School of Mathematics, Statistics & Actuarial Science

PPO FOCUS

Shaun Parsley BSc MSc FIA ACII (s.parsley@kent.ac.uk)

WITH THE RECENT OGDEN RATE CHANGE STILL IN MIND, THIS UPDATE INVESTIGATES SOME OF THE CHALLENGES THAT PERIODIC PAYMENT ORDERS (PPOs) BRING TO INSURERS.

The last couple years have seen the incidence of new PPOs granted by the courts fall. This has lessened, somewhat, the focus of the motor insurers on the challenges that PPOs bring to them. Even at this low current incidence, due to the life expectancy of the individuals affected often being well over 30 years, general insurers are seeing their balance sheets gradually increasing their exposure to a small number of significant longevity risks.

The reserving of these high value life risks is notoriously difficult to perform, and relatively small assumption differences can lead to large changes in technical provisions due to the expected long duration of the PPOs. Reinsurance will attempt to reduce the risk exposure but sometimes this doesn't always extinguish longevity risk fully.

A fundamental difficulty with PPOs is that the risks they pose are pertinent to each individual PPO holder. Longevity is an example of this. Traditional annuity reserving techniques rely on large pools of lives to allow standard mortality tables and generic assumptions to be used. PPOs are few by nature but large by individual size hence pooling does not really exist.

Reliance then tends to therefore focus on the medical assessment of an individual life. Medical reports required for life expectancy measurement are often required throughout the compensation claim process. Much of this is useful to insurance medical underwriters in their own assessment of future life expectancy of the claimant.

This information is often used to generate the longevity assumptions for reserving purposes however it does not help the insurer to understand all the risk associated with longevity. In particular the risk of mis-estimation by the medical underwriting on an individual life (the 'misestimation risk'), risks around the estimation of the future improvements for these lives (the 'trend risk'), and the generic random risk around such small sample sizes (the 'stochastic risk).

The building of a longevity risk model is in itself a complex exercise. However, even if the insurer achieves this, calibration of the model is often difficult as the PPO market is relatively new and therefore experience studies are of very limited use.

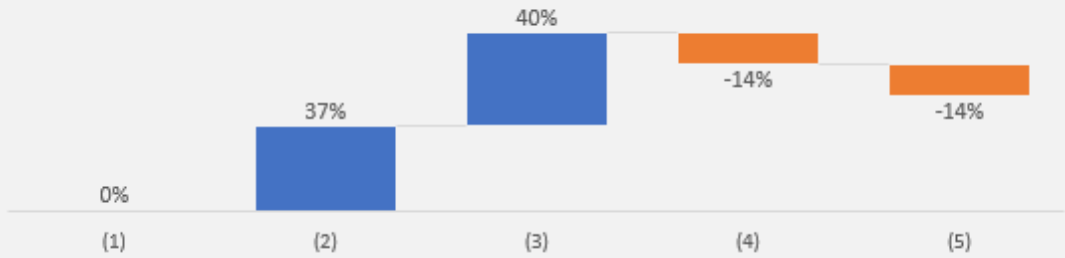
These difficulties often lead capital actuaries to apply the standard formula stress scenario for longevity. A reduction of mortality rates of 20% pa may be meaningful for a book of pension annuities but it is less so here where the size of the pool is so small.

A key concept to improving the capital efficiency under Solvency II is to increase the diversification of longevity risk by increasing the pool size. This is one of the main drivers behind insurers interested in consolidating PPOs into a single fund.

Figure 1 highlights the impact to the longevity risk capital by having a larger pool of PPO holders in your fund.

Column (4) suggests that a reduction of 14% in technical provision by way of the number of PPOs in the fund increasing from a pool of 10 moving up to 50. Similarly moving from a pool of 50 lives to 100 has a similar further effect.

Figure 1 Highlighting the Impact of Various Inflation Assumptions & Longevity Risk



KEY

(1). BEL (RPI)

(2). BEL (ASHE)

(3) Risk Margin inclusion to (2)

(4) Impact to (3) of a larger PPO pool to 50 lives

(5) Impact to (4) of a larger PPO mortality pool (100 lives)

Wage Inflation

Another assumption that can cause large fluctuations in the technical provisions held by insurers is the estimate of future care costs inflation. Usually the court requires PPOs to increase in line with the ONS index of care workers' salaries (often referred to as the ASHE 6115 index).

The difficulty is that there is no simple asset hedge for care workers wage inflation. Figure 2 highlights a comparison of RPI versus care wage inflation over the last 15 years. Simple correlation between the two is not as strong as what might be presumed. Currently implied 30-year RPI is around 3.25%. What should an ASHE based care costs inflation be?

It is believed that a significant proportion of the difference between the RPI and care worker wage inflation is due to the uncertainty driven by politics. Wage growth is often heavily influenced by government policy - for instance the focus on austerity during the period 2010 to 2015 appears to have the slowed care sector wage growth.

Nationally there appears to be growing pressure to adopt the 'National Living Wage' and it is likely it will impact a large number of care workers.

The Resolution Foundation predicts the impact of adopting the living wage could materially increase salaries for one million care workers.

Political risk is very difficult to hedge in its own right as the changes and subsequent impacts are difficult to predict over the short term let alone the longer term. Often the future time period of assessment is more than 40 years which means relatively small variations in this assumption can result in very large differences over to the overall cost. Analysis suggest that this assumption may bring with it the largest exposure to balance sheet volatility for the insurer.

In the absence of a natural hedge for wage inflation risk it is common practice for actuaries will try to base an assumption around RPI as there is at least RPI bonds available, or if equities are the preferred investment strategy, then dividend growth is often thought to be a reasonable match to RPI.

This doesn't account for the additional risk of matching to ASHE. This risk is very difficult to mitigate. Some insurers have taken the prudent step to assume that care worker wage inflation is 1.5% higher than RPI per annum. With so much uncertainty around this risk it does feel appropriate to assume a figure higher than RPI.

Ogden Change

Last week it was announced that the Ogden 'discount rate' would be moved from the current minus 0.75% to minus 0.25%. This is an increase of 0.5% since the last announcement in 2017.

The higher Ogden rate is likely to mean that lump sum settlements will reduce by between 10%-20% depending on the age (and future life expectancy) of the PPO holder. It is unlikely that we will see a large increase in the propensity to seek PPOs rather than lump sums as PPOs will continue to be viewed as more expensive than lump sums although there may be some.

Is the Ogden rate change fair to insurers? The Ministry of Justice announced in 2018 that the assumed risk profile of the claimant would be moved from very low risk to low risk. The MoJ consulted on the approach that should be used to ascertain an appropriate asset allocation for claimants.

The effect of this methodology change is that the Ogden rate increases by around 0.75%. This is at the top end of the range that IFAs would plan for their client. On paper it feels like a fair outcome for insurers. It may have been that insurers were predicting a larger increase, but gilt yields have fallen since 2017 and not increased as they had hoped. Time will tell.

PPOs have been gradually accumulating on non-life insurers balance sheets over the last ten or so years. Recent years have seen fewer new PPOs however this accumulation of longevity risk is likely to continue for a significant period of time. Are the motor insurers ready?

PPOs have been quietly accumulating on the balance sheets of motor insurers over the last ten years.

Recently motor insurers have been less concerned as a result generally lower volume of new PPOs written. However with the Ogden rate now updated it is likely that focus will switch back to addressing their PPO risks.

"…of the projected 1.7 million frontline care workers in the UK in 2020 we estimate that between 51-64% will be directly affected by the raising of the pay floor (due to the paying of the National Living Wage) for over-24s, equivalent to a pay rise for between 850,000 and 1 million workers."

Resolution Foundation