MILLIMAN RESEARCH REPORT

Brief study of UK health insurers' first SFCRs

Analysis by cash plans and PMI providers

March 2018

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Since 2017, European insurers have been required to publish Solvency and Financial Condition Reports (SFCRs), which also contain a number of Quantitative Reporting Templates (QRTs). They are an important source of information on a company's financial position under Solvency II.

This brief compares and contrasts the information in selected QRTs of 13 health insurers operating in the UK. These QRTs capture the vast majority of the health insurance market, split out between cash plans and private medical insurance (PMI). Additional information found in the SFCRs of individual companies was also used to provide further support for this brief.

FIGURE 1: UK HEALTH INSURERS ANALYSED

CASH PLANS	PRIVATE MEDICAL INSURERS (PMI)
BHSF GROUP LIMITED (BHSF)	AXA PPP HEALTHCARE (AXA PPP)
HSF HEALTH PLAN LTD (HSF)	BUPA INSURANCE LIMITED (BUPA)
MEDICASH HEALTH BENEFITS LIMITED (MEDICASH)	CIVIL SERVICE HEALTHCARE SOCIETY (CS HEALTHCARE)
PAYCARE	EXETER FRIENDLY SOCIETY LTD (EXETER)
SIMPLYHEATH ACCESS (SIMPLYHEALTH)	VITALITY HEALTH INSURANCE LIMITED (VITALITY HEALTH)
SOVEREIGN HEALTH CARE (SOVEREIGN)	WESTERN PROVISION ASSOCIATION (WPA)
WESTFIELD CONTRIBUTORY HEALTHSCHEME LIMITED (WESTFIELD)	

Note:

1. Healthshield is not included in this analysis as the company reported its medical expenses operations under the life template.

2. Aviva and CIGNA are also missing from the analysis; Aviva sells health insurance in addition to other lines of business such as motor insurance or property and casualty insurance, which makes it not possible to isolate the capital charges for health insurance based on the information included in the QRTs. Similarly CIGNA sells primarily international private medical insurance (IPMI) in addition to medical insurance in the UK, and was therefore excluded.

Premiums, claims and expenses

All 13 insurers reported information on premiums, claims and expenses in QRT S.05.01.01, S.05.01.02 or S.05.02.01. With the exception of BUPA, which reported some activity in the assistance line of business, all other insurers reported the total gross written premium under medical expenses. Figures 2 and 3 show the distribution of gross written premium (GWP) by company, largely dominated by BUPA and AXA PPP for PMI providers and Simplyhealth for cash plans. In aggregate, PMI providers account for about 91% of the total GWP covered by this brief.

The gross written premium can be analysed in terms of the following components:

- Gross claims (represented by the gross of reinsurance loss ratio)
- Other expenses (change in net technical provisions and the difference between ceded reinsurance premiums and claims paid by reinsurers)
- Technical result ratio (difference between net premium income and net outgo items as a percentage of GWP).

FIGURE 2: PERCENTAGE OF GROSS WRITTEN PREMIUMS BY CASH PLANS, 2016

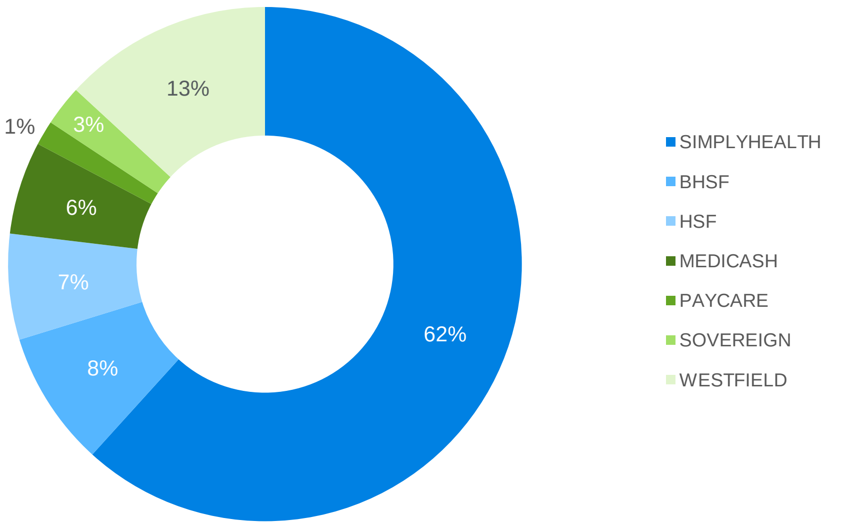
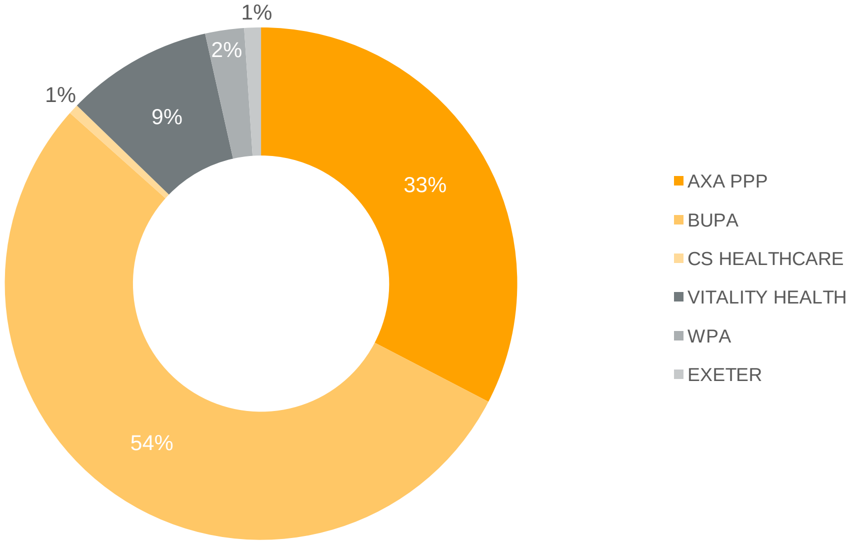


FIGURE 3: PERCENTAGE OF GROSS WRITTEN PREMIUMS BY PMI PROVIDERS, 2016



Figures 4 shows significant variation among these categories in the composition of GWP. We note that other cash flows such as fees and commissions are not captured, which is due to the prescribed format of the QRTs or in some cases to the reporting principles of individual insurers. Generally, larger insurers tend to exhibit lower gross claims as a percentage of GWP, as well as positive technical result ratios, per the information reported in QRT S.05.01.02. In aggregate, cash plans allocate a greater proportion of GWP to “other expenses” than PMI providers, which is offset by lower gross claims, as observed in Figure 5 and Figure 6

FIGURE 4: GWP COMPOSITION IN 2016: CASH PLANS VS. PMI

	CASH PLANS	PMI	TOTAL
BREAKDOWN OF GWP			
OTHER EXPENSES	32.9%	25.8%	26.4%
GROSS CLAIMS	67.4%	70.4%	70.1%
TECHNICAL RESULT RATIO	-0.2%	3.9%	3.5%

FIGURE 5: GWP COMPOSITION IN 2016: CASH PLANS

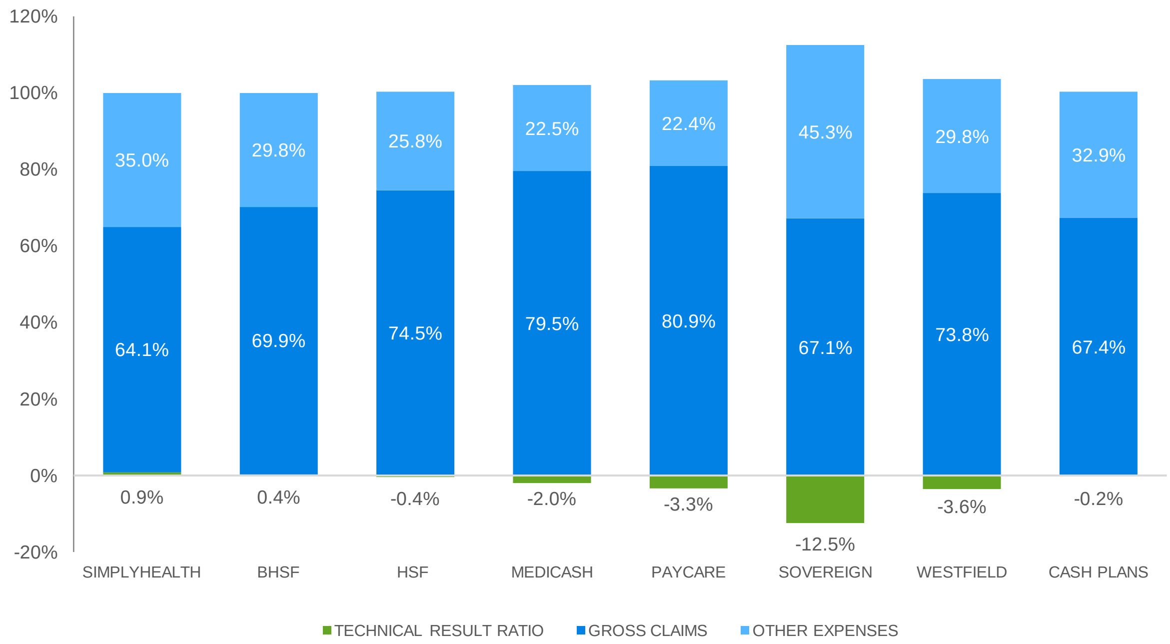
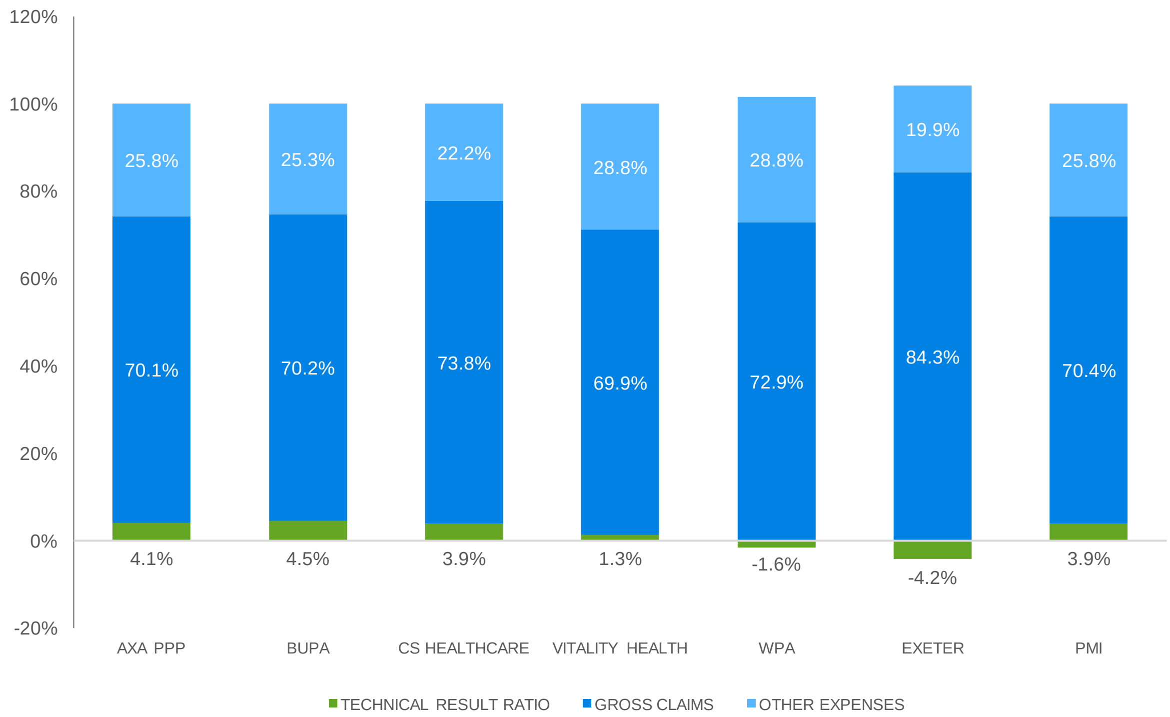


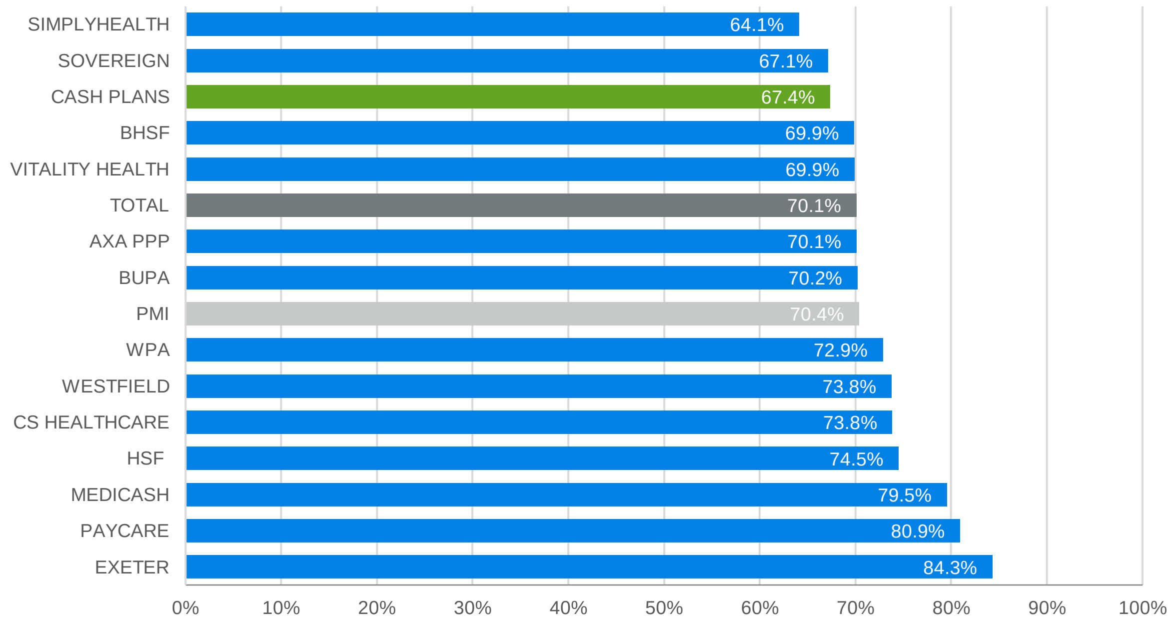
FIGURE 6: GWP COMPOSITION IN 2016: PMI



REINSURANCE

The use of reinsurance also varies by company, but in general cash plans and PMI providers make limited use of reinsurance. Four of the seven cash plans do not have any reinsurance. Simplyhealth's cession rate as a percentage of gross premium is the exception, at over 20%. The experience is similar for PMI providers, with the exception of Vitality Health, which shows ceded rates around 23.7%. Finally, the gross and net (of reinsurance) loss ratios of each company are broadly similar, as shown in Figure 7. For Vitality Health and Simplyhealth, however, the use of reinsurance improves the net loss ratio (with differences of 5.4% and 1.3%, respectively).

FIGURE 7: GROSS LOSS RATIO BY COMPANY IN 2016

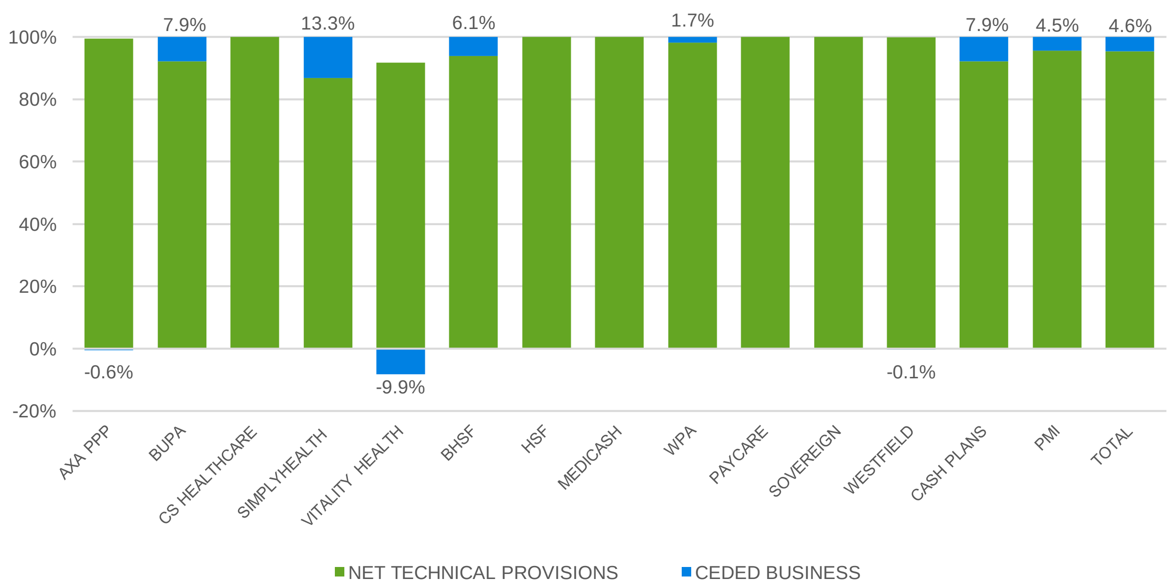


Balance Sheet

TECHNICAL PROVISIONS: NON-LIFE

Technical provisions are often the largest item in health insurers' liabilities, and this section is based on the information reported in the Non-Life Technical Provisions QRT (S.17.01.02).[1] Cash plan and PMI providers seem to hold similar levels of technical provision as a proportion of liabilities (approximately 50%), though we note these proportions can vary considerably among insurers (i.e., Vitality at 28% and CS Healthcare at 78%). Consistent with the analysis of reinsurance in the prior section, only a minority of insurers and cash plans are reliant on reinsurance. In the case of Vitality the negative ceded rate is due to 'Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default,' as reported in the SFCR. Figure 8 below highlights the differences by company.

FIGURE 8: CEDED BUSINESS AS A PERCENTAGE OF GROSS TECHNICAL PROVISIONS



[1] In the absence of S.17.01.02, the authors relied on the information found in S.17.01.01 QRT, where available. Note that Exeter did not complete either of the two QRTs and is therefore excluded from the analysis in this section.

The split of technical provisions among premium provisions, claims provisions and risk margin also varies substantially across all insurers. The 43/54/3 split for PMI providers contrasts with the 3/86/11 split for cash plans (though we note similarities between Vitality and cash plans). While premium provisions for cash plans are low as a proportion of technical provisions, only Simplyhealth is reporting negative values for premium provisions. With the exception of Paycare and CS Healthcare, all other insurers report claims provisions as their largest components of the technical provisions.

The risk margin is added to the best estimate of claims provisions and premiums provisions to form the total technical provisions. It accounts for between 2.1% of technical provisions (AXA PPP Healthcare) and 17.8% for Westfield. The two largest insurers, AXA and BUPA, both show a risk margin under 3%. Figure 9 and Figure 10 show the full breakdown of net technical provisions. Note that HSF and Exeter provided an aggregated amount for claims provisions and premiums provisions, therefore they are represented in Figure 9 under claims provisions.

FIGURE 9: COMPONENTS OF NET TECHNICAL PROVISIONS IN 2016: CASH PLANS

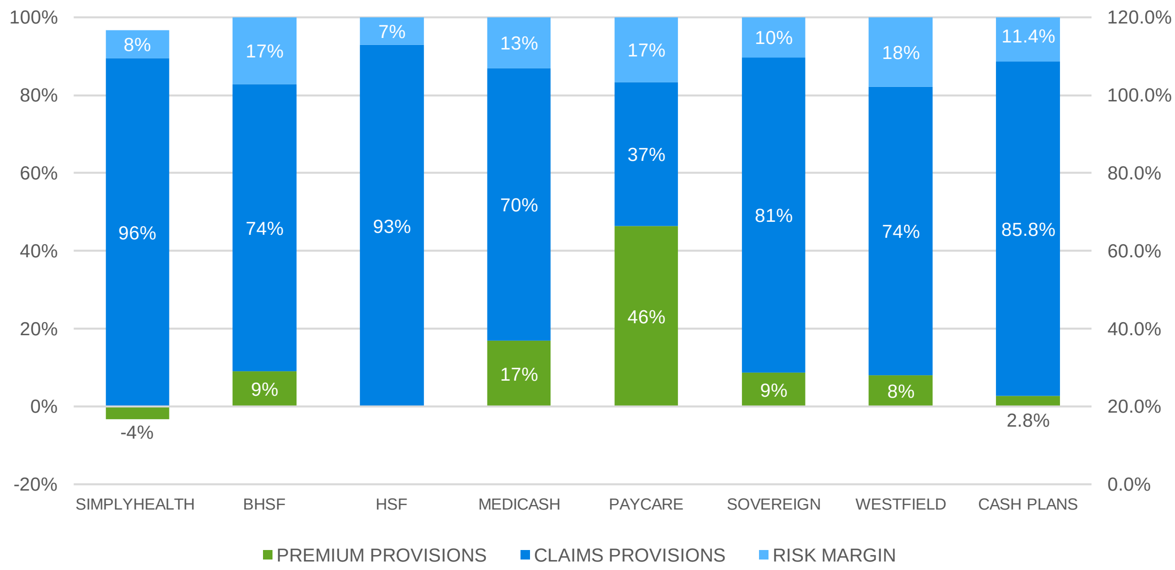
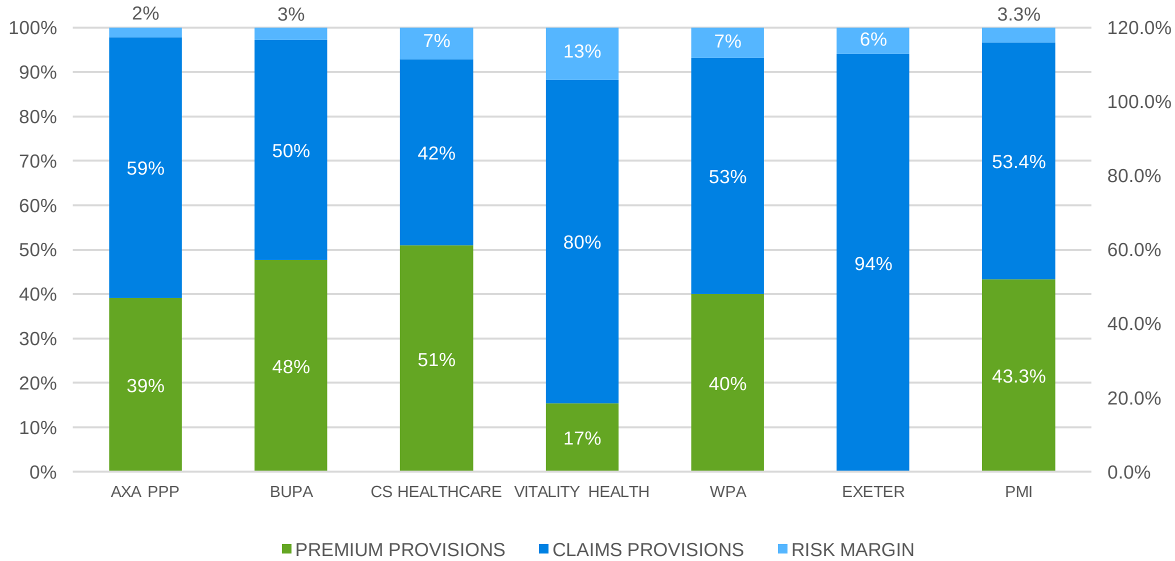
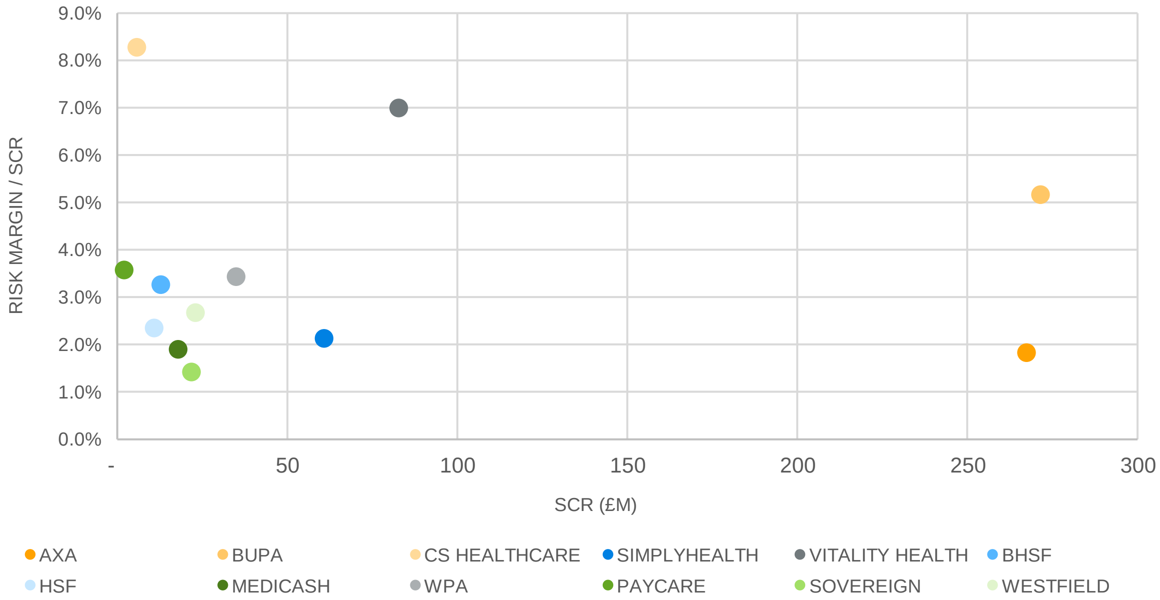


FIGURE 10: COMPONENTS OF NET TECHNICAL PROVISIONS IN 2016: PMI



Finally, Figure 11 shows the risk margin as a percentage of Solvency Capital Requirements (SCR), which is an interesting ratio to analyse. This 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 SCR under £50 million and a ratio within 4%, which implies a runoff smaller than one year. Both CS Healthcare and Vitality report a ratio above 6%, which would suggest a slower runoff.

FIGURE 11: RATIO OF RISK MARGIN OVER SCR IN 2016, BY INSURER



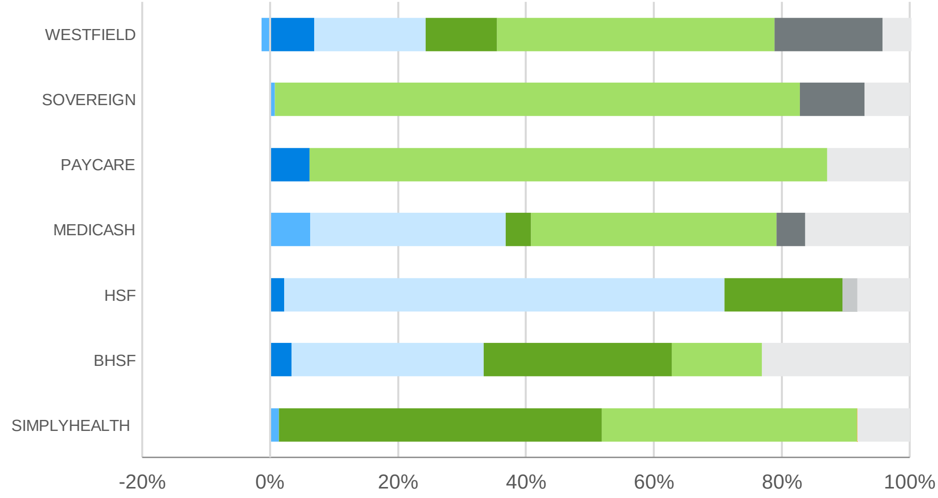
INVESTMENTS BY ASSET CLASS

Based on the information reported in balance sheet QRT S.02.01.02 and S.02.01.01, cash plan and PMI providers hold approximately 71% to 82% of total assets in investments. An analysis of the full allocation by asset class reveals some differences between the cash plans and PMI providers considered, shown in Figure 12. Investment in bonds varies substantially among insurers, from over 78% for AXA PPP to 0% for CS Healthcare and smaller cash plans like Paycare and Sovereign Health Care. Generally, PMI providers seem to hold greater proportions in bonds than their cash plan counterparts, but lower proportions in equity. While not always true, low investments in bonds are typically offset by higher investments in collective investment undertakings. They are more prevalent in cash plans, with Simplyhealth holding 40%. Investments in property and derivatives are minimal for most insurers, with cash and cash equivalents at approximately 10% on average, yet there are some exceptions as shown in Figure 12.

FIGURE 12: ASSET ALLOCATION: CASH PLANS VS. PMI

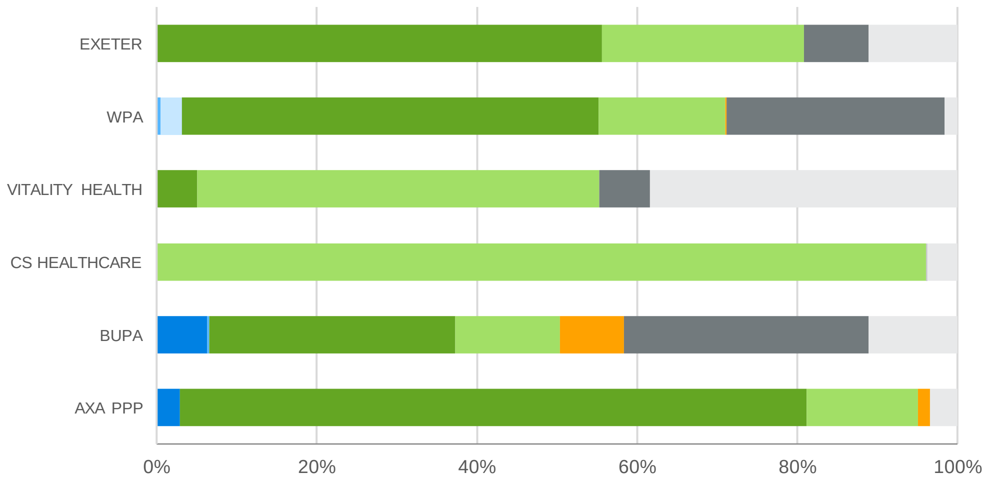
	CASH PLANS	PMI	TOTAL
INVESTMENT BY ASSET CLASS			
PROPERTY	1.5%	3.8%	3.4%
HOLDINGS IN RELATED UNDERTAKINGS, INCLUDING PARTICIPATIONS	1.1%	0.2%	0.3%
EQUITY	9.9%	0.2%	1.7%
ALL BONDS	29.9%	46.0%	43.5%
COLLECTIVE INVESTMENTS UNDERTAKINGS	43.7%	18.3%	22.2%
DERIVATIVES	0.0%	4.1%	3.5%
DEPOSITS OTHER THAN CASH EQUIVALENTS	4.5%	17.1%	15.2%
OTHER INVESTMENTS	0.1%	0.0%	0.0%
CASH AND CASH EQUIVALENTS	9.3%	10.4%	10.2%
TOTAL	**100.0%**	**100.0%**	**100.0%**

FIGURE 13: PROPORTION OF INVESTMENT BY ASSET CLASS: CASH PLANS



	SIMPLYHEALTH	BHSF	HSF	MEDICASH	PAYCARE	SOVEREIGN	WESTFIELD
PROPERTY	0.0%	3.4%	2.2%	0.0%	6.2%	0.0%	6.9%
HOLDINGS IN RELATED UNDERTAKINGS, INCLUDING PARTICIPATIONS	1.4%	0.0%	0.0%	6.3%	0.0%	0.8%	-1.4%
EQUITY	0.0%	30.0%	68.8%	30.6%	0.0%	0.0%	17.5%
ALL BONDS	50.4%	29.4%	18.5%	3.9%	0.0%	0.0%	11.1%
COLLECTIVE INVESTMENTS UNDERTAKINGS	40.0%	14.1%	0.0%	38.4%	80.9%	82.0%	43.4%
DERIVATIVES	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DEPOSITS OTHER THAN CASH EQUIVALENTS	0.0%	0.0%	0.0%	4.5%	0.0%	10.2%	16.9%
OTHER INVESTMENTS	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%
CASH AND CASH EQUIVALENTS	8.2%	23.1%	8.2%	16.4%	12.9%	7.0%	5.6%

FIGURE 14: PROPORTION OF INVESTMENT BY ASSET CLASS: PMI



	AXA PPP	BUPA	CS HEALTHCARE	VITALITY HEALTH	WPA	EXETER
PROPERTY	2.9%	6.3%	0.0%	0.0%	0.0%	0.0%
HOLDINGS IN RELATED UNDERTAKINGS, INCLUDING PARTICIPATIONS	0.0%	0.3%	0.0%	0.0%	0.5%	0.0%
EQUITY	0.0%	0.0%	0.0%	0.0%	2.6%	0.0%
ALL BONDS	78.2%	30.7%	0.0%	5.1%	52.1%	55.6%
COLLECTIVE INVESTMENTS UNDERTAKINGS	13.9%	13.1%	96.1%	50.2%	15.8%	25.3%
DERIVATIVES	1.5%	8.0%	0.0%	0.0%	0.1%	0.0%
DEPOSITS OTHER THAN CASH EQUIVALENTS	0.0%	30.6%	0.0%	6.3%	27.3%	8.0%
OTHER INVESTMENTS	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
CASH AND CASH EQUIVALENTS	3.4%	11.1%	3.8%	38.4%	1.6%	11.1%

OTHER ASSETS AND LIABILITIES

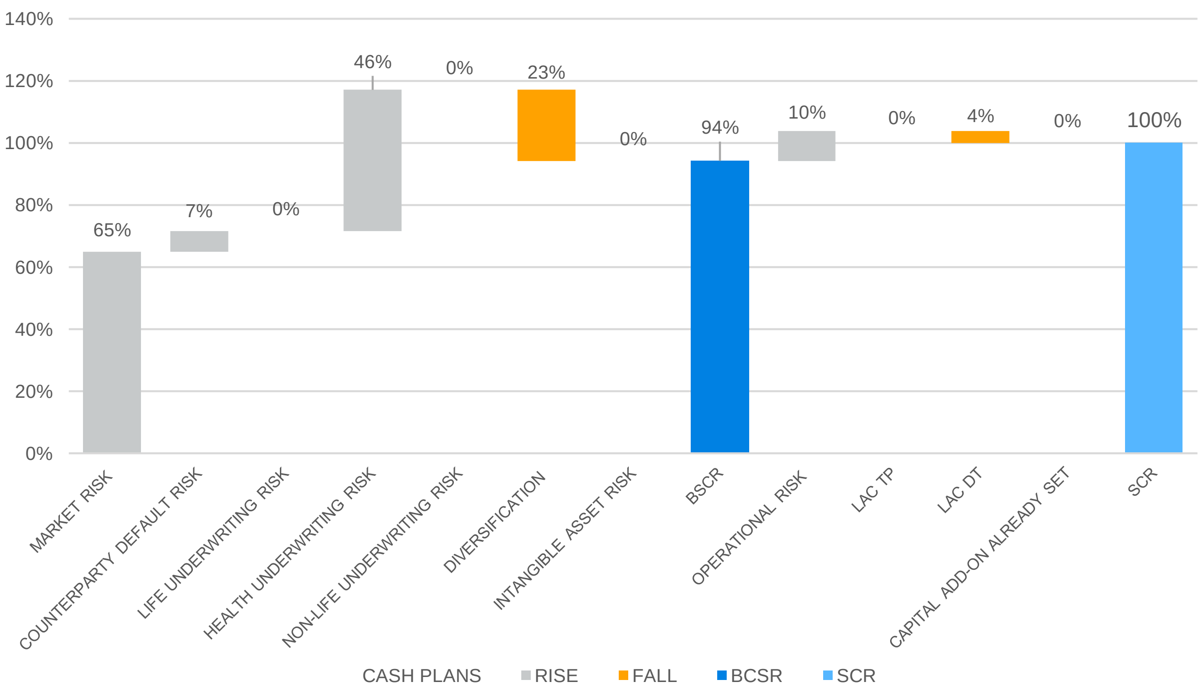
Outside of investment assets and technical provisions, debtors or ‘receivables’ (such as insurance and intermediary receivables, reinsurance receivables and trade receivables) make up approximately 10% of investment assets on average. This is fairly low and is consistent with the low level of reinsurance observed in the UK market. On the liabilities side, BHSF is reporting pension benefit obligations at 29% (versus a 2% average across the industry), and 'payables' (reinsurance, insurance and trade payables) are another balance sheet item that varies greatly, between 0% for Sovereign and 62% for Vitality.

SCR and own funds

This section focuses on the Solvency Capital Requirement (SCR) and own funds information reported in QRTs S.25.01 and S.25.02 and in S.25.03, and S.23.01, respectively. For PMI providers, the SCR primarily consists of health underwriting risk, with market risk, operational risk and counterparty default risk also making up large portions of the SCR. The split of health underwriting risk is not shown below as its sub-components (premium and reserve risk, lapse risk and health catastrophe risk) are not included in the public QRTs. Conversely, for cash plans, market risk generally is the dominant risk in the SCR, followed by health underwriting risk. This could be explained by the greater reliance of cash plans on riskier assets such as equity.

Figures 15 and 16 show, on an aggregated basis, the breakdowns by SCR risk module for the firms using the standard formula. This also includes any reduction to the SCR, for instance diversification, loss-absorbing capacity of deferred taxes and loss-absorbing capacity of technical provisions. We note that BUPA is using an undertaking-specific parameter (USP) as a substitute for the insurance premium risk parameter used in the standard formula.

FIGURE 15: SCR BREAKDOWN BY RISK MODULE: CASH PLANS



Notes

LAC TP: Loss-absorbing capacity of technical provisions

LAC DT: Loss-absorbing capacity of deferred taxes

BSCR: Basic Solvency Capital Requirement

HSF does not appear in this graph as it is an outlier and therefore distorts the scale.

FIGURE 16: SCR BREAKDOWN BY RISK MODULE: PMI

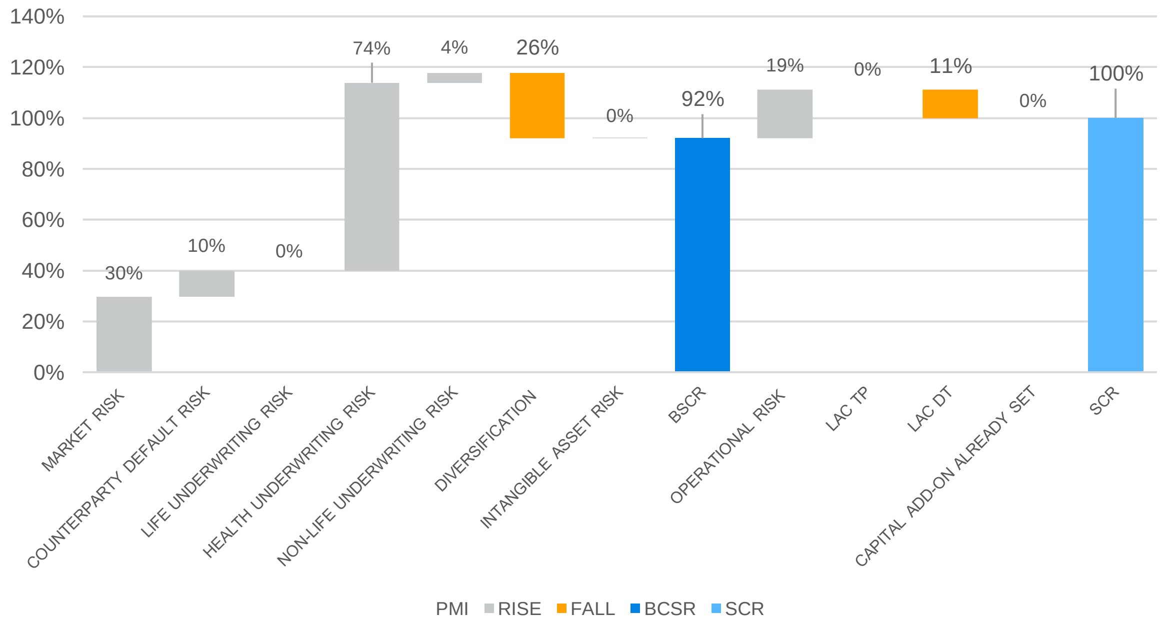
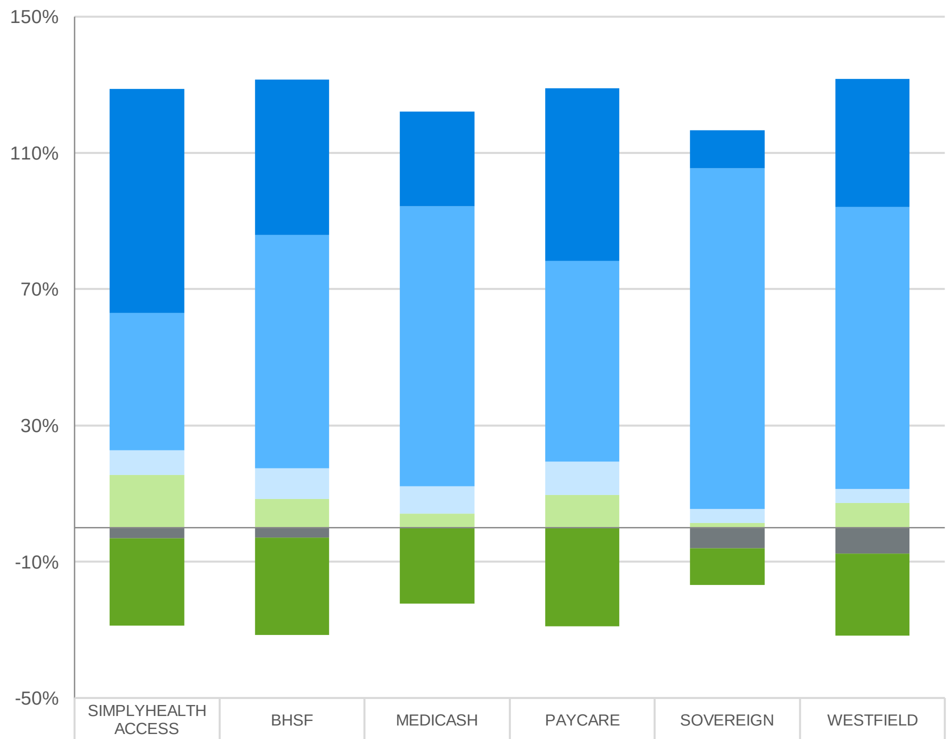


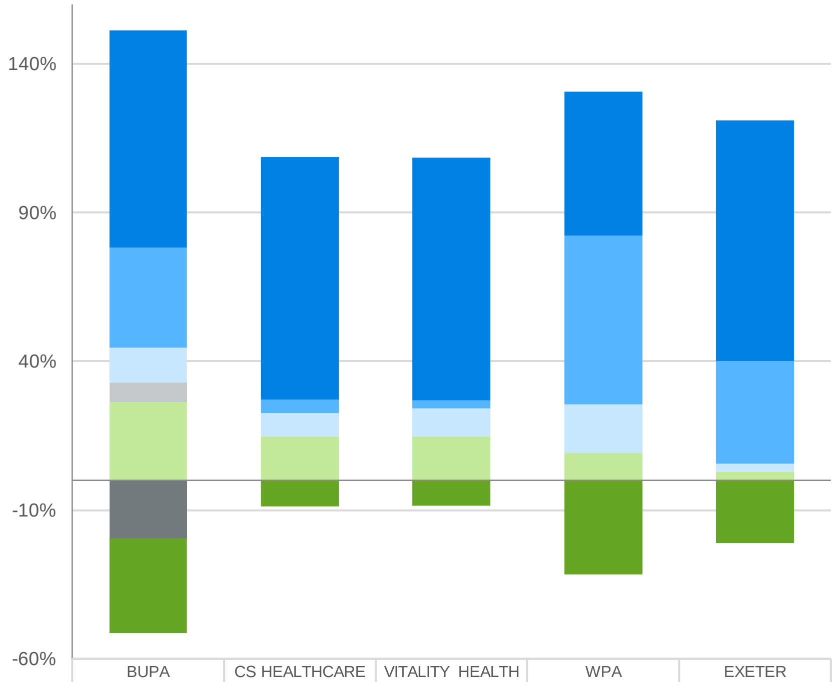
Figure 17 and Figure 18 below break out the SCR risk modules for cash plans and PMI providers separately. Note HSF was again removed from the cash plan chart as it was distorting the scale.

FIGURE 17: SCR BREAKDOWN BY RISK MODULE IN 2016: CASH PLANS



	SIMPLYHEALTH ACCESS	BHSF	MEDICASH	PAYCARE	SOVEREIGN	WESTFIELD
HEALTH UNDERWRITING RISK	66%	45%	28%	51%	11%	37%
MARKET RISK	40%	69%	82%	59%	100%	83%
COUNTERPARTY DEFAULT RISK	7%	9%	8%	10%	4%	4%
DIVERSIFICATION	-26%	-29%	-22%	-29%	-11%	-24%
OPERATIONAL RISK	15%	8%	4%	10%	1%	7%
LAC DT	-3%	-3%	0%	0%	-6%	-8%
LAC TP	0%	0%	0%	0%	0%	0%

FIGURE 18: SCR BREAKDOWN BY RISK MODULE IN 2016: PMI



	BUPA	CS HEALTHCARE	VITALITY HEALTH	WPA	EXETER
HEALTH UNDERWRITING RISK	73%	82%	82%	48%	81%
MARKET RISK	34%	4%	3%	57%	35%
COUNTERPARTY DEFAULT RISK	12%	8%	10%	16%	3%
NON-LIFE UNDERWRITING RISK	7%	0%	0%	0%	0%
OPERATIONAL RISK	26%	15%	15%	9%	3%
DIVERSIFICATION	-32%	-9%	-9%	-32%	-21%
LOSS-ABSORBING CAPACITY OF DEFERRED TAXES	-20%	0%	0%	0%	0%

Note that AXA PPP relies on its internal model rather than the standard formula and is therefore not included in this analysis for consistency, due to the higher number of sub-risks and risk factors found in the internal model.

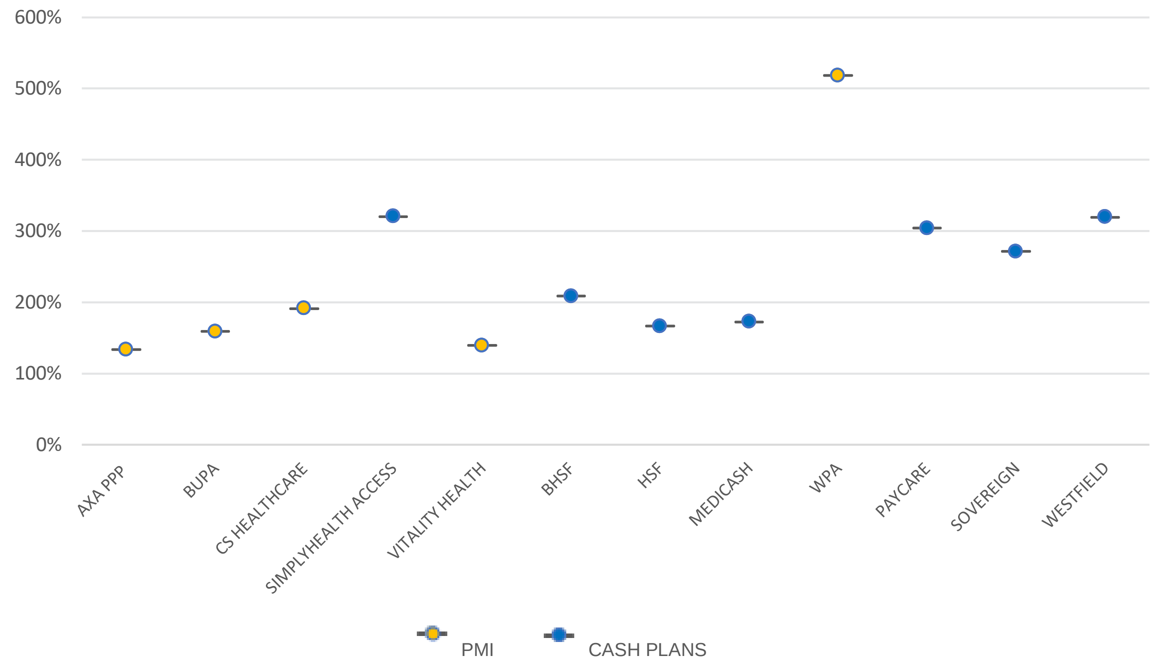
Figure 19 shows the distribution of the SCR by insurer. All insurers report a SCR coverage ratio above 100%. There is one outlier in the data reporting a SCR coverage ratio above 500%, but generally PMI providers are under the 200% mark and cash plans under the 300% mark. The solvency coverage ratio for cash plans and PMI is shown in Figure 19, for SCR and Minimum Capital Requirement (MCR), with further insights by company shown in Figure 20

FIGURE 19: SCR AND MCR RATIOS

CATEGORY	SCR	MCR
CASH PLANS	275%	417%
PMI[2]	166%	1,047%

[2] Exeter is not included in the PMI group as it did not complete the QRTs analysed.

FIGURE 20: DISTRIBUTION OF SCR COVERAGE RATIO BY COMPANY IN 2016



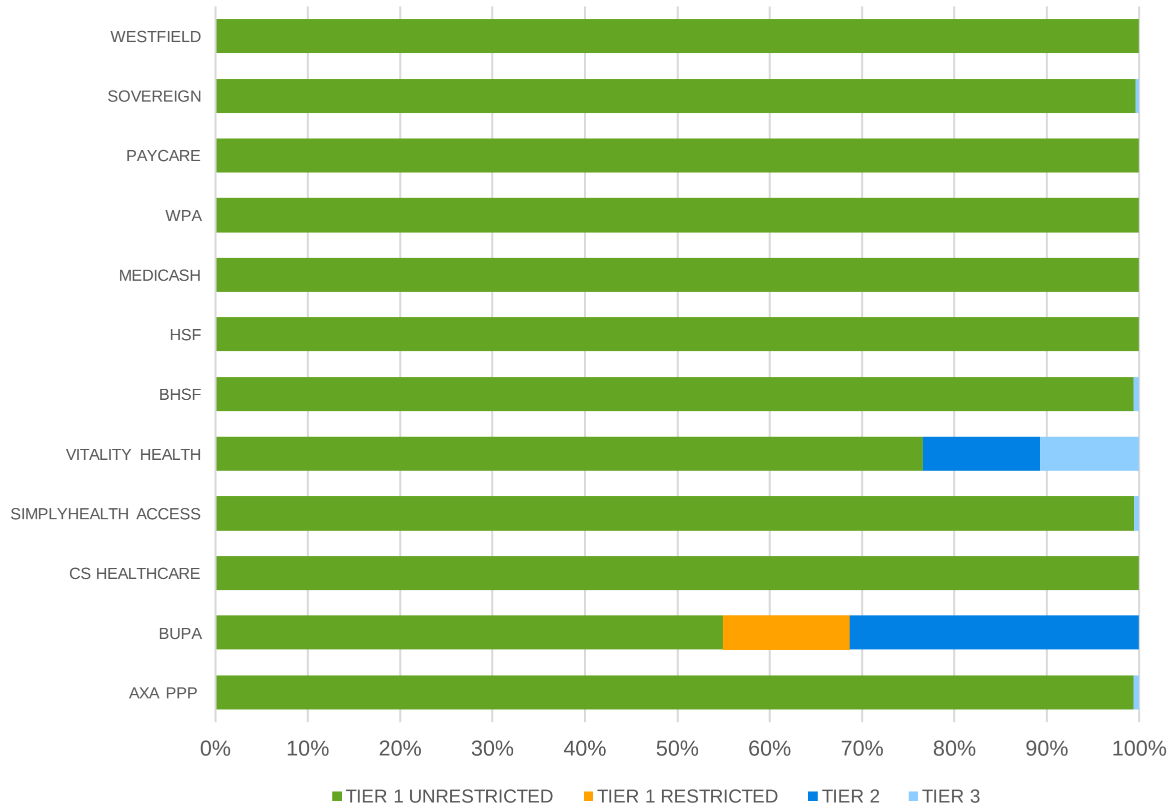
OWN FUNDS

Own funds consists of the capital items backing a company's SCR and 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 insurers, unrestricted Tier 1 (highest quality) is the most dominant tier. Lower-quality own funds are held by BUPA through subordinated liabilities, and to a lesser extent by Vitality Health. Overall, the tiering of own funds shows some differences between cash plans and PMI providers, shown in Figure 21. Further details by company seen in Figure 22.

FIGURE 21: TIERING OF OWN FUNDS

	CASH PLANS	PMI	TOTAL
ELIGIBLE OWN FUNDS TO MEET THE SCR	**100%**	**100%**	**100%**
TIER 1 UNRESTRICTED	99.7%	79.6%	85.0%
TIER 1 RESTRICTED	0.0%	5.4%	3.9%
TIER 2	0.0%	13.7%	10.0%
TIER 3	0.3%	1.3%	1.1%

FIGURE 22: TIERING OF SCR-ELIGIBLE OWN FUNDS BY CATEGORY



In Figure 23, the split of basic own funds by type is reported for cash plans and PMI providers. It appears the reconciliation reserve is the principal component for cash plans, while PMI providers focus on ordinary share capital and subordinated liabilities.

FIGURE 23: OWN FUNDS COMPONENTS

	CASH PLANS	PMI
ELIGIBLE OWN FUNDS TO MEET THE SCR	**100%**	**100%**
ORDINARY SHARE CAPITAL	0.0%	60.0%
RECONCILIATION RESERVE	99.7%	9.6%
SUBORDINATED LIABILITIES	0.0%	29.2%
DEFERRED TAX ASSETS (DTA)	0.3%	1.2%
OTHER BASIC OWN FUNDS	0.0%	0.0%

The second set of SFCRs should be released in the next few months. A logical further analysis will be to continue to observe the experience of cash plans and PMI providers in England separately, while also monitoring changes over time in the values found in the SFCRs across health plans.

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