MILLIMAN REPORT

Analysis of insurers' Solvency and Financial Condition Reports

UK domestic medical insurers and IPMI markets

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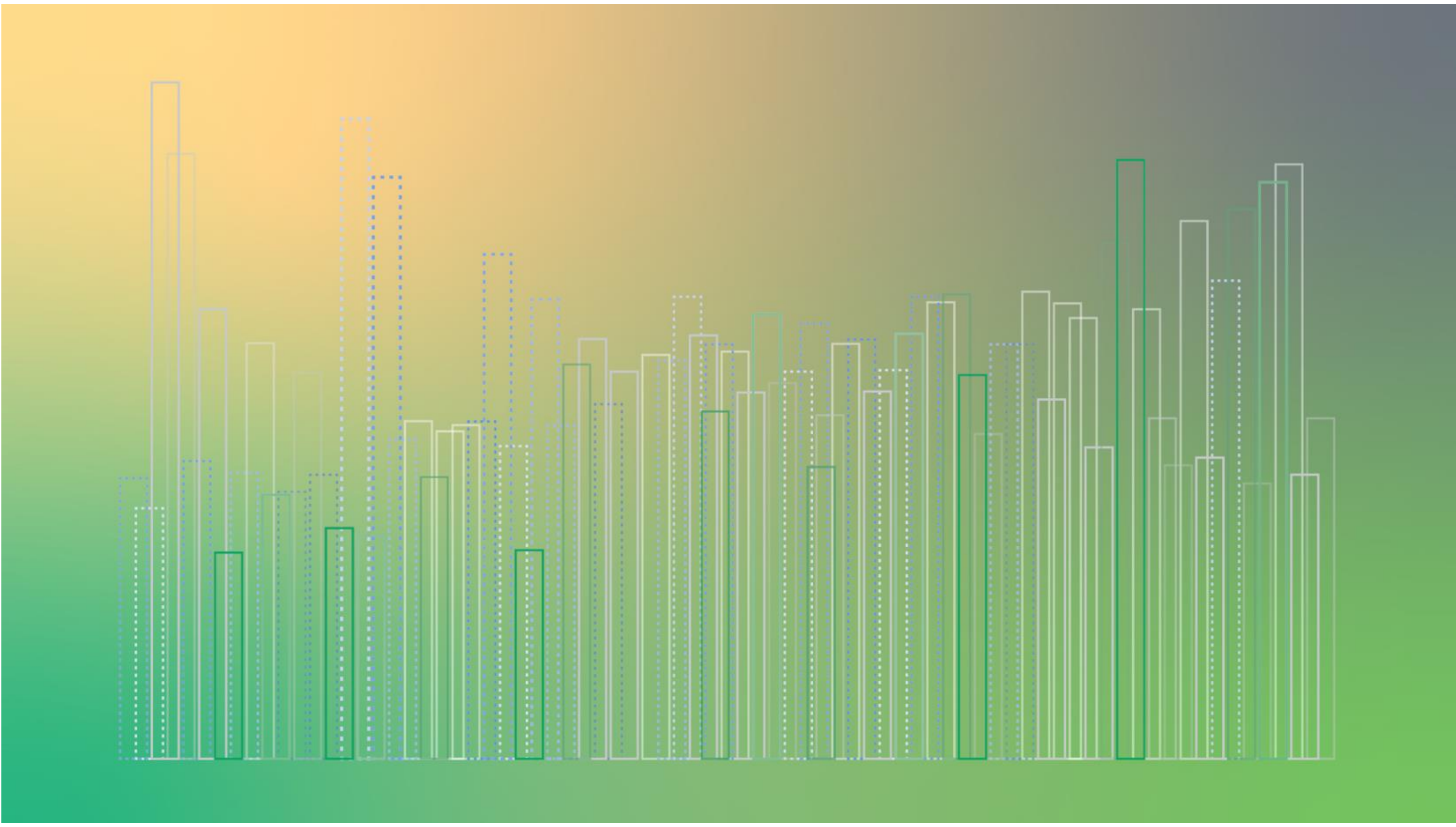

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Introduction

BACKGROUND

Under Solvency II, European insurers are required to publish their Solvency and Financial Condition Reports (SFCRs). Five sets of SFCRs have been published, with the first publication for most entities occurring in May 2017 and the most recent in April/May 2022.

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 health insurers in specific markets.

HEALTHCARE SYSTEMS INCLUDED IN THIS ANALYSIS

Our focus in this report is on health insurers with domestic medical insurance business in the United Kingdom.

The logic we have used to determine whether or not to include companies within our analysis is described in the section below.

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 under Solvency II as non-life or composite insurers and exclude those classified as life insurers.
- We exclude UK insurers primarily selling health cash plan products.
- We include solo companies and remove group entities to avoid double-counting of companies.
- 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 expense” line of business (LOB). Hence, we exclude insurers that sell high volumes of products 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 charges for PMI alone 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.
- We exclude companies where business falls within ring-fenced funds, which restrict Own Funds to the total Solvency Capital Requirement (SCR) value (e.g., Exeter Friendly Society in the UK).
- We have included the following insurers in the UK domestic market analysis:
  - AXA PPP Healthcare Limited
  - Bupa Insurance Limited
  - Vitality Health Limited
  - Western Provident Association Limited
  - Civil Service Healthcare Society Limited (CSH), included in combined graphs for 2019, having been acquired by Bupa Insurance Limited at the end of 2020

Note that a number of domestic UK medical insurers also sell international private medical insurance (IPMI) for their UK domestic solo entity. It is not possible to split IPMI from the domestic health business and so we have applied some judgement, based on our knowledge of the market as to whether to include these medical insurers as UK domestic participants.

UNDERLYING DATA

The analysis underlying this report focuses on the quantitative information contained in the public QRTs. The data tool by Solvency II Wire Data Limited (Ltd.), 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.

IMPACT DUE TO COVID-19

In February/March 2020 the virus named SARS-CoV-2, commonly referred to as COVID-19, began to spread across the UK. Reporting for 2021 year-end sees many insurers commenting on the continued impact of the virus on their experience over 2021, their approaches to monitor and assess the impact of COVID-19 during 2021 and the future outlook. All UK medical insurers comment on COVID-19 in their SFCRs, some with dedicated sections on the pandemic effects and others commenting on it throughout the report.

Most medical insurers have experienced lower claims volumes than anticipated over 2021. Key drivers for this in the UK were further lockdowns in 2021 due to COVID-19 and ongoing health service restrictions and apparent changes in customer behaviour as a result. Several insurers comment that COVID-19 increases the uncertainty inherent in predicting future experience, with many highlighting the risk of increases in claims costs in the coming years to compensate for the reduced utilisation over 2020 and 2021, the effects of which may extend out to 2022 and 2023. Additionally, several insurers note that the deferred cost of treating undiagnosed or untreated illnesses after delays in elective treatment could more than offset any reduction in claims during the lockdown periods when access to care was limited.

IMPACT OF INFLATION

The UK is currently experiencing relatively high levels of inflation compared to past years, driven by a combination of factors.

Some medical insurers acknowledge the change in general inflation rates within the market in their SFCRs and are monitoring the impact over 2022. In general, insurers indicate that these changes in inflation and inflation expectations are expected to have a minimal impact on their business.

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 detail.
- **Solvency Capital Requirement (SCR) breakdown:** This section focuses on the breakdown of the SCR for each company assessed in this analysis during 2021.
- **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 A. The table shows the companies' SCRs in 2020 and 2021 along with capital model types.

Analysis

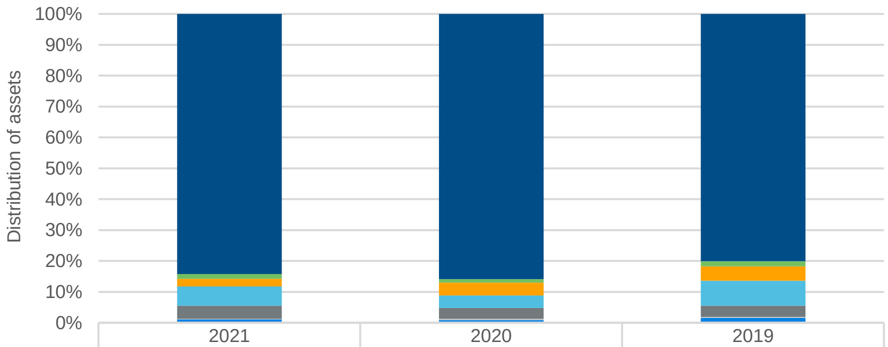
1.1 UNITED KINGDOM – DOMESTIC PMI BUSINESS

1.1.1 Distribution of assets

Investments form the majority of total assets across the United Kingdom. The overall proportion of assets in investments has decreased by 2% from 2020 to 2021, with small changes in other asset groups.

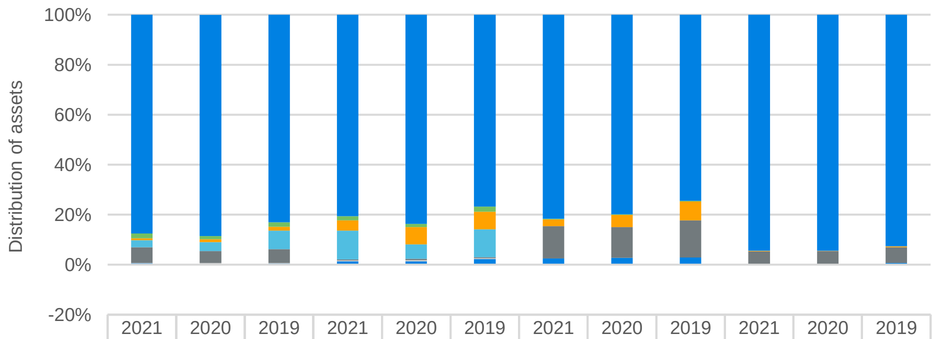
All of the companies analysed in this region have greater than 80% of total assets in investments, as can be seen in Figure 2. Each company has differing splits of their remaining assets, with Bupa having a significant proportion of its assets in loans and mortgages, and AXA PPP, Vitality and Western Provident Association (WPA) having the majority of their remaining assets in "Other asset types."

FIGURE 1: DISTRIBUTION OF ASSETS FOR FIRMS BASED IN THE UNITED KINGDOM



	2021	2020	2019
Investment	84%	86%	80%
Receivables [trade not insurance]	2%	1%	2%
Insurance and intermediary receivables	2%	4%	5%
Loans and mortgages	6%	4%	8%
Other asset types	4%	3%	4%
Reinsurance receivables	0%	0%	0%
Reinsurance recoverables	1%	1%	2%

FIGURE 2: DISTRIBUTION OF ASSETS BY COMPANY BASED IN THE UNITED KINGDOM

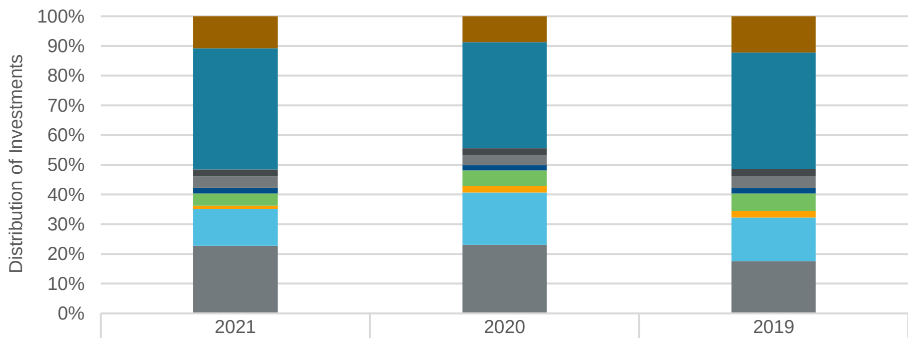


	AXA PPP Healthcare Limited			Bupa Insurance Limited			Vitality Health Limited			Western Provident Association Limited		
	2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019
Investment	87%	89%	83%	81%	84%	77%	82%	80%	75%	94%	94%	93%
Receivables [trade not insurance]	2%	1%	2%	2%	1%	2%	0%	0%	0%	0%	0%	0%
Insurance and intermediary receivables	1%	1%	2%	4%	7%	7%	3%	5%	8%	0%	0%	0%
Loans and mortgages	3%	4%	7%	11%	6%	11%	0%	0%	0%	0%	0%	0%
Other asset types	6%	5%	5%	0%	1%	0%	13%	12%	15%	5%	5%	6%
Reinsurance receivables	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Reinsurance recoverables	1%	0%	0%	1%	1%	2%	2%	3%	3%	0%	0%	1%

1.1.2 Distribution of investments

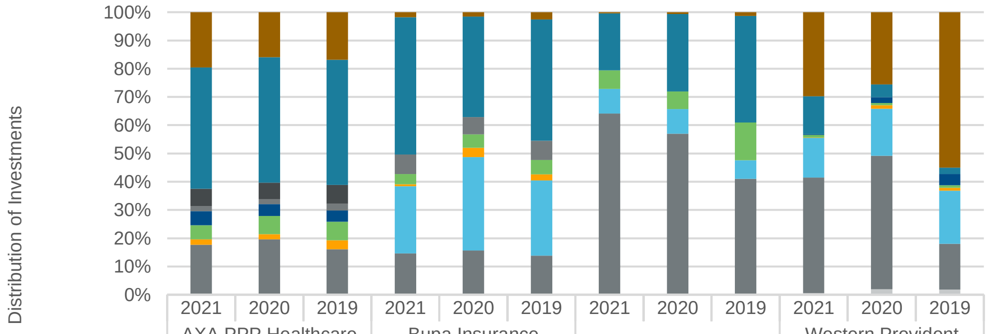
Around 54% of the total investments are attributed to bonds in 2021, compared with 47% in 2020. All other investments have remained relatively stable from 2020 to 2021 with the exception of a six-percentage-point movement away from deposits other than cash equivalents into bonds.

FIGURE 3: DISTRIBUTION OF INVESTMENTS IN THE UNITED KINGDOM



	2021	2020	2019
Government bonds	11%	9%	12%
Corporate bonds	41%	36%	39%
Other bonds	2%	2%	2%
Property	4%	4%	4%
Equity	2%	2%	2%
Cash and cash equivalents	4%	5%	6%
Derivatives	1%	2%	2%
Deposits other than cash equivalents	12%	18%	15%
Collective investment undertakings	23%	23%	17%
Holdings in related undertakings	0%	0%	0%
Other investments	0%	0%	0%

FIGURE 4: YEARLY DISTRIBUTION OF INVESTMENTS BY COMPANY IN THE UNITED KINGDOM



	AXA PPP Healthcare Limited			Bupa Insurance Limited			Vitality Health Limited			Western Provident Association Limited		
	2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019
Government bonds	20%	16%	17%	2%	2%	3%	0%	1%	1%	30%	26%	55%
Corporate bonds	43%	44%	44%	49%	36%	43%	20%	27%	38%	13%	5%	2%
Other bonds	6%	6%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Property	2%	2%	2%	7%	6%	7%	0%	0%	0%	0%	0%	0%
Equity	5%	4%	4%	0%	0%	0%	0%	0%	0%	0%	2%	4%
Cash and cash equivalents	5%	6%	6%	4%	5%	5%	7%	6%	13%	1%	1%	1%
Derivatives	2%	2%	3%	1%	3%	2%	0%	0%	0%	0%	1%	1%
Deposits other than cash equivalents	0%	0%	0%	24%	33%	27%	9%	9%	7%	14%	17%	19%
Collective investment undertakings	18%	20%	16%	15%	16%	14%	64%	57%	41%	41%	47%	16%
Holdings in related undertakings	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%	2%
Other investments	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

1.1.3 Distribution of liabilities

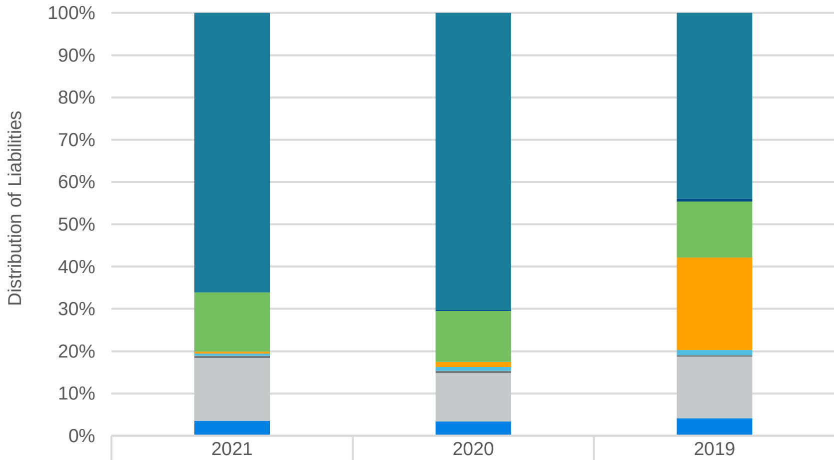
On average, Technical Provisions have decreased marginally from 2020 to 2021, though they still remain the largest liability overall on health insurers' balance sheets. This average change is driven by a decrease of 10 percentage points in Technical Provisions held by AXA PPP, falling from 70% in 2020 to 60% in 2021, with offsetting increases in payables and "Other liabilities."

AXA PPP is holding lower provisions at 2021 year-end compared with 2020 year-end, as it has released some provisions for COVID-19 anticipated catch-ups related to deferred treatment from 2020. Vitality shows an increase in its proportion of liabilities in Technical Provisions in 2021, alongside a notable reduction in the proportion in subordinated debt between 2020 and 2021. Vitality notes that the increase in Technical Provisions is due to general growth and higher levels of treatment compared to the previous year. Other insurers have commented on a reduction in Technical Provisions, although most appear to be continuing to hold additional premium provisions in anticipation of deferred claims emergence in 2022.

The proportion of subordinated liabilities has substantially reduced from 2019 to 2020, driven by Bupa which previously held just under 35% of liabilities in this category (approximately £400 million). At the end of 2020, however, Bupa held none, as it fully repaid its subordinated loan in September 2020.

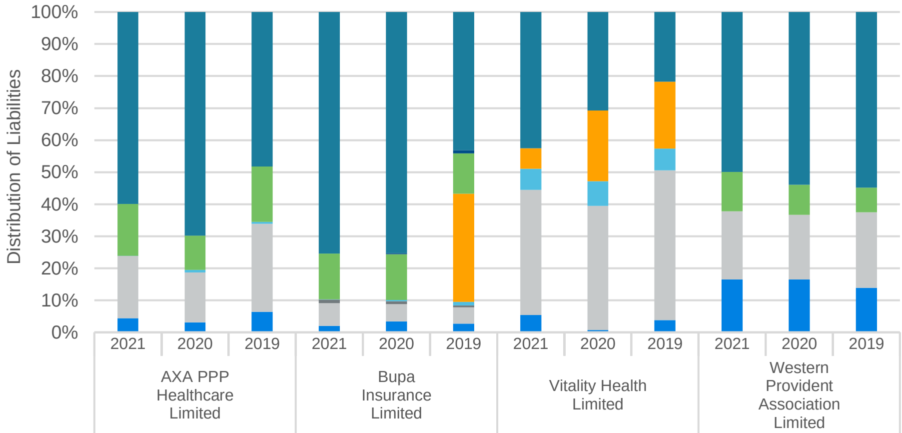
All companies, aside from Bupa, have a high proportion of liabilities in trade payables, with Vitality having the highest proportion at 39% as at 2021 year-end, in line with previous years. Vitality's trade payables reflect an unsubordinated loan from its parent company as well as intercompany payables to Vitality Corporate Services ltd.

FIGURE 5: DISTRIBUTION OF LIABILITIES FOR FIRMS BASED IN THE UNITED KINGDOM



	2021	2020	2019
Technical provisions – health	66%	70%	44%
Technical provisions – index & unit linked	0%	0%	0%
Technical provisions – life	0%	0%	0%
Technical provisions - Non Life (excl. health)	0%	0%	1%
Other liabilities	14%	12%	13%
Subordinated liabilities	0%	1%	22%
Reinsurance payables	1%	1%	1%
Deposits from reinsurers	1%	0%	0%
Payables (trade, not insurance)	15%	11%	15%
Insurance & intermediaries payables	4%	3%	4%

FIGURE 6: DISTRIBUTION OF LIABILITIES BY COMPANY BASED IN THE UNITED KINGDOM



	AXA PPP Healthcare Limited 2021	AXA PPP Healthcare Limited 2020	AXA PPP Healthcare Limited 2019	Bupa Insurance Limited 2021	Bupa Insurance Limited 2020	Bupa Insurance Limited 2019	Vitality Health Limited 2021	Vitality Health Limited 2020	Vitality Health Limited 2019	Western Provident Association Limited 2021	Western Provident Association Limited 2020	Western Provident Association Limited 2019
Technical provisions – health	60%	70%	48%	75%	75%	43%	43%	31%	22%	50%	54%	55%
Technical provisions – index & unit linked	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Technical provisions – life	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Technical provisions - Non Life (excl. health)	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%
Other liabilities	16%	11%	17%	14%	14%	13%	0%	0%	0%	12%	9%	8%
Subordinated liabilities	0%	0%	0%	0%	0%	34%	6%	22%	21%	0%	0%	0%
Reinsurance payables	0%	1%	1%	0%	0%	1%	7%	8%	7%	0%	0%	0%
Deposits from reinsurers	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Payables (trade, not insurance)	19%	16%	27%	7%	5%	5%	39%	39%	47%	21%	20%	24%
Insurance & intermediaries payables	4%	3%	6%	2%	3%	3%	5%	1%	4%	16%	16%	14%

1.1.4 SCR breakdown

The SCR for the majority of health insurers is driven by the capital charge for health underwriting risk, with market risk and operational risk also making up large proportions of the SCR. In Figure 7, everything above the blue line represents a capital charge, such as health underwriting risk, market risk and operational risk. Everything below the blue line represents a reduction to the SCR, e.g., for diversification benefits or the loss-absorbing capacity of deferred taxes. Overall, the distribution of the SCR is stable year-to-year, with some marginal movement between the modules.

We observe that health underwriting risk and market risk are usually the two highest proportions of the SCR and, at an overall level, both have a slowly increasing trend over the years.

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 insurers other than AXA PPP have a low exposure to counterparty default risk consistent with their balance sheet positions, which tend to have low levels of reinsurance recoverables and cash relative to other investments. Whilst AXA PPP has higher counterparty default risk, this is offset by higher levels of diversification.

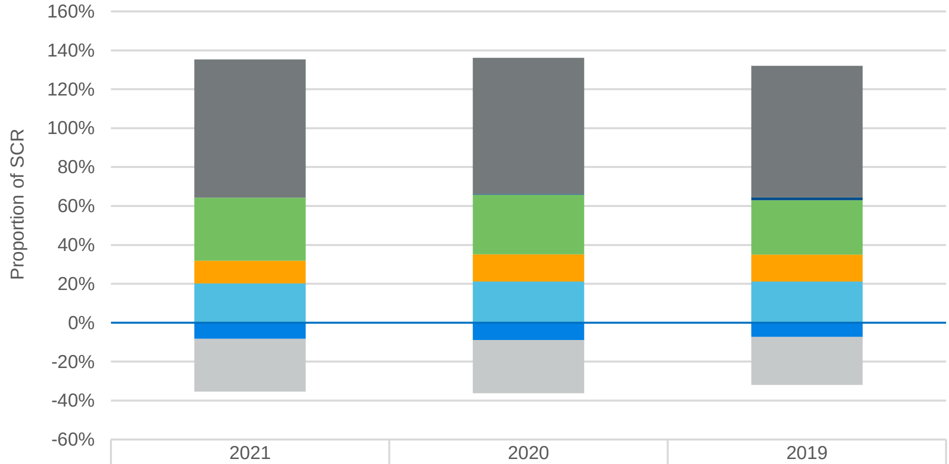
For most companies, operational risk forms a significant proportion of total SCR. In the case of the UK, Bupa has a relatively high operational risk component of 24% of total SCR in 2021. AXA PPP is the only company to use a full internal model for its calculations and has 20% of its SCR in the Operational Risk module (pre-diversification). WPA has the smallest operational risk component, describing in its SFCR[1] that it has a number of *"independent robust operational risk management strategies"* in place.

Market risk represents a large component of WPA's SCR. This is driven by its exposure to currency risk, primarily the US dollar exchange rate. In 2021 WPA saw an increase in its equity holdings, increasing its equity risk and therefore market risk further. Vitality notes in its SFCR that it has no significant exposure to market risk given the short-term nature of private medical insurance business and mentions that it does it not participate in any *"speculative, arbitrage or trading activities[2]"*.

[1] WPA SFCR : https://www.wpa.org.uk/about/corporate-governance

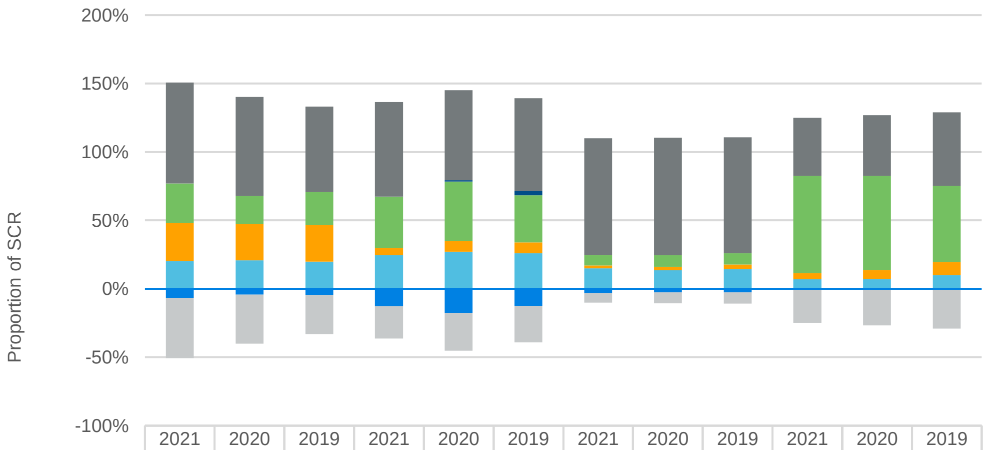
[2] Vitality SFCR:: https://www.vitality.co.uk/legal/

FIGURE 7: SCR BREAKDOWN FOR FIRMS IN THE UNITED KINGDOM



	2021	2020	2019
Health underwriting risk	71%	70%	68%
Non Life underwriting risk	0%	0%	1%
Market risk	32%	31%	28%
Counterparty default risk	12%	14%	14%
Operational risk	20%	21%	21%
Intangible asset risk	0%	0%	0%
Diversification	-27%	-27%	-25%
Loss absorbing - Deferred taxes	-8%	-9%	-7%

FIGURE 8: SCR BREAKDOWN BY COMPANY IN THE UNITED KINGDOM



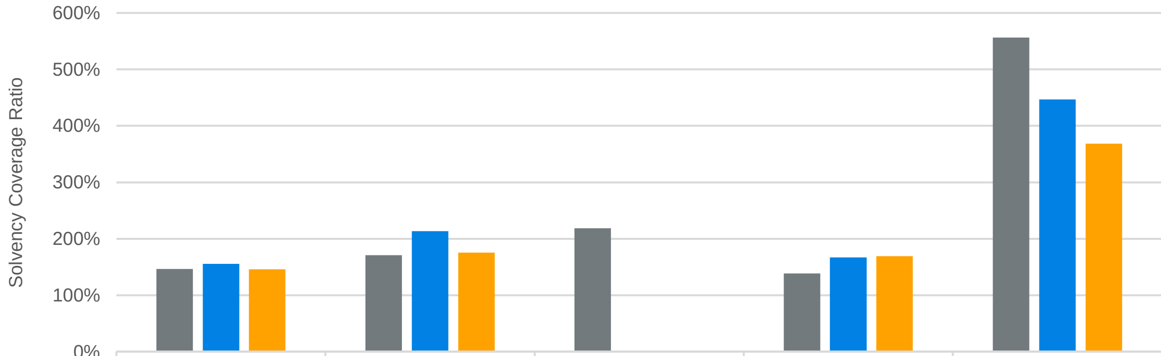
	AXA PPP Healthcare Limited			Bupa Insurance Limited			Vitality Health Limited			Western Provident Association Limited		
	2021	2020	2019	2021	2020	2019	2021	2020	2019	2021	2020	2019
Health underwriting risk	74%	72%	62%	69%	66%	68%	85%	86%	85%	42%	44%	54%
Non Life underwriting risk	0%	0%	0%	0%	1%	3%	0%	0%	0%	0%	0%	0%
Market risk	29%	21%	24%	37%	43%	34%	8%	9%	8%	71%	69%	56%
Counterparty default risk	28%	27%	27%	5%	8%	8%	2%	3%	3%	4%	7%	10%
Operational risk	20%	21%	20%	24%	27%	26%	15%	14%	15%	7%	7%	10%
Intangible asset risk	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Diversification	-44%	-36%	-29%	-24%	-28%	-27%	-7%	-8%	-8%	-25%	-27%	-29%
Loss absorbing - Deferred taxes	-6%	-4%	-4%	-13%	-18%	-12%	-3%	-3%	-3%	0%	0%	0%

1.1.5 Solvency Coverage Ratio

As of year-end 2021, the weighted average SCR coverage ratio across the insurers is 177%, compared with 198% as at 2020 year-end. This decrease in weighted average solvency coverage ratio is driven by a lower solvency ratio in 2021 than 2020 for all providers other than Vitality. Bupa has reported that a fall in its SCR is linked to dividend payouts, with its SCR increasing between 2020 and 2021 due to an increase in its underwriting risk from the inclusion of the adjusted 2020 accident year data in its undertaking-specific parameters (USP) calculation for health premium risk and an increase in lapse risk due to higher expected bound profits. For WPA, the driving factor for its reduction in solvency ratio is an increase in equity exposure in its investment portfolio, resulting in an increase in equity risk and therefore the SCR, with no corresponding increase in eligible own funds resulting in the fall in its solvency ratio.

The table in Figure 9 summarises the solvency coverage ratios of the UK health insurers from 2019 year-end to 2021.

FIGURE 9: SOLVENCY COVERAGE RATIO BY UK PROVIDERS FROM 2019 TO 2021[3]

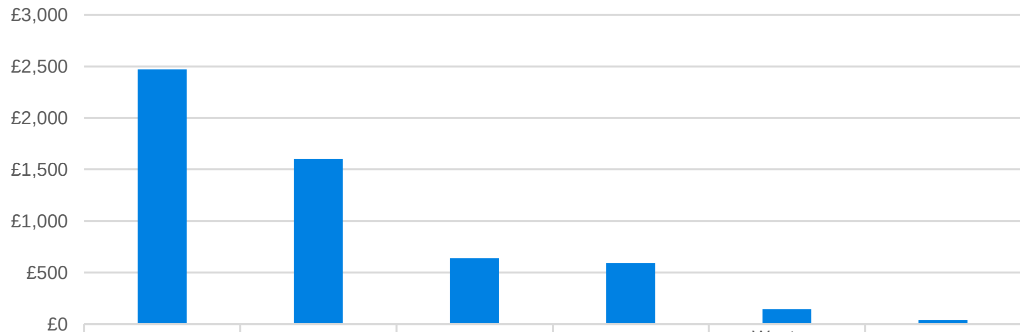


	AXA PPP Healthcare Limited	Bupa Insurance Limited	Civil Service Healthcare Society Limited	Vitality Health Limited	Western Provident Association Limited
2019	147%	171%	218%	139%	557%
2020	155%	213%		167%	447%
2021	146%	175%		169%	369%

1.1.6 Market share

In the United Kingdom, the PMI market is dominated by four major insurers. They are Bupa, AXA PPP, Aviva and Vitality. Whilst we have excluded Aviva and Exeter from the above analysis because the medical insurance GWP reported under Solvency II is shown separately, we have included both here. WPA is included as its medical insurance GWP makes up the majority of its total earnings.

FIGURE 10: MEDICAL GROSS WRITTEN PREMIUMS (£ MILLIONS) BY PMI PROVIDERS IN THE UNITED KINGDOM, 2021



	Bupa Insurance Limited	AXA PPP Healthcare Limited	Aviva Insurance Limited	Vitality Health Limited	Western Provident Association Limited	Exeter Friendly Society Limited (solo)
Medical GWP in 2021	£2,472	£1,603	£640	£592	£144	£40

[3] In 2020 CSH was acquired by Bupa.

Summary observations

The majority of investments held by UK domestic health insurers is in bonds (e.g., government, corporate) or otherwise collective investment undertakings. There has been an increase in the proportion of bond holdings over 2021, which is balanced by a reduction in deposits other than cash equivalents.

Most liabilities for UK market segments are Technical Provisions, which have decreased as a proportion of liabilities for the UK domestic market as at 2021 year-end compared with 2020. This is primarily driven by AXA PPP holding lower provisions than held at 2020 year-end, as it released some provisions for COVID-19 anticipated catch-ups related to deferred treatment from 2020. Other insurers also released COVID-19 provisions over 2021.

Most UK insurers reported a continued suppression of utilisation in 2021 as a result of COVID-19 despite the expectation of a "bounce-back" of claims deferred from 2020. Some insurers now anticipate the "bounce-back" may carry into future months outside current contract boundaries in 2022 and potentially 2023, though the level and timing remains uncertain.

Within the SCR, health underwriting risks and market risks are still the largest risk exposures of health insurers, based on the split of the SCR components, with the proportion of the SCR in each increasing slightly from 2020 to 2021. Operational risks and counterparty default risks are also significant risk exposures for most health insurers. Diversification benefits are significant for all the health insurers we reviewed.

Overall, UK health insurers included in the sample were in strong positions at 2021 year-end, with a weighted average SCR coverage ratio of 177%, although we note this is lower than the weighted average SCR coverage ratio in 2020 of 198% for the same set of companies.

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Appendix A: List of selected companies in 2021 and corresponding solvency coverage ratio

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

FIGURE 112: SELECTED COMPANIES AND SOLVENCY COVERAGE RATIO IN 2021 AND 2020

COUNTRY	COMPANY NAME	SOLVENCY COVERAGE RATIO (2021)	SOLVENCY COVERAGE RATIO (2020)	CAPITAL MODEL TYPE
United Kingdom	AXA PPP Healthcare Limited	146%	155%	Full Internal Model
United Kingdom	Bupa Insurance Limited	175%	213%	Standard Formula (with undertaking-specific parameters)
United Kingdom	Civil Service Healthcare Society Limited	NA	NA	Standard Formula
United Kingdom	Vitality Health Limited	169%	167%	Standard Formula
United Kingdom	Western Provident Association Limited	369%	447%	Standard Formula

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