the minimum in orange and the median in blue.

<sup>3</sup> The weighted average solvency coverage ratios are calculated as the sum of all eligible own funds for all companies within our sample in a given region divided by the sum of all the SCRs.

FIGURE 9: DISTRIBUTION OF SCR COVERAGE RATIO BY COUNTRY<sup>4</sup>

The average European SCR Coverage ratio **232%**  
for year-end 2019 is

Figure 9 shows that, for most countries, the distribution of SCR coverage ratios has a wide range, although this does depend on the number of life insurers included in the analysis for each country. The largest ranges are seen in the UK, Germany, France and Ireland, where the number of companies included in our analysis is high.

Germany has the highest median solvency coverage ratios in Europe at 385%. The second highest is Denmark at 294%, which is included as part of the NOR.

Based on the life companies included in our analysis, there were no insurers with an SCR coverage ratio below 100% as at year-end 2019. The average distribution at a European level shows a minimum SCR coverage ratio of 100%: This is due to one company in the UK.<sup>5</sup> Figure 9 shows a maximum SCR coverage ratio of 992% (UK), but this excludes eight companies that reported SCR coverage ratios in excess of 1,000% (four in the UK, three in France and one in Germany). The highest of these companies was from the UK and reported an SCR coverage ratio of 3,898%. The range of the SCR coverage ratios is comparable to that seen in the 2018 year-end SFCRs.

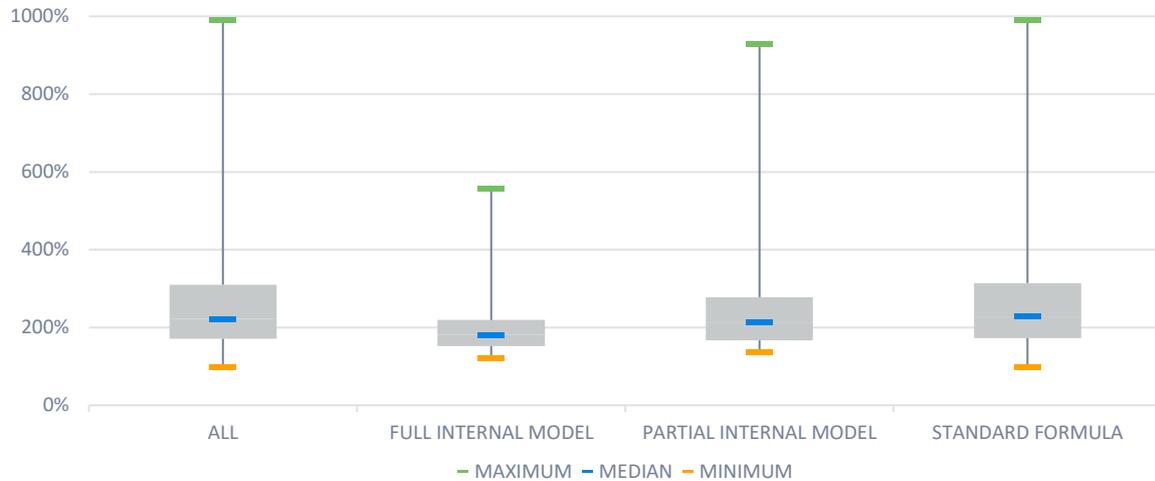
Out of the 691 companies included in our analysis, 608 are companies that report under the Solvency II Standard Formula (88%). Of the remaining 83 companies (12%), 53 companies (8%) were using a partial internal model (PIM) and 30 companies (4%) were using full internal models (FIMs).

The chart in Figure 10 shows a split of the SCR coverage ratio distribution by SCR calculation type as at year-end 2019, with any undertaking-specific parameters (USP) companies included with the Standard Formula companies. The chart shows the maximum coverage ratio in green, the minimum in orange and the median in blue.

<sup>4</sup> Note that we have excluded companies where the SCR coverage ratio exceeded 1,000% to allow the chart to be more readable. This excluded four companies in the UK, two in Germany and one in France.

<sup>5</sup> This is due to the company restricting own funds such that the company's own funds equals its SCR.

FIGURE 10: DISTRIBUTION OF SCR COVERAGE RATIOS BY SCR CALCULATION METHOD



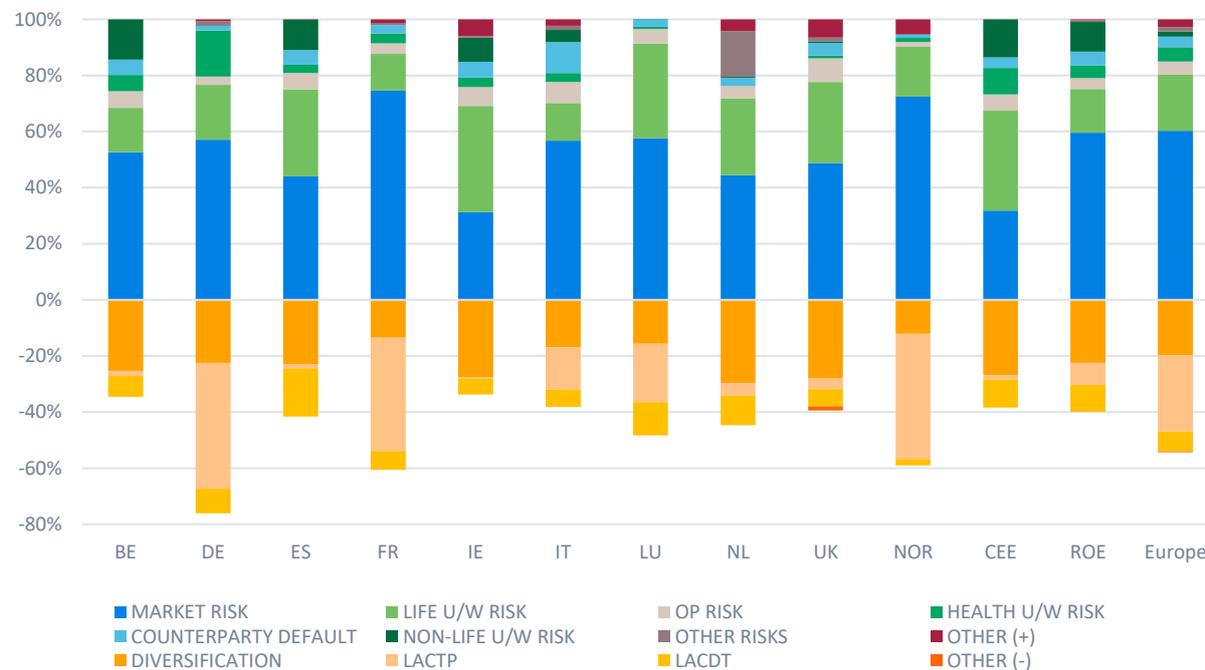
In general, the distributions are broadly similar, with the PIM and FIM companies having slightly tighter distributions and slightly lower median SCR coverage ratios than the Standard Formula companies. It is difficult to draw any inferences from this, but Figure 10 suggests that capital is more closely managed in companies with a PIM or even more so a FIM than in those using the Standard Formula. This may be because internal model companies are more likely to be part of large insurance groups and therefore may more actively manage their capital. This is consistent with what was seen with the previous SFCR results.

As in Figure 9, solvency coverage ratios in excess of 1,000% have been excluded from the chart. All eight companies in the sample with solvency coverage ratios in excess of 1,000% are classified as Standard Formula firms.

## Analysis of SCR

The chart in Figure 11 shows the breakdown of the SCR by risk module for companies across Europe as at year-end 2019, with the European average represented in the last bar on the chart, labelled as 'Europe.'

FIGURE 11: BREAKDOWN OF SCR BY COUNTRY<sup>6</sup>



**20%** The **LEVEL OF DIVERSIFICATION** between risk modules of the SCR across Europe (on average)

On average across the EU, market risk makes up the highest proportion of the undiversified SCR (60%) for life insurers. Life underwriting risk makes up the second-largest portion (20%). For Ireland, the highest proportion of the undiversified SCR is life underwriting risk (38%), while for all other regions shown it is market risk. Although a number of firms in Ireland have a larger proportion of life underwriting risk relative to market risk, one large internal model firm is skewing the average results towards life underwriting risk.

The remainder of the undiversified SCR is mostly made up of operational risk (5%), health underwriting risk (5%) and counterparty default risk (4%). Non-life underwriting risk, other risks (including intangible asset risk and underwriting risk which has not been specified as life, non-life or health) and other positive adjustments account for around 2%, 2% and 3%, respectively.

In other countries such as Spain, Ireland, Belgium and countries in the CEE and ROE categories,<sup>7</sup> some of the companies are reinsurers or composites, and as such it was difficult to define the distinction between life and non-life companies. These regions display a greater proportion of their SCRs held for non-life underwriting risk relative to other regions as a result.

<sup>6</sup> The amounts within this figure are as a percentage of the total of the capital requirement for each risk module, including operational risk (the undiversified SCR). Each element has been calculated as the sum across the companies within the region.

<sup>7</sup> In particular, there is a high proportion of non-life underwriting risk in our sample in Czechia, Croatia, Hungary, Romania, Slovenia and Slovakia in CEE and Austria, Greece and Portugal in ROE.

The diversification of risk results in a reduction of 20% of the undiversified SCR on average across Europe. This is diversification between the risk modules and not within the risk modules (which is not disclosed in the SFCRs for many companies). The amount of benefit varies widely by country, with diversification benefit highest where there is a wider spread of risk exposure. For example, the Netherlands has the highest diversification benefit, reflecting the fact that Dutch insurers have a wide range of risk exposures across market risk, life underwriting risk, health underwriting risk and non-life underwriting risk, resulting in a reduction of 30%. This is closely followed by the UK (28%), Ireland (28%), CEE (27%) and Belgium (25%).

In addition to diversification benefits, there are two additional adjustments available to companies post-diversification:

1. Loss-absorbing capacity of technical provisions (LACTP), which reflects the ability to reduce future discretionary benefits under stress scenarios
2. Loss-absorbing capacity of deferred tax (LACDT), which reflects the reduction in the future corporation tax payable under stress scenarios

The LACTP<sup>8</sup> and the LACDT result in further reductions of 27% and 7%, respectively. LACTP is largest in Norway<sup>9</sup> at 62% reduction, while LACDT is largest in Spain at 17%.

It is not surprising that many of the countries with high exposure to market risk are some of the countries with the largest portions of TPs in respect of 'Insurance With Profit Participation' (Germany, France and Italy). The investment guarantees associated with these contracts result in a high exposure to market risk. These countries also benefit from significant reductions as a proportion of the undiversified SCR reflecting the LACTP associated with 'Insurance With Profit Participation' business, including a 45% reduction for Germany, 40% for France and 15% for Italy.

Unfortunately, due to the nature of the public disclosure requirements for PIMs and FIMs, it is not straightforward to make a direct comparison with Standard Formula firms to analyse the SCR breakdown by risk type, as the risk exposures captured in the internal models vary by company. Where reasonable we have mapped the risks resulting from the PIMs and FIMs into the Standard Formula structure for comparison in Figure 11.

The breakdown of the SCR has not changed significantly since the previous set of SFCRs were published.

<sup>8</sup> Some companies reported their other risk modules after the risk-mitigation generated by their LACTP. Where this has happened, we have made an assumption that the LACTP is offsetting the market risk module and adjusted it to be pre-LACTP.

<sup>9</sup> Included within the NOR. The second highest LACTP is found in Denmark, which is also included in the NOR.

## Long-term guarantee measures

A number of European life insurers in our sample use long-term guarantee measures (LTGMs). The measures that are available to insurers and that are discussed in this report are:

- Matching adjustment (MA)
- Volatility adjustment (VA)
- Transitional measures on technical provisions (TMTP)

The chart in Figure 12 shows the breakdown of the SCR coverage ratio by the different LTGM and non-LTGM components (as at year-end 2019) for each of the regions analysed in this report. The total across all companies in our sample is also shown.

FIGURE 12: BREAKDOWN OF SCR COVERAGE RATIO BY LONG-TERM GUARANTEE MEASURE

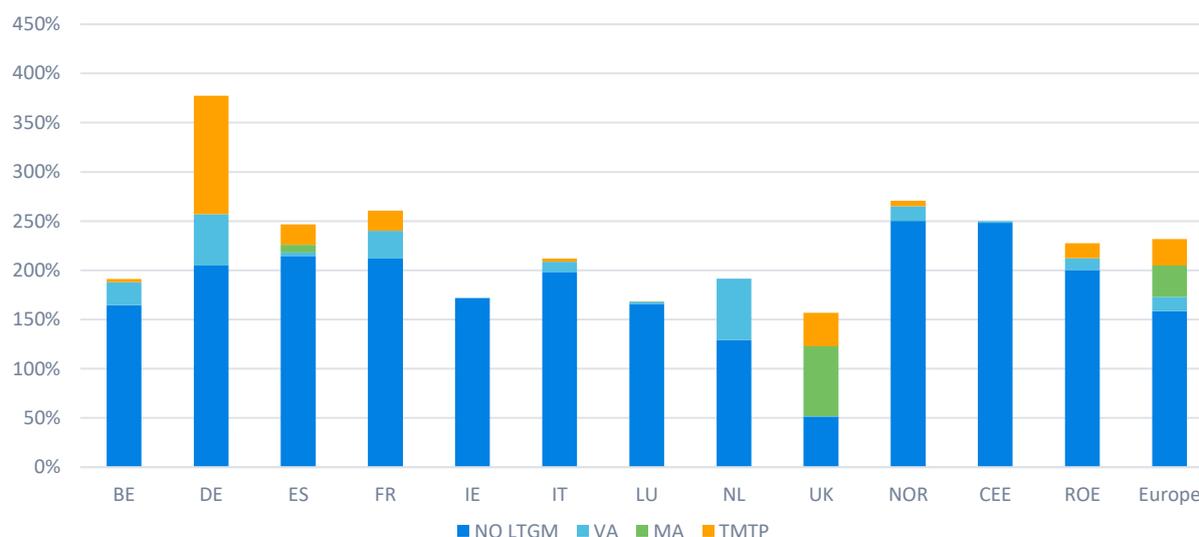


Figure 12 shows that different countries place different levels of reliance on the various LTGMs. The VA is the most widely used measure, affecting 21 of the 31 countries and one territory in our sample, including all of the largest markets we have shown in the chart. It has the largest impact in the Netherlands, where it increased the SCR coverage ratio by 62 percentage points on average. In general, usage of the VA is lower in countries where prior approval by the regulator is required, such as the UK and Ireland (increasing the SCR by less than one percentage point in each country). Approval is also required in Denmark; however, there is high VA usage there (contributing 29 percentage points of the SCR coverage ratio). There are also substantial VA impacts in Germany (52 percentage points), France (28 percentage points) and Belgium (23 percentage points). Higher take-up in countries such as Germany and the Netherlands could be due to the possibility of using the dynamic volatility adjustment (DVA). The DVA is currently not reported separately to the non-dynamic VA and as such has not been separated out in our analysis; however, separate reporting of the dynamic and non-dynamic VAs is under consideration as part of the Solvency II 2020 Review.

Over **50%** of German companies in our report apply the **TMTP**

The TMTP is being used in 12 of the countries, based on our sample. The SCR coverage ratio in Germany is 120 percentage points higher on average due to the use of the TMTP, the highest impact of any country in our sample. More than 50% of the German companies in our report apply the TMTP, with some showing very large benefits from its use. The other countries that receive the most significant increase from using the TMTP are the UK (34 percentage points), Portugal (32 percentage points), and Finland (25 percentage points).

The MA is the least frequently used LTGM, with visible impacts being seen by insurers in the UK and Spain (in Spain it is primarily used on legacy business). It contributes 71 percentage points to the UK and eight percentage points to Spain<sup>10</sup> (down from 53 percentage points in 2018) to each country's SCR coverage ratio based on the companies in our sample.

There are a number of countries where no companies use the LTGMs; Croatia, Cyprus, Estonia, Iceland, Latvia, Lithuania, Malta, Poland, Romania and Slovenia, as well as Gibraltar, based on the companies included in our sample. Meanwhile in Bulgaria, Czechia, Hungary, Ireland, Liechtenstein, Sweden and Slovakia, take up has been low, with only a small number of companies using the VA (contributing less than five percentage points to the solvency coverage ratio).

When comparing the results in this report to the previous SFCR reports, in general we see that there has been a decrease in the benefit received for using the LTGMs. These increases are likely due to the following:

- VA has decreased in many countries in line with a decrease in the VA rates. For example, the euro VA rates have decreased from 24 basis points (bps) to 7 bps and the Danish krone VA rates have increased from 45 bps to 20 bps over the year.
- MA has remained relatively similar over the year. In particular, in the UK market the MA benefit has remained reasonably similar despite an increase in credit spreads over the year.
- The TMTP benefits reduce by 1/16th as they run off; however, some of these have been impacted by recalculations of the measure, where required, leading to small increases in some jurisdictions.

## Conclusion

There has not been a significant amount of change in European life insurers' balance sheets relative to last year.

European life insurers continue to favour government and corporate bonds, on average, as investment categories, investing over 60% of their total assets (excluding index-linked and unit-linked assets) in these categories, on average.

The mix of life insurance business varies across Europe, with many markets (including Belgium, France, Germany and Italy) dominated by 'Insurance With Profit Participation' business, while the market in other countries (such as Ireland, Luxembourg and the UK) is predominantly in respect of 'IL and UL Insurance' business.

However, despite the different business mix, overall European life insurers had high levels of solvency cover relative to the minimum required capital based on the disclosures in the year-end 2019 SFCRs, with an average SCR coverage ratio of 232%. This represents an improvement on the year-end 2018 SFCRs, which had an average SCR coverage ratio of 226%.

Own funds are predominantly invested in tier 1 unrestricted own funds (91%), which is the highest form of capital in terms of quality and loss absorbency as defined under Solvency II.

For most countries, the largest constituent parts of their undiversified SCRs are market risk, with life underwriting risk being the second largest component. LACTP and diversification represent the largest reductions to the SCR.

The LTGMs are used to different extents in each country, with the VA the most widely used. However, in countries where the TMTP or the MA, or indeed both, are used, they often have much higher impacts on the SCR coverage ratio than the VA. The benefit from the LTGMs to the solvency coverage has decreased since year-end 2018.



The average European SCR coverage ratio has **IMPROVED** over the year **from 226% to 232%**

<sup>10</sup> This is a significant decrease from the 53 percentage points the MA added to Spanish companies in our analysis of life insurers' year-end 2018 SFCRs. This is primarily due to a larger number of Spanish companies being included in the year-end 2019 report, most of which do not apply the MA.



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](https://milliman.com)

**CONTACT**

**Neil Christy**  
[neil.christy@milliman.com](mailto:neil.christy@milliman.com)

**Stuart Reynolds**  
[stuart.reynolds@milliman.com](mailto:stuart.reynolds@milliman.com)

**Samuel Burgess**  
[samuel.burgess@milliman.com](mailto:samuel.burgess@milliman.com)