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# PPOs post-Solvency II: From bad to worse?

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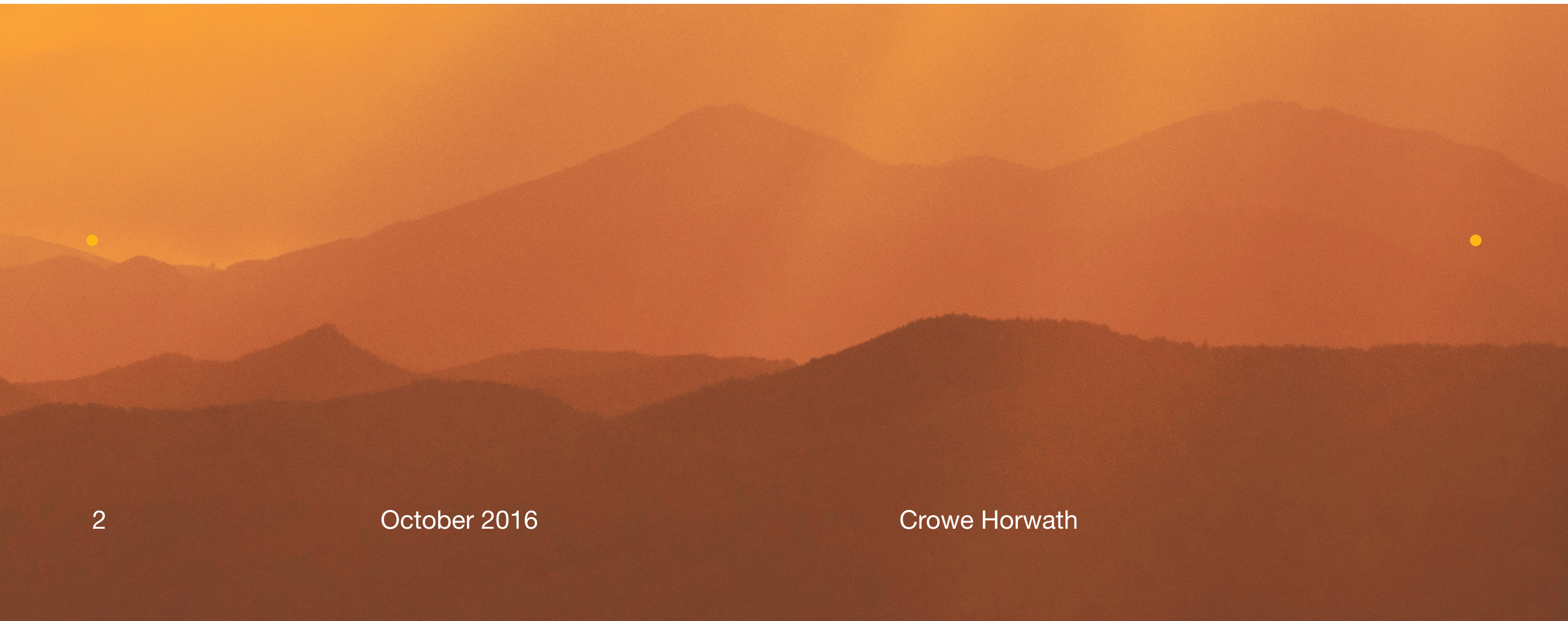
# Managing periodic payment order (PPO) liabilities is becoming more and more difficult.

And the implementation of the Solvency II Directive will result in a classic case of going from bad to worse for insurers with PPO liabilities. The specifications of the directive, a revision of EU insurance and reinsurance law, will add significant complexity, together with corresponding additional capital requirements, to the already difficult-to-manage liabilities.

For property and casualty companies, the nature and duration of PPO liabilities pose real challenges in relation to their traditional business model. PPOs represent long-term liabilities, which differ considerably from the standard general insurance products with short-term liabilities, which typically provide compensation for specific losses occurring within a one-year period.

## PPO proliferation

PPOs, introduced in the U.K. by the *Courts Act 2003*, allow regular payments over the remainder of the claimant's lifetime, instead of a single lump sum, in the settlement of catastrophic injury claims. Since then, the number of PPOs settled through the courts has steadily increased – to more than 50 new cases a year and more than 500 in-payment cases on the books by 2016. The cases have an average of 40 years of future payments remaining, according to the Periodical Payment Orders Working Party of the Institute and Faculty of Actuaries.



The long-term nature of PPO business imposes numerous challenges on insurers – challenges which are exacerbated by Solvency II:

- The projection of (impaired) mortality rates for many years, especially for young claimants, and the nature of injuries can lead to further uncertainty related to longevity risk.
- The use of the Annual Survey of Hours and Earnings (ASHE) indices to represent cost of care inflation leads to complications related to the matching of liability cash flows, because there are no assets linked directly to ASHE.
- The discount rate used for the valuation of PPOs is a critical factor in calculating the size of the future liabilities.
- The selection of assets to match these extended liabilities can generate further market risks, depending on the investment strategy.
- The long-term duration of PPOs increases the operational overhead through increased responsibilities of the administration and customer service departments.
- Reinsurers' capitalisation clauses limit longevity risk recapture under existing treaties.
- The Prudential Regulatory Authority (PRA) has increased its interest in and scrutiny of the management of these liabilities.

More broadly, Solvency II requirements affect insurers with PPO liabilities in the context of:

◊ Complex and onerous capital requirements (Pillar 1)
◊ In-depth risk management considerations in governance, oversight and decision-making (Pillar 2)
◊ Significantly increased reporting and disclosures (Pillar 3)

Insurers with long-term, nontraditional liabilities such as PPOs need to consider carefully the impact of these requirements on the way they manage and operate their business, not least because of the parallels these liabilities have with products in the life insurance sector, such as annuities.

In contrast to many general insurance companies with similar exposures – life insurance companies have been actively developing management actions for years in advance of Solvency II implementation, to proactively mitigate some of the effects on their long-term liabilities.

## The implications of Solvency II for PPOs

Following is a discussion of each of the three pillars of Solvency II, along with key implications for those insurers with PPOs.

### Pillar 1: Complex and onerous capital requirements

Solvency II regulations define how insurance companies should calculate their Solvency II assets and liabilities in order to determine the amount of capital available to cover losses.

The assets and liabilities need to be valued using probability-weighted cash flow-based best estimates of their market value, along with sufficient capital to withstand 1-in-200-year stresses over a one-year period.

This explicit use of cash flow modelling, as well as the calculation of capital requirements and the removal of prudence in the liability calculation, represents key changes in methodology from the Pillar 1 calculations under Solvency I.

**Solvency II implications**

The Solvency II capital requirements and risk margin amount to about half of the size of the best estimate liabilities for a benchmark policy.

Therefore, insurers with PPO liabilities that have a history of reserving in line with the actuarial compensation tables for injury and death (Ogden tables) will need to develop and improve their cash flow modelling capabilities in order to fully comply with Solvency II technical requirements (Exhibit 1).

**Exhibit 1: Solvency II vs. Ogden table basis for a benchmark PPO policy[1]**

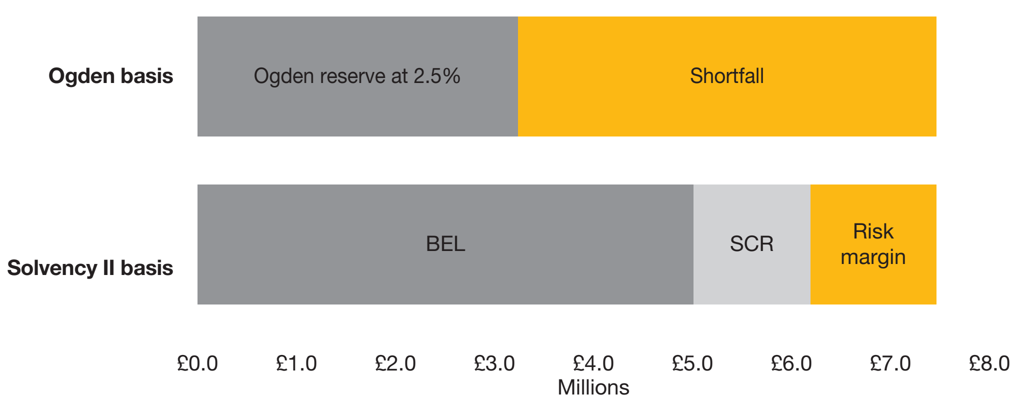


**Exhibit 2: The threefold impact of PPO liabilities on a Solvency II balance sheet**

| Best estimate liabilities (BEL) | Solvency capital requirements (SCR) | Risk margin |
|---|---|---|
| • Insurers need to fully justify any impairments reflected in their assumed best estimate mortality assumptions.<br>• The discount rate used is the risk-free yield curve specified by the European Insurance and Occupational Pensions Authority, which, in conjunction with the current ASHE index, implies a net rate of about −0.5% at the short end of the curve, rising to +0.5% at the long end of the curve.<br>• Expense assumptions need to be allocated to PPO liabilities as part of the cash flow projections, explicitly taking into consideration any additional overhead and operational challenges arising from managing long-term liabilities.<br>• The assumption for the indexation rate of future care costs needs to be justified across the full lifetime of the PPO policies (in excess of 50 years in some instances). | • The amount of capital held under Solvency II in order to withstand adverse scenarios can vary significantly depending on a company's asset investment strategy, underwriting experience and operational factors<br>• For PPO obligations, we expect the largest capital requirements under Solvency II to be driven by market risk arising from investing in long-term assets, followed by underwriting risk arising from uncertain longevity exposures from impaired lives receiving PPO payments.<br>• In addition, insurers that don't pursue an internal model will have to decide how best to reflect the inflation risk associated with future costs of care, or risk receiving a capital add-on from the regulator, since there is no inflation risk specified under the standard formula of Solvency II. | • Risk margin is an additional buffer of capital to hold under Solvency II, to reflect the cost of holding capital to back liabilities in a wind-up scenario. This was not required under Solvency I regulations<br>• The risk margin calculation is specified by the regulator and is a function of the capital requirements for underwriting risk, the duration of the liabilities and the risk-free interest rate<br>• Insurers with PPO liabilities may be particularly exposed to the size and volatility of the long duration of these liabilities, the relatively high underwriting risk capital requirements and the current low-interest-rate environment. |

## Pillar 2: In-depth risk management considerations in governance, oversight and decision-making

The goal of the Pillar 2 requirements of Solvency II regulations is for companies to put risk management at the heart of decision-making. Irrespective of the capital requirements prescribed by Pillar 1, insurance companies need to form their own view and assessment of the risks they are exposed to and hold an appropriate amount of capital for these risks.

This assessment may differ from the predefined Pillar 1 requirements because it needs to be carried out with consideration of the entire risk universe to which the company is exposed. In the context of PPOs, for example, an insurer could decide on a management action to hold additional capital against inflation risk, which is not a risk specified under the Pillar 1 rules.

The appropriate risk management arrangements chosen to handle different types of PPO obligations will vary significantly, depending on the nature and scale of the underlying exposures.

Due to the significant effort and cost required to develop an internal or partially internal model, regular reviews of the model's appropriateness will need to be scheduled, in order to anticipate any shortcomings of the standard formula as a result of future liability profile changes.

## Pillar 3: Significantly increased reporting and disclosures

The supervisory and public reporting requirements under Solvency II aim for greater transparency and comparability of companies and to enhance market discipline through increased disclosure.

For insurers with PPOs, one of the key considerations for meeting Pillar 3 requirements is that PPO liabilities must be segmented as "annuities stemming from non-life insurance obligations."

This means that the size of PPO reserves will be fully visible in all regulatory disclosures which show the segmented BEL. This is in contrast to companies' disclosures over the past few years, which have been relatively opaque in terms of PPO details.

**Exhibit 3: Highlights of the minimum disclosures under Pillar 3, which may contain information about PPOs**

| Source | Reporting |
|---|---|
| Quantitative Reporting Templates (QRTs) | • Detailed information on annuities stemming from non-life insurance obligations<br>• Undiscounted annuity claims provisions<br>• Annuity payments<br>• Number of annuities<br>• Best estimate for annuity claims provisions |
| Reports | • Detailed risk disclosures<br>• Projections of risk profiles<br>• Stress and scenario testing<br>• Expected future risk profile and emerging risk exposures |

We expect this significant increase in the breadth and depth of disclosures and reporting to be a strong incentive for insurers to further demonstrate both to the regulator and the public that they conduct their business in a sound, efficient manner and continuously maintain adequate reserves to back PPO liabilities and practise targeted and proactive risk management.

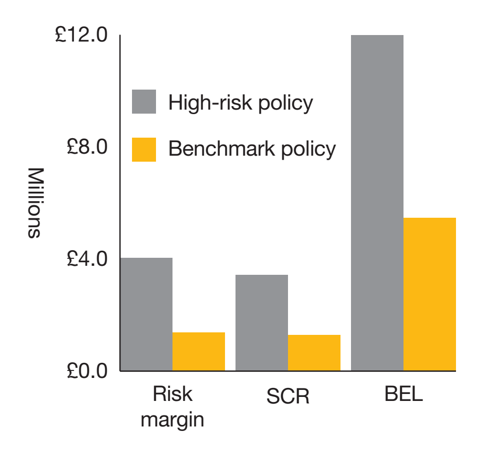
In the context of the PRA's recent comments and increased focus on PPOs, the implication is that Pillar 3 disclosures will be scrutinised for details about PPO exposures and the management of their risks.

## Case Study: Effects of Solvency II standard formula on different periodic payment order policy types

Shown here are some high-level implications modelled to highlight the effects of the Solvency II standard formula specifications on different types of PPO policies. A “high-risk” policy and a “low-risk” policy are contrasted with a benchmark policy.

| **Scenario 1: Relatively high-risk PPO policy** | |
|---|---|
| Younger | Claimant age: 10 years |
| High impairment | Impairment to healthy life expectancy: 25 years |
| High PPO amount | PPO amount: £20,000 per month |

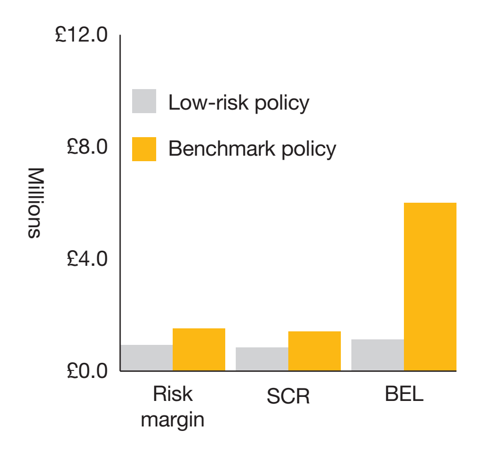
**Benchmark policy vs. high-risk policy**




While the best estimate liabilities (BEL) double, Solvency capital requirements (SCR) and risk margin are approximately triple for a high-risk policy relative to the SCR and risk margin of the benchmark policy.

| **Scenario 2: Relatively low-risk PPO policy** | |
|---|---|
| Older | Claimant age: 60 years |
| Low impairment | Impairment to healthy life expectancy: 2 years |
| Low PPO amount | PPO amount: £5,000 per month |

**Benchmark policy vs. low-risk policy**




Conversely, for a low-risk policy, the BEL decreases fivefold; but, importantly, the SCR and risk margin decrease is far less pronounced relative to the benchmark policy.

Further to the risks considered in the standard formula SCR, insurers very likely will have to separately calculate and reserve additional cost of care inflation risk, or face a potential capital add-on from the regulator (because inflation risk does not form part of the standard formula of Solvency II). The exposure to inflation risk needs to feed into the ongoing assessment of the appropriateness of the standard formula as a whole for the particular business.

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## What should companies be doing?

As the number of settled PPOs continues to increase, it is clear that the difficulties of managing long-term liabilities are only just beginning for insurers with PPOs on their books – which is not helped by the additional complication of Solvency II requirements.

The current sophistication of managing PPO liabilities varies across companies, but it is deemed to be low compared to the sophistication of life insurance companies that manage long-term liabilities of a similar nature. At a minimum, insurers will need to focus on the following aspects of their business in order to understand their PPO exposures and to meet regulatory expectations:

- Improve modelling capability in order to quickly understand the impact of any adverse future stresses and scenarios.
- Reassess current reserves held for PPOs in light of Solvency II SCR and risk margin requirements.
- Validate assumptions underlying the management of PPO liabilities, including any views on materiality.
- Review the efficiency of investment strategies for assets backing the PPO liabilities.

Ultimately, firms will need to work towards a good understanding of the risks underlying their PPOs and the assets backing these obligations, in order to hold appropriate capital and manage the risks in a proactive manner.

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[1] Benchmark policy: Male, 35 years old, five-year impairment to healthy life expectancy, £10,000 monthly PPO amount