MILLIMAN REPORT

Brief study of UK health insurers' second SFCRs

Analysis by private medical insurers and health cash plans

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1. Introduction

Under Solvency II, European insurers are required to publish their Solvency and Financial Condition Reports (SFCRs). Two sets of SFCRs have been published, with the first publication occurring in May 2017 and the second one in May 2018 for most of the insurers.

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 a number of 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 draws conclusions about the balance sheets and risk exposures of 15 UK private medical insurance (PMI) and health cash plan providers. We also highlight noteworthy trends between the 2017 and 2018 publications.

1.1 COMPANIES INCLUDED IN THIS ANALYSIS

We have included insurers that have at least 90% of their gross written premium (GWP) for 2016 and 2017 in the medical line of business. All insurers shown in Figure 1 have 100% of GWP in the medical line of business, except for Personal Assurance Plc and Bupa Insurance Limited, which each have 98% of their GWP in the medical line of business and 2% of their GWP in income protection insurance and travel assistance insurance, respectively. The 15 included insurers shown in Figure 1 account for 74% of medical GWP in the UK in 2016 and 2017.

FIGURE 1: UK HEALTH INSURERS INCLUDED (CASH PLANS AND PMI)

CASH PLAN PROVIDERS	PMI PROVIDERS
BHSF Limited (BHSF)	AXA PPP Healthcare Limited (AXA PPP)
HSF Health Plan limited (HSF)	Bupa Insurance Limited (BUPA)
Medicash Health Benefits Limited (MEDICASH)	Civil Service Healthcare Society Limited (CSH)
Paycare (PAYCARE)	Exeter Friendly Society Limited (solo) (EXETER)
Personal Assurance Plc (PA)	Vitality Health Limited (VITALITY)
Simplyhealth Access (SIMPLY HEALTH)	Western Provident Association Limited (WPA)
Sovereign Health Care (SOVEREIGN)	
The Exeter Cash Plan (EXETER CASH)	
Westfield Contributory Health Scheme (WESTFIELD)	

The insurers accounting for the excluded 26% of medical GWP (in 2016 and 2017) have significant proportions of their GWP in nonmedical lines of business and it is therefore not possible to isolate the capital charges for medical business. The major contributors to the 26% of excluded medical GWP include:

- Aviva Insurance Limited (36% of excluded medical GWP in 2016 and 2017). The medical business forms only 11% of the total GWP of Aviva in 2016 and 2017, with other major lines of business including motor and property insurance.
- Lloyds (22% of excluded medical GWP in 2016 and 2017). The medical business forms only 2% of the total GWP of Lloyds in 2016 and 2017, with other major lines of business including marine and property insurance.
- Royal and Sun Alliance (18% of excluded medical GWP in 2016 and 2017). The medical business forms only 9% of the total GWP of Royal and Sun Alliance in 2016 and 2017, with other major lines of business including motor and property insurance.

Although Cigna sells private medical insurance business in the UK, it primarily sells international private medical insurance (IPMI) and is classified as a Belgian rather than a UK company in the data underlying our analysis. It has therefore been excluded from this report.

1.2 UNDERLYING DATA

The analysis underlying this report focuses on the quantitative information contained in the public QRTs. The Solvency II Wire Tool,[1] which contains comprehensive information from the QRTs, is used to produce the results included in this report. We have used data for Medicash in 2016 directly from the SFCR because this was not included in the Solvency II Wire Tool.

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 and 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.

This report is not intended to guide or determine any specific individual situation and persons should consult qualified professionals before taking specific actions.

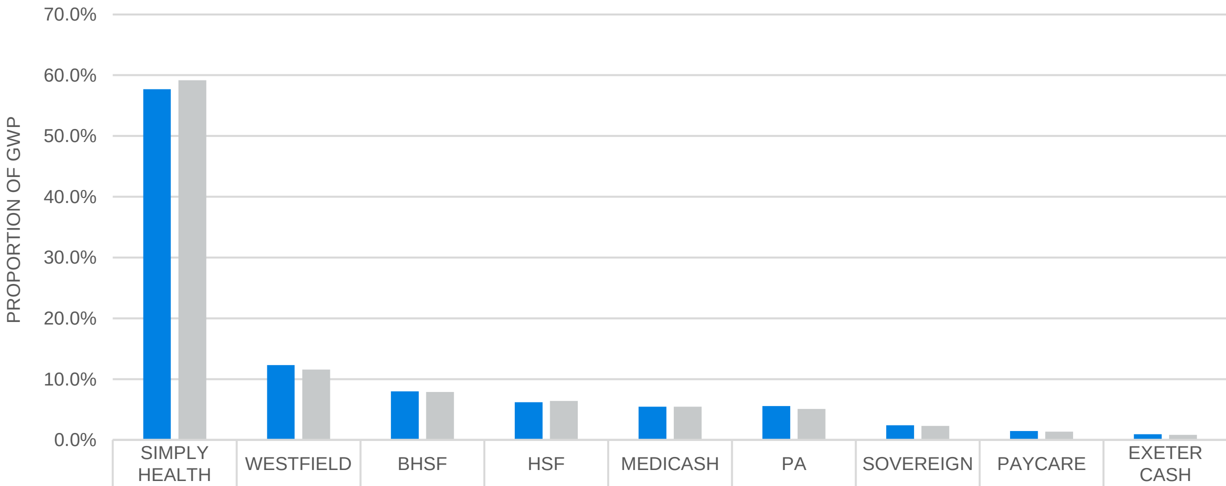
[1] The Solvency II Wire Tool is available at https://solvencyiiwiredata.com. The extraction date for this data was 1 November 2018.

2. Premiums, claims and expenses

2.1 GROSS WRITTEN PREMIUM (GWP)

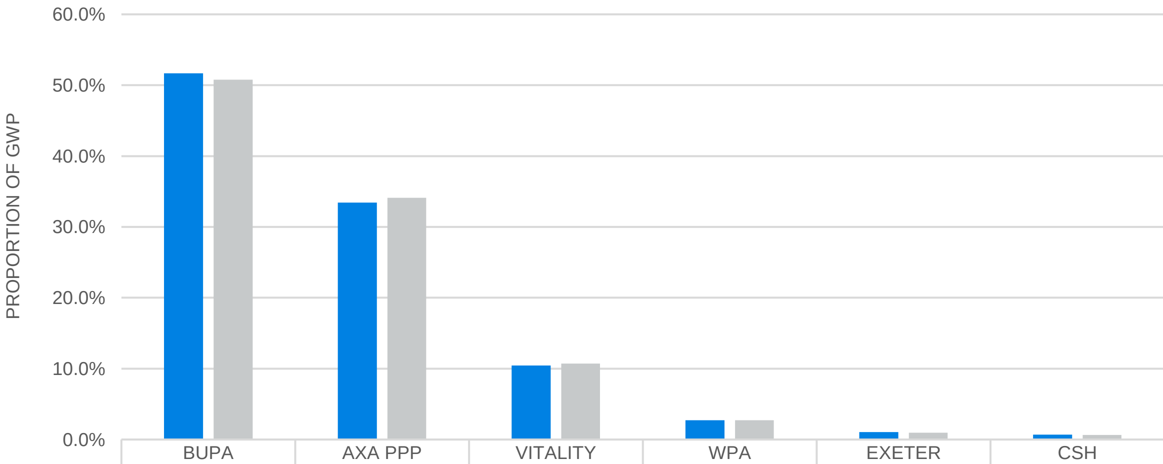
Figures 2 and 3 show the gross written premium[2] (GWP) by company for the cash plans and PMI providers included in this report, respectively. PMI providers account for approximately 91% of the included total GWP in 2017. Out of the cash plans, Simplyhealth has the largest market share. Out of the PMI insurers, Bupa, AXA PPP and Vitality Health have the largest market share, with these insurers accounting for over 90% of the 2017 PMI GWP included in this analysis.

FIGURE 2: GWP DISTRIBUTION BY CASH PLAN PROVIDER, 2016 AND 2017



	SIMPLY HEALTH	WESTFIELD	BHSF	HSF	MEDICASH	PA	SOVEREIGN	PAYCARE	EXETER CASH
2016	57.7%	12.3%	8.0%	6.2%	5.5%	5.6%	2.4%	1.4%	0.9%
2017	59.2%	11.6%	7.9%	6.4%	5.4%	5.1%	2.3%	1.4%	0.8%

FIGURE 3: GWP DISTRIBUTION BY PMI PROVIDER, 2016 AND 2017



	BUPA	AXA PPP	VITALITY	WPA	EXETER	CSH
2016	51.7%	33.4%	10.4%	2.7%	1.1%	0.7%
2017	50.8%	34.1%	10.7%	2.7%	1.0%	0.7%

[2] The information on premiums is provided in QRT S.05.01.01.

2.3 NET EARNED PREMIUM COMPOSITION: CASH PLANS VS. PMI

Figure 4 compares the net earned premium (NEP) composition of cash plans and PMI providers by year. The net earned premium is analysed in terms of three major components:

- Net incurred claims (net of reinsurance incurred claims).
- Total expenses (expenses incurred, other expenses and change in net technical provisions).
- Technical result (difference between net earned premium and net outgo items such as net incurred claims and total expenses), i.e., a high-level estimate of profit.

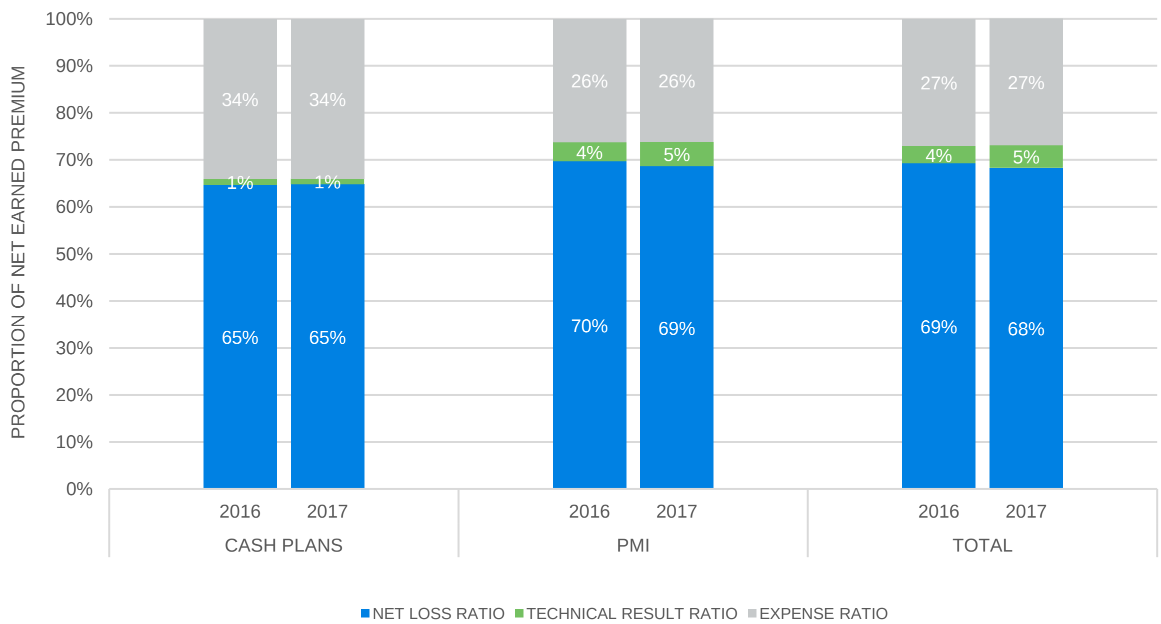
We calculate the following ratios to understand the composition of NEP:

- Net loss ratio: Net incurred claims / net earned premium.
- Expense ratio: Total expenses / net earned premium.
- Technical result ratio: Technical result / net earned premium.

We observe that cash plans have higher expense ratios as compared to PMI providers in both 2016 and 2017. However, the technical result ratios and the net loss ratios are lower for cash plans than PMI.

We observe that, for both cash plans and PMI, the composition of the NEP has been quite stable from 2016 to 2017.

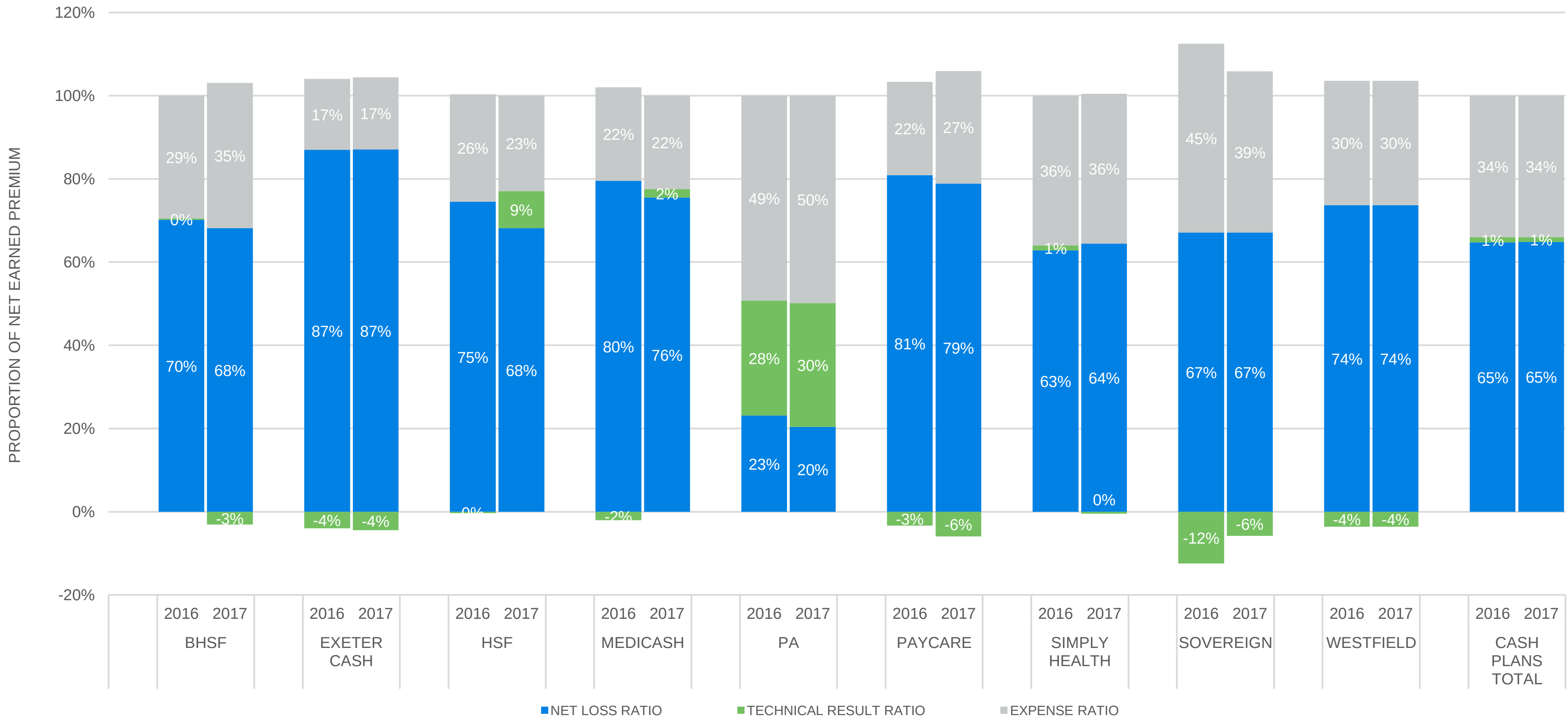
FIGURE 4: NEP COMPOSITION: CASH PLANS VS. PMI



2.4 NET EARNED PREMIUM COMPOSITION: CASH PLANS

Figure 5 illustrates the composition of net earned premium by cash plan for 2016 and 2017. The components of NEP vary significantly by insurer. We observe a significant reduction in the net loss ratio of HSF and Medicash from 2016 to 2017. BHSF and Paycare have reported significant expense ratio increases, while HSF and Sovereign have reported expense ratio reductions.

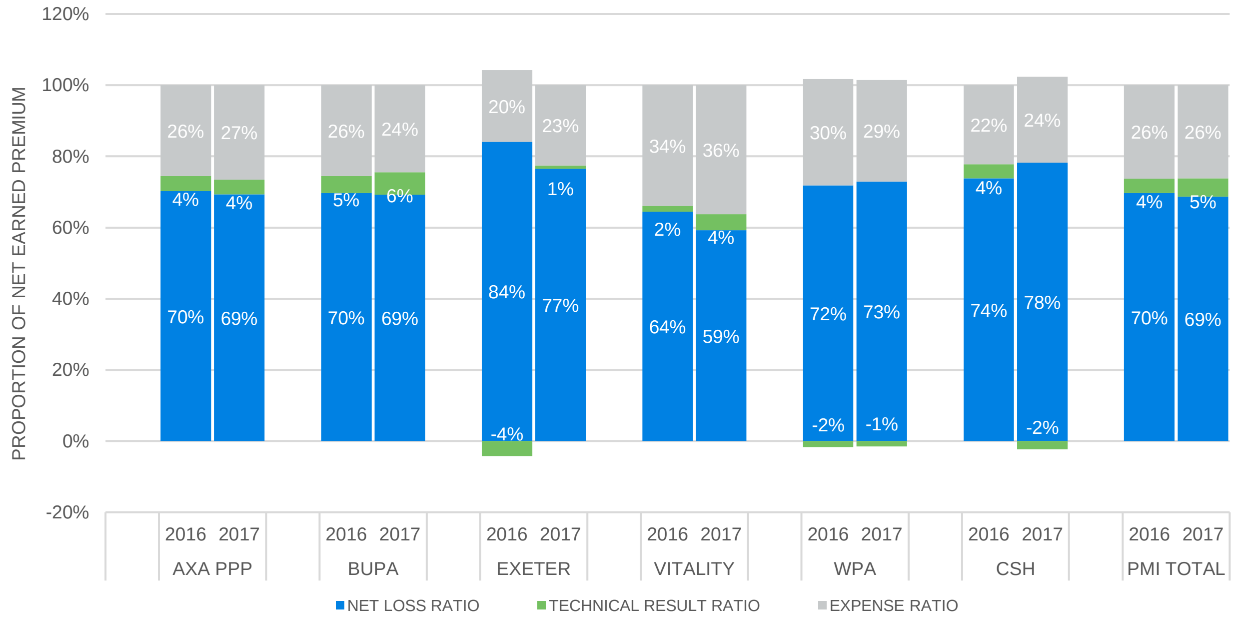
FIGURE 5: NEP COMPOSITION BY CASH PLANS IN 2016 AND 2017



2.5 NET EARNED PREMIUM COMPOSITION: PMI

Figure 6 illustrates the NEP composition for PMI providers in 2016 and 2017. For PMI, all insurers have an expense ratio of greater than or equal to 20% of NEP in 2016 and 2017. Generally, the PMI providers have net loss ratios below 80% (except for Exeter in 2016). We observe a significant reduction in the net loss ratio for Exeter and Vitality from 2016 to 2017. For CSH, we observe an increase of four percentage points in the net loss ratio from 2016 to 2017. The expense ratio has generally been stable for the PMI providers, with small variations from 2016 to 2017. Bupa, Exeter, Vitality and WPA have experienced technical result ratio improvements from 2016 to 2017 while CSH has experienced a deterioration in its technical result ratios.

FIGURE 6: NEP COMPOSITION BY PMI IN 2016 AND 2017

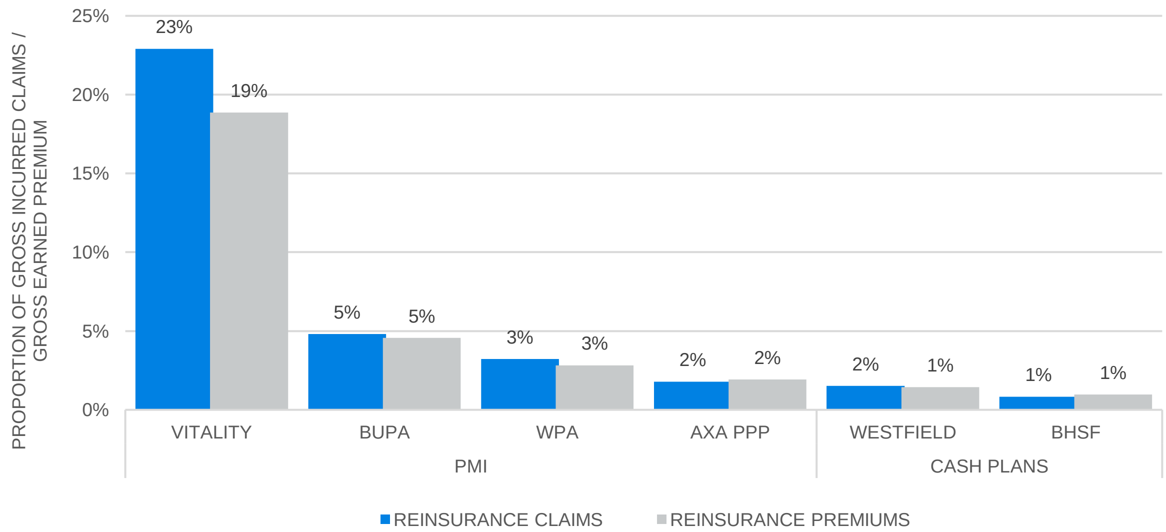


2.6 PROPORTION OF REINSURANCE CLAIMS AND PREMIUMS

The use of reinsurance varies by company, but in general cash plan providers make limited use of reinsurance. Out of the PMI providers and cash plans, Vitality uses the most significant levels of reinsurance. Other insurers such as Bupa, WPA, AXA PPP, Westfield and BHSF use lower levels of reinsurance.

Note that Figure 7 only displays the insurers with a reinsurance usage of greater than 0% in 2017.

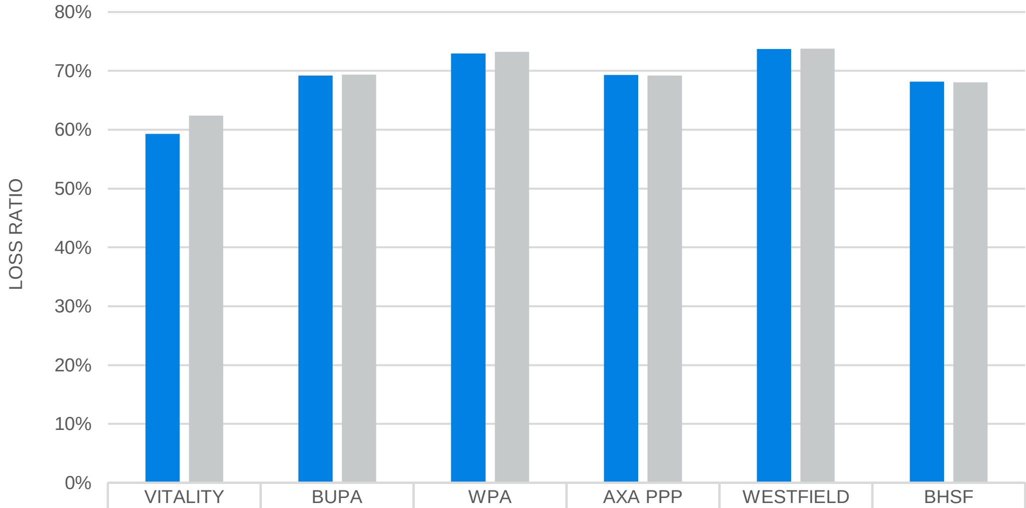
FIGURE 7: PROPORTION OF REINSURANCE (CLAIMS AND PREMIUMS) IN 2017



2.7 NET LOSS RATIOS AND GROSS LOSS RATIOS

In Figure 8, we analyse the differences in the net loss ratio and gross loss ratio for insurers having reinsurance arrangements in 2017. We observe that overall performance is similar with and without reinsurance (i.e., gross and net of reinsurance), except for Vitality, where the net loss ratio is lower than the gross loss ratio.

FIGURE 8: NET LOSS RATIO AND GROSS LOSS RATIO COMPARISON FOR 2017



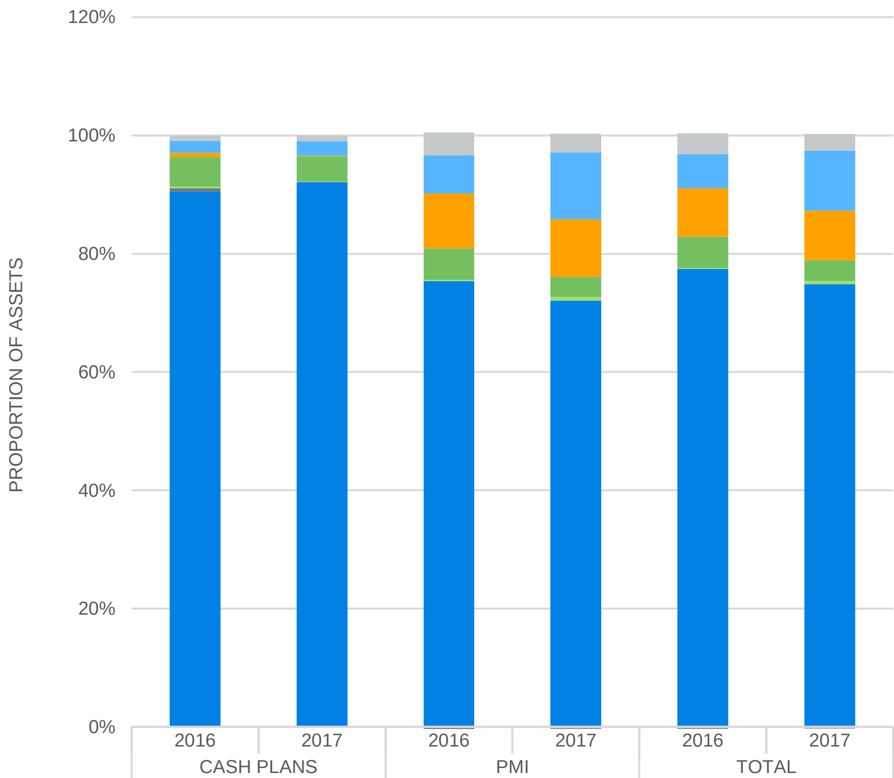
	PMI				CASH PLANS	
	VITALITY	BUPA	WPA	AXA PPP	WESTFIELD	BHSF
NET LOSS RATIO	59%	69%	73%	69%	74%	68%
GROSS LOSS RATIO	62%	69%	73%	69%	74%	68%

3. Balance sheet

3.1 DISTRIBUTION OF ASSETS BY TYPE OF INSURER

The distribution of assets by asset type varies for cash plans and PMI providers. However, the distribution for each insurer type has been consistent from 2016 to 2017. In the case of cash plans, over 90% of assets are concentrated in investments for both 2016 and 2017. In the case of PMI, investments form the largest proportions of assets, but there are significant concentrations in alternative asset types such as loans and mortgages, receivables and other assets.

FIGURE 9: DISTRIBUTION OF ASSETS BY TYPE OF INSURER

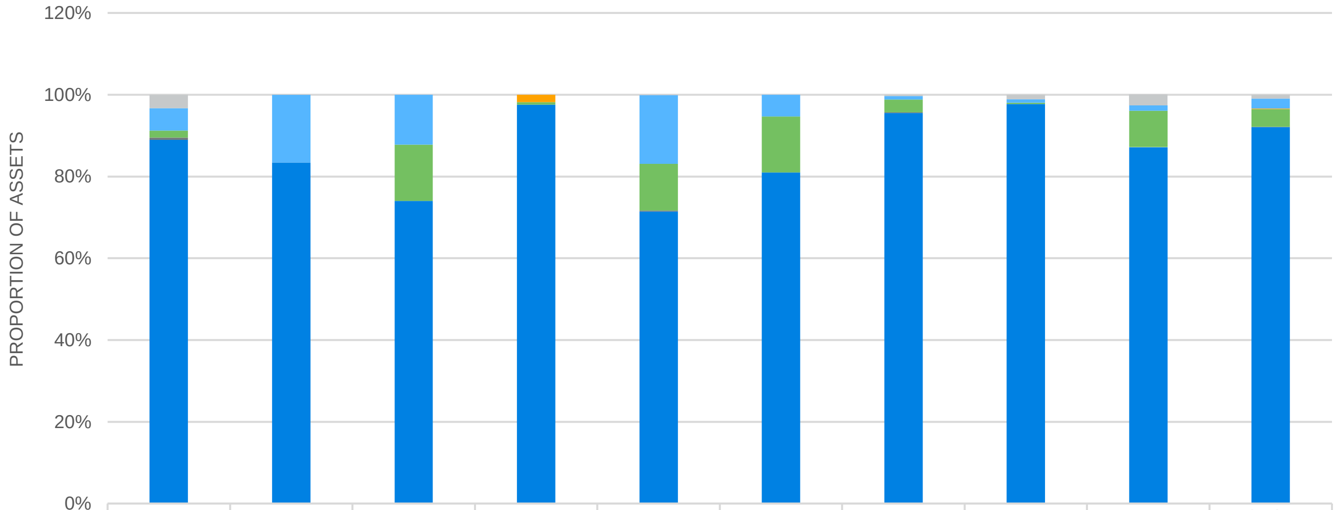


	CASH PLANS 2016	CASH PLANS 2017	PMI 2016	PMI 2017	TOTAL 2016	TOTAL 2017
Receivables (trade, not insurance)	1%	1%	4%	3%	3%	3%
Insurance and intermediaries receivables	2%	2%	6%	11%	6%	10%
Loans and mortgages	1%	0%	9%	10%	8%	8%
Other assets	5%	4%	5%	3%	5%	4%
Reinsurance receivables	0%	0%	0%	1%	0%	1%
Reinsurance recoverables	1%	0%	0%	0%	0%	0%
Investments	90%	92%	75%	72%	77%	75%

3.2 DISTRIBUTION OF ASSETS BY INSURER: CASH PLANS

The distribution of assets for cash plans in 2017 varies by insurer. As mentioned above, the concentration of assets is in investments. However, some insurers have significant proportions of assets in insurance and intermediary receivables and other assets.

FIGURE 10: DISTRIBUTION OF ASSETS FOR CASH PLANS IN 2017

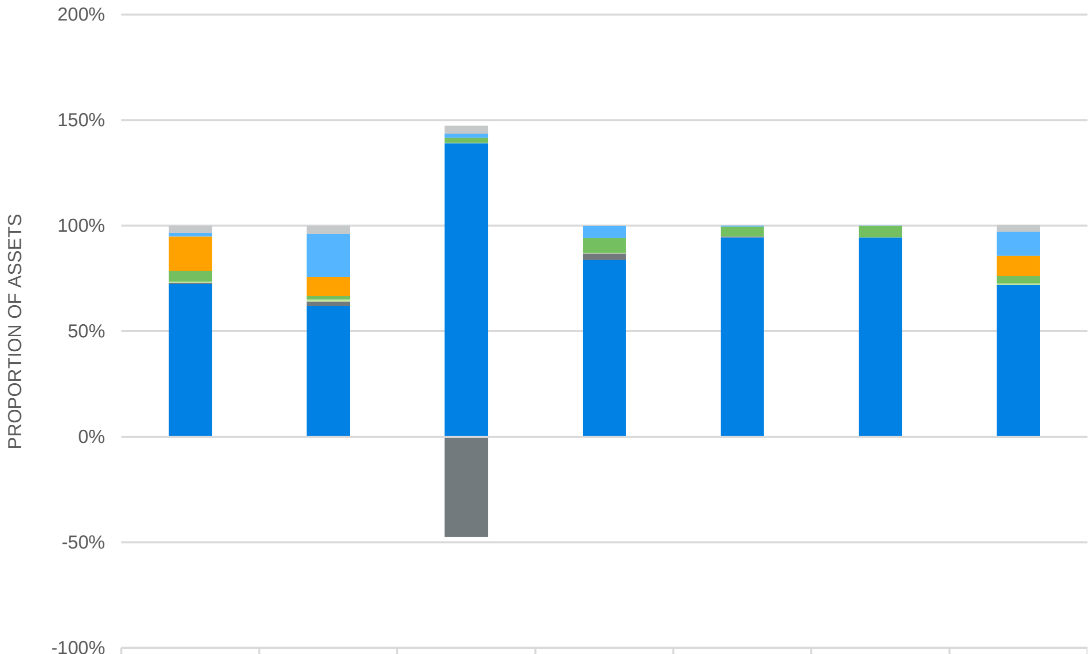


	BHSF	EXETER CASH	HSF	MEDICASH	PA	PAYCARE	SIMPLY HEALTH	SOVEREIGN	WESTFIELD	CASH PLANS TOTAL
Receivables (trade, not insurance)	3%	0%	0%	0%	0%	0%	0%	1%	3%	1%
Insurance and intermediaries receivables	5%	17%	12%	0%	17%	5%	1%	1%	1%	2%
Loans and mortgages	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%
Other assets	2%	0%	14%	1%	11%	14%	3%	0%	9%	4%
Reinsurance receivables	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Reinsurance recoverables	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Investments	89%	83%	74%	98%	71%	81%	96%	98%	87%	92%

3.3 DISTRIBUTION OF ASSETS BY INSURER: PMI

The distribution of assets for PMI in 2017 varies by insurer. Similarly to cash plans, PMI insurers have large portions of assets in investments. In the case of Exeter, the reported reinsurance recoverable figure is negative. This implies that the insurer expects to pay a higher reinsurance premium than it expects to receive in reinsurance claims.

FIGURE 11: DISTRIBUTION OF ASSETS FOR PMI IN 2017

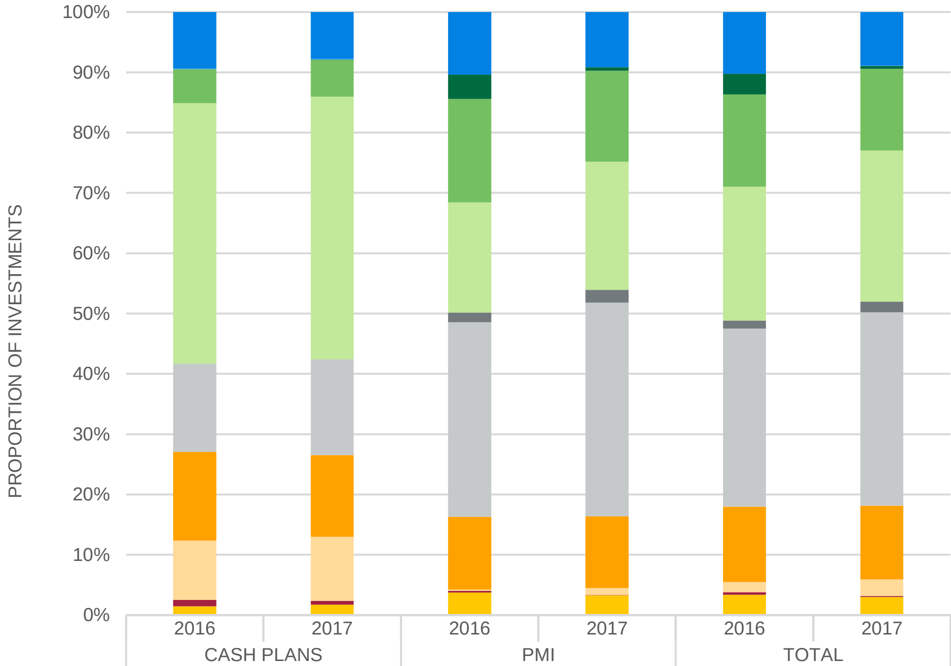


	AXA PPP	BUPA	EXETER	VITALITY	WPA	CSH	PMI TOTAL
Receivables (trade, not insurance)	3%	4%	4%	0%	0%	0%	3%
Insurance and intermediaries receivables	2%	21%	2%	6%	0%	0%	11%
Loans and mortgages	16%	9%	0%	0%	0%	0%	10%
Other assets	5%	2%	2%	7%	5%	5%	3%
Reinsurance receivables	0%	1%	0%	0%	0%	0%	1%
Reinsurance recoverables	1%	2%	-47%	3%	0%	0%	0%
Investments	73%	62%	139%	84%	94%	94%	72%

3.4 DISTRIBUTION OF INVESTMENTS BY TYPE OF INSURER

The distribution of investments for both cash plans and PMI has been quite stable from 2016 to 2017. For cash plans, collective investment undertakings is the largest investment category, followed by corporate and government bonds. For PMI, corporate bonds is the largest investment category followed by collective investment undertakings.

FIGURE 12: DISTRIBUTION OF INVESMENTS BY TYPE OF INSURER

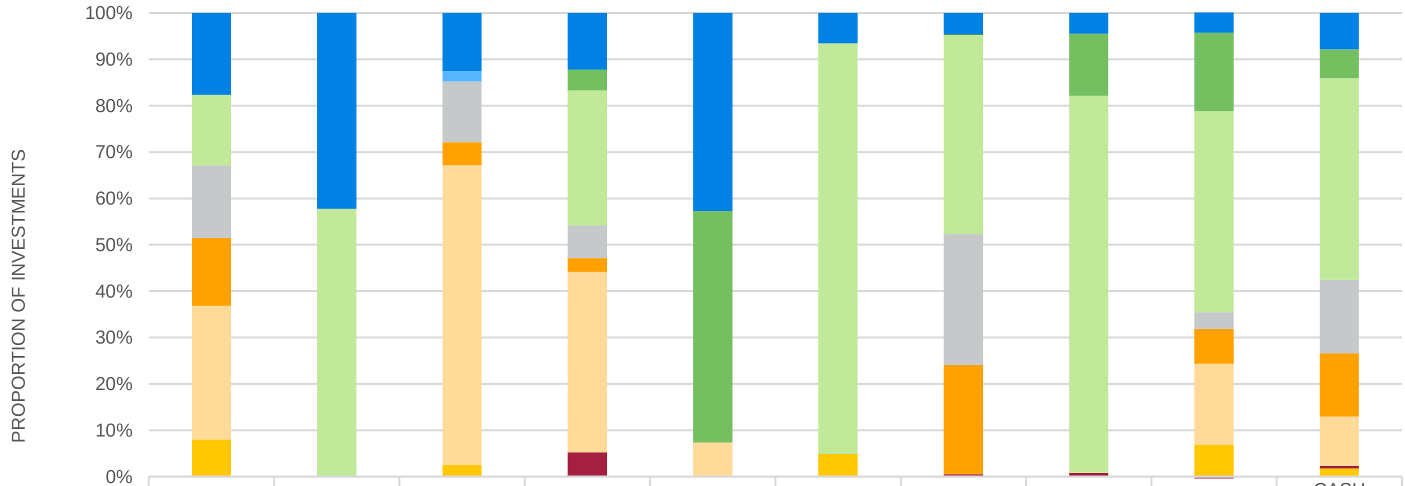


	CASH PLANS 2016	CASH PLANS 2017	PMI 2016	PMI 2017	TOTAL 2016	TOTAL 2017
Cash and cash equivalents	9%	8%	10%	9%	10%	9%
Other investments	0%	0%	0%	0%	0%	0%
Derivatives	0%	0%	4%	1%	3%	1%
Deposits other than cash equivalents	6%	6%	17%	15%	15%	14%
Collective investment undertakings	43%	44%	18%	21%	22%	25%
Other bonds	0%	0%	2%	2%	1%	2%
Corporate bonds	15%	16%	32%	35%	30%	32%
Government bonds	15%	14%	12%	12%	12%	12%
Equity	10%	11%	0%	1%	2%	3%
Holdings in related undertakings, incl. participations	1%	1%	0%	0%	0%	0%
Property	1%	2%	4%	3%	3%	3%

3.5 DISTRIBUTION OF INVESTMENTS BY INSURER: CASH PLANS

The largest cash plan by market share, Simplyhealth, has the majority of its investments in bonds and collective instruments in 2017. The other large cash plans such as BHSF, Westfield and HSF have significant proportions of investment in equities, which are typically higher-risk instruments.

FIGURE 13: DISTRIBUTION OF INVESTMENTS IN 2017 FOR CASH PLANS

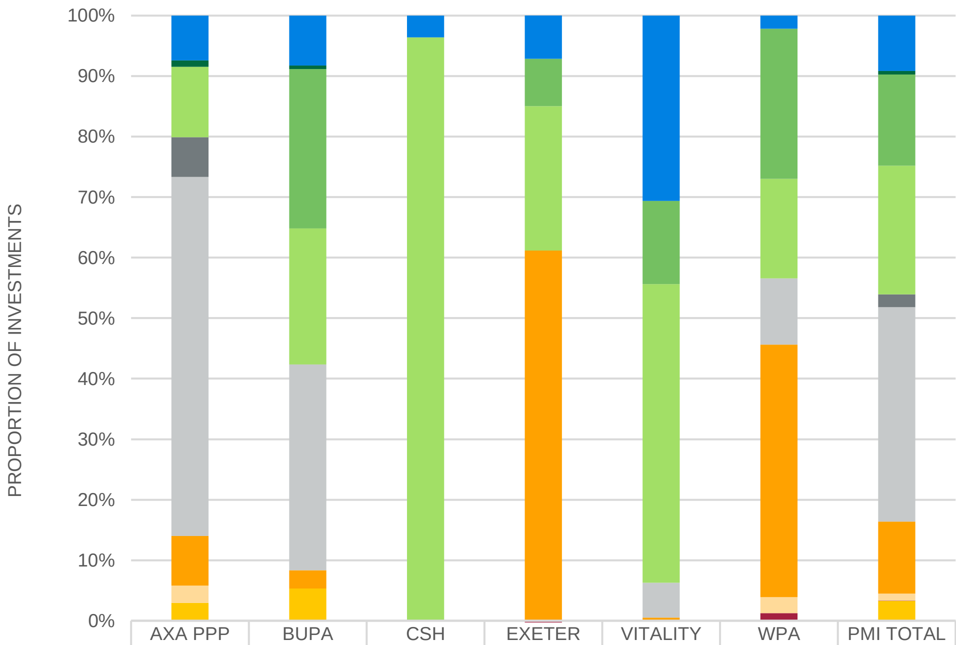


	BHSF	EXETER CASH	HSF	MEDICASH	PA	PAYCARE	SIMPLY HEALTH	SOVEREIGN	WESTFIELD	CASH PLANS TOTAL
Cash and cash equivalents	18%	42%	13%	12%	43%	7%	5%	5%	6%	8%
Other investments	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Derivatives	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Deposits other than cash equivalents	0%	0%	0%	5%	50%	0%	0%	13%	17%	6%
Collective investment undertakings	15%	58%	0%	29%	0%	89%	43%	81%	43%	44%
Other bonds	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Corporate bonds	16%	0%	13%	7%	0%	0%	28%	0%	4%	16%
Government bonds	15%	0%	5%	3%	0%	0%	23%	0%	8%	14%
Equity	29%	0%	65%	39%	7%	0%	0%	0%	17%	11%
Holdings in related undertakings, incl. participations	0%	0%	0%	5%	0%	0%	1%	1%	-1%	1%
Property	8%	0%	3%	0%	0%	5%	0%	0%	7%	2%

3.6 DISTRIBUTION OF INVESTMENTS BY INSURER: PMI

Similarly to cash plans, the distribution of investments for PMI in 2017 varies significantly by insurer. Overall, we observe that PMI insurers invest in instruments such as bonds, collective investments undertakings, cash equivalents and deposits other than cash equivalents, with much lower holdings of assets such as equities and properties which may be higher risk.

FIGURE 14: DISTRIBUTION OF INVESTMENTS IN 2017 FOR PMI

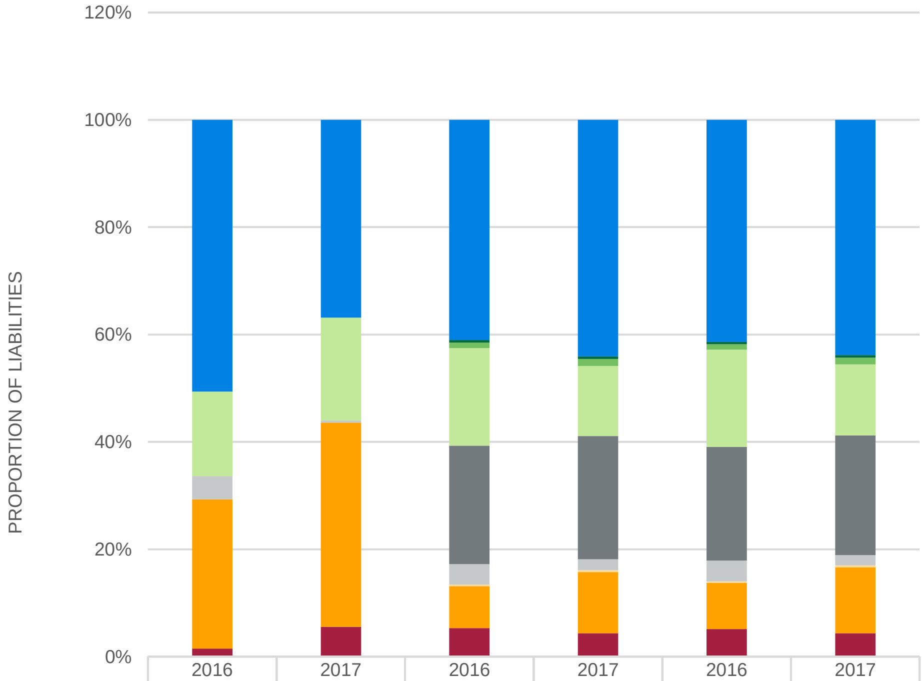


	AXA PPP	BUPA	CSH	EXETER	VITALITY	WPA	PMI TOTAL
Cash and cash equivalents	7%	8%	4%	8%	31%	2%	9%
Other investments	0%	0%	0%	0%	0%	0%	0%
Derivatives	1%	1%	0%	0%	0%	0%	1%
Deposits other than cash equivalents	0%	26%	0%	8%	14%	25%	15%
Collective investment undertakings	12%	22%	96%	24%	49%	16%	21%
Other bonds	7%	0%	0%	0%	0%	0%	2%
Corporate bonds	59%	34%	0%	0%	6%	11%	35%
Government bonds	8%	3%	0%	61%	1%	42%	12%
Equity	3%	0%	0%	0%	0%	3%	1%
Holdings in related undertakings, incl. participations	0%	0%	0%	-1%	0%	1%	0%
Property	3%	5%	0%	0%	0%	0%	3%

3.7 DISTRIBUTION OF LIABILITIES BY TYPE OF INSURER

For cash plans, the health technical provisions form the largest portions of liabilities in 2016, and payables form the largest portions of liabilities in 2017. For PMI providers, the health technical provisions form the largest portions of liabilities both in 2016 and 2017. Other than the technical provisions, other liabilities form significant proportions of the total liabilities for both types of insurers. For PMI, subordinated liabilities form large portions of total liabilities. In the case of cash plans, we observe a significant reduction in the health technical provisions from 2016 to 2017, driven by the largest cash plan, Simplyhealth. This is offset by an increase in payables. In the case of PMI, the composition of liabilities is quite stable from 2016 to 2017.

FIGURE 15: DISTRIBUTION OF LIABILITIES BY TYPE OF INSURER

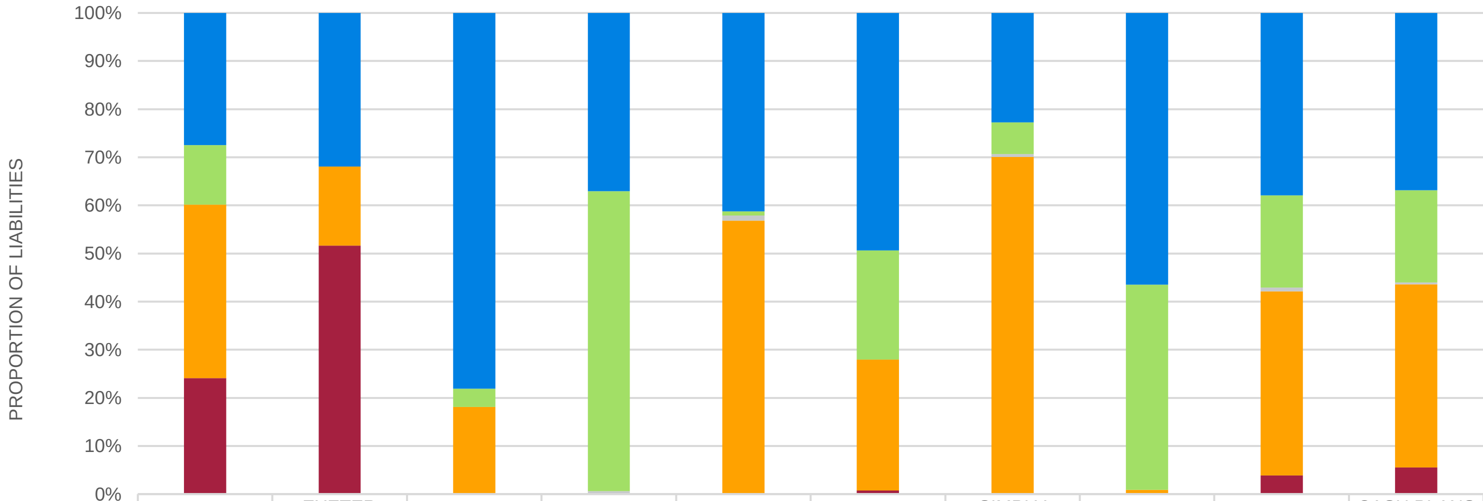


	CASH PLANS 2016	CASH PLANS 2017	PMI 2016	PMI 2017	TOTAL 2016	TOTAL 2017
Technical provisions – health	51%	37%	41%	44%	41%	44%
Technical provisions – index & unit linked	0%	0%	0%	0%	0%	0%
Technical provisions – life	0%	0%	0%	0%	0%	0%
Technical provisions Non Life (excl. health)	0%	0%	1%	1%	1%	1%
Other liabilities	16%	19%	18%	13%	18%	13%
Subordinated liabilities	0%	0%	22%	23%	21%	22%
Reinsurance payables	4%	0%	4%	2%	4%	2%
Deposits from reinsurers	0%	0%	0%	0%	0%	0%
Payables (trade, not insurance)	28%	38%	8%	11%	9%	12%
Insurance & intermediaries payables	1%	6%	5%	4%	5%	4%

3.8 DISTRIBUTION OF LIABILITIES BY INSURER: CASH PLANS

The distribution of liabilities varies by insurer for cash plans in 2017. For most cash plans, either health technical provisions or payables form the largest proportion of liabilities in 2017.

FIGURE 16: DISTRIBUTION OF LIABILITIES IN 2017 FOR CASH PLANS

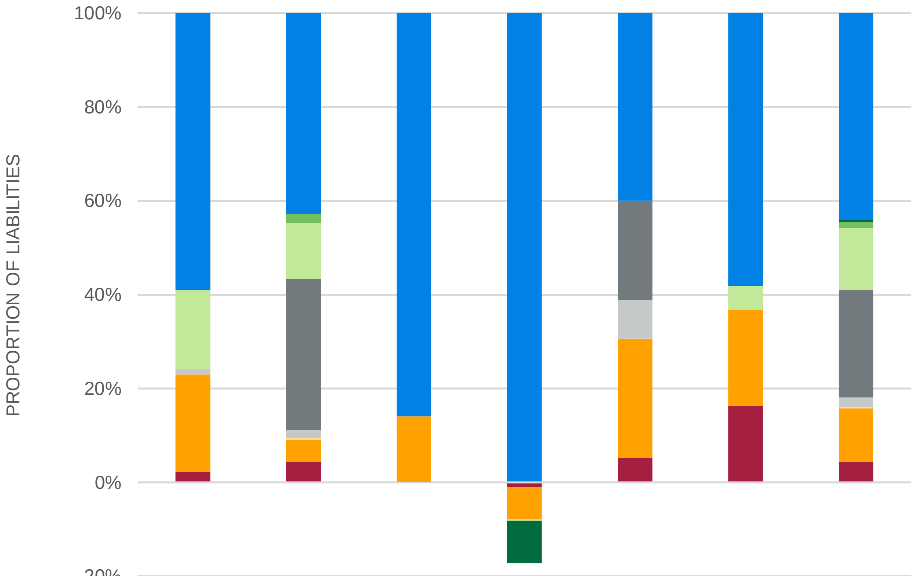


	BHSF	EXETER CASH	HSF	MEDICASH	PA	PAYCARE	SIMPLY HEALTH	SOVEREIGN	WESTFIELD	CASH PLANS TOTAL
Technical provisions – health	27%	32%	78%	37%	41%	49%	23%	56%	38%	37%
Technical provisions – index & unit linked	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Technical provisions – life	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Technical provisions Non Life (excl. health)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other liabilities	12%	0%	4%	62%	1%	23%	7%	43%	19%	19%
Subordinated liabilities	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Reinsurance payables	0%	0%	0%	1%	1%	0%	1%	0%	1%	0%
Deposits from reinsurers	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Payables (trade, not insurance)	36%	16%	18%	0%	57%	27%	70%	1%	38%	38%
Insurance & intermediaries payables	24%	52%	0%	0%	0%	1%	0%	0%	4%	6%

3.9 DISTRIBUTION OF LIABILITIES BY INSURER: PMI

The distribution of liabilities varies by insurer for PMI in 2017. Health technical provisions form the largest proportion of the liabilities. For Bupa and Vitality, subordinated liabilities form significant proportions of liabilities.

FIGURE 17: DISTRIBUTION OF LIABILITIES IN 2017 FOR PMI



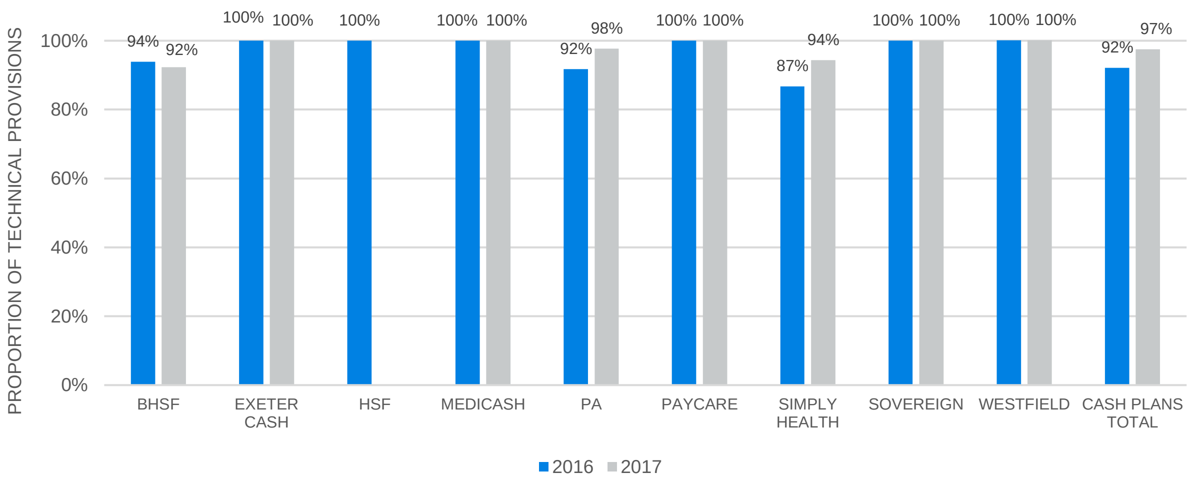
	AXA PPP	BUPA	CSH	EXETER	VITALITY	WPA	PMI TOTAL
Technical provisions – health	59%	43%	86%	117%	40%	58%	44%
Technical provisions – index & unit linked	0%	0%	0%	0%	0%	0%	0%
Technical provisions – life	0%	0%	0%	-9%	0%	0%	0%
Technical provisions Non Life (excl. health)	0%	2%	0%	0%	0%	0%	1%
Other liabilities	17%	12%	0%	0%	0%	5%	13%
Subordinated liabilities	0%	32%	0%	0%	21%	0%	23%
Reinsurance payables	1%	2%	0%	0%	8%	0%	2%
Deposits from reinsurers	0%	0%	0%	0%	0%	0%	0%
Payables (trade, not insurance)	21%	5%	14%	-7%	25%	21%	11%
Insurance & intermediaries payables	2%	4%	0%	-1%	5%	16%	4%

3.10 NET TECHNICAL PROVISIONS FOR CASH PLANS

Figure 18 illustrates the ratios of net to gross technical provisions for cash plans, reflecting the proportion of gross technical provisions that are retained by the insurer (net) and the remaining portion that is reinsured in each year. For most insurers, the net technical provisions are over 90% of the gross technical provisions. We observe that for PA and Simplyhealth the net technical provisions increase significantly from 2016 to 2017.

Note that net technical provisions are not available for HSF (2017), hence it is not included in Figure 18.

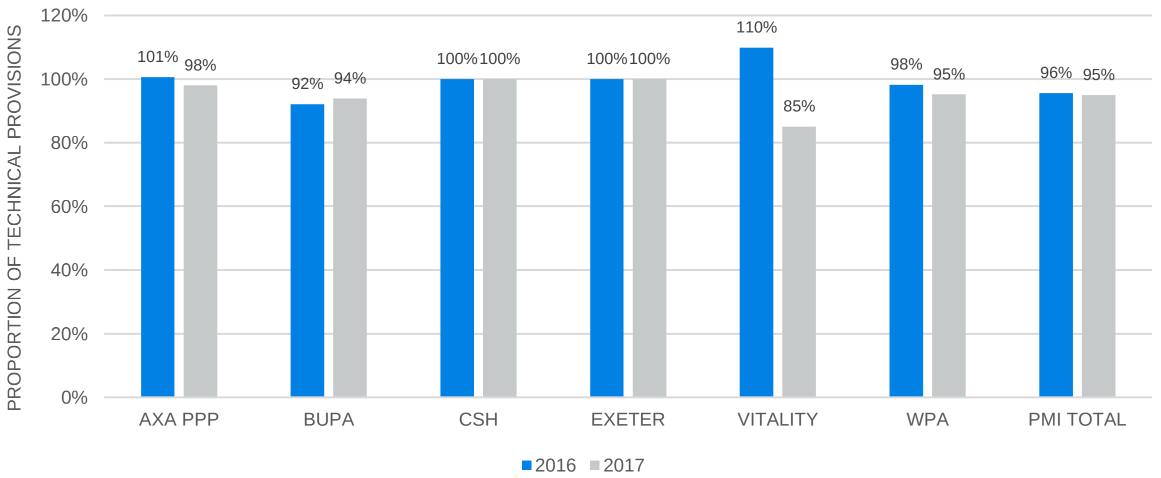
FIGURE 18: NET TECHNICAL PROVISIONS FOR CASH PLANS



3.11 NET TECHNICAL PROVISIONS FOR PMI

Similarly to cash plans, the net technical provisions form quite a large proportion of technical provisions for PMI in 2016 and 2017. We observe that for Vitality there is a significant decrease in the portion of net technical provisions from 2016 to 2017.

FIGURE 19: NET TECHNICAL PROVISIONS FOR PMI

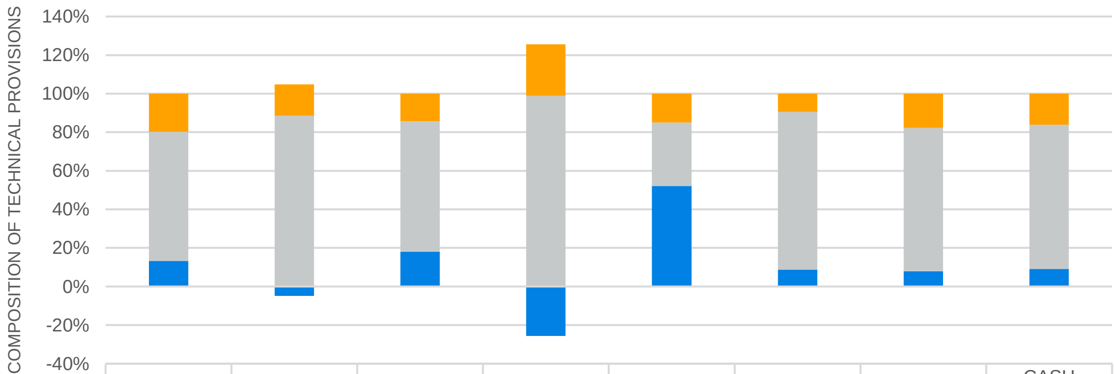


3.12 COMPOSITION OF TECHNICAL PROVISIONS: CASH PLANS

Figure 20 shows the composition of the technical provisions by the distribution of premium provisions, claims provisions and risk margin for cash plans in 2017. The claims provisions form the largest proportion of technical provisions for all cash plans in 2017 except Paycare. The composition of technical provisions remains stable from 2016 to 2017.

Note that the composition of technical provisions for HSF (2017) is not available. The composition for Simplyhealth is significantly different from other providers and this insurer has been excluded from Figure 20 to avoid distorting the total cash plan view. As Simplyhealth is the largest cash plan provider in the market, the composition of technical provisions for total cash plans in Figure 20 may not be representative of the actual total cash plan market value.

FIGURE 20: COMPOSITION OF TECHNICAL PROVISIONS FOR CASH PLANS IN 2017

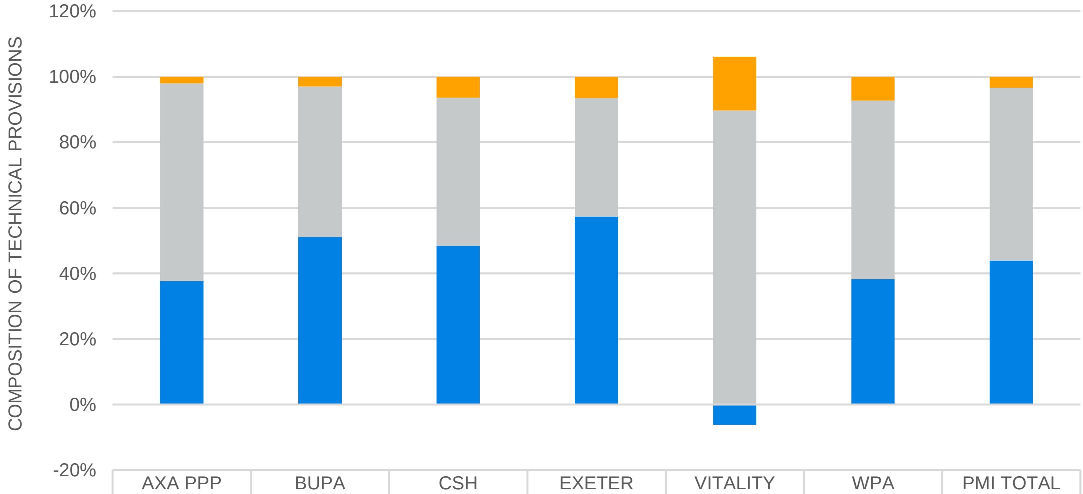


	BHSF	EXETER CASH	MEDICASH	PA	PAYCARE	SOVEREIGN	WESTFIELD	CASH PLANS TOTAL
Risk margin	20%	16%	14%	27%	15%	9%	18%	16%
Claims provisions	67%	89%	68%	99%	33%	82%	74%	75%
Premium provisions	13%	-5%	18%	-26%	52%	9%	8%	9%

3.13 COMPOSITION OF TECHNICAL PROVISIONS: PMI

In the case of PMI, we observe that premium provisions are a larger component of technical provisions as compared to cash plans. The only exception is Vitality, which has 90% of technical provisions made up of claims provisions in 2017. Further, for Vitality we observe a negative premium provision, implying that the expected present value of future premiums receivable (unearned element) exceeds the sum of the expected present value of future claims payments (unexpired) and the expected present value of all types of future expenses (unearned element).

FIGURE 21: COMPOSITION OF TECHNICAL PROVISIONS FOR PMI IN 2017



	AXA PPP	BUPA	CSH	EXETER	VITALITY	WPA	PMI TOTAL
Risk margin	2%	3%	6%	6%	16%	7%	3%
Claims provisions	60%	46%	45%	36%	90%	54%	53%
Premium provisions	38%	51%	48%	57%	-6%	38%	44%

4. Solvency capital requirements and own funds

4.1 SOLVENCY CAPITAL REQUIREMENT AND RISK MARGIN BY INSURER

In Figure 22, we analyse the interaction of the Solvency Capital Requirement (SCR) with the Risk Margin (RM) in 2017.

We observe that Bupa and AXA have large SCRs, which is due to their high volumes of health business compared to other insurers. Out of the cash plans, Simplyhealth has the largest SCR.

RM represents the expected runoff of the company's risk exposure in terms of cost of capital, with the cost of capital defined as 6% of the SCR (excluding the capital charge for hedgeable market risk). The majority of insurers report a ratio within 4% of the total SCR. Allowing for the impact of excluding hedgeable market risk from the SCR, the ratio is closer to 6%, which implies an average runoff period of around one year. For most insurers we observe that the ratio of RM to SCR remains stable from 2016 to 2017.

FIGURE 22: SCR AND RM/SCR IN 2017

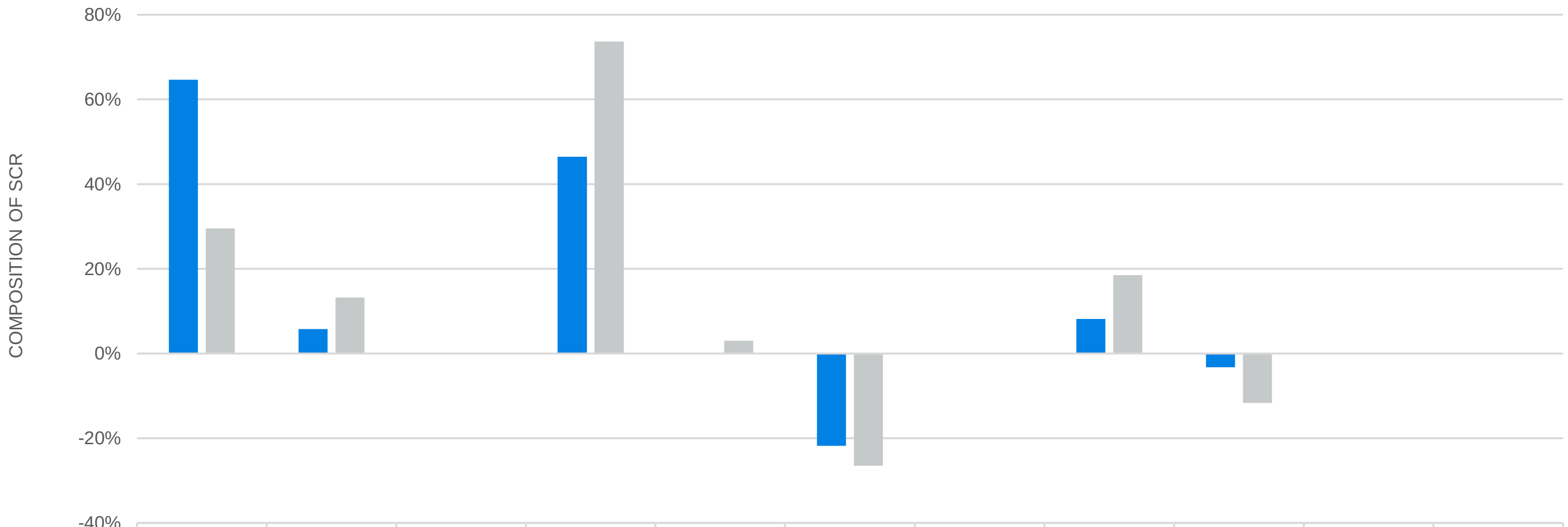
INSURER	TYPE OF INSURER	SCR IN 2016 (MILLION EUROS)	SCR IN 2017 (MILLION EUROS)	RM / SCR IN 2016	RM / SCR IN 2017
BHSF	Cash Plan	14.96	15.25	3.3%	3.4%
EXETER CASH	Cash Plan	1.01	0.94	6.2%	6.9%
HSF	Cash Plan	12.64	12.25	2.4%	0.0%
MEDICASH	Cash Plan	20.90	22.72	1.9%	1.8%
PA	Cash Plan	5.65	5.22	7.4%	7.2%
PAYCARE	Cash Plan	2.36	2.18	3.6%	3.7%
SIMPLY HEALTH	Cash Plan	71.51	65.56	2.1%	3.3%
SOVEREIGN	Cash Plan	25.58	28.17	1.4%	1.3%
WESTFIELD	Cash Plan	26.88	25.81	2.7%	2.7%
	Cash Plans Total	**181.48**	**178.09**	**2.4%**	**2.6%**
AXA PPP	PMI	313.57	247.79	1.8%	2.6%
BUPA	PMI	318.39	316.63	5.2%	5.0%
CSH	PMI	6.80	6.42	8.3%	8.0%
EXETER	PMI	86.43	91.60	1.0%	0.9%
VITALITY	PMI	99.17	95.05	7.0%	7.0%
WPA	PMI	40.95	42.00	3.4%	3.3%
	PMI Total	**865.32**	**799.49**	**3.7%**	**4.0%**
	Total	**1,046.79**	**977.58**	**3.5%**	**3.7%**

4.2 SOLVENCY CAPITAL REQUIREMENT: BREAKDOWN

We analyse the breakdown of the SCR into the different risk components for cash plans and PMI in 2017. We observe that for cash plans there is significant market risk, which may be due to significant proportions of investment in equities. For PMI, the health underwriting risk is the largest component of SCR. The counterparty default risk is greater for PMI compared to cash plans, which may be due to the higher reinsurance exposure of PMI insurers as compared to cash plans.

Note that HSF is excluded from Figure 23 because of the large positive value of the health underwriting risk component, which is offset by the large negative value of the loss-absorbing capacity of technical provisions. The inclusion of HSF leads to a distorted positive proportion of health underwriting risk and a distorted negative proportion for loss-absorbing capacity of technical provisions.

FIGURE 23: SOLVENCY CAPITAL REQUIRMENT: BREAKDOWN IN 2017



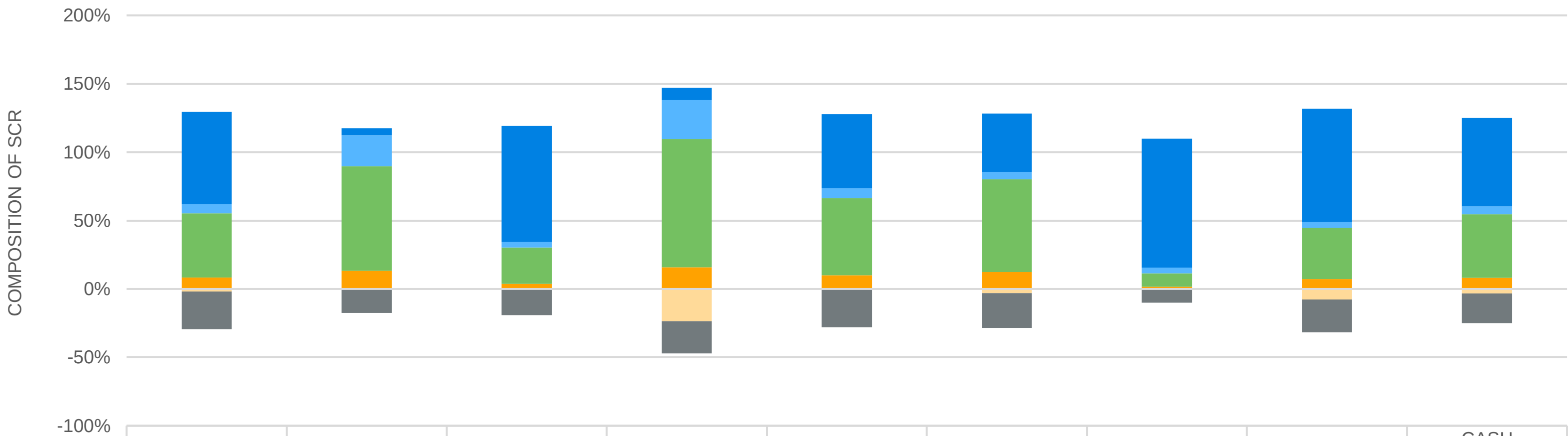
	Market risk	Counterparty default risk	Life underwriting risk	Health underwriting risk	Non-life underwriting risk	Diversification	Intangible asset risk	Operational risk	Loss absorbing capacity of deferred taxes	Loss absorbing capacity of technical provisions	Capital add on already set
CASH PLANS	65%	6%	0%	46%	0%	-22%	0%	8%	-3%	0%	0%
PMI	30%	13%	0%	74%	3%	-26%	0%	19%	-12%	0%	0%

4.3 SOLVENCY CAPITAL REQUIREMENT FOR CASH PLANS: BREAKDOWN

In Figure 24, we compare the SCR risk components for cash plans in 2017. Most of the insurers have high market risk and health underwriting risk. Some insurers have significant counterparty default risk and operational risk.

Note that HSF is excluded from Figure 24 because of the large positive value of the health underwriting risk component, which is offset by the large negative value of the loss-absorbing capacity of technical provisions. The inclusion of HSF leads to a distorted positive proportion of health underwriting risk and a distorted negative proportion for loss-absorbing capacity of technical provisions.

FIGURE 24: SOLVENCY CAPITAL REQUIRMENT FOR CASH PLANS: BREAKDOWN IN 2017



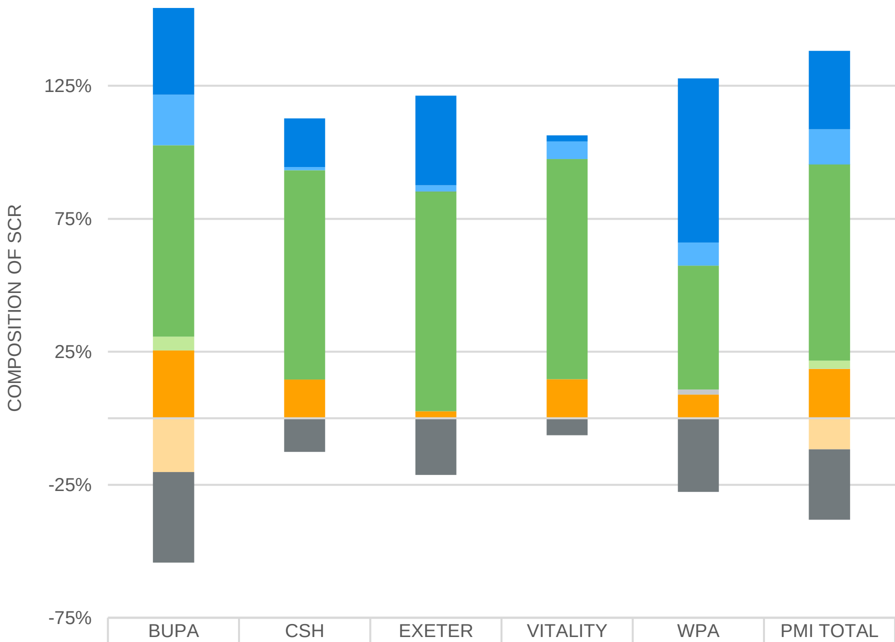
	BHSF	EXETER CASH	MEDICASH	PA	PAYCARE	SIMPLY HEALTH	SOVEREIGN	WESTFIELD	CASH PLANS TOTAL
Market risk	67%	5%	85%	9%	54%	43%	94%	83%	65%
Counterparty default risk	7%	23%	4%	28%	7%	5%	4%	4%	6%
Life underwriting risk	0%	0%	0%	0%	0%	0%	0%	0%	0%
Health underwriting risk	47%	76%	27%	94%	56%	68%	10%	37%	46%
Non-life underwriting risk	0%	0%	0%	0%	0%	0%	0%	0%	0%
Diversification	-27%	-18%	-19%	-24%	-28%	-25%	-10%	-24%	-22%
Intangible asset risk	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operational risk	8%	13%	4%	16%	10%	12%	1%	7%	8%
Loss absorbing capacity of deferred taxes	-2%	0%	0%	-23%	0%	-3%	0%	-8%	-3%
Loss absorbing capacity of technical provisions	0%	0%	0%	0%	0%	0%	0%	0%	0%
Capital add on already set	0%	0%	0%	0%	0%	0%	0%	0%	0%

4.4 SOLVENCY CAPITAL REQUIREMENT FOR PMI: BREAKDOWN

In Figure 25, we compare the SCR risk components for PMI insurers in 2017. For WPA, the largest risk component is the market risk, whereas for all other PMI insurers the largest component is the health underwriting risk. All the PMI insurers have significant operational risk components.

The split of SCR is excluded for AXA PPP as it is not available in the underlying data.

FIGURE 25: SOLVENCY CAPITAL REQUIRMENT FOR PMI: BREAKDOWN IN 2017



	BUPA	CSH	EXETER	VITALITY	WPA	PMI TOTAL
Market risk	33%	18%	34%	2%	62%	30%
Counterparty default risk	19%	1%	2%	7%	9%	13%
Life underwriting risk	0%	0%	0%	0%	0%	0%
Health underwriting risk	72%	79%	83%	83%	47%	74%
Non-life underwriting risk	5%	0%	0%	0%	0%	3%
Diversification	-34%	-13%	-21%	-6%	-28%	-26%
Intangible asset risk	0%	0%	0%	0%	2%	0%
Operational risk	25%	15%	3%	15%	9%	19%
Loss absorbing capacity of deferred taxes	-20%	0%	0%	0%	0%	-12%
Loss absorbing capacity of technical provisions	0%	0%	0%	0%	0%	0%
Capital add on already set	0%	0%	0%	0%	0%	0%

4.5 SOLVENCY COVERAGE RATIO AND MINIMUM COVERAGE RATIO

In Figure 26, we provide the solvency coverage ratio[3] and minimum coverage ratio[4] for cash plans and PMI insurers in 2016 and 2017. In general, we observe that PMI insurers have lower coverage ratios than cash plans, with the only exception being WPA.

Apart from WPA, other PMI insurers have solvency coverage ratios of less than 200%, whereas most of the cash plans have solvency coverage ratios of greater than 200%.

FIGURE 26: SOLVENCY COVERAGE RATIO AND MINIMUM COVERAGE RATIO IN 2016 AND 2017

TYPE OF INSURER	INSURER	SOLVENCY COVERAGE RATIO (2016)	SOLVENCY COVERAGE RATIO (2017)	MINIMUM COVERAGE RATIO (2016)	MINIMUM COVERAGE RATIO (2017)
Cash Plan	BHSF	209%	189%	831%	751%
Cash Plan	EXETER CASH	339%	369%	129%	140%
Cash Plan	HSF	167%	179%	668%	717%
Cash Plan	MEDICASH	173%	170%	692%	681%
Cash Plan	PA	261%	260%	551%	543%
Cash Plan	PAYCARE	305%	299%	272%	264%
Cash Plan	SIMPLY HEALTH	321%	351%	1278%	1404%
Cash Plan	SOVEREIGN	272%	251%	1083%	1003%
Cash Plan	WESTFIELD	320%	320%	1278%	1278%
Cash Plans Total		**275%**	**279%**	**974%**	**995%**
PMI	AXA PPP	134%	135%	462%	360%
PMI	BUPA	160%	187%	264%	325%
PMI	CSH	192%	189%	494%	490%
PMI	EXETER	100%	100%	400%	400%
PMI	VITALITY	140%	145%	449%	434%
PMI	WPA	519%	483%	2077%	1931%
PMI Total		159%	172%	416%	409%

* Note that, for Exeter,[5] the insurer has two separate ring-fenced funds: one for long-term business and one for short-term general business. In accordance with the Solvency II regulations each sub-fund is treated as ring-fenced from a capital point of view and a surplus from one fund cannot be added to another. Ring-fenced fund restrictions mean that own funds at an overall Society level are restricted to the total SCR across both funds, giving rise to the results above showing zero excess own funds. Therefore, the reported solvency coverage ratio is shown as 100% both in 2016 and 2017. The more meaningful results are those at the fund level and before the ring-fenced fund restrictions apply. The solvency coverage ratio for long-term business is 169% in 2016 and 167% in 2017, whereas for general business the ratio is 516% in 2016 and 510% in 2017.

4.6 TIERING OF OWN FUNDS: CASH PLANS

We analysed tiering of own funds for cash plans in 2017. Own funds consists of the capital items backing a company's SCR and Minimum Capital Requirement (MCR). They will include equity and debt as well as other items such as retained earnings and the present value of future profits. Various tier levels of own funds exist under Solvency II, based on the quality and ability to absorb losses. For most of the cash plans, the own funds are held entirely in Tier 1, with the exception of very small net deferred tax assets (less than 1% of own funds) owned by BHSF, PA and Sovereign, which are classified as Tier 3 under Solvency II rules.

Note that the tiering in this analysis is based on the available own funds to meet the SCR.

[3] Solvency coverage ratio is calculated as own funds required divided by the SCR.

[4] Minimum coverage ratio is calculated as own funds required divided by the MCR.

[5] This information is provided in the 2017 SFCR of Exeter Friendly Society.

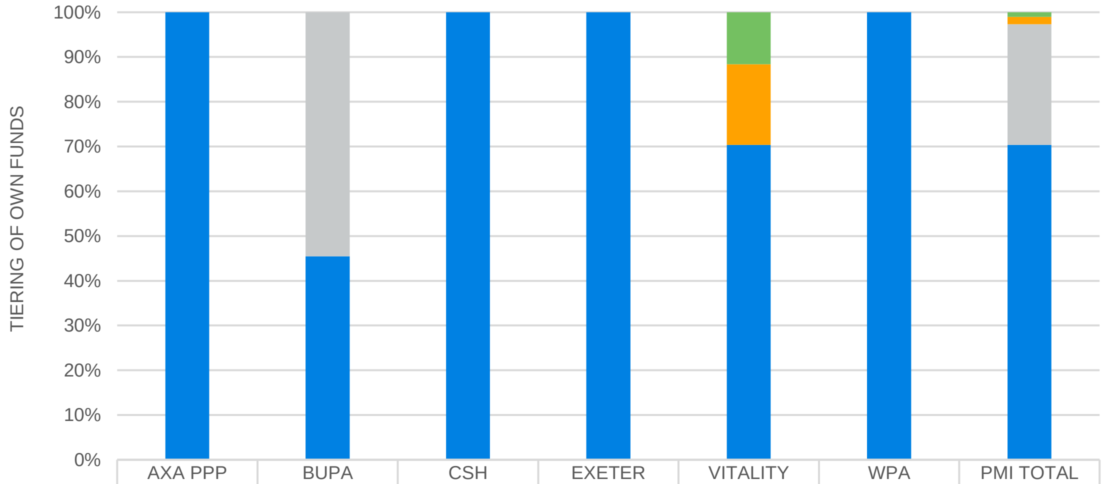
4.7 TIERING OF AVAILABLE OWN FUNDS: PMI

In Figure 27, we analyse tiering of available own funds for PMI in 2017. For AXA, CSH, Exeter and WPA, the available own funds are held in the highest-quality fund structure.

Lower-quality own funds are held by Bupa through subordinated liabilities (Tier 1 restricted assets), and for Vitality a large portion of Tier 3 funds is held as deferred tax assets.

Note that the tiering in this analysis is based on the available own funds to meet the SCR.

FIGURE 27: TIERING OF AVAILABLE FUNDS FOR PMI IN 2017

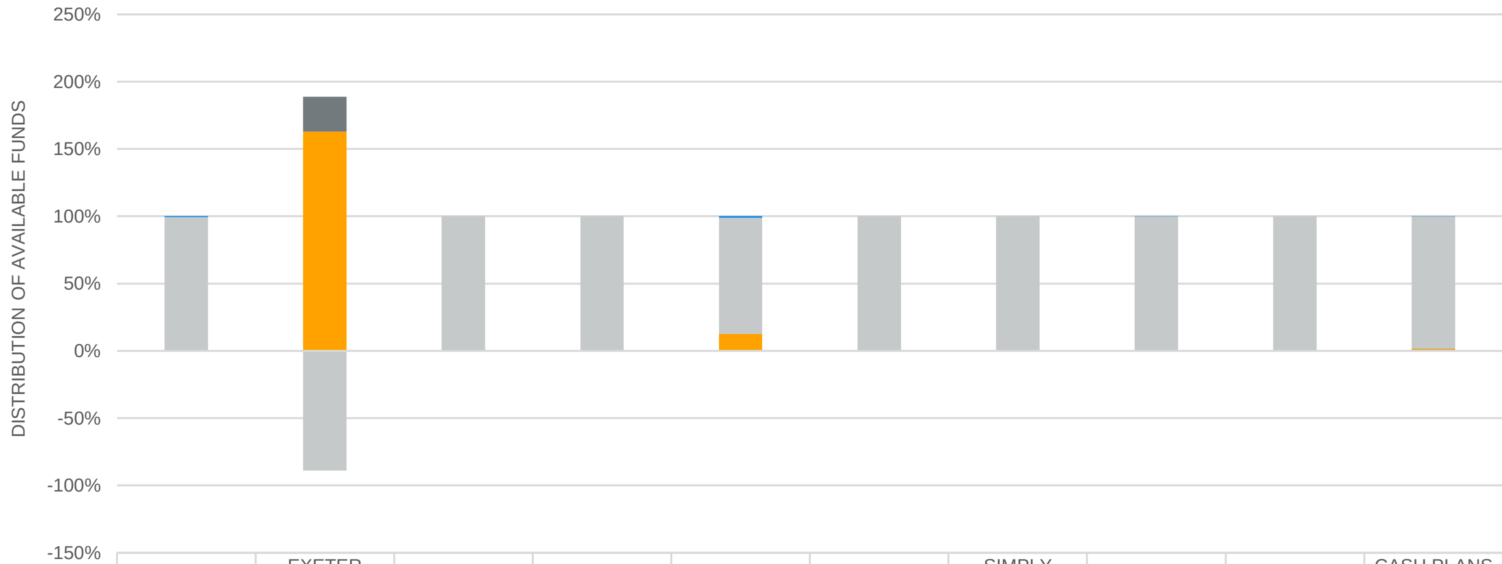


	AXA PPP	BUPA	CSH	EXETER	VITALITY	WPA	PMI TOTAL
Tier 3	0.0%	0.0%	0.0%	0.0%	11.6%	0.0%	1.0%
Tier 2	0.0%	0.0%	0.0%	0.0%	18.0%	0.0%	1.6%
Tier 1 restricted	0.0%	54.5%	0.0%	0.0%	0.0%	0.0%	27.0%
Tier 1 unrestricted	100.0%	45.5%	100.0%	100.0%	70.4%	100.0%	70.3%

4.8 DISTRIBUTION OF BASIC OWN FUNDS BY INSURER: CASH PLANS

In Figure 28, the distribution of basic own funds by type is reported for cash plans in 2017. It appears the reconciliation reserve is the principal component for cash plans. However, for Exeter Cash, ordinary share capital forms a larger portion of the basic own funds than the reconciliation reserve.

FIGURE 28: DISTRIBUTION OF BASIC OWN FUNDS FOR CASH PLANS IN 2017

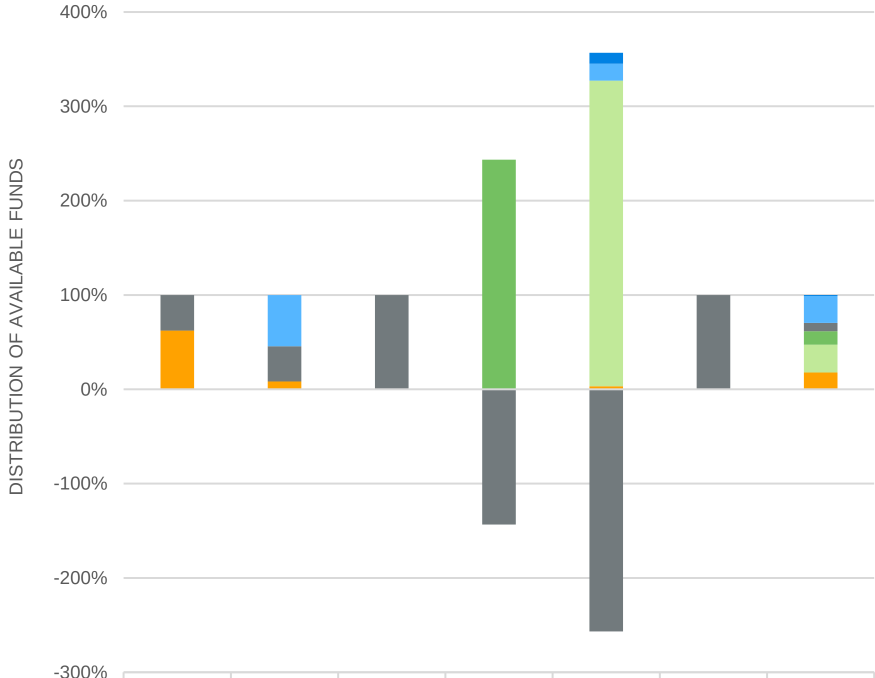


	BHSF	EXETER CASH	HSF	MEDICASH	PA	PAYCARE	SIMPLY HEALTH	SOVEREIGN	WESTFIELD	CASH PLANS TOTAL
Deferred tax assets	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Subordinated liabilities	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Reconciliation reserves	99%	-89%	100%	100%	86%	100%	100%	100%	100%	98%
InItial funds, member contributions, mutual funds	0%	26%	0%	0%	0%	0%	0%	0%	0%	0%
Surplus funds	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Share premium account	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ordinary share capital	0%	163%	0%	0%	13%	0%	0%	0%	0%	1%

4.9 DISTRIBUTION OF BASIC OWN FUNDS BY INSURER: PMI

In Figure 29, the distribution of basic own funds by type is reported for PMI in 2017. The subordinated liabilities form the largest portion of basic own funds for Bupa. For WPA and CSH, the reconciliation reserve is the sole component of the basic own funds.

FIGURE 29: DISTRIBUTION OF BASIC OWN FUNDS FOR PMI IN 2017



	AXA PPP	BUPA	CSH	EXETER	VITALITY	WPA	PMI TOTAL
Deferred tax assets	0%	0%	0%	0%	12%	0%	1%
Subordinated liabilities	0%	55%	0%	0%	18%	0%	29%
Reconciliation reserves	38%	37%	100%	-143%	-257%	100%	9%
InItial funds, member contributions, mutual funds	0%	0%	0%	0%	0%	0%	0%
Surplus funds	0%	0%	0%	243%	0%	0%	14%
Share premium account	0%	0%	0%	0%	324%	0%	29%
Ordinary share capital	62%	8%	0%	0%	3%	0%	18%

5. Conclusion

In this report, we provide the analysis of 2016 and 2017 financial figures for nine cash plans and six PMI providers in the UK. These 15 insurers form 74% of the medical gross written premium (GWP) of the UK in 2016 and 2017.

Simplyhealth has the largest market share of cash plan providers included in this report (over 50% of medical GWP in 2016 and 2017). In the case of PMI providers included in this report, Bupa has the largest market share (over 50% of medical GWP in 2016 and 2017) followed by AXA PPP (over 30%) and Vitality (over 10%).

As representative components of net earned premium (NEP), the net loss ratio and expense ratio of cash plans is 65% of NEP and 34% of NEP, respectively, in 2017. In the case of PMI, the net loss ratio and expense ratio is 69% of NEP and 26% of NEP, respectively, in 2017. The net loss ratios, expense ratios and technical result ratios have been quite stable for cash plans and PMI from 2016 to 2017.

The health insurance market in the UK as a whole makes little use of reinsurance. For cash plans, the reinsurance levels of claims and premiums are 1% of gross incurred claims and 1% of gross earned premiums, respectively, in 2017. In the case of PMI providers, the reinsurance levels are 5% of gross incurred claims and 5% of gross earned premium in 2017. Vitality is the only insurer with high reinsurance usage, with reinsurance claims making up 23% of gross incurred claims and reinsurance premiums making up 19% of gross earned premiums in 2017.

Investments form the biggest portions of assets both for cash plans and PMI providers in 2016 and 2017. For cash plans, investments form over 90% of assets in 2017 and, for PMI providers, investments form over 70% of assets in 2017. For PMI providers, loans and mortgages form close to 10% of assets in 2017.

For cash plans, collective investment undertakings form the largest portion of investments, with a proportion of 40% of investments in 2017. In the case of PMI providers, corporate bonds form the largest portion with close to 35% of investments in 2017.

Payables form the largest portions of liabilities for cash plans (38% of liabilities in 2017) and health technical provisions form the largest portions of liabilities for PMI (44% of liabilities in 2017). In the case of cash plans, this is followed by health technical provisions (37% of liabilities in 2017) and other liabilities (19%). In the case of PMI, health technical provisions is followed by subordinated liabilities (23% of liabilities in 2017) and other liabilities (18%).

For cash plans, the ceded technical provisions are 8% of technical provisions in 2016 and 3% of technical provisions in 2017. This reduction is primarily due to a decrease in ceded technical provisions for Simplyhealth from 2016 to 2017. In the case of PMI, the ceded technical provisions remain stable (4% of technical provisions in 2016 and 5% of technical provisions in 2017).

In terms of components of technical provisions, claims provisions form the largest portions both for cash plans and PMI in 2016 and 2017. For PMI, the premium provisions as a proportion of technical provisions are larger than that for cash plans. In the case of cash plans, the claims provisions are 75% of technical provisions, premium provisions are 9% of technical provisions and Risk Margin (RM) is 16% of technical provisions in 2017. For PMI, the claims provisions are 53% of technical provisions, premium provisions are 44% of technical provisions and RM is 3% of technical provisions in 2017.

The RM to SCR ratio[6] for cash plans is approximately 2.4% in 2016 and increases to 2.6% in 2017. The ratio for PMI is approximately 3.7% in 2016 and increases to 4.0% in 2017. However, adjusting the SCR to exclude hedgeable market risk brings this ratio closer to 6% for both cash plans and PMI, implying both types of insurers have similar runoff periods of around one year.

In terms of the undiversified risk exposure components of the SCR, for cash plans the market risk is 52% of SCR and the health underwriting risk is 37% of SCR in 2017. For PMI, the market risk is 21% of SCR and the health underwriting risk is 53% of SCR in 2017. The higher market risk for cash plans as compared to PMI suggests that cash plans invest in riskier instruments than PMI providers.

[6] The ratio represents the expected runoff of the company's risk exposure in terms of cost of capital, with the cost of capital defined as 6% of the SCR (excluding the capital charge for hedgeable market risk). In general, a ratio of about 6% implies that the runoff is about one year. A ratio below 6% implies a quicker runoff and a ratio above 6% implies a slower runoff.

The solvency coverage ratio is 279% for cash plans and 172% for PMI in 2017. The cash plans have a minimum coverage ratio of 995% and PMI providers have a minimum coverage ratio of 409% in 2017.

The own funds of cash funds are essentially classified in the highest-quality tier, which is Tier 1 unrestricted (99% of own funds in 2017). In the case of PMI, the classification in Tier 1 unrestricted is 70% of own funds in 2017. Tier 1 restricted and Tier 2 form significant portions of own funds for Bupa, and Tier 2 and Tier 3 form significant portions of own funds for Vitality.

Reconciliation reserves form the largest portions of own funds (98% of own funds in 2017) for cash plans. In the case of PMI, share premium account and subordinated liabilities form the largest portions of own funds (each is 29% of own funds in 2017) followed by ordinary share capital (18% of own funds in 2017) and surplus funds (14%).

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