MILLIMAN REPORT

Analysis of insurers' Solvency and Financial Condition Reports

European health insurers

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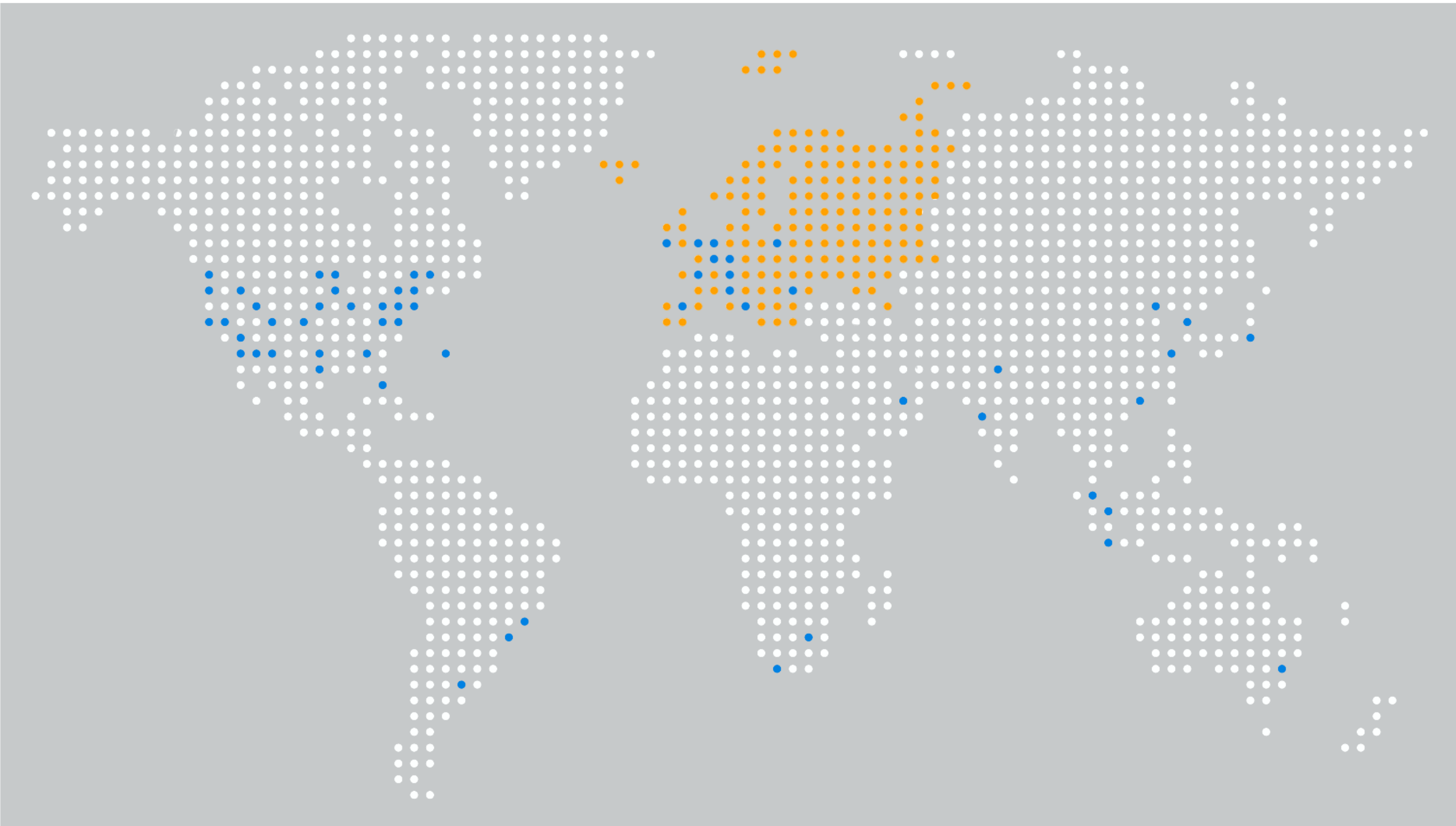

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Introduction

BACKGROUND

Under Solvency II, European insurers are required to publish their Solvency and Financial Condition Reports (SFCRs). Four sets of SFCRs have been published, with the first publication for most entities occurring in May 2017 and the most recent in May/June 2020.

The SFCRs contain a significant amount of information, including details of the company's performance over the reporting period, system of governance, risk profile, valuation basis and capital requirements. In addition, the SFCRs include several Quantitative Reporting Templates (QRTs) providing details of the company's financial position under Solvency II.

This analysis compares information provided in the QRTs and SFCRs and makes observations about the balance sheets and risk exposures of European health insurers.

HEALTHCARE SYSTEMS INCLUDED IN THIS ANALYSIS

Our focus is on health insurers with domestic business in the following countries:

- France
- Germany
- Ireland
- The Netherlands
- Spain
- United Kingdom

In addition, we have included European insurers selling international private medical insurance (IPMI) products.

The size of the private health insurance market varies considerably by territory, primarily due to government health policy in relation to public health coverage. In Appendix A, we describe the distinct healthcare system features of the included countries. The logic we have used to determine whether or not to include countries and companies within our analysis is described in the section below.

In the case of IPMI, the market focuses on private health insurance for expatriates. IPMI coverage provides beneficiaries with private health insurance outside of their home countries and is designed to provide seamless access to comprehensive international healthcare services on a regional or global basis. IPMI policies are typically purchased by employers for employees with long-term assignments out of their home countries. The benefits under such policies are generally comprehensive in nature and are not tied to a specific country or healthcare system. The premiums are risk-rated, and a key difference in coverage is whether treatments in the United States (US) are included or excluded.

COMPANIES INCLUDED IN THIS ANALYSIS

For this analysis, we include insurers that primarily sell private medical insurance (PMI). The selection criteria are defined as follows:

- We include companies classified as non-life or composite insurers and exclude those classified as life insurers. There is one exception to this as we have included SegurCaixa Adeslas, S.A. de Seguros y Reaseguros from Spain, which is classified as a life business in the Solvency II Wire Tool.[1] SegurCaxia is the largest PMI provider in Spain; therefore, it is appropriate that we included it in this report.
- We exclude UK insurers primarily selling health cash plan products.
- We include solo companies and remove group entities to avoid double-counting of companies. There are two exceptions to this, as we included two group entities in the Netherlands (Achmea Zorgverzekeringen N.V. and CZ Groep) and excluded its subsidiaries due to the double leverage effect being applied within these groups.
- To ensure that the figures we include in our analysis mostly relate to PMI business, we include companies that have at least 90% of their gross written premium (GWP) listed as 'medical' line of business (LOB). Hence, we exclude insurers that sell high volumes in other lines of businesses such as motor insurance or property and casualty insurance (e.g., Aviva in the UK) because it is not possible to isolate the capital

[1] Data extraction date: 27 July 2020. See the Solvency Wire Tool at https://solvencyiiwiredata.com.

charges for PMI based on the information included in the QRTs. This rule was applied as a first pass filter in order to remove a large portion of companies that are not predominantly health insurers. However, there are some exceptions to this rule. We reviewed each country individually and decided to include some companies that did not meet the 90% threshold, either because they have such a large presence in the market or they were very close to meeting the 90% threshold.

- We classify the following insurers as IPMI insurers due to the high volume of business in IPMI products: Cigna Life Insurance S.A., Aetna, Globality S.A., OOM Global Care N.V. and Allianz Worldwide Partners Health & Life.

UNDERLYING DATA

The analysis underlying this report focuses on the quantitative information contained in the public QRTs. The Solvency II Wire Tool, which contains comprehensive information from the QRTs, is used to produce the results included in this report.

Where relevant, we study the SFCRs to gain some additional insights into certain companies, in particular if they display characteristics that differ from the market average.

In carrying out our analysis and producing this research report, we rely on the data and information provided in the SFCRs and QRTs of our sample companies, as obtained from the Solvency II Wire Tool. 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 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.

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 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 the figures published in this report are converted into euros, by the Solvency II Wire Tool, using exchange rates as at each SFCR's report date.

IMPACT DUE TO COVID-19

In February/March 2020 the virus named SARS-CoV-2, commonly referred to as COVID-19, began to spread heavily in mainland Europe, and it reached a peak in several countries around the time of Solvency II reporting deadlines with local regulators. As a result of this, insurers were informed that the deadlines for their SFCRs had been extended by around eight weeks, and each insurer was tasked with calculating the impact on their SFCRs going forward.

Many insurers included a section on COVID-19 in each of their SFCRs. We have tried to summarise the insurers' COVID-19 comments below.

- In Ireland, most of the health insurers noted the uncertainty associated with the pandemic and that stress and scenario tests were being carried out to assess the potential impact to the company. At the end of March, the government entered into a deal with the private hospitals for a period of three months to increase hospital bed capacity during the first peak of the pandemic. This led to a significant fall-off in claims for the health insurers in Ireland over this three-month period and resulted in all three health insurers providing premium rebates to customers for the three months that the government takeover was in place.
- In Spain, generally companies commented that COVID-19 was a key risk they were monitoring, with expectations of a large fall in new business and an increase in expenses associated with business continuity plans. Mitigating plans included focusing on portfolio retention and specific analysis of COVID-19 in Own Risk and Solvency Assessments (ORSAs).

- In the United Kingdom, most insurers stated that they expected to experience lower claims in the short term, but potentially increased claims in the long term. This was due to the private hospital facilities being re-purposed as spare capacity for the National Health Service (NHS). During this period, elective surgeries and other treatments were postponed as the country prepared for a wave of patients utilising hospital beds. Insurers commented that there was potential for the costs of claims to increase in the long run, as the deferred cost of treating undiagnosed or untreated illnesses after delays in elective treatment could be higher.
- In the Netherlands, it is worth noting that the Dutch basic health insurers are protected against catastrophe risk via the government by means of article 33 of the Dutch Health Insurance Act: If the costs resulting from a pandemic (catastrophe) exceed a certain limit, an extra contribution will follow from the healthcare act. Moreover, the health insurers have agreed to share the financial burden amongst the insurers, as some (regional) insurers are more affected than others. Insurers therefore state their capital reserve level to be adequate to absorb any serious shock due to COVID-19. The main focus of the health insurers has been to ensure financial continuity for the healthcare providers throughout the pandemic, and ensuring that the healthcare infrastructure remains available after the crisis.

INFORMATION INCLUDED IN THIS ANALYSIS

- **Distribution of assets and liabilities (investment):** This section focuses on the main types of assets and liabilities of health insurers reporting under Solvency II. Given the importance of investments and technical provisions within the balance sheet, both items are analysed in greater detail.
- **Solvency Capital Requirement (SCR) breakdown:** This section focuses on the breakdown of the SCR for each company assessed in this analysis during 2019.
- **Market share:** This section focuses on the split of the market share for the companies included in this analysis.
- **Solvency coverage ratios:** We have included a list of all the companies included in the analysis in a table in Appendix B. The table shows the companies' SCRs, capital model types and countries.

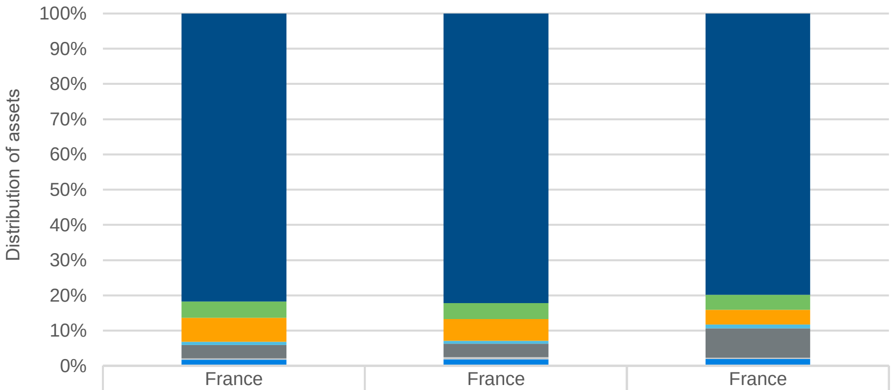
Country-specific analysis

1.1 FRANCE

1.1.1 Distribution of assets

Investments form the majority of total assets across most of the firms included in the analysis. The remaining assets are split in many different ways across each company. Reinsurance recoverables and receivables generally make up a very small proportion of the total assets. Loans and mortgages are rarely used, and most of the variation between firms comes from the split between other asset types and insurance receivables.

FIGURE 1: DISTRIBUTION OF ASSETS FOR FIRMS IN OUR PANEL FROM FRANCE

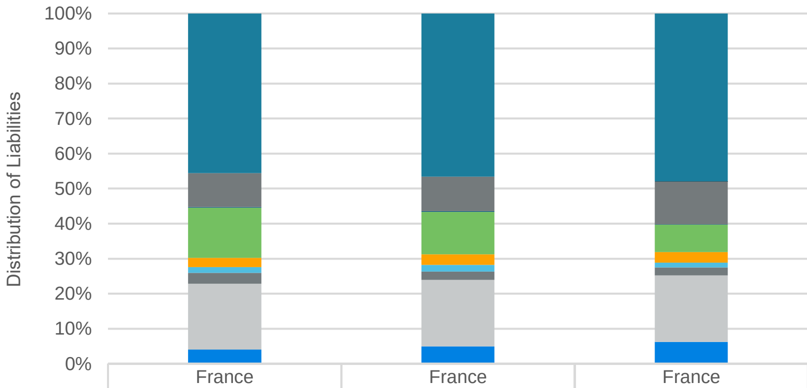


	France 2019	France 2018	France 2017
Investment	82%	82%	80%
Receivables [trade not insurance]	5%	4%	4%
Insurance and intermediary receivables	7%	6%	4%
Loans and mortgages	1%	1%	1%
Other asset types	4%	4%	8%
Reinsurance receivables	0%	1%	0%
Reinsurance recoverables	2%	2%	2%

1.1.2 Distribution of liabilities

For the majority of companies we review in France, the technical provisions for health make up the largest component of the liabilities on the balance sheet. However, we notice that this is not true for all, and companies such as MAAF Sante and Harmonie Mutuelle have a large proportion of their liabilities tied up in trade payables. For most companies, other liabilities was the second-largest component of the liabilities section on the balance sheet.

FIGURE 2: DISTRIBUTION OF LIABILITIES FOR FIRMS IN FRANCE

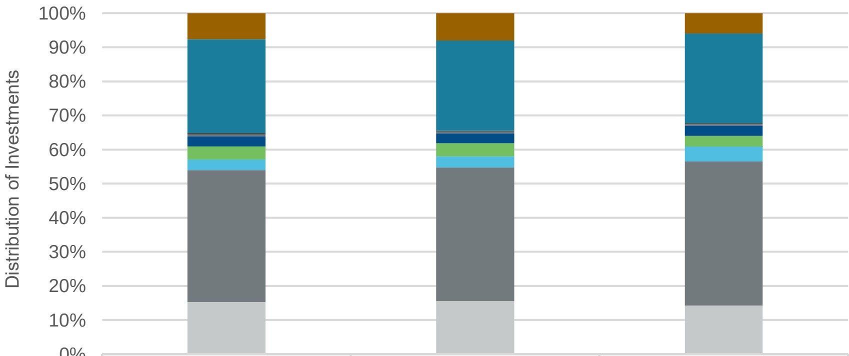


	France 2019	France 2018	France 2017
Technical provisions – health	46%	47%	48%
Technical provisions – index & unit linked	0%	0%	0%
Technical provisions – life	10%	10%	12%
Technical provisions - Non Life (excl. health)	0%	0%	0%
Other liabilities	14%	12%	8%
Subordinated liabilities	3%	3%	3%
Reinsurance payables	2%	2%	1%
Deposits from reinsurers	3%	2%	2%
Payables (trade, not insurance)	19%	19%	19%
Insurance & intermediaries payables	4%	5%	6%

1.1.3 Distribution of investments

France has the lowest proportion of investments attributed to bonds of any of the other countries we reviewed. Since 2017, the only change in investment strategy has been the slight reduction in collective investment undertakings from 2017 to 2018.

FIGURE 3: DISTRIBUTION OF INVESTMENTS IN FRANCE



	France 2019	France 2018	France 2017
Government bonds	8%	8%	6%
Corporate bonds	27%	26%	26%
Other bonds	1%	0%	0%
Property	0%	0%	0%
Equity	3%	3%	3%
Cash and cash equivalents	4%	4%	3%
Derivatives	0%	0%	0%
Deposits other than cash equivalents	3%	3%	4%
Collective investment undertakings	39%	39%	42%
Holdings in related undertakings	15%	16%	14%
Other investments	0%	0%	0%

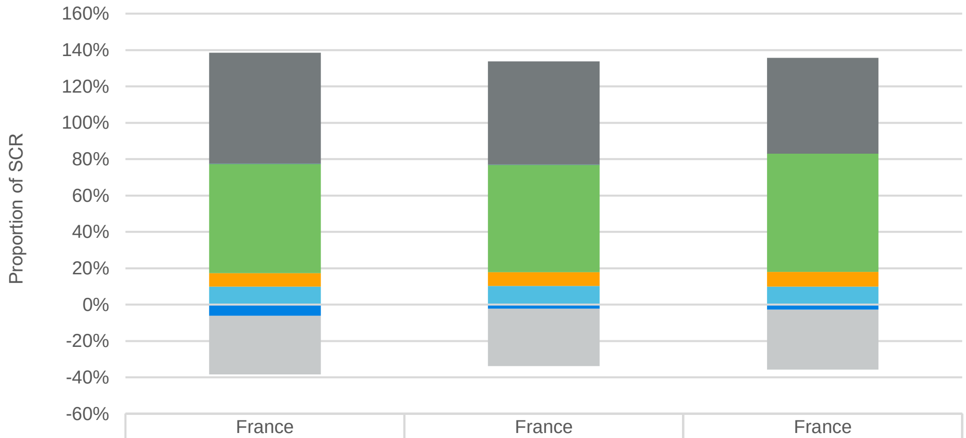
1.1.4 SCR breakdown

The SCR for the majority of health insurers consists of the capital charge for health underwriting risk, with market risk, operational risk and counterparty default risk also making up large proportions of the SCR. In Figure 4, everything above the zero line represents a capital charge, such as health underwriting risk, market risk and operational risk. Everything below the zero line represents a reduction to the SCR, e.g., for diversification benefits or the loss-absorbing capacity of deferred taxes.

We observe that health underwriting risk and market risk are usually the two highest proportions of the SCR. The French insurers have a large proportion of market risk because they have a high proportion of collective investment schemes and holdings in related undertakings.

Counterparty default risk is associated with multiple types of contracts such as reinsurance arrangements, securitisations and derivatives, receivables from intermediaries, policyholder debtors, cash at bank, deposits with ceding institutions, capital, initial funds and letters of credit. The insurers within the review usually have between 6% and 13% of the proportion of their SCRs in this type of risk.

FIGURE 4: SCR BREAKDOWN FOR FIRMS IN FRANCE

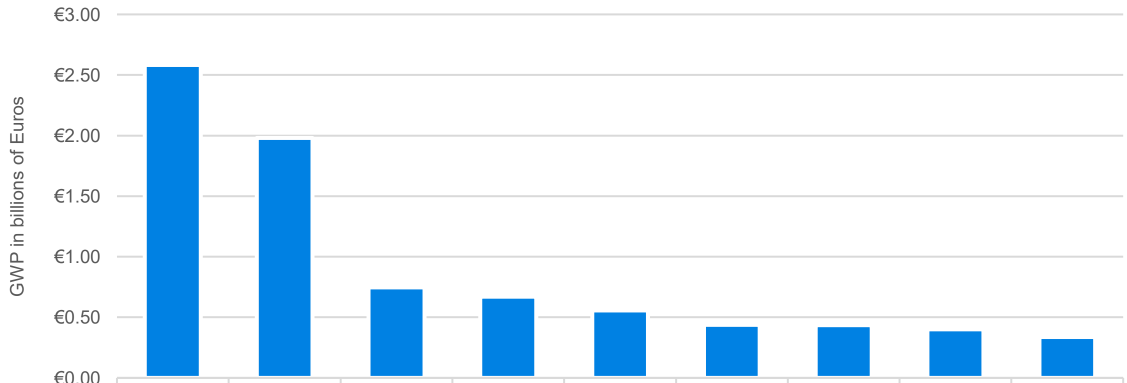


	France 2019	France 2018	France 2017
Health underwriting risk	61%	57%	53%
Non Life underwriting risk	0%	0%	0%
Market risk	60%	59%	65%
Counterparty default risk	7%	7%	8%
Operational risk	10%	10%	10%
Intangible asset risk	0%	0%	0%
Diversification	-32%	-32%	-33%
Loss absorbing - Deferred taxes	-6%	-2%	-3%

1.1.5 Market share

In France, a large share of the health market (in terms of premiums) is represented by the Groupe VYV, AXA France, Groupama, AESIO Group and AG2R La Mondiale. However, given that this report aims at focusing on entities whose business is mostly health, AXA France, Groupama and AG2R La Mondiale were not included in our review. Hence, the retained panel is dominated by Harmonie Mutuelle and Mutuelle MGEN, which are part of the Groupe VYV, as they compose of around 56% of the total GWP from the list of companies we assessed, while the three mutuals of AESIO Group (Eovi-Mcd, Adrea Mutuelle and Apreva Mutuelle) represent around 22%. We have excluded a large number of firms that meet the criterion of '>=90% GWP in medical business,' due to their having smaller proportions of the total market.

FIGURE 5: GROSS WRITTEN PREMIUMS BY PMI PROVIDERS IN FRANCE, 2019



	Harmonie Mutuelle	Mutuelle MGEN	Eovi-mcd	Adrea Mutuelle	ViaSanté Mutuelle	Malakoff Médéric Mutuelle	MAAF Sante	Macif Mutualité	Apréva mutuelle
GWP in 2019	€2.58	€1.98	€0.75	€0.67	€0.56	€0.44	€0.43	€0.40	€0.34

1.2 GERMANY

A special feature of German private health insurance is the distinction between similar to life techniques (SLT) and non-SLT (NSLT)[2] business. SLT business accounts for about 98% of the total health insurance business, by medical GWP, and includes all long-term contracts which cannot be cancelled by the insurer and that have a premium adjustment option. This premium adjustment is not considered a contract boundary under Solvency II because it requires external approval by an independent trustee. Therefore, these contracts involve the typical risks that can also be observed in life insurance, i.e., market risks and underwriting risks from lapses and mortality as well as from future claims development. As a rule, only short-term foreign travel health insurance policies are considered under NSLT. Stress scenarios for non-life policies apply to these contracts.

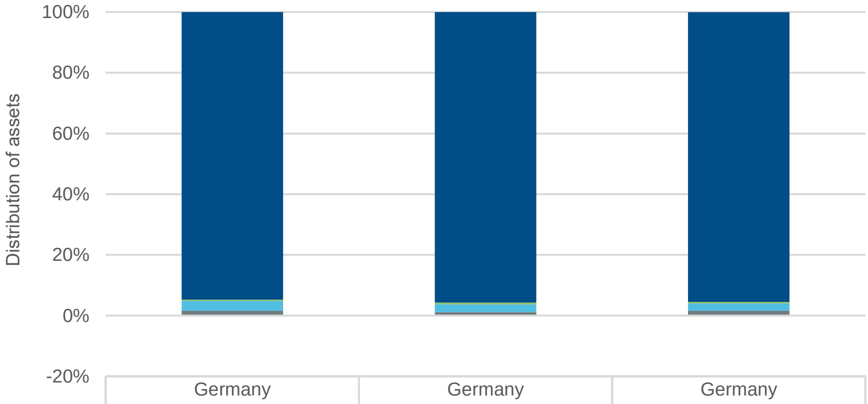
Another special feature of the German market is that those companies that are subsidiaries of the larger insurance groups Allianz, Generali, AXA and ERGO use (partial) internal models for risk assessment. This is accompanied by different stress scenarios and a different method of measuring technical provisions. While the majority of health insurers use the inflation-neutral valuation method, the standard procedure of the German Association of Private Health Insurers, the users of internal models use their own projection models, which can lead to considerable variations in technical provisions.

1.2.1 Distribution of assets

In Germany, the majority of assets (over 90%) are in investments. The underlying firms appear to distribute their assets according to two major strategies. The first type of strategy (e.g., Allianz Private Krankenverisicherungs-AG) splits assets into investments, loans and mortgages, and other asset types, with around 85% to 90% of the split attributed to investments. The second type of strategy (e.g., Union Krankenverischerung AG) seems to allocate between 98% and 100% of assets into investments. Loans and mortgages are more commonly used in Germany than in France or the United Kingdom.

[2] Solvency II defines an 'SLT health' contract as one that is deemed to be written on a similar technical basis as a life insurance contract (i.e., long-term business). A 'Non-SLT health' contract is one that is similar to non-life insurance (i.e., short-term business)

FIGURE 6: DISTRIBUTION OF ASSETS FOR FIRMS IN GERMANY

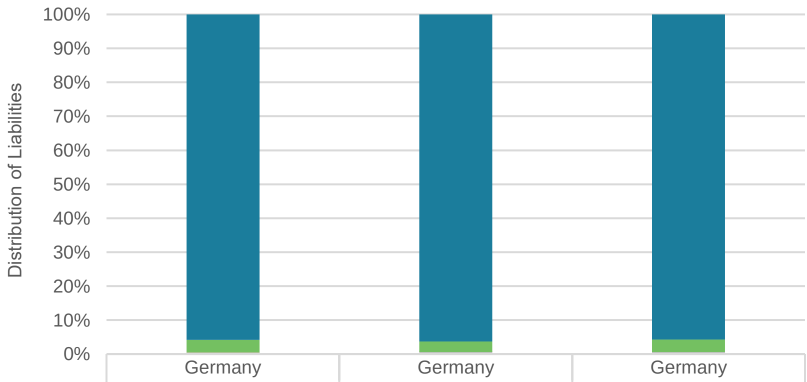


	Germany 2019	Germany 2018	Germany 2017
Investment	95%	96%	95%
Receivables [trade not insurance]	0%	0%	0%
Insurance and intermediary receivables	0%	0%	0%
Loans and mortgages	3%	3%	2%
Other asset types	2%	1%	2%
Reinsurance receivables	0%	0%	0%
Reinsurance recoverables	0%	0%	0%

1.2.2 Distribution of liabilities

All of the major health insurers have significant proportions of their liabilities held in health technical provisions. Only a few companies with significant proportions of NSLT business have smaller percentages of technical provisions on their balance sheets. Other liabilities tend to make up the remainder of the proportion for all of the insurers.

FIGURE 7: DISTRIBUTION OF LIABILITIES FOR FIRMS IN GERMANY

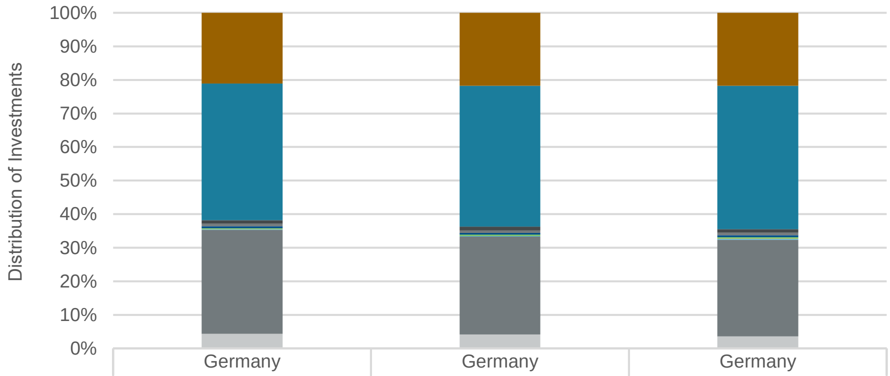


	Germany 2019	Germany 2018	Germany 2017
Technical provisions – health	96%	96%	96%
Technical provisions – index & unit linked	0%	0%	0%
Technical provisions – life	0%	0%	0%
Technical provisions - Non Life (excl. health)	0%	0%	0%
Other liabilities	4%	3%	4%
Subordinated liabilities	0%	0%	0%
Reinsurance payables	0%	0%	0%
Deposits from reinsurers	0%	0%	0%
Payables (trade, not insurance)	0%	0%	0%
Insurance & intermediaries payables	0%	0%	0%

1.2.3 Distribution of investments

Around 63% of total investments are attributed to government, corporate and other bonds, with collective investment undertakings making up the majority of the remainder of investments. The distribution of investments has remained broadly consistent over the past three years.

FIGURE 8: DISTRIBUTION OF INVESTMENTS IN GERMANY



	Germany 2019	Germany 2018	Germany 2017
Government bonds	21%	22%	22%
Corporate bonds	41%	42%	43%
Other bonds	1%	1%	1%
Property	1%	1%	1%
Equity	1%	0%	1%
Cash and cash equivalents	0%	0%	0%
Derivatives	0%	0%	0%
Deposits other than cash equivalents	0%	0%	0%
Collective investment undertakings	31%	29%	29%
Holdings in related undertakings	4%	4%	4%
Other investments	0%	0%	0%

1.2.4 SCR breakdown

The SCR for the majority of health insurers who use the standard formula consists of the capital charge for market risk and health underwriting risk, with operational risk and counterparty default risk also making up some proportions of the SCR. In Figures 9 and 10, everything above the line represents a capital charge, such as health underwriting risk, market risk and operational risk. Everything below the line represents a reduction to the SCR, e.g., for diversification benefits or the loss-absorbing capacity of deferred taxes.

Market risk is very dominant for German private health insurers because, under the SLT calculation principles, insurers must build up long-term aging reserves using an actuarial interest rate. This actuarial interest rate is not guaranteed for the whole coverage period, but only until the next premium adjustment. Therefore, large investment portfolios are built up and there is significant interest risk until the next premium adjustment when the interest rate can be altered.

As in any market, health underwriting risk is significant; however, the long-term nature of the risk under the SLT calculation principles is mitigated by the ability to adjust premiums.

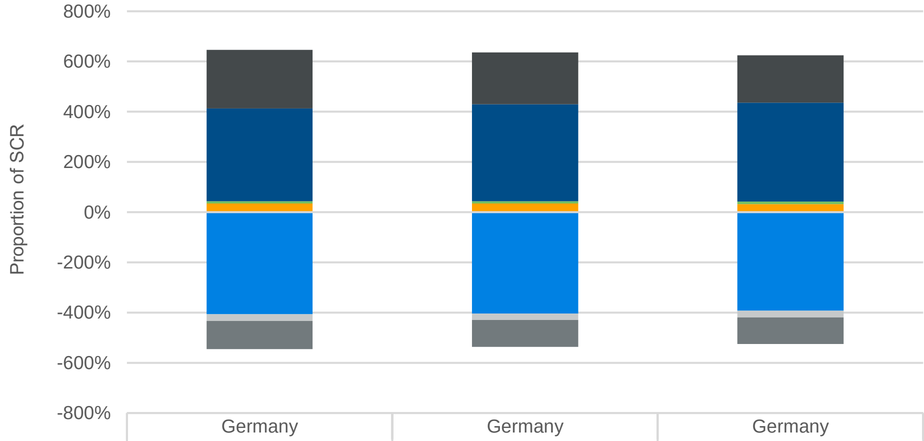
Counterparty default risk is associated with multiple types of contracts such as reinsurance arrangements, securitisations and derivatives, receivables from intermediaries, policyholder debtors, cash at bank, deposits with ceding institutions, capital, initial funds and letters of credit. All of the insurers have low exposures to counterparty default risk.

The companies with (partial) internal models have partly different risk categories from the standard formula, and therefore no direct comparison between users of the standard formula and users of internal models is possible. We have split them out in two different charts in Figures 9 and 10. But also, a comparison among users of internal models themselves is not possible because of their different reporting standards in the SFCRs.

Therefore, in Figure 10 we only show the SCR as a whole and the diversification and loss-absorbing capacity effects.

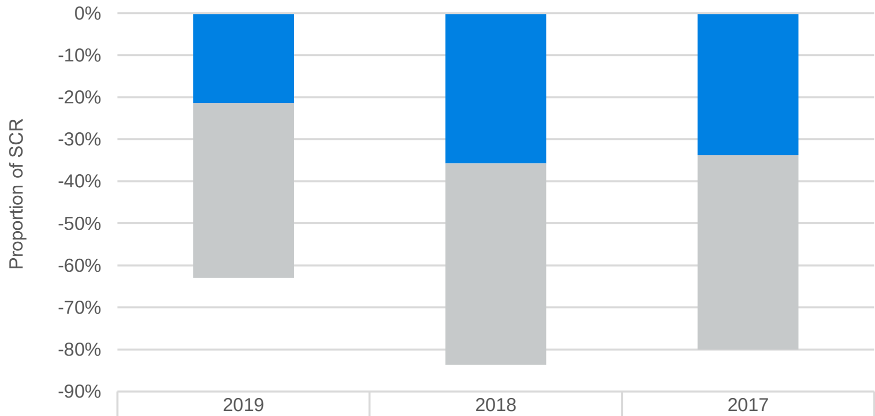
Finally, there is a statutory profit participation scheme that is applicable to private health insurers in Germany. In stressed scenarios, the surpluses are reduced compared to the basic scenario and thus also the profit participation. As a result, the adjustment of profit participation in stress scenarios results in a risk reduction. In addition to the loss-absorbing capacity of deferred taxes (LACDT), this effect is also included in the standard formula of the SCR as the loss-absorbing capacity of the technical provision (LACTP).

FIGURE 9: SCR BREAKDOWN FOR FIRMS IN GERMANY, STANDARD FORMULA



	Germany 2019	Germany 2018	Germany 2017
Health underwriting risk	233%	207%	188%
Non Life underwriting risk	0%	0%	0%
Market risk	369%	386%	394%
Counterparty default risk	9%	9%	10%
Operational risk	35%	34%	32%
Intangible asset risk	0%	0%	0%
Diversification	-113%	-107%	-105%
Loss absorbing - Deferred taxes	-27%	-25%	-27%
Loss absorbing - technical provisions	-406%	-404%	-393%

FIGURE 10: SCR BREAKDOWN FOR FIRMS IN GERMANY, INTERNAL MODELS

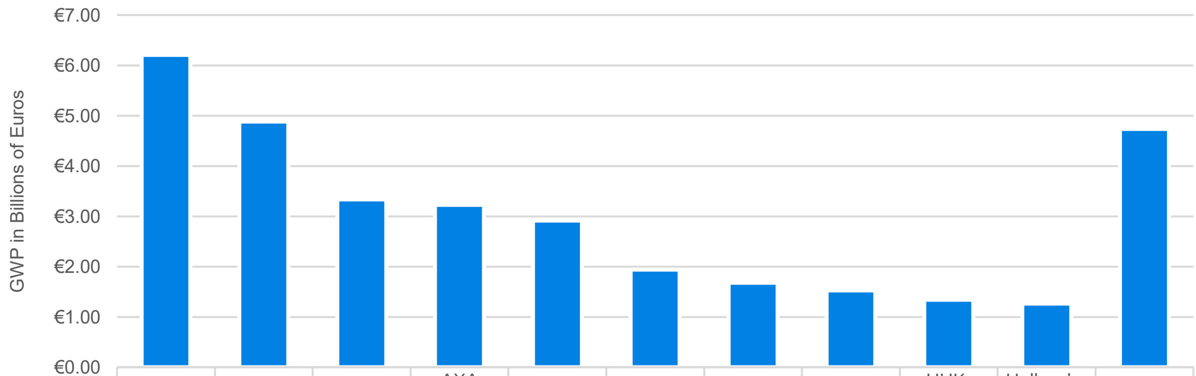


	2019	2018	2017
Diversification Total	-42%	-48%	-46%
Loss absorbing capacity of deferred taxes	-21%	-36%	-34%

1.2.5 Market share

Of the companies we assessed in this report, the two with the largest share of the market are Debeka Krankenversicherungsverein AG and DKV AG, with €6,200 million and €4,900 million, respectively. Our analysis covered 24 private health insurance companies with an overall GWP of €33,900 million.

FIGURE 11: GROSS WRITTEN PREMIUMS BY PMI PROVIDERS IN GERMANY, 2019



	Debeka Krankenversicherungsverein a.G.	DKV Deutsche Krankenversicherung AG	Allianz Private Krankenversicherungs-AG	AXA Krankenversicherung Aktiengesellschaft	SIGNAL IDUNA Krankenversicherung a. G.	Central Krankenversicherung AG	Continentale Krankenversicherung a.G.	Bayerische Beamtenkrankenkasse AG	HUK-COBURG - Krankenversicherung AG	Hallesche Krankenversicherung auf Gegenseitigkeit	Other companies included in analysis
GWP in 2019	€6.20	€4.88	€3.33	€3.22	€2.91	€1.94	€1.68	€1.52	€1.34	€1.26	€4.74

1.3 IRELAND

Our focus on health insurers writing business in Ireland includes the following companies:

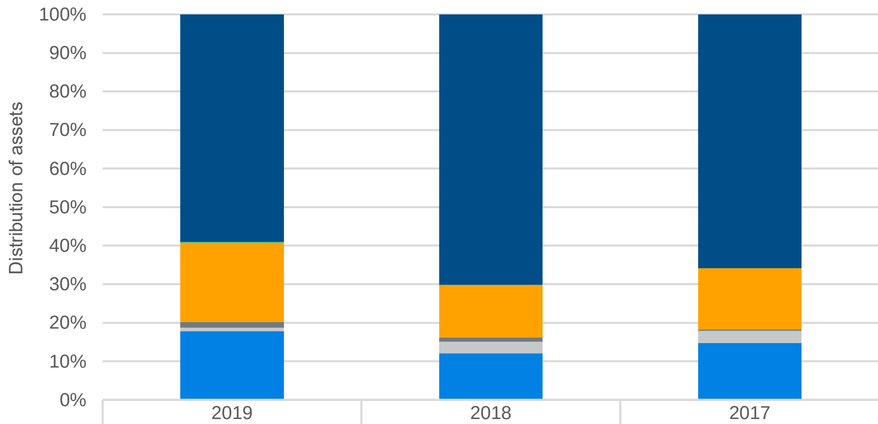
- Elips Versicherungen AG, trading as Laya Healthcare
- Irish Life Health
- Vhi Healthcare

It should be noted that Elips Versicherungen AG, trading as Laya Healthcare, is authorised by the Financial Market Authority in Liechtenstein. The company sells insurance in Switzerland (accident insurance and sickness daily allowance) and in Ireland (medical health insurance). The majority of Laya Healthcare's business is medical expense insurance sold in Ireland (over 80% of GWP in 2019), so it has been included in our analysis of Irish health insurers, despite having a broader mix of business than Irish Life Health or Vhi Healthcare.

1.3.1 Distribution of assets

For the Irish health insurers, the majority of assets is invested in financial investments (bonds, equity, cash, cash equivalents, etc.). This accounted for about 60% of investments at year-end 2019. The amount of reinsurance recoverables has increased at year-end 2019 relative to other years, in addition to an increase in insurance and intermediary receivables.

FIGURE 12: DISTRIBUTION OF ASSETS FOR IRISH HEALTH INSURERS

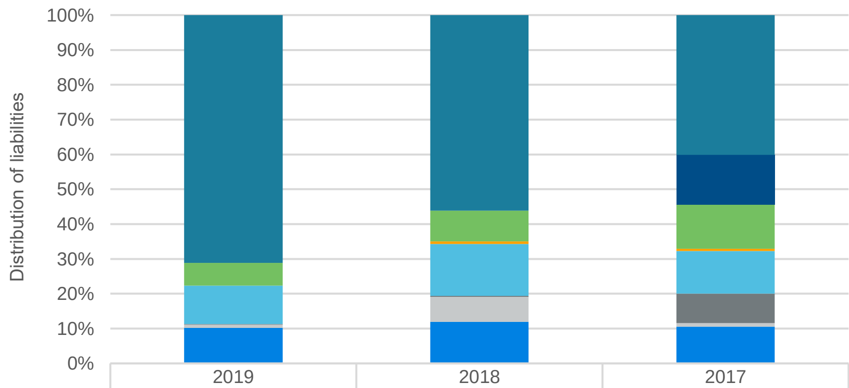


	2019	2018	2017
Investment	59%	70%	66%
Receivables [trade not insurance]	0%	0%	0%
Insurance and intermediary receivables	20%	14%	16%
Loans and mortgages	0%	0%	0%
Other asset types	1%	1%	0%
Reinsurance receivables	1%	3%	3%
Reinsurance recoverables	18%	12%	15%

1.3.2 Distribution of liabilities

Technical provisions for health insurance make up the majority of liabilities for the Irish health insurers. This includes health insurance categorised as both SLT and NSLT. At year-end 2019, health insurance technical provisions made up approximately 70% of total liabilities, with the remainder consisting primarily of reinsurance payables (11%) and insurance and intermediary payables (10%).

FIGURE 13: DISTRIBUTION OF LIABILITIES FOR IRISH HEALTH INSURERS

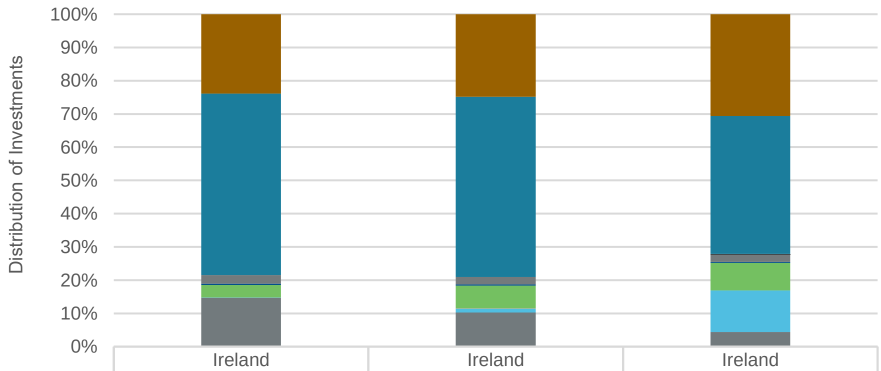


	2019	2018	2017
Technical provisions – health	71%	56%	40%
Technical provisions – index & unit linked	0%	0%	0%
Technical provisions – life	0%	0%	0%
Technical provisions - Non Life (excl. health)	0%	0%	14%
Other liabilities	7%	9%	13%
Subordinated liabilities	0%	1%	1%
Reinsurance payables	11%	15%	12%
Deposits from reinsurers	0%	0%	8%
Payables (trade, not insurance)	1%	7%	1%
Insurance & intermediaries payables	10%	12%	11%

1.3.3 Distribution of investments

Analysis of investment by asset classes shows the change in distribution since 2017. Overall, at a total level, the split of investments is broadly similar for the last three years. However, there has been a notable increase in investment in corporate bonds and collective investments at the expense of government bonds and cash.

FIGURE 14: DISTRIBUTION OF INVESTMENTS IN IRELAND



	Ireland 2019	Ireland 2018	Ireland 2017
Government bonds	24%	25%	31%
Corporate bonds	55%	54%	41%
Other bonds	0%	0%	0%
Property	3%	2%	2%
Equity	0%	0%	0%
Cash and cash equivalents	4%	7%	8%
Derivatives	0%	0%	0%
Deposits other than cash equivalents	0%	1%	13%
Collective investment undertakings	15%	10%	4%
Holdings in related undertakings	0%	0%	0%
Other investments	0%	0%	0%

1.3.4 SCR breakdown

The SCR for health insurers primarily consists of the capital charge for health underwriting risk, with market risk, operational risk and counterparty default risk also making up large portions of the SCR.

In Figure 15, everything above the line represents a capital charge such as health underwriting risk, market risk or operational risk. Everything below the line represents a reduction to the SCR, e.g., for diversification benefits or the loss-absorbing capacity of deferred tax. The loss-absorbing capacity of technical provisions is not relevant for health insurance and therefore has no impact on the SCR.

We observe that the breakdown of SCR by risk type is broadly consistent in the last three years.

FIGURE 15: SCR BREAKDOWN FOR IRISH FIRMS

	Ireland 2019	Ireland 2018	Ireland 2017
Health underwriting risk	80%	82%	85%
Non Life underwriting risk	0%	0%	0%
Market risk	17%	15%	9%
Counterparty default risk	8%	8%	13%
Operational risk	16%	17%	17%
Intangible asset risk	0%	0%	0%
Diversification	-16%	-15%	-14%
Loss absorbing - Deferred taxes	-4%	-6%	-9%

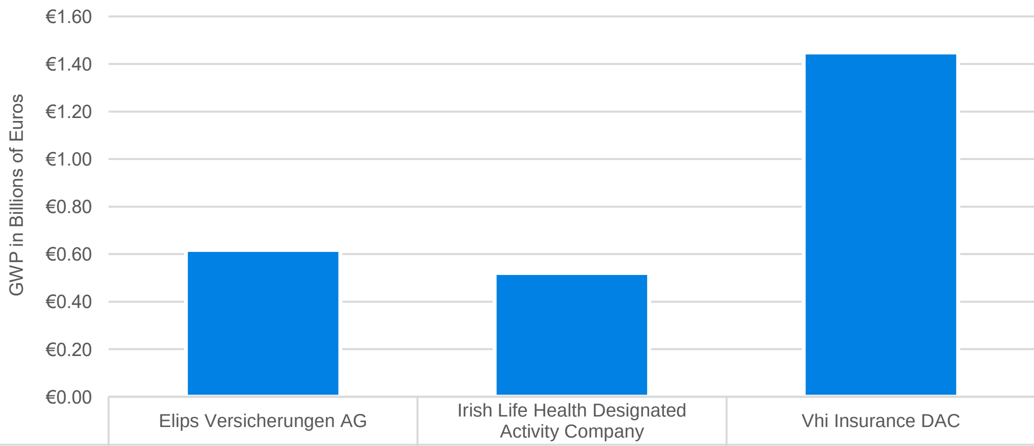
Market risk has increased as a proportion of the SCR since 2017, perhaps as a result of increased investment in corporate bonds and collective investments, which have higher capital charges than government bonds.

Counterparty default risk has reduced since 2017 due to reduced reinsurance cover (Vhi).

1.3.5 Market share

The health insurance market in Ireland is dominated by Vhi, with Irish Life Health and Laya Healthcare splitting the remainder. It is worth noting that the take-up of private medical insurance in Ireland is voluntary.

FIGURE 16: GROSS WRITTEN PREMIUMS BY PMI PROVIDERS IN IRELAND, 2019



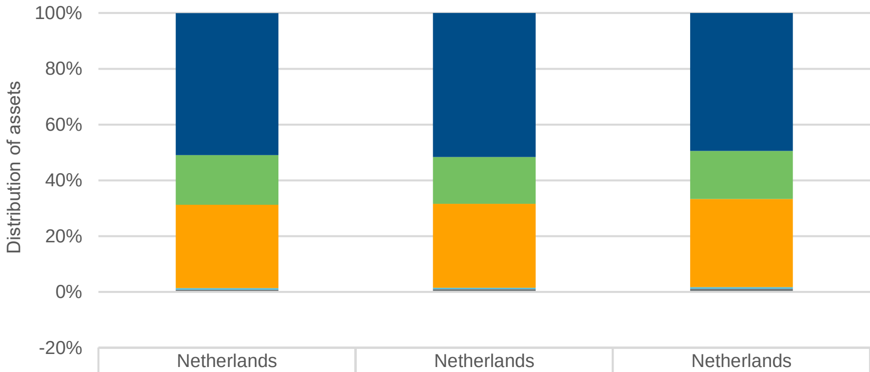
	Elips Versicherungen AG	Irish Life Health Designated Activity Company	Vhi Insurance DAC
GWP in 2019	€0.62	€0.52	€1.45

1.4 NETHERLANDS

1.4.1 Distribution of assets

In comparison to all of the other countries, the Netherlands has the lowest proportion of assets attributed to investments. All of the top 10 companies, ranked by medical GWP, held a proportion of assets in investments of between 43% and 72%. Of these top 10 companies, ranked by medical GWP, eight held large proportions (greater than 28%) of assets in insurance receivables, as this is linked to the risk equalisation health insurance fund for basic health insurers. The remaining two corporations, CZ Groep and OWN DSW Zorgverzekeraar U.A, held material proportions of assets in trade receivables instead. None of the insurers we reviewed for this analysis used any form of reinsurance.

FIGURE 17: DISTRIBUTION OF ASSETS FOR FIRMS BASED IN THE NETHERLANDS

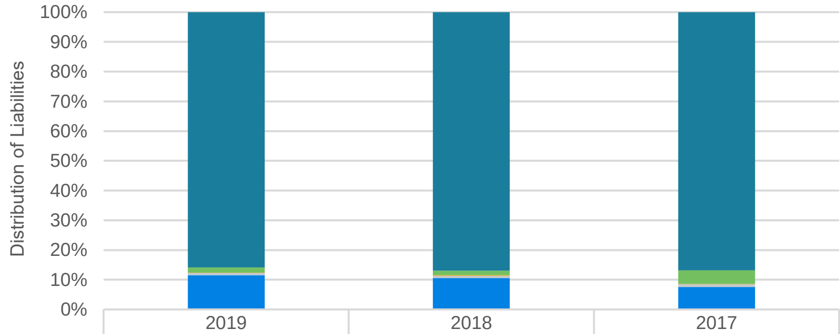


	Netherlands 2019	Netherlands 2018	Netherlands 2017
Investment	51%	52%	50%
Receivables [trade not insurance]	18%	17%	17%
Insurance and intermediary receivables	30%	30%	32%
Loans and mortgages	0%	0%	1%
Other asset types	1%	1%	1%
Reinsurance receivables	0%	0%	0%
Reinsurance recoverables	0%	0%	0%

1.4.2 Distribution of liabilities

Technical provisions make up the largest liability on most of the insurers' balance sheets. As expected, health provisions is the dominant line of business in terms of technical provisions across the different companies. Most companies have the rest of their liabilities attributed to trade and insurance payables. The year-on-year change from 2017 to 2019 across all insurers has seen a rise in insurance payables, from 8% to 12%, mainly due to a decrease in other liabilities.

FIGURE 18: DISTRIBUTION OF LIABILITIES FOR FIRMS BASED IN THE NETHERLANDS

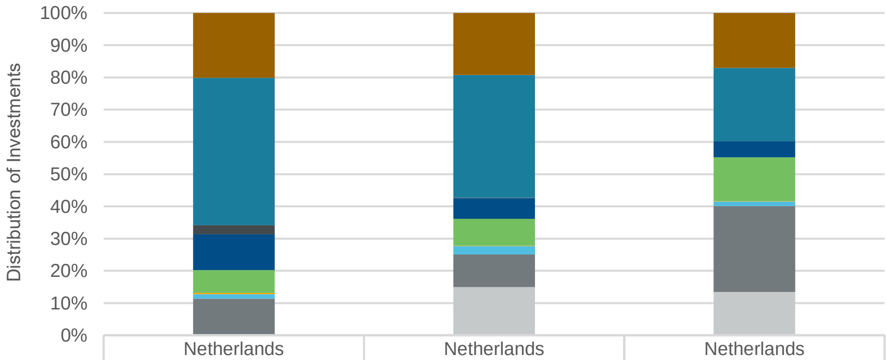


	2019	2018	2017
Technical provisions – health	86%	87%	87%
Technical provisions – index & unit linked	0%	0%	0%
Technical provisions – life	0%	0%	0%
Technical provisions - Non Life (excl. health)	0%	0%	0%
Other liabilities	2%	1%	5%
Subordinated liabilities	0%	0%	0%
Reinsurance payables	0%	0%	0%
Deposits from reinsurers	0%	0%	0%
Payables (trade, not insurance)	1%	1%	1%
Insurance & intermediaries payables	12%	11%	8%

1.4.3 Distribution of investments

Around 69% of the total investments are attributed to bonds in 2019; this has increased from 57% and 49% in 2018 and 2017, respectively, due to increases in corporate bonds and other bonds. Insurers have also increased their exposures to equity, while reducing their exposures to cash and holdings in related undertakings. The exposure to holdings in related undertakings was primarily only for Achmea Zorgverzekeringen NV.

FIGURE 19: DISTRIBUTION OF INVESTMENTS IN THE NETHERLANDS



	Netherlands 2019	Netherlands 2018	Netherlands 2017
Government bonds	20%	19%	17%
Corporate bonds	46%	38%	23%
Other bonds	3%	0%	0%
Property	0%	0%	0%
Equity	11%	6%	5%
Cash and cash equivalents	7%	8%	14%
Derivatives	0%	0%	0%
Deposits other than cash equivalents	1%	3%	1%
Collective investment undertakings	11%	10%	27%
Holdings in related undertakings	0%	15%	13%
Other investments	0%	0%	0%

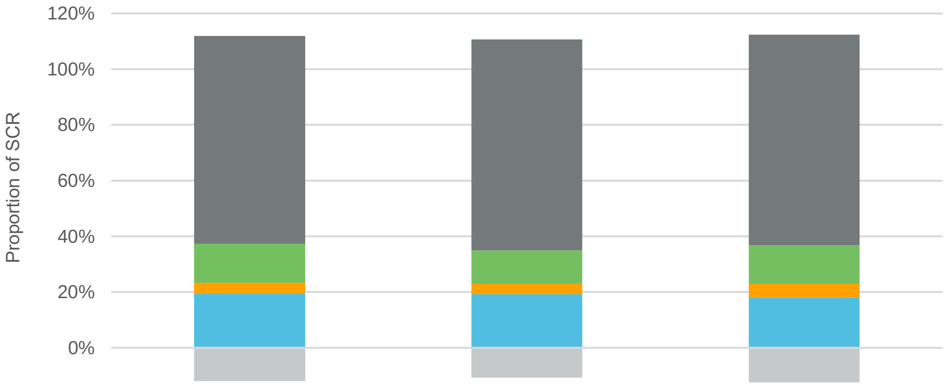
1.4.4 SCR breakdown

The SCR for the majority of health insurers consists of the capital charge for health underwriting risk, with operational risk, market risk and counterparty default risk also making up large proportions of the SCR. In Figure 20, everything above the line represents a capital charge, such as health underwriting risk, market risk and operational risk. Everything below the line represents a reduction to the SCR, e.g., for diversification benefits or the loss-absorbing capacity of deferred taxes.

We observe that health underwriting risk and operational risk are usually the two highest proportions of the SCR.

All the insurers generally have low exposures to counterparty default risk, and for most companies, operational risk forms a significant proportion of total SCR. In the Netherlands, operational risk is capped at 20%, because operational risk is proportional to premium volume, including the risk equalisation contribution in addition to the commercial premium.

FIGURE 20: SCR BREAKDOWN FOR FIRMS IN THE NETHERLANDS



	Netherlands 2019	Netherlands 2018	Netherlands 2017
Health underwriting risk	75%	76%	76%
Non Life underwriting risk	0%	0%	0%
Market risk	14%	12%	14%
Counterparty default risk	4%	4%	5%
Operational risk	20%	19%	18%
Intangible asset risk	0%	0%	0%
Diversification	-12%	-11%	-12%
Loss absorbing - Deferred taxes	0%	0%	0%

1.4.5 Market share

This year we have included 16 Dutch insurers in the analysis. Three entities were not included due to missing data in the Solvency II Wire Tool. Due to double leverage[3] being applied within Achmea and CZ Groep, we have included the consolidated group figures for these companies and not the underlying solo entities. Additionally, a merger has taken place between VGZ Zorgverzekeraar N.V. and VGZ Voor de Zorg N.V., resulting in the removal of VGZ Voor de Zorg N.V.

The top 10 of these insurers account for 97% of the total market. Achmea Zorgverzekeringen N.V., (consolidated) (30%), and CZ Groep (22%) held 52% of the market from the companies included in this analysis.

[3] Insurance companies use double leverage when debt is issued by a parent company and the proceeds are then invested in subsidiaries as equity. Assessments of an insurer's capital adequacy are confounded by the occurrence of double leverage because it obscures actual risk exposure. Financial authorities have frequently raised concerns about the issue of double leverage because of this type of intra-firm financing.

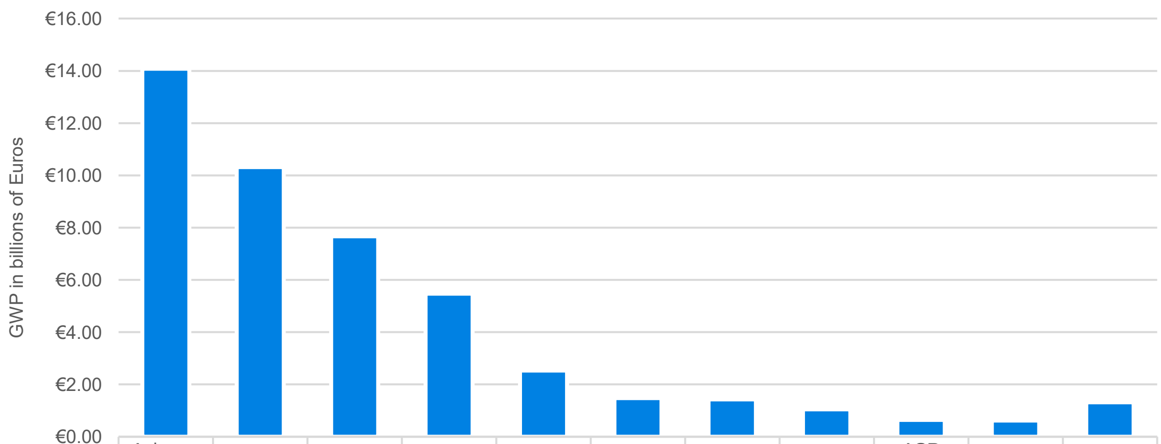
The parent organisation for Achmea Zorgverzekeringen N.V., (Consolidated) includes the following associates or subsidiaries:

- Achmea Zorgverzekeringen N.V. (solo)
- FBTO Zorgverzekeringen N.V.
- De Friesland Zorgverzekeraar N.V.
- Interpolis Zorgverzekeringen N.V.
- Zilveren Kruis Zorgverzekeringen N.V

The parent organisation for CZ Groep includes the following associates/subsidiaries:

- Centrale Ziektekostenverzekering NZV N.V. (formerly Delta Lloyd Zorgverzekering N.V.)
- OHRA Ziektekostenverzekeringen N.V.
- CZ Zorgverzekeringen NV (No longer offering health insurance as of 2020)
- OWM CZ Groep Aanvullende verzekering Zorgverzekeraar U.A.
- OWM CZ Groep Zorgverzekeraar U.A.

FIGURE 21: GROSS WRITTEN PREMIUMS BY PMI PROVIDERS IN THE NETHERLANDS, 2019



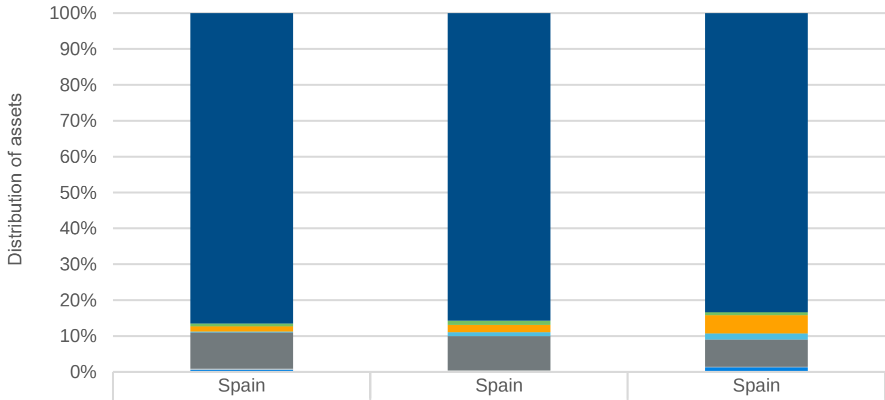
	Achmea Zorgverzekeringen N.V. (Consolidated)	CZ groep	VGZ Zorgverzekeraar N.V.	Menzis Zorgverzekeraar N.V.	Univé Zorg, N.V.	OWM DSW Zorgverzekeraar U.A.	IZA Zorgverzekeraar N.V.	ONVZ Ziektekostenverzekeraar N.V.	ASR Basis Ziektekostenverzekeringen N.V.	AnderZorg N.V.	Other companies included in report
Series1	€14.08	€10.31	€7.67	€5.47	€2.54	€1.48	€1.42	€1.05	€0.64	€0.62	€1.32

1.5 SPAIN

1.5.1 Distribution of assets

Investments form the majority of total assets for most of the health insurers that we included in our analysis for Spain. Most of the insurers tend to choose other asset types as the second-best alternative to distribute their assets. Igualatorio Médico Quirúrgico y de Especialidades de Navarra, S.A. is an outlier, as it has 14% of its assets in reinsurance receivables and 14% in loans and mortgages. All of the other insurers we included in our review have less than 1% attributed to each of these categories.

FIGURE 22: DISTRIBUTION OF ASSETS FOR FIRMS BASED IN SPAIN



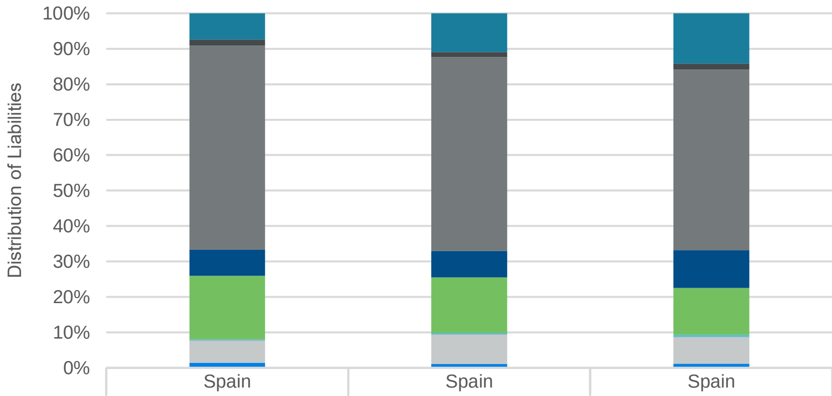
	Spain 2019	Spain 2018	Spain 2017
Investment	87%	86%	83%
Receivables [trade not insurance]	1%	1%	1%
Insurance and intermediary receivables	1%	2%	5%
Loans and mortgages	0%	1%	2%
Other asset types	10%	10%	8%
Reinsurance receivables	0%	0%	0%
Reinsurance recoverables	1%	0%	1%

1.5.2 Distribution of liabilities

We observe that there are large technical provisions present in life business in the following Spanish insurers:

- Aegon España S.A.U. de Seguros y Reaseguros
- Agrupació AMCI Seguros y Reaseguros, S.A.
- Hermandad Nacional de Arquitectos Superiores y Químicos, Mutualidad de Previsión Social

FIGURE 23: DISTRIBUTION OF LIABILITIES FOR FIRMS BASED IN SPAIN

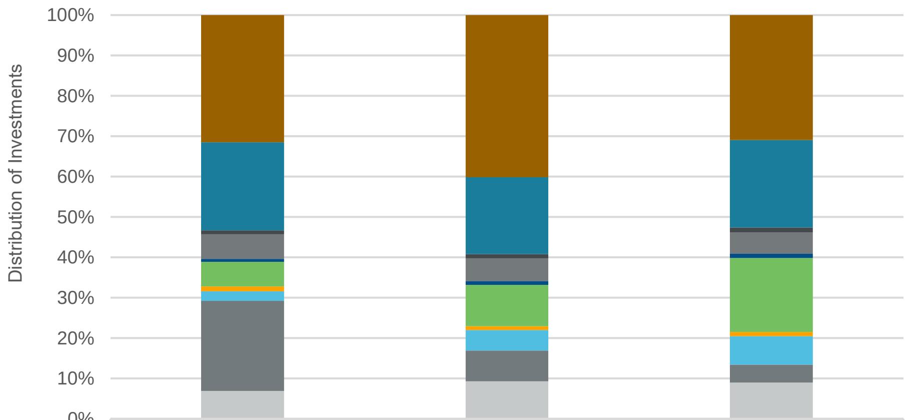


	Spain 2019	Spain 2018	Spain 2017
Technical provisions – health	7%	11%	14%
Technical provisions – index & unit linked	2%	1%	2%
Technical provisions – life	58%	55%	51%
Technical provisions - Non Life (excl. health)	7%	7%	11%
Other liabilities	18%	16%	13%
Subordinated liabilities	0%	0%	0%
Reinsurance payables	0%	0%	1%
Deposits from reinsurers	0%	0%	0%
Payables (trade, not insurance)	6%	8%	7%
Insurance & intermediaries payables	1%	1%	1%

1.5.3 Distribution of investments

Around 54% of the total investments are attributed to bonds in 2019. This is down from 60% in 2018. Insurers have reduced their exposure to cash and deposits other than cash equivalents. There has been a material increase in collective investment undertakings in 2019.

FIGURE 24: DISTRIBUTION OF INVESTMENTS IN SPAIN



	Spain 2019	Spain 2018	Spain 2017
Government bonds	31%	40%	31%
Corporate bonds	22%	19%	22%
Other bonds	1%	1%	1%
Property	6%	6%	5%
Equity	1%	1%	1%
Cash and cash equivalents	6%	10%	18%
Derivatives	1%	1%	1%
Deposits other than cash equivalents	2%	5%	7%
Collective investment undertakings	22%	8%	4%
Holdings in related undertakings	7%	9%	9%
Other investments	0%	0%	0%

1.5.4 SCR breakdown

The SCR for the majority of health insurers consists of the capital charge for health underwriting risk, with market risk, operational risk and counterparty default risk also making up large proportions of the SCR. In Figure 25, everything above the line represents a capital charge, such as health underwriting risk, market risk and operational risk. Everything below the line represents a reduction to the SCR, e.g., for diversification benefits or the loss-absorbing capacity of deferred taxes.

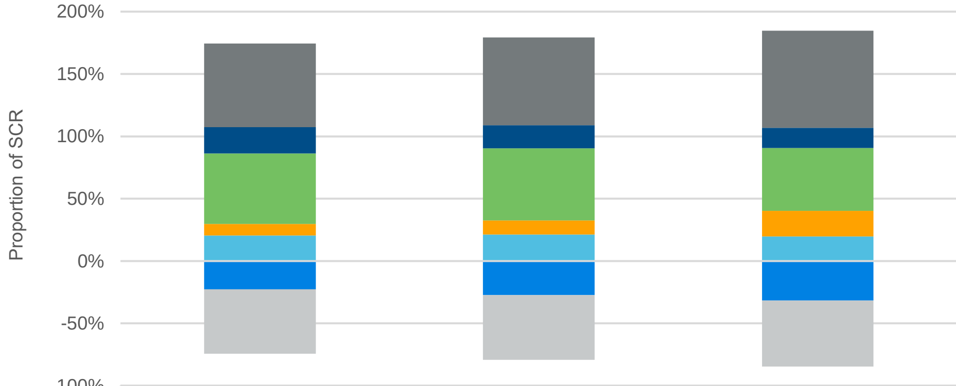
We observe that health underwriting risk and market risk are usually the two highest proportions of the SCR. Insurers with large technical provisions present in life business also tend to have high exposure to market risks. This is due to the nature of the assets they tend to invest in.

The non-life underwriting risk is close to 0% for all of the companies (except SegureCaxia Adesias, S.A. de Seguros y Reaseguros) because the health insurers have little exposure to general insurance business.

Counterparty default risk is associated with multiple types of contracts such as reinsurance arrangements, securitisations and derivatives, receivables from intermediaries, policyholder debtors, cash at bank, deposits with ceding institutions, capital, initial funds and letters of credit. Spanish insurers have a low exposure to counterparty default risk, with only Agrupació AMCI Seguros y Reaseguros, S.A. and SegurCaixa Adeslas, S.A. de Seguros y Reaseguros having more than 10% attributed to this type of risk.

Most insurers have some exposure to operational risk, and three of the eight insurers have a proportion that is greater than 24%.

FIGURE 25: SCR BREAKDOWN FOR FIRMS IN SPAIN



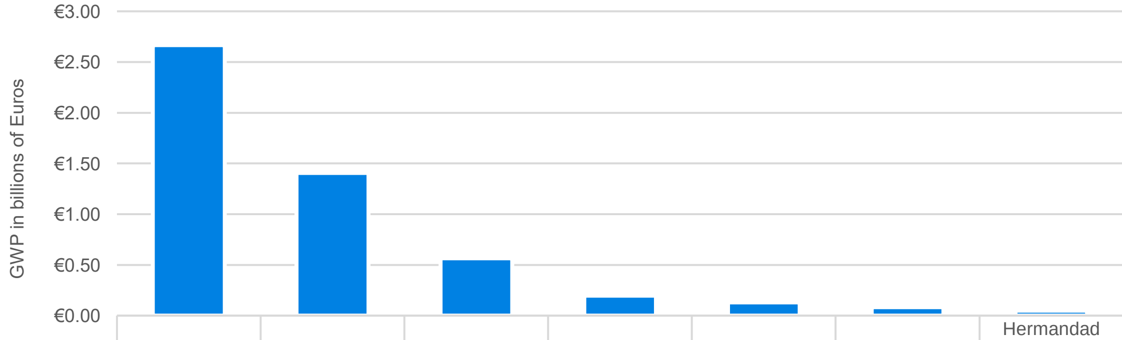
	Spain 2019	Spain 2018	Spain 2017
Health underwriting risk	67%	70%	78%
Non Life underwriting risk	21%	18%	16%
Market risk	56%	58%	50%
Counterparty default risk	9%	11%	21%
Operational risk	20%	21%	20%
Intangible asset risk	0%	0%	0%
Diversification	-52%	-52%	-53%
Loss absorbing - Deferred taxes	-23%	-27%	-32%

1.5.5 Market share

We have included three of the five largest health insurers in the country, as these insurers account for over 70% of the total market share of premiums. They are listed below in the top five insurers, which account for over 90% of the total medical GWP assessed in this report.

- SegurCaixa Adeslas, S.A. de Seguros y Reaseguros (included)
- Sanitas Sociedad Anónima de Seguros (included)
- Asisa
- DVK Seguros y Reaseguros S.A.E. (included)
- Mapfre Espana

FIGURE 26: GROSS WRITTEN PREMIUMS BY PMI PROVIDERS IN SPAIN, 2019



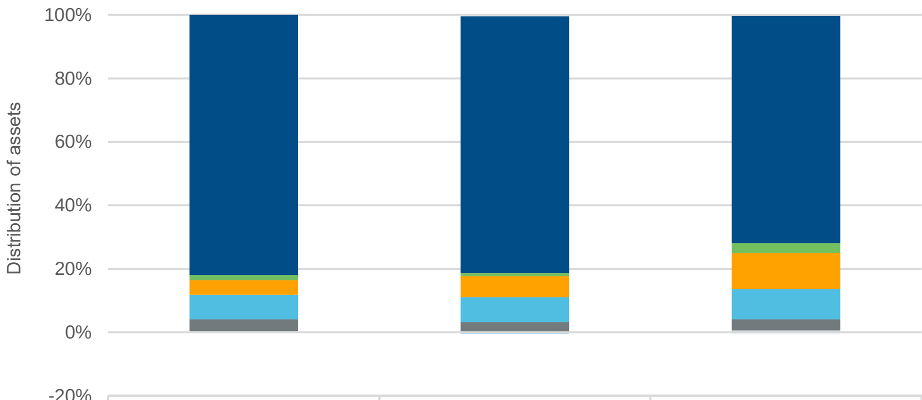
	SegurCaixa Adeslas, S.A. de Seguros y Reaseguros	Sanitas Sociedad Anónima de Seguros	DVK Seguros y Reaseguros S.A.E.	Asistencia Sanitaria Colegial SA de Seguros	Agrupació AMCI Seguros y Reaseguros, S.A.	Aegon España S.A.U. de Seguros y Reaseguros	Hermandad Nacional de Arquitectos Superiores y Químicos, Mutualidad de Previsión Social
GWP in 2019	€2.67	€1.41	€0.56	€0.20	€0.13	€0.08	€0.05

1.6 UNITED KINGDOM

1.6.1 Distribution of assets

Investments form the majority of total assets across the United Kingdom. All of the companies analysed in this region have greater than 75% of total assets in investments. Each company uses different strategies to distribute their remaining assets, with companies such as Bupa and AXA distributing a significant proportion of their assets in loans and mortgages, whereas CS Healthcare, Vitality Health and WPA have chosen to allocate more of their assets in other asset types.

FIGURE 27: DISTRIBUTION OF ASSETS FOR FIRMS BASED IN THE UNITED KINGDOM

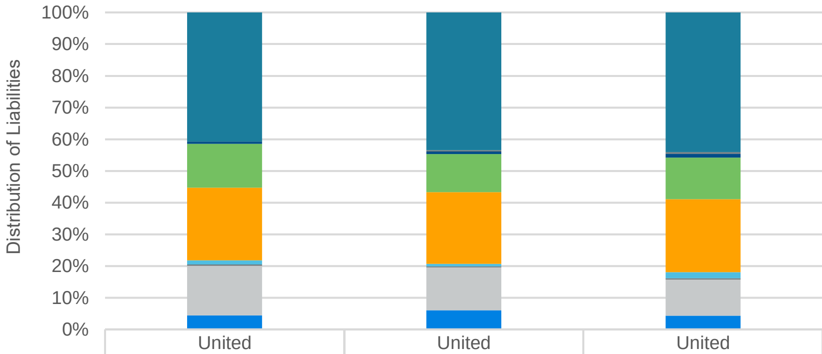


	United Kingdom 2019	United Kingdom 2018	United Kingdom 2017
Investment	82%	82%	72%
Receivables [trade not insurance]	2%	1%	3%
Insurance and intermediary receivables	5%	7%	11%
Loans and mortgages	8%	8%	10%
Other asset types	4%	3%	3%
Reinsurance receivables	0%	0%	1%
Reinsurance recoverables	0%	0%	0%

1.6.2 Distribution of liabilities

Technical provisions make up the largest liability on four of the five health insurers' balance sheets, and their relative proportions vary considerably among the five companies considered. As expected, health is the dominant line of business in terms of technical provisions across the different companies. All companies, aside from Bupa, have a high proportion of liabilities in trade payables, with Vitality having the highest proportion at 47%. Vitality also has the lowest proportion of technical health provisions among the companies assessed.

FIGURE 28: DISTRIBUTION OF LIABILITIES FOR FIRMS BASED IN THE UNITED KINGDOM

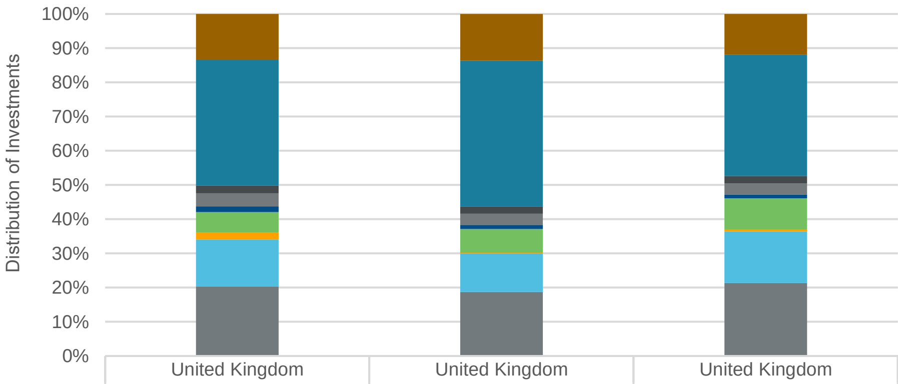


	United Kingdom 2019	United Kingdom 2018	United Kingdom 2017
Technical provisions – health	41%	44%	44%
Technical provisions – index & unit linked	0%	0%	0%
Technical provisions – life	0%	0%	0%
Technical provisions - Non Life (excl. health)	1%	1%	1%
Other liabilities	14%	12%	13%
Subordinated liabilities	23%	23%	23%
Reinsurance payables	1%	1%	2%
Deposits from reinsurers	0%	0%	0%
Payables (trade, not insurance)	16%	14%	11%
Insurance & intermediaries payables	4%	6%	4%

1.6.3 Distribution of investments

Around 52% of the total investments are attributed to bonds in 2019. This is down from 59% in 2018. All other investments have remained relatively stable from 2018 to 2019 with the exception of deposits other than cash equivalents, which saw a 3% increase.

FIGURE 29: DISTRIBUTION OF INVESTMENTS IN THE UNITED KINGDOM



	United Kingdom 2019	United Kingdom 2018	United Kingdom 2017
Government bonds	13%	14%	12%
Corporate bonds	37%	43%	35%
Other bonds	2%	2%	2%
Property	4%	3%	3%
Equity	2%	1%	1%
Cash and cash equivalents	6%	7%	9%
Derivatives	2%	0%	1%
Deposits other than cash equivalents	14%	11%	15%
Collective investment undertakings	20%	19%	21%
Holdings in related undertakings	0%	0%	0%
Other investments	0%	0%	0%

1.6.4 SCR breakdown

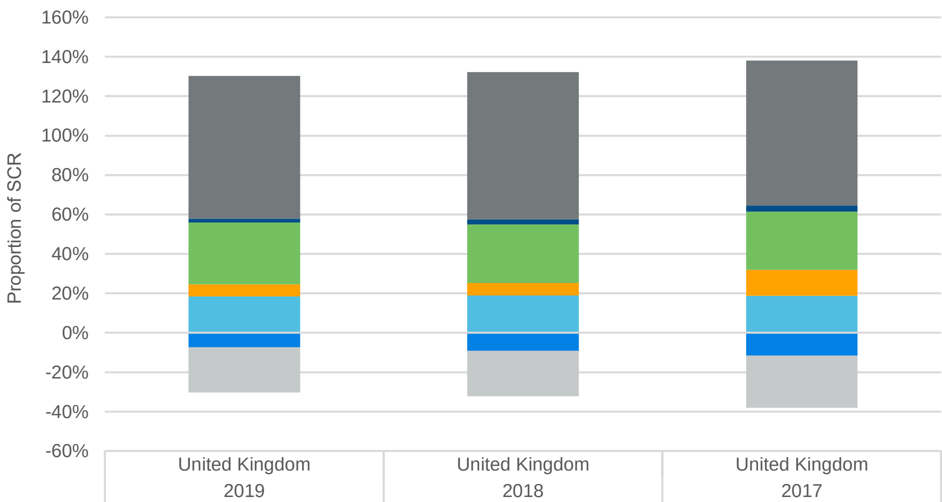
The SCR for the majority of health insurers is driven by the capital charge for health underwriting risk, with market risk, operational risk and counterparty default risk also making up large proportions of the SCR. In Figure 30, everything above the line represents a capital charge, such as health underwriting risk, market risk and operational risk. Everything below the line represents a reduction to the SCR, e.g., for diversification benefits or the loss-absorbing capacity of deferred taxes.

We observe that health underwriting risk and market risk are usually the two highest proportions of the SCR. The UK insurers have a noticeably lower proportion of market risk than some German and French insurers, which is expected because health insurers in the UK typically sell only short-term contracts.

Counterparty default risk is associated with multiple types of contracts such as reinsurance arrangements, securitisations and derivatives, receivables from intermediaries, policyholder debtors, cash at bank, deposits with ceding institutions, capital, initial funds and letters of credit. All the insurers have a low exposure to counterparty default risk.

For most companies, operational risk forms a significant proportion of total SCR. In the case of the UK, Bupa has a relatively high operational risk component of 26% of total SCR in 2019.

FIGURE 30: SCR BREAKDOWN FOR FIRMS IN THE UNITED KINGDOM

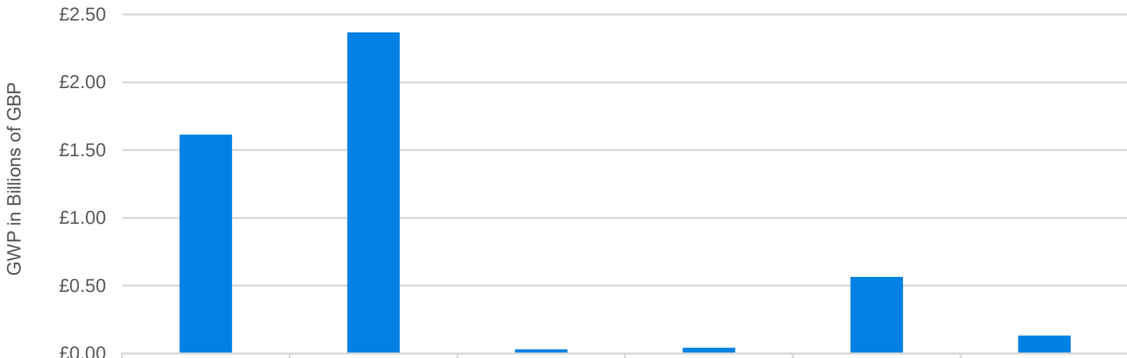


	United Kingdom 2019	United Kingdom 2018	United Kingdom 2017
Health underwriting risk	72%	75%	74%
Non Life underwriting risk	2%	3%	3%
Market risk	31%	30%	30%
Counterparty default risk	6%	6%	13%
Operational risk	18%	19%	19%
Intangible asset risk	0%	0%	0%
Diversification	-23%	-23%	-26%
Loss absorbing - Deferred taxes	-7%	-9%	-12%

1.6.5 Market share

In the United Kingdom, the PMI market is dominated by four major providers. They are Bupa, AXA, Aviva and Vitality Health. We have excluded Aviva from this analysis because the business is not split into a separate entity for health products and the medical GWP reported in Solvency II only makes up a small proportion of their total earnings.

FIGURE 31: GROSS WRITTEN PREMIUMS BY PMI PROVIDERS IN THE UNITED KINGDOM, 2019



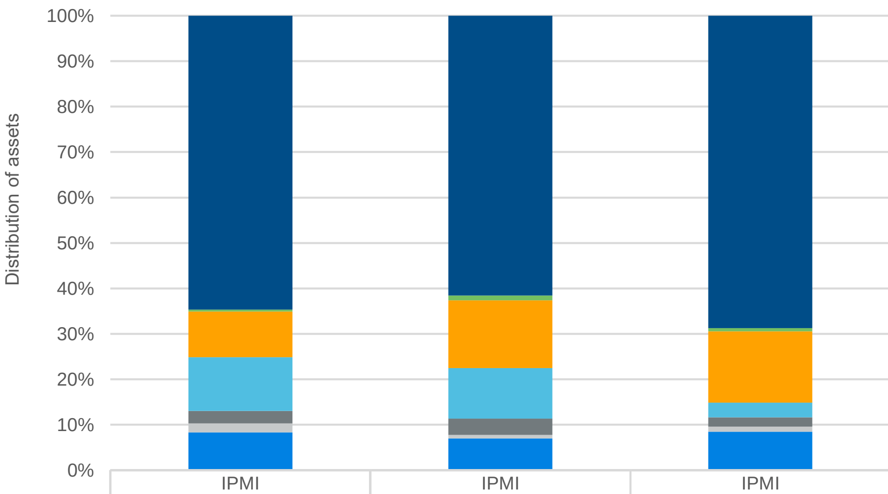
	AXA PPP Healthcare Limited	Bupa Insurance Limited	Civil Service Healthcare Society Limited	Exeter Friendly Society Limited (solo)	Vitality Health Limited	Western Provident Association Limited
GWP in 2019	£1.61	£2.37	£0.03	£0.04	£0.56	£0.13

1.7 INTERNATIONAL PRIVATE MEDICAL INSURANCE

1.7.1 Distribution of assets

Investments form the majority of total assets across the IPMI companies, but the proportion of assets held in investments is notably lower than the domestic health insurers in Germany, the UK and Spain, and higher (on average) than in the Netherlands. All three of the companies analysed (Allianz, Cigna and Globality) have close to 65% of total assets in investments. Each company uses different strategies to distribute their remaining assets, with Allianz allocating a large proportion of assets in loans and mortgages, Cigna allocating more of its proportion of assets to insurance receivables and reinsurance recoverables, and Globality allocating more of its proportion of assets to insurance receivables and other asset types.

FIGURE 32: DISTRIBUTION OF ASSETS FOR IPMI FIRMS

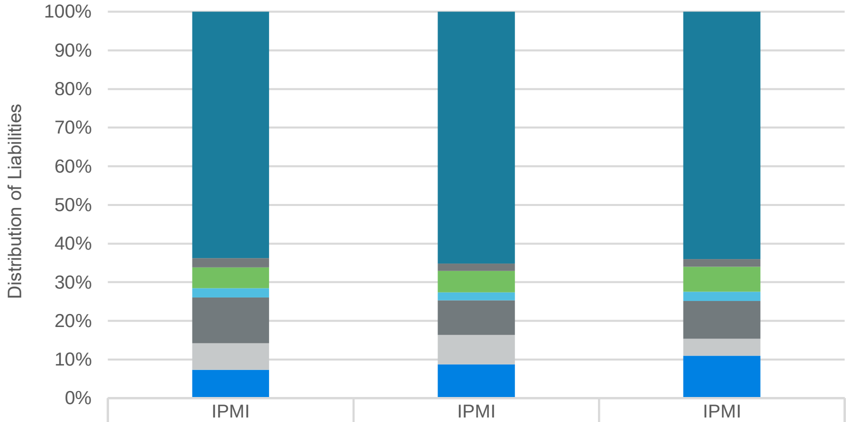


	IPMI 2019	IPMI 2018	IPMI 2017
Investment	65%	62%	69%
Receivables [trade not insurance]	0%	1%	1%
Insurance and intermediary receivables	10%	15%	16%
Loans and mortgages	12%	11%	3%
Other asset types	3%	4%	2%
Reinsurance receivables	2%	1%	1%
Reinsurance recoverables	8%	7%	8%

1.7.2 Distribution of liabilities

Technical provisions make up the largest liability on all three of the insurers' balance sheets, but their relative proportions vary considerably. Allianz has almost all of its liabilities attributed to health technical provisions, whereas Cigna has a more even split across health provisions, deposits from reinsurers and payables (both insurance and trade). Globality also has a high proportion (32%) of liabilities in payables (trade and insurance).

FIGURE 33: DISTRIBUTION OF LIABILITIES FOR IPMI FIRMS

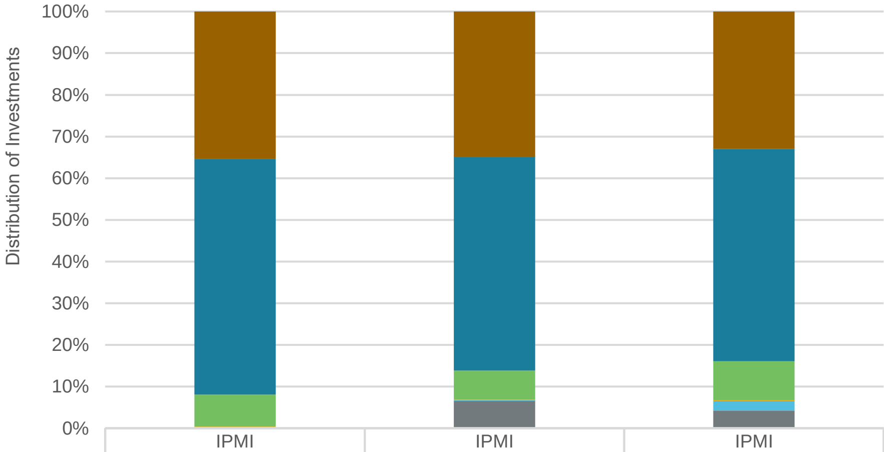


	IPMI 2019	IPMI 2018	IPMI 2017
Technical provisions – health	64%	65%	64%
Technical provisions – index & unit linked	0%	0%	0%
Technical provisions – life	2%	2%	2%
Technical provisions - Non Life (excl. health)	0%	0%	0%
Other liabilities	5%	6%	6%
Subordinated liabilities	0%	0%	0%
Reinsurance payables	2%	2%	2%
Deposits from reinsurers	12%	9%	10%
Payables (trade, not insurance)	7%	8%	4%
Insurance & intermediaries payables	7%	9%	11%

1.7.3 Distribution of investments

Overall, IPMI insurers tend to invest the majority of their assets in bonds. These companies tend to have the highest proportion of investments in bonds, compared with any of the domestic health insurers in countries we reviewed for this report. In 2019, IPMI firms reallocated 7% of their total investments in collective investment undertakings to corporate bonds.

FIGURE 34: DISTRIBUTION OF INVESTMENTS FOR IPMI FIRMS



	IPMI 2019	IPMI 2018	IPMI 2017
Government bonds	35%	35%	33%
Corporate bonds	57%	51%	51%
Other bonds	0%	0%	0%
Property	0%	0%	0%
Equity	0%	0%	0%
Cash and cash equivalents	8%	7%	9%
Derivatives	0%	0%	0%
Deposits other than cash equivalents	0%	0%	2%
Collective investment undertakings	0%	7%	4%
Holdings in related undertakings	0%	0%	0%
Other investments	0%	0%	0%

1.7.4 SCR breakdown

There was not enough information provided by Cigna to show its SCR breakdown.

The SCR for the majority of health insurers is driven by the capital charge for health underwriting risk, with market risk, operational risk and counterparty default risk also making up large proportions of the SCR. In Figure 35, which focuses on Allianz and Globality, everything above the line represents a capital charge, such as health underwriting risk, market risk and operational risk. Everything below the line represents a reduction to the SCR, e.g., for diversification benefits or the loss-absorbing capacity of deferred taxes.

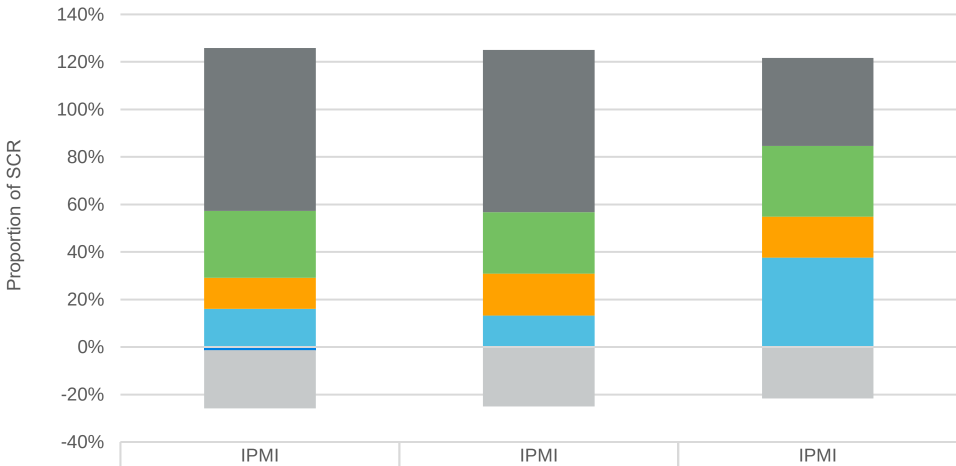
We observe that health underwriting risk and market risk are usually the two highest proportions of the SCR.

Counterparty default risk is associated with multiple types of contracts such as reinsurance arrangements, securitisations and derivatives, receivables from intermediaries, policyholder debtors, cash at bank, deposits with ceding institutions, capital, initial funds and letters of credit. Both insurers have 13% of their SCRs in counterparty default risk.

For both companies, operational risk forms a small proportion of total SCR.

Overall, the split of the SCR is almost identical between the two companies included in the analysis.

FIGURE 35: SCR BREAKDOWN FOR IPMI FIRMS

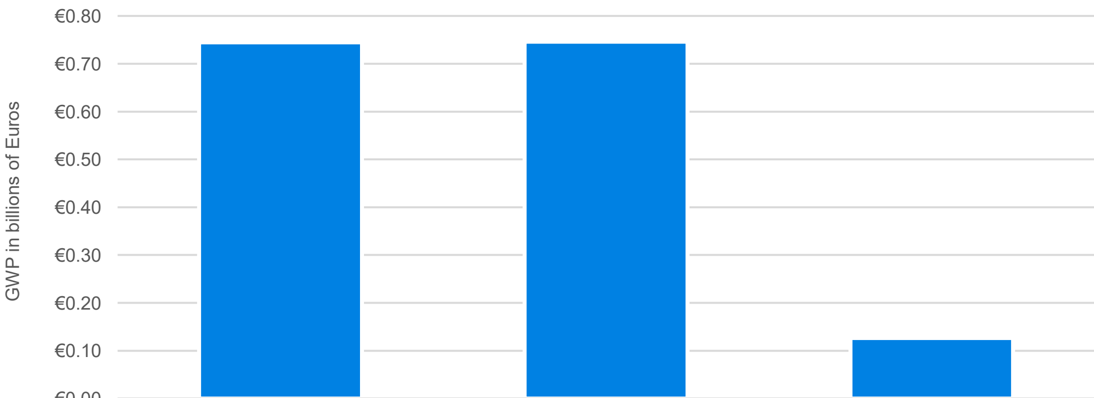


	IPMI 2019	IPMI 2018	IPMI 2017
Health underwriting risk	69%	68%	37%
Non Life underwriting risk	0%	0%	0%
Market risk	28%	26%	30%
Counterparty default risk	13%	18%	17%
Operational risk	16%	13%	38%
Intangible asset risk	0%	0%	0%
Diversification	-25%	-25%	-22%
Loss absorbing - Deferred taxes	-1%	0%	0%

1.7.5 Market share

The IPMI market is dominated by five major providers: Aetna, Allianz, Cigna, Globality and OOM Global Care. We have excluded Aetna and OOM Global Care from the analysis due to a lack of information populated for 2019 in the Solvency II Wire Tool.

FIGURE 36: GROSS WRITTEN PREMIUMS BY IPMI PROVIDERS, 2019



	Allianz Worldwide Partners Health & Life	Cigna Life Insurance Company of Europe	Globality S.A.
GWP in 2019	€0.74	€0.75	€0.13

Summary observations

The largest distribution of assets across all countries is investments. However, the proportion of assets in investments varies significantly across each country. We found the lowest proportion of investments among domestic health insurers in the Netherlands, with around 50% of assets held as investments. The highest proportion was found among domestic health insurers in Germany, with an average of 95% of assets held in investments in 2019.

Within investments, the majority of assets in Europe are held as some form of a bond (e.g., government, corporate). French insurers had the lowest proportion of investments in bonds, at 36%, whilst also having the largest proportion of assets in collective investment undertakings (39% in 2019). Insurers in all other countries had varying proportions of investments in bonds, ranging from 52% to 79%. The only exceptions were the three IPMI companies (Allianz, Cigna, Globality), which attributed almost all of their investments to bonds (92%).

Not surprisingly, the largest distribution of liabilities for the health insurers in Europe is the technical provisions of health. All countries, apart from Spain, have proportions of liabilities in technical provisions of health, which are greater than 41%. Spain has around 58% of its liabilities attributed to technical provisions – life. The large proportion of nonmedical GWP for Spain is due to the inclusion of SegurCaixa Adeslas, S.A. de Seguros y Reaseguros, which has a significant proportion of GWP in nonmedical lines of business.

Within the SCR, health underwriting risks and market risks appear to be the largest risk exposures of health insurers, based on the split of the SCR components, except in the Netherlands where operational risk is around 20% of the SCR. However, there are some differences in the risk exposure across the various countries, generally depending on the nuances of the healthcare systems in which the insurers operate. Operational risks and counterparty default risks are also significant risk exposures for the health insurers. Diversification benefits are significant for all the health insurers we reviewed.

Overall, the European health insurers included in the sample were in very strong positions at year-end 2019, with an average SCR coverage ratio of 251%. Of the companies included in our analysis, 63% of the insurers had an SCR coverage ratio of more than 150% in 2019, down from 85% in 2017.

Appendix A: Health systems by country

DESCRIPTIONS OF HEALTH SYSTEM INDICATORS IN FIGURE 37 BELOW

Healthcare funding systems

- **Tax-based/NHI**: Tax-based/National Health Insurance
- **PMI**: Private Medical Insurance
- **SHI**: Social Health Insurance
- **OOP**: Out-of-Pocket Expenditure

Pricing and rating methods for PMI

- **Risk-rated**: Insurers able to differentiate premiums based on policyholders' risk profiles
- **Community-rated**: Insurers obliged to charge single premium rate to all policyholders; no differentiation by risk profile
- **Risk equalisation**: Insurers with higher/lower-risk members receive or contribute funds to equalise risk amongst insurers
- **Open enrolment**: Insurer is obliged to accept every member who wishes to enrol as a policyholder

Purpose of PMI

- **Duplicative**: Services available in PMI system are also in public sector
- **Supplementary**: PMI covers gaps in payment or access to services from public sector
- **Complementary**: PMI covers gaps in services from public sector
- **Substitutive**: PMI used when policyholders opt out of SHI or other schemes
- **Primary source**: PMI is the primary source of funding for healthcare service provision

Description of benefits

This gives an indication of the richness of benefits provided in PMI. We considered whether primary care, emergency, maternity, chronic condition, outpatient, inpatient elective, prescription, dental, optical and long-term care (LTC) services are provided in each system.

FIGURE 37: HEALTH SYSTEMS BY COUNTRY

COUNTRY	HEALTHCARE FUNDING MECHANISMS	PRICING AND RATING METHODS FOR PMI	PMI POLICY TYPE AND PURPOSE OF PMI	TYPICAL BENEFIT COVERAGE IN PMI
France	Primary funding system is SHI. Other dominant systems are PMI and OOP.	Premiums are risk-rated.	PMI undertaking is sometimes compulsory through the employer, but is voluntary for individual policies. Purpose of PMI is supplementary.	Comprehensive coverage for most services, including long-term care. Coverage for chronic conditions is excluded.
Germany, Supplementary/ Complementary Health Insurance	Primary funding system is SHI. Other dominant systems are OOP and PMI.	Premiums are risk-rated.	PMI undertaking is voluntary and individual-based. Purpose of PMI is more often supplementary rather than complementary.	Covers comprehensive range of services available in SHI schemes but there may be copayments for some services. PMI can be used to provide access to additional services.
Germany, Substitutive Health Insurance	Primary funding system is SHI. Other dominant systems are OOP and PMI.	Premiums are risk-rated.	PMI undertaking is voluntary and individual-based. Purpose is substitutive.	Covers additional services that would not normally be covered under SHI.
Ireland	Primary funding system is tax-based/NHI. Other dominant systems are PMI and OOP.	Premiums are mostly community-rated, but there is some capacity for age band adjustments. There is a risk equalisation system in place with open enrolment.	PMI undertaking is voluntary and individual-based. Purpose of PMI is complementary, duplicative and supplementary.	Fairly comprehensive benefits. Provision of primary care and emergency services varies by product. Generally, coverage for prescriptions, dental and optical services is excluded.
Spain	Primary funding system is tax-based/NHI. Other dominant systems are PMI and OOP.	Premiums are risk-rated	PMI undertaking is voluntary and individual-based. Purpose of PMI is duplicative and supplementary.	Fairly comprehensive coverage. Coverage for preexisting chronic conditions and prescriptions. Optical is excluded. Dental cover is optional.
The Netherlands, Basic Health Insurers	Primary funding system is PMI (50% tax-based funded and 50% via premiums). Other dominant system is OOP.	Premiums are community-rated. A risk equalisation system is in place with open enrolment.	PMI undertaking is compulsory for individuals and PMI is the primary source of health insurance.	Comprehensive benefit coverage.
The Netherlands, Supplementary Health Insurers	Primary funding system is PMI. Other dominant system is OOP.	Premiums are risk-rated	PMI undertaking is voluntary and individual-based. Purpose of PMI is both complementary and supplementary.	Covers services such as dental, physiotherapy, optical, contraceptives and medicine copayments to supplement the services available through the basic system.
United Kingdom	Primary funding system is tax-based/NHI. Other dominant systems are PMI and OOP.	Premiums are risk-rated.	PMI undertaking is voluntary. Policies can be employer-sponsored or individual but are mostly employer-sponsored. Purpose of PMI is duplicative and supplementary.	Mostly covers inpatient elective and outpatient diagnostic services. Coverage for emergency services, chronic conditions and maternity services is excluded and primary care coverage is limited.

Appendix B: List of selected companies in 2019 and corresponding solvency coverage ratio

Note that certain companies do not have a populated model type or solvency coverage ratio.

FIGURE 38: SELECTED COMPANIES AND SOLVENCY COVERAGE RATIO IN 2019

COUNTRY	COMPANY NAME	SOLVENCY COVERAGE RATIO (2019)	CAPITAL MODEL TYPE
IPMI	Allianz Worldwide Partners Health & Life	138%	Standard Formula
IPMI	Cigna Life Insurance Company of Europe	172%	Partial Internal Model
IPMI	Globality S.A.	174%	Standard Formula
France	Adrea Mutuelle	267%	Standard Formula
France	Apréva mutuelle	245%	Standard Formula
France	Eovi-mcd	281%	Standard Formula
France	Harmonie Mutuelle	300%	Standard Formula
France	MAAF Sante	609%	Standard Formula
France	Macif Mutualité	191%	Standard Formula
France	Malakoff Médéric Mutuelle	410%	Standard Formula
France	Mutuelle MGEN	211%	Standard Formula
France	Mutuelle Uneo	244%	Standard Formula
France	ViaSanté Mutuelle	477%	Standard Formula
Netherlands	Achmea Zorgverzekeringen N.V. (Consolidated)	158%	Standard Formula with national parameters (Health Risk Equalisation System or HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	AnderZorg N.V.	170%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	ASR Aanvullende Ziektekostenverzekeringen N.V.	173%	Standard Formula
Netherlands	ASR Basis Ziektekostenverzekeringen N.V.	144%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	Eno Aanvullende Verzekeringen N.V.	219%	Standard Formula
Netherlands	IZA Zorgverzekeraar N.V.	149%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	Menzis N.V.	214%	Standard Formula
Netherlands	Menzis Zorgverzekeraar N.V.	142%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	N.V. Zorgverzekeraar UMC	159%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	ONVZ Aanvullende Verzekering N.V.	194%	Standard Formula
Netherlands	ONVZ Ziektekostenverzekeraar N.V.	124%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)

COUNTRY	COMPANY NAME	SOLVENCY COVERAGE RATIO (2019)	CAPITAL MODEL TYPE
Netherlands	OWM DSW Zorgverzekeraar U.A.	129%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	Stad Holland Zorgverzekeraar Onderlinge Waarborgmaatschappij U.A.	139%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	Univé Zorg, N.V.	149%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	VGZ Zorgverzekeraar N.V.	134%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Netherlands	CZ groep	149%	Standard Formula with national parameters (HRES-deduction for Basic Health insurance: sigma premium risk is 2.7% instead of 5.0%)
Germany	Allianz Private Krankenversicherungs-AG	523%	Full Internal Model
Germany	Alte Oldenburger Krankenversicherung AG	738%	Standard Formula
Germany	Alte Oldenburger Krankenversicherung von 1927 V.V.a.G.	524%	Standard Formula
Germany	AXA Krankenversicherung Aktiengesellschaft	251%	Full Internal Model
Germany	Bayerische Beamtenkrankenkasse AG	489%	Standard Formula
Germany	Central Krankenversicherung AG	596%	Partial Internal Model
Germany	Concordia Krankenversicherungs-AG	469%	Standard Formula
Germany	Continentale Krankenversicherung a.G.	496%	Standard Formula
Germany	Debeka Krankenversicherungsverein auf Gegenseitigkeit Sitz Koblenz am Rhein	470%	Standard Formula
Germany	DEVK Krankenversicherungs-AG	438%	Standard Formula
Germany	DKV Deutsche Krankenversicherung AG	335%	Full Internal Model
Germany	ERGO Direkt Krankenversicherung AG	194%	Standard Formula
Germany	Gothaer Krankenversicherung AG	744%	Standard Formula
Germany	Hallesche Krankenversicherung auf Gegenseitigkeit	680%	Standard Formula
Germany	HUK-COBURG-Krankenversicherung AG	409%	Standard Formula
Germany	Inter Krankenversicherung aG	474%	Standard Formula
Germany	Landeskrankenhilfe V.V.a.G.	1498%	Standard Formula
Germany	LVM Krankenversicherungs-AG	416%	Standard Formula
Germany	Mecklenburgische Krankenversicherungs-AG	309%	Standard Formula
Germany	NÜRNBERGER Krankenversicherung AG	308%	Standard Formula
Germany	Pax-Familienfürsorge Krankenversicherung AG im Raum der Kirchen	398%	Standard Formula
Germany	R+V Krankenversicherung Aktiengesellschaft	848%	Standard Formula
Germany	SIGNAL IDUNA Krankenversicherung a. G.	476%	Standard Formula
Germany	Union Krankenversicherung AG	576%	Standard Formula
Germany	ENVIVAS Krankenversicherung AG	409%	Standard Formula

COUNTRY	COMPANY NAME	SOLVENCY COVERAGE RATIO (2019)	CAPITAL MODEL TYPE
United Kingdom	AXA PPP Healthcare Limited	147%	Full Internal Model
United Kingdom	Bupa Insurance Limited	171%	Standard Formula
United Kingdom	Civil Service Healthcare Society Limited	218%	Standard Formula
United Kingdom	Exeter Friendly Society Limited (solo)	100%	Standard Formula
United Kingdom	Vitality Health Limited	139%	Standard Formula
United Kingdom	Western Provident Association Limited	557%	Standard Formula
Spain	Aegon España S.A.U. de Seguros y Reaseguros	257%	Standard Formula
Spain	Agrupació AMCI Seguros y Reaseguros, S.A.	235%	Standard Formula
Spain	Asistencia Sanitaria Colegial SA de Seguros	231%	Standard Formula
Spain	DVK Seguros y Reaseguros S.A.E.	197%	Standard Formula
Spain	Hermandad Nacional de Arquitectos Superiores y Químicos, Mutualidad de Previsión Social	206%	Standard Formula
Spain	Igualatorio Médico Quirúrgico y de Especialidades de Navarra, S.A.	259%	Standard Formula
Spain	Sanitas Sociedad Anónima de Seguros	226%	Standard Formula
Spain	SegurCaixa Adeslas, S.A. de Seguros y Reaseguros	155%	Standard Formula

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