

What have we learnt from the second round of Solvency II Solvency and Financial Condition Reports







Introduction

Ding ding, it's round two as insurers with a December 31 year end publish their 2017 Solvency II Solvency and Financial Condition Reports (SFCRs). Last year, PwC analysed a number of SFCRs and concluded that insurers had significant opportunity to optimise their capital positions. This finding in itself was not surprising as firms discovered the possibilities in the first full year of the new regulatory regime. This year, in addition to quantitative analysis of QRT data, we have examined the look, feel and quality of SFCRs. Our sample comprised nearly 60 insurers across life, general insurance and the London Market. Even as the Prudential Regulation Authority (PRA) attempts to reduce the regulatory reporting burden on firm's evidenced by a number of recent consultation papers we expect SFCR preparation has become more of a business as usual activity for insurers. Both the Regulator and other SFCR users would hope that firms now view SFCR production as less a compliance exercise and more an opportunity to showcase their businesses to policyholders and wider stakeholder groups and that this would be reflected in the quality of reports going forward. So, what has our analysis uncovered?

How easy was it to find SFCRs and how did they look and feel?

Most firm's reports were easy to find and saved in prominent locations on their websites, mainly investor relations. A number of firms (56%) had hyperlinks in the contents page of their reports which helped navigate the document. 2 firms also included spreadsheet versions of their QRTs to help user analysis.

Surprisingly, there was quite a change in the length of SFCRs. Our sample of 2017 SFCRs were longer than those in 2016 by 8% (386 pages) with Section E – Capital Management increasing by 77

pages but Section B – Systems of Governance reducing by 75 pages. Also, life insurers with larger Solvency Capital Requirement (SCR) tended to have longer SFCRs but no such correlation was seen in non-life firms. Despite this finding we recognise that SFCR length can be driven by factors independent of the SCR including business model complexity, lines of business written and attitudes toward Pillar 3 reporting.

In December 2017 EIOPA published the supervisory statement '*Solvency II – Solvency and Financial Condition Report*'

outlining the findings of its analysis of EEA insurers 2016 SFCRs. The statement was not intended to capture all issues with SFCRs but influence the quality of 2017 reports in specific areas. Areas highlighted included the use of prior year comparatives, more appropriate summaries (identified by EIOPA as the part that is most relevant to policyholders) and the use of QRT information in the narrative text of the report.

Did EIOPA achieve its goal?

Our study has not assessed SFCRs against the full detail of EIOPA's findings but has instead sought to determine if firms have addressed chosen aspects of the statement as outlined above. All firms in our sample used QRT information in the body of their reports often supporting their

descriptions with prior year figures. Most firm's SFCRs (88%) had detailed summaries covering key sections of their reports. But outliers remain, with the report summaries of 12% of firms in our sample lacking required detail. Based on the quality of 2017 reports, EIOPA has concluded (and we agree)

that the quality of SFCRs has been positively influenced. EIOPA has indicated that it would repeat this review exercise in 2018.

What did not look so good?

Some firm's SFCRs were scanned copies of low quality uploaded on their websites. The QRT tables in the SFCR of an insurer in our sample were split across multiple pages making it difficult to read the tables as a whole. There also appeared to be inconsistencies between gross written premium and diversification benefit figures quoted in the annex of some reports and tables used in the narrative text. Some firms have also continued to incorrectly quote figures in their QRTs in millions or whole units and not thousands as required by EIOPA. Whilst this requirement is not applicable to the narrative section of the SFCR firms should aim for consistent presentation to avoid confusing users.

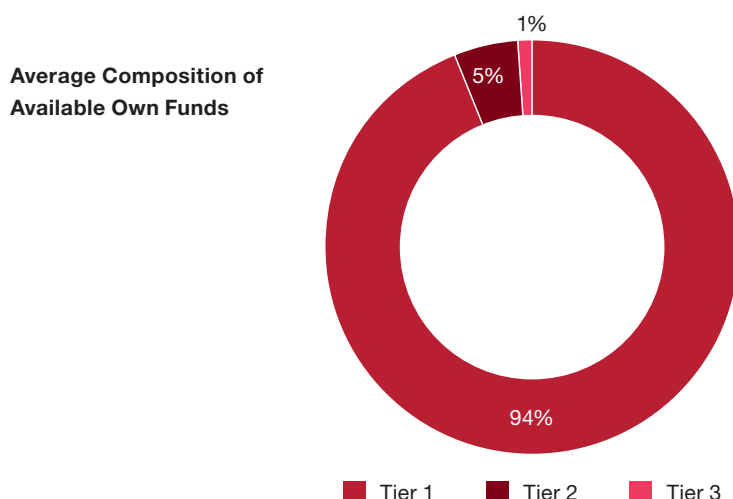
Hints and tips for firms

The issues highlighted above are easy to fix:

- We encourage firms to check their QRT data for inconsistencies with the narrative report and ensure that figures are quoted correctly.
- QRTs should be readable with individual tables on a single page.
- Certain firms need to consider the formatting and file quality of their reports and should opt for electronic pdf copies of their reports published on their websites.
- Firms should be mindful of the content of EIOPA's supervisory statement and other Solvency II requirements for SFCRs to ensure their reports are fully compliant.

Aside from the qualitative findings described above, have SFCR given us useful and revealing information on the Solvency and Financial Condition of the insurance industry?

Figure 1: Tiering of available own funds



Insurers are well capitalised, but there is still room to optimise capital

For firms in our sample, the split of own funds by Tier has not changed since 2016 and significant headroom remains in Tier 2 and Tier 3 capital.

As evidenced in figure 1, 95% of available own funds was Tier 1 capital with Tier 2 and Tier 3 making up 5% and 1% respectively. Only one firm in our sample used ancillary own funds (AOF) and this could be for a number of reasons including the potential dilution of control and earnings per share (if equity based and when called) and the need to seek PRA approval. AOF can however provide material capital benefit.

The cost of committed but unpaid capital is generally lower than fully paid or called up capital so insurers could benefit from a lower overall cost of capital.

Added flexibility provided by AOF is attractive and could be useful particular during periods of high SCR volatility as once called these items qualify as Tier 1 basic own funds. For insurance Groups, AOF could be a particularly attractive alternative to paid up capital as in this context most AOF items are likely to be internal structures.

The average solvency coverage ratio for firms in our sample was 184% with no insurer reporting a ratio below 100%. On average, general insurers on the Standard Formula had the highest ratios

at 285% with London Market Standard Formula insurers the lowest at 156%.

The highest ratio in our sample of 1338% was for a non-life insurer whose own funds was about 13 times the size of its SCR. The lowest ratio of 120% belonged to a general insurer that suffered adverse claims performance in 2017.

A shareholder may rightly ask why firms have such high ratios. They could argue that capital surpluses could be invested elsewhere or indeed returned to them via share buy backs, higher or even special one-off dividends. The answer to this question becomes obvious when we simulate the impact on solvency coverage ratios of a stress equal to a firm's SCR.



Balance sheet shock, who survives?

The Solvency II SCR is calibrated to enable an insurer withstand a 1 in 200 year event i.e. an extreme stress. It is designed to limit an insurer's probability of ruin over a one year period to 0.5% (value at risk at the 99.5th percentile). In

regular stress tests, insurers are supposed to simulate the impact of extreme events on their business models and capital positions. In this exercise, we have simulated an extreme stress by mechanically applying a loss equal to a

firm's SCR to its Solvency II balance sheet to determine whose coverage ratio would remain above 100%. For this exercise we excluded firms with anomalous capital figures from our sample.

Figure 2: Impact of an SCR shock on the solvency coverage ratios of life insurers

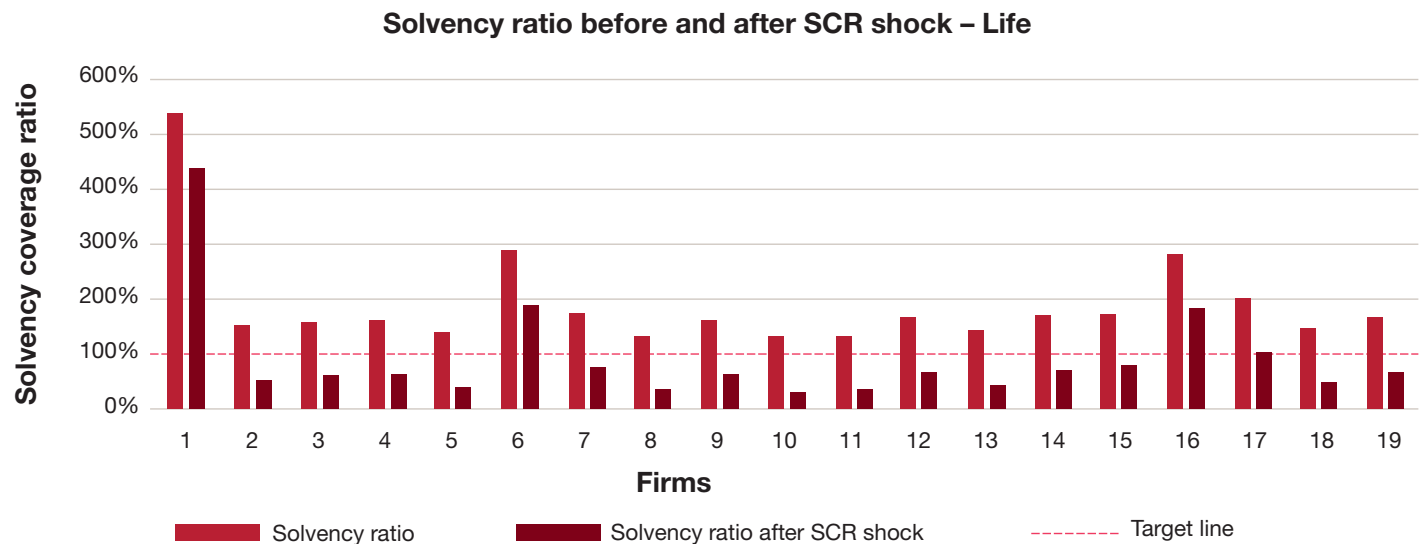
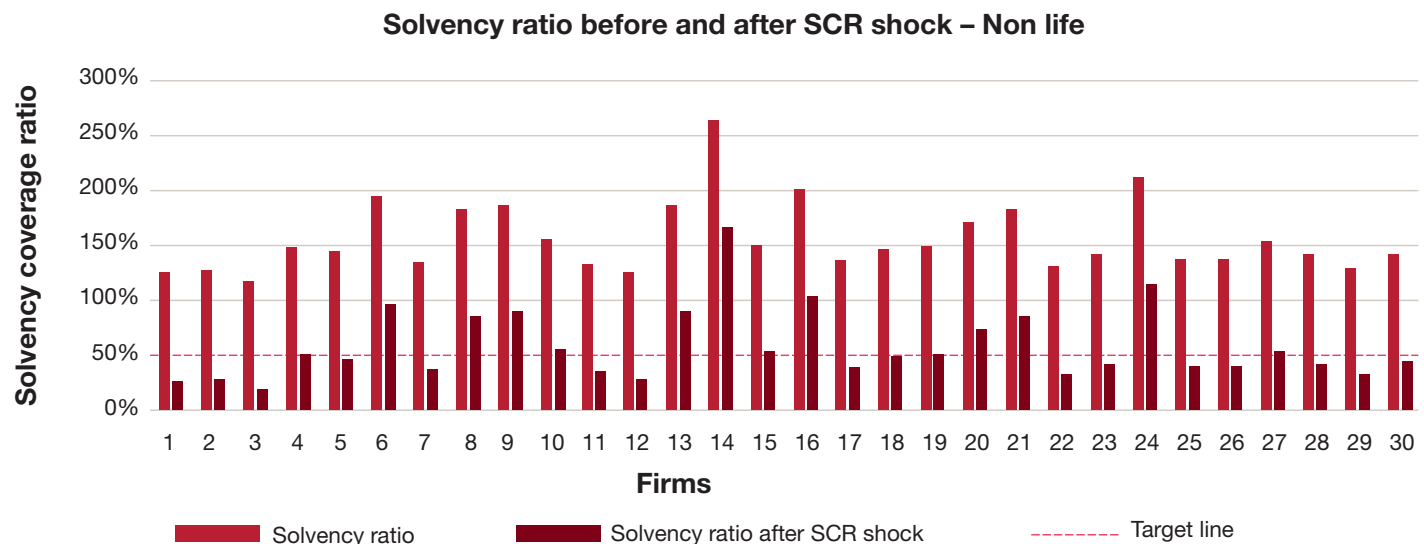


Figure 3: Impact of an SCR shock on the solvency coverage ratios of non-life insurers



84% (16) of life firms in our sample would need to recapitalise if they experienced an SCR shock with 16% of firms surviving such a stress (3). On the non-life side, 27 (93%) firms would need to recapitalise after an SCR shock but 3 firms (7%) would survive this shock. What do these results tell us? The fact that insurers would need to recapitalise after a 1 in 200 year event is no surprise. However, from a financial management perspective the challenge the Chief Financial Officer faces is clear i.e. how much should I retain as a capital buffer to protect my business in an extreme stress and how much should I pay out in dividends to satisfy the shareholders return requirements (assuming the appreciation in the value of shares does not provide enough of a return)? In answering this question, the CFO needs to consider the PRA's expectation outlined in its May 2017 Supervisory Statement on Financial Management for Insurers which focused on risk appetite setting, business and financial planning and dividend sustainability and suitability. In addition, the need for firms to fully understand their risks exposures and accurately capture

associated capital requirements either via full, partial internal models or the standard formula is significant. The development of recovery and resolution plans and the viability of a firm's management actions in an extreme stress are also important. Linked to this is the importance of considering a wide range of extreme scenarios in stress tests to assess the firm's resilience and financial strength.

Earlier in this study we alluded to opportunities for firm's to optimise their capital positions. What does the SFCR data tell us about actions firms are taking now to do this?

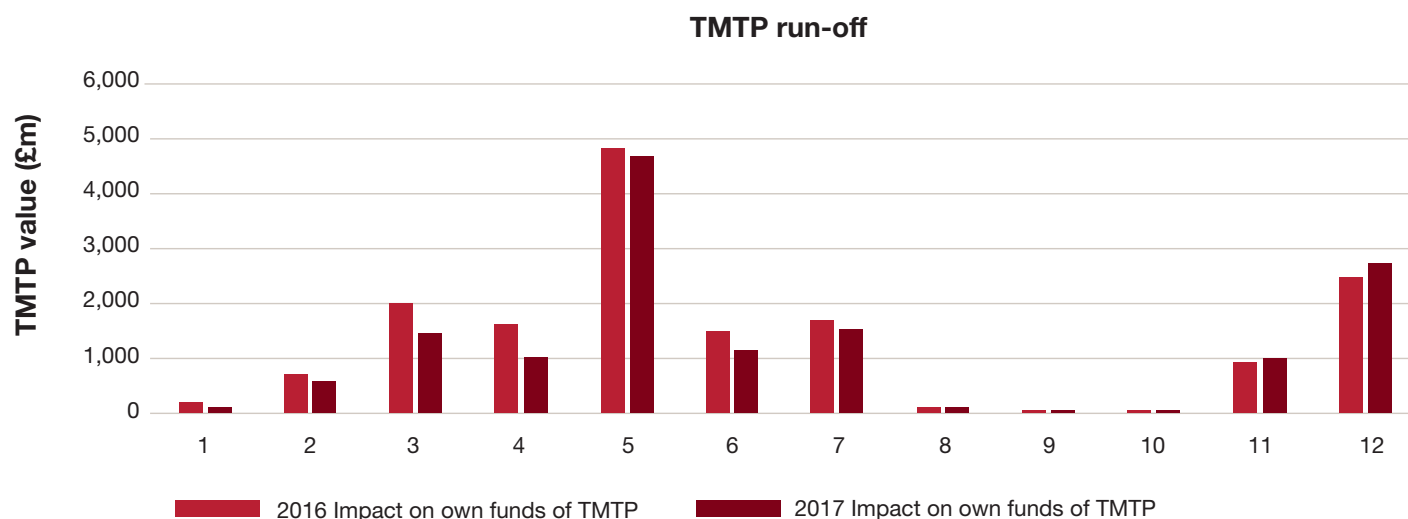
Use Long Term Guarantee packages

61% of life insurance firms in our sample use at least one long term guarantee (LTG) instrument. 37% use the transitional measure for technical provisions (TMTP), 29% the Matching Adjustment (MA) and 34% the Volatility Adjustment (VA). No firm in our sample uses the transitionals on risk free rates which could in part be because it cannot be used in

conjunction with MA which provides significant benefit particularly to life insurers. MA was the most beneficial LTG to firms providing an SCR benefit of 38%, followed by TMTP at 28% and VA at 3%. This finding is broadly consistent with EIOPA's LTG report which showed that the VA accounted for a much smaller SCR coverage ratio benefit (i.e. single digit improvement) for life insurers than MA. However the story does not end here.

Whilst considered Tier 1 capital by the regulator, firms using TMTP need to be mindful of its run off i.e. the annual amortisation by 1/16th. By 2032 at the latest, firms are expected to not be reliant on this measure to achieve solvency coverage ratios within their internal risk appetites and above 100%. Indeed as part of TMTP recalculation applications, the PRA requires firms to produce what it calls a phasing in plan. This plan essentially reflects the run off of TMTP and identifies when a firm would no longer be reliant on this measure to maintain a healthy solvency coverage ratio.

Figure 4: Run off of TMTP demonstrated by a reduction in benefit between 2016 and 2017



In figure 4 the reduction in the own funds impact of TMTP between 2016 and 2017 for firms using this measure is demonstrated. The chart does contain 2 outliers whose TMTP increased over the period but this was due to the impact of business acquisitions and Part VII transfers that took place during 2017.

The PRA in April 2018 released consultation paper 9/18 on the use of the Dynamic Volatility Adjustment (DVA), a form of VA that moves in line with credit spreads. Following this, PwC published a hot topic paper titled *Dynamic VA (DVA) Balance Sheet Protection under Stress* which considered the potential benefits of a DVA versus a static VA. Whilst our study has shown that firms received the least SCR benefit from using VA this related to a static and not DVA. EIOPA reported in its LTG report that the overall SCR derived using a dynamic VA may be in the range of 69% to 94% of the SCR calculated with a static VA. As such internal model firms may be better off compared to standard formula firms when applying a DVA in their overall SCR calculations and may benefit from added diversification. In addition to the aforementioned potential benefits, the introduction of DVA would also bring the UK in line with a number of European Countries including France where DVA is allowed. But more stringent PRA requirements for DVA approval might deter certain firms and it remains to be seen if its introduction would increase VA usage by UK Insurers.

As demonstrated earlier in this study MA provides a material SCR benefit to insurers particularly life insurers. Life insurers who invest in illiquid assets (in a hunt for yield and to back their long term liabilities) restructure these assets through securitisation to make their cash flows more bond like, predictable and therefore MA eligible. A major consideration for these insurers is the rating of these assets and how this feeds into the credit quality step and ultimately the value of MA benefit claimed. We consider illiquid assets in more detail later in this study and highlight areas of focus for the PRA.

Using reinsurance

Reinsurance is widely used by insurers to reinsure non-hedgeable risks such as longevity or non-life insurance risks such as weather catastrophe both of

which could drive significant capital requirements. Reinsurance positively impacts an insurers own funds by reducing liability volatility and its risk margin. It enables an insurer transfer a portion of its underwriting risk to a reinsurer which also reduces its underwriting risk capital. In our sample, reinsurance recoverables accounted for 16% of total technical provisions. Its use was prevalent in life index and unit linked business lines (55%) followed by life excluding health, unit linked and index linked products at 27%. Non-life excluding health at 30% had the highest level of ceded reinsurance which was 7% higher than the next category which was health similar to life at 23%.

The benefits of reinsurance are clear but new credit counterparties introduced through such transactions create reinsurance credit risk which firms need to manage. An insurer could choose to retain this risk, hold additional counterparty credit risk capital and mitigate it through active exposure management. Another option would be to hedge this risk through the use of derivatives. Using Insurance Linked Securities (ILS) offers insurers an added option to potentially reduce their reliance on the traditional reinsurance market. More so now than before as the UK welcomed its Insurance Linked Securities (ILS) regime in December 2017.

Using the Loss Absorbing Capacity of Deferred Taxes (LaCDT) and Technical Provisions (LaCTP)

12% of firms in our sample use LaCTP claiming on average a 27% improvement in their solvency coverage ratios. 6 of those firms were life insurers and 1 was a Retail General Insurer. Life insurers using LaCTP accounted for 83% of the total benefit claimed with a single entity accounting for 47% of the LaCTP of all users. 54% of firms in our sample claimed LaCDT benefit which on average provided a 13% boost to their solvency coverage ratios.

Whilst more firms seem to use LaCDT, the coverage ratio benefit to users of LaCTP (whilst fewer) is actually greater at 27% compared to 13%. This is not in itself surprising given the calculation for notional deferred tax involves the application of a tax rate which is not the case when calculating LaCTP. On February 2018 and as part of its

Standard Formula review EIOPA proposed additional criteria for the calculation of deferred taxes after the shock loss, reflecting key principles it had developed in this regard. It proposes that these principles are incorporated in Level 2 legislation to increase regulatory convergence. These changes could limit the credit that can be taken for LaCDT, in particular by constraining the ability to take account of assumed future profits in the post stress scenario in a number of ways.

Diversification benefit

On average, firms in our sample claimed up to £972m (c£52bn in total) in diversification benefit. 73% of the benefit claimed was by internal model firms, 20% by partial internal model firms with standard formula firms only claiming 7% of the total diversification benefit. The large portion of diversification claimed by internal model firms is because for these firms diversification arises from various sources and occurs between risk types, within risk types or through a common risk drivers. Diversification benefit could be significant demonstrated by a partial internal model firm in our sample claiming diversification benefit larger than its SCR. This could be another incentive for firms to consider applying for internal models albeit we acknowledge the driver behind an internal model application should be a more accurate reflection of an entity's risk profile. Additional challenges posed when considering enhancing diversification benefit include the dependency and aggregation structure chosen to capture the interaction between risks, data availability and perhaps crucially senior management confidence in the final figure.

Our analysis has demonstrated the various ways and mechanisms insurers are using to optimise their capital positions but how do they calculate their SCRs and what risks do firms hold capital against?

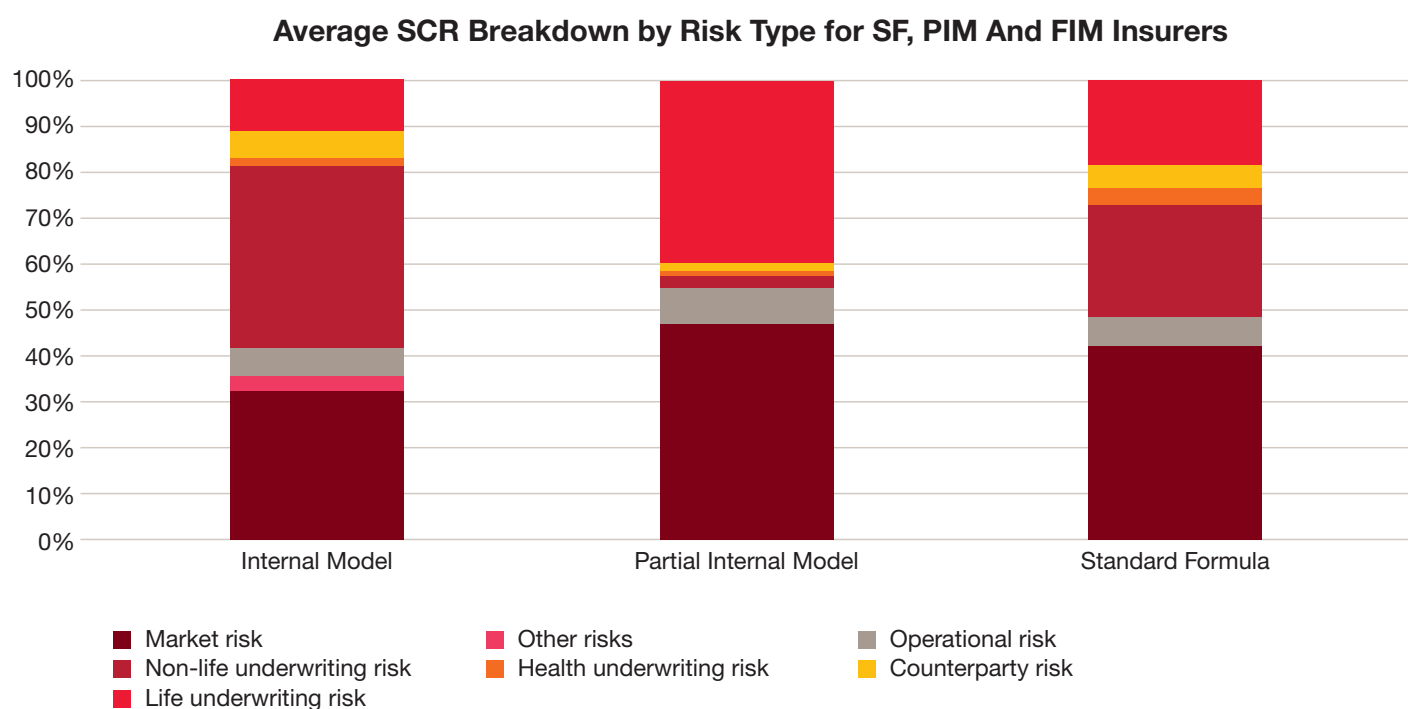
How are SCR calculations and what risks are dominant?

60% of the firms in our population (34 firms) use the standard formula to calculate their SCR. 26% (15 firms) use an internal model and 14% use a partial internal model (8 firms). A significant incentive for using an internal model to calculate capital requirements is the potential for a reduction in capital

requirement either due to increased diversification benefit or simply more accurate calculations of capital requirements. A firm in our sample that moved from the standard formula to an internal model experienced a 25% (£836.9m) SCR benefit (from £3,360.5m in 2016 to £2,523.6m in 2017). We

however acknowledge that this reduction in capital could be due to a number of additional factors outside the model and that firms moving to an internal model may not necessarily experience capital benefit of a similar magnitude.

Figure 5: SCR Breakdown by Solvency II Risk Types



Material risks for internal model firms accounting for c72% of their SCRs were market risk and non-life underwriting risks. For partial internal model firms,

market risk and life underwriting risk dominated and accounted for c60% of their SCRs. Standard formula firms risk profiles largely comprised market risk,

non-life underwriting and life underwriting risk (up to 85% of their SCRs).



Do balance sheets reveal anything?

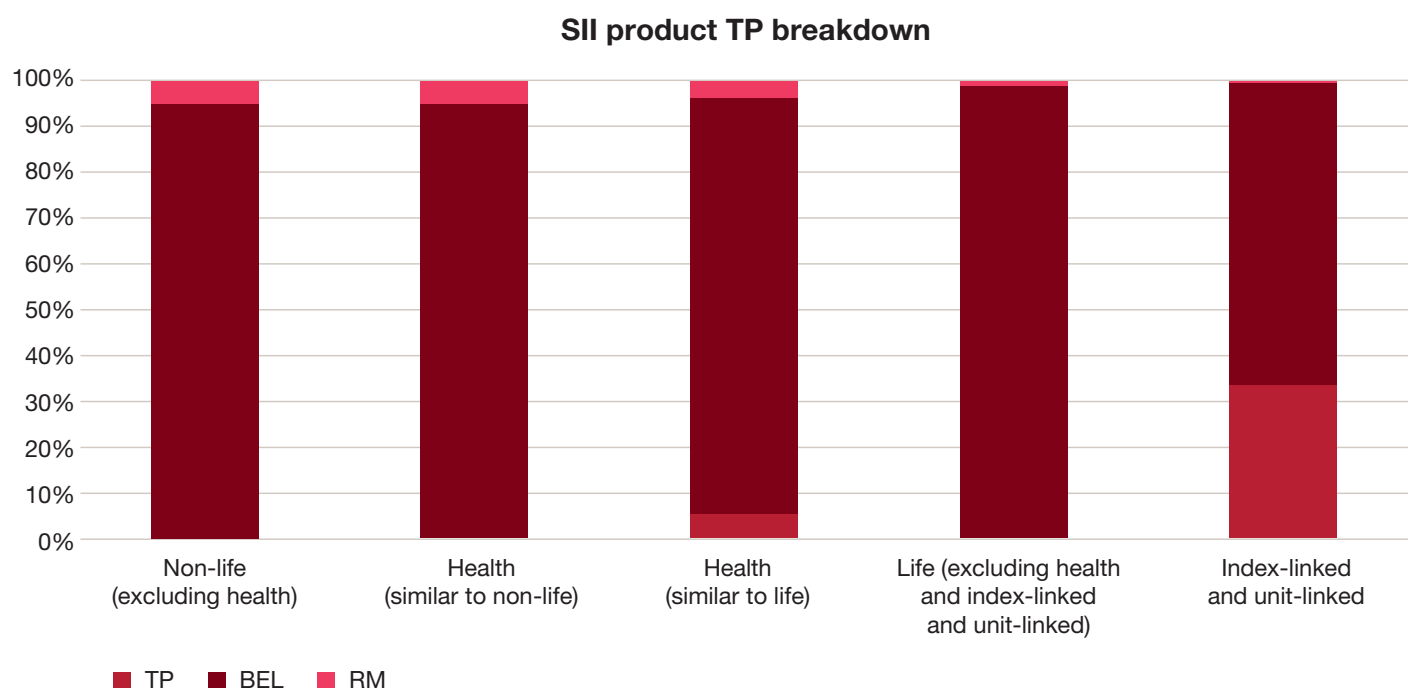
Firms in our sample had total assets of £1.18trn with 87% (£1.03trn) of this figure from the life sector and 13% (£147bn) from non-life insurers. Do the investment profiles of life firms differ to that of non-life firms? Not materially. At 58.3% of total assets, most life firms invest heavily in bonds (mainly corporate bonds) with equities (mainly listed equities) accounting for only 4% of their investments. The largest asset class for non-life firms was bonds (largely corporate bonds but with a larger Government bond portfolio than

life insurers). Equities (listed) accounted for 3.4% of investments albeit unlisted equity investments were more material for non-life insurers. This findings is consistent with EIOPAs view outlined in its Q4 2017 Solvency II statistics c60% of the investments of EEA insurers comprised of bonds.

The bulk of life sector liabilities were index and unit linked (51%), followed by technical provisions – life (excluding unit linked and index linked) at 35% and deposits from reinsurers at 7%.

76% of non-life insurer's liabilities were non-life technical provisions, 5% financial liabilities and 4% each were deposits from reinsurers and payables respectively. The remaining 15% comprised a number of smaller items including (but not limited to) reinsurance payables, debt owed to credit institutions and subordinated liabilities.

Figure 6: Breakdown of Solvency II Technical Provisions by product type



As per figure 6, Technical provisions (TPs) were further broken down into TPs calculated as a whole, best estimate liabilities (BEL) and risk margin, all split by Solvency II line of business. TPs calculated as a whole were only material for index and unit linked business with the BEL making up the largest proportion of liabilities for each line of business (more than 65% and up to 99% for 'life excluding health, index linked and unit linked' products).

The 2017 risk margin for our sample of firms accounted for 1.63% of total liabilities but was c£1bn less than the value in 2016. This finding would suggest that despite industry wide ill will towards the risk margin it appears that arrangements put in place to mitigate its impact are succeeding. That said the risk margin at c24% of the total SCR of firms in our sample remains significant (particularly for large insurance groups). For life insurers in our sample the risk margin represents close to 30% of their SCRs. This

supports claims by the industry about the material impact the risk margin has on life insurer's capital positions and explains the PRA's attempts at reform. However as outlined in Sam Woods' 4 July 2018 letter to the Treasury Select Committee the PRA has been unable to develop a durable solution that firms can rely on given the current uncertainty around Brexit.

The risk margin is clearly a very topical issue for life firms. What else is big news in the industry right now?

What is topical?

Equity Release Mortgages (ERMs)

We described earlier in this study how life insurers invest in illiquid assets as they provide a good match for their long term liabilities. In their original form, cash flows from these assets are unpredictable and therefore not eligible for inclusion in MA portfolios but can be securitised through special purpose vehicles to make them eligible.

Investments range from commercial real estate to infrastructure assets such as hospitals. The Regulator is currently focused on ERM's which is a growing investment category for life insurers. Our analysis supports this assertion as between 2016 and 2017 there was an 11% increase in the loans and mortgages asset category in the balance sheets of insurers in our sample. Over the same period, loans and mortgages

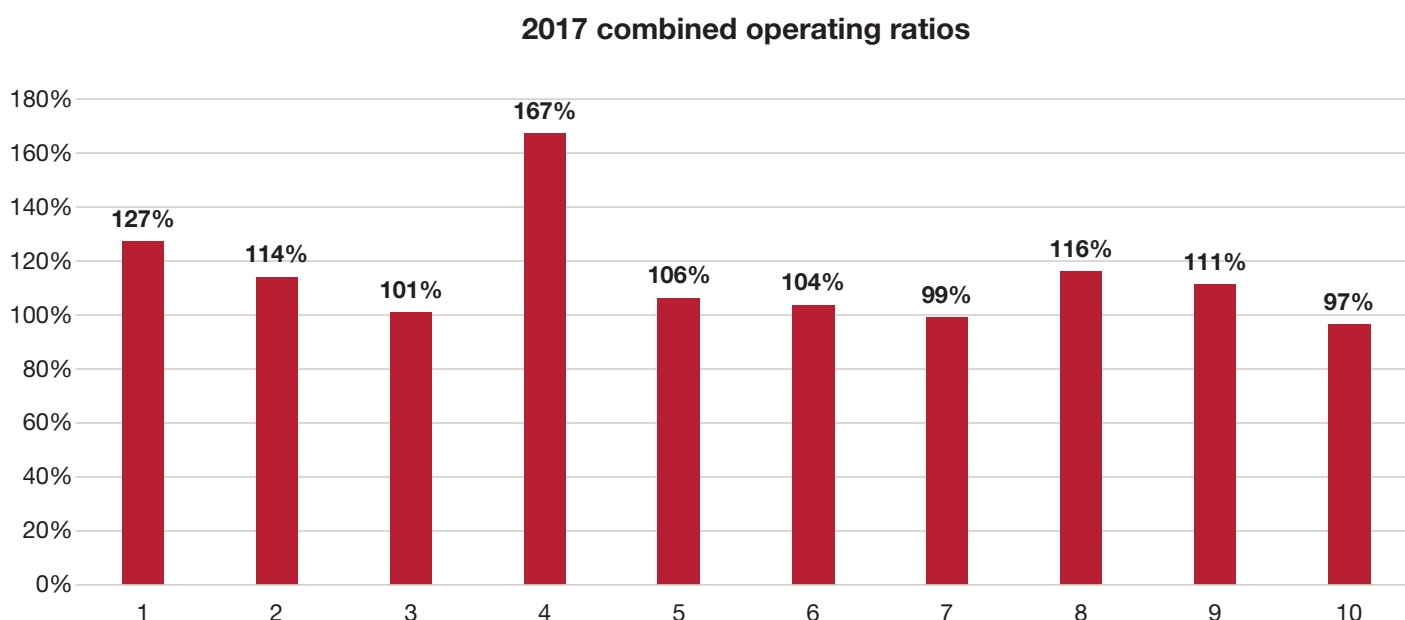
to individuals increased by 43%. Life firms dominate this picture with the majority of growth coming from large players in the bulk purchase annuity (BPA) market.

Concerns from the regulator are many and linked to its statutory objectives to promote the safety and soundness of firms and policyholder protection. To this end the PRA has released *consultation paper 13/18* consulting on the treatment of ERM's with focus on the value of MA benefit claimed by firms, the modelling of the no negative equity guarantees (NNEG) that accompany these products and how this impacts available TMTTP relief. At PwC we will closely monitor development in this space but suspect that PRA is likely to focus on other illiquid asset classes once its work on ERM's concludes.

Underwriting performance of speciality market insurers

In her recent 'Dear CEO' letter, Anna Sweeney, Director of Insurance at the PRA, outlined the findings of its review work on the profitability of speciality market insurers. A key finding was insurers reporting consistently low levels of underwriting profitability even in years of low natural catastrophe activity. Whilst hurricanes Harvey, Irma and Maria contributed to poor underwriting performance in 2017 the PRA suggested that performance challenges were also in part due to overly optimistic forecasts and assumed future profitability. The letters also suggested an overreliance on loss pricing systems that pointed to profitable business when actual results suggested otherwise. Given the above, what can we prove from SFCR data?

Figure 7: 2017 combined operating ratios for London markets firms.



In figure 7, we considered the underwriting performance of 10 London Market firms in our sample. 8 of those firms reported an underwriting loss with combined operating ratios (COR) above 100% ranging from 101% to 167%. 2 firms in our sample did report an underwriting profit with CORs of

97% and 99% respectively but this was due to a one-off management action and reserve releases.

Although based on a handful of firms our analysis typifies the real underwriting performance challenges facing speciality insurers. Firms may

benefit from more benign weather in 2018 to date and this might boost performance. However the sector should take heed of the regulator's views and consider the possibility of increased regulatory scrutiny if they do not address issues highlighted.

How can PwC help?

At PwC we can support your business by

- Ensuring that your SFCR complies with Solvency II requirements and the findings of EIOPAs supervisory statement.
- Supporting all aspects of your Solvency II applications including regulatory liaison for internal model approval and model change, Ancillary Own Funds, TMTP, MA and VA application. We can also review your exiting LTG models.
- Developing appropriate phasing in plans for TMTP to ensure that your business is not reliant on this measure indefinitely.
- Conducting a high level impact analyses to help you understand potential SCR benefits with the DVA and the impact on overall SII balance sheet.
- Building dynamic VA models and providing an independent review of your existing VA models.
- Providing assurance on your LaCTP and LaCDT calculations. Model the potential impact of EIOPAs LaCDT proposals on capital positions.
- Helping you maximise your use of diversification benefit and providing assurance on existing calculations including your choice of dependency and aggregation structures.
- Helping you understand the implication for your business model and capital position of the PRA consultation paper and Dear CEO letter on equity release mortgages and Anna Sweeney's letter of speciality market performance.
- Offering a multi-disciplinary team of experts in Regulation, Tax, Transfer Pricing, People Matters, Strategy and Operations to help plan and implement your regulatory, market structuring and compliance programmes. We can help relocate your ILS to London where you have an existing ILS.

Contact



Andy Moore

Partner

T: +44 (0)7702 677654

E: andy.moore@pwc.com



Jeanette Joubert

Senior Manager

T: +44 (0)7889 643819

E: jeanette.joubert@pwc.com



David Otudeko

Manager

T: +44 (0)7561 789061

E: david.otudeko@pwc.com

This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors.

© 2018 PricewaterhouseCoopers LLP. All rights reserved. PwC refers to the UK member firm, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details.

190122-144242-UM-OS