

Approaches to smoothing pay-outs on with-profits policies

A review of market practice

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Market practice in relation to the smoothing methodologies applied when determining final pay-outs on with-profits policies varies significantly between firms, and often for different funds within the same firm.

A key feature of most with-profits policies is that claim values are smoothed to protect policyholders from the short-term volatility in the value of their policy that can arise from the investment of supporting assets. Whilst policyholders are protected by with-profits guarantees, the claim value of a policy could still fall significantly if there is adverse market experience in the run-up to the claim date, so the practice of smoothing plays an important part in ensuring a more stable outcome for policyholders.

A firm's approach to smoothing can have a material impact on with-profits pay-outs, so is an important element of discretion. Firms should therefore be aware of the impact of their chosen approach, and ensure that it remains appropriate and provides a fair outcome for policyholders, both in individual cohorts and across different generations.

Approaches to smoothing vary significantly across the industry, and it is quite common for different smoothing strategies to be applied to different funds within the same firm. Milliman consultants have conducted a survey of the different smoothing approaches applied across a sample of with-profits funds, and this paper presents the results of this survey¹. The paper then goes on to consider the impact and cost of smoothing that could arise under some of the main approaches.

Finally, the paper briefly considers the benefits and challenges of changing smoothing methodologies.

Approaches to smoothing

There are two main approaches to smoothing: the smoothing of pay-outs and the smoothing of investment returns. Within this paper, a firm is described as 'smoothing pay-outs' when it adjusts pay-outs (i.e. claim values) after having calculated

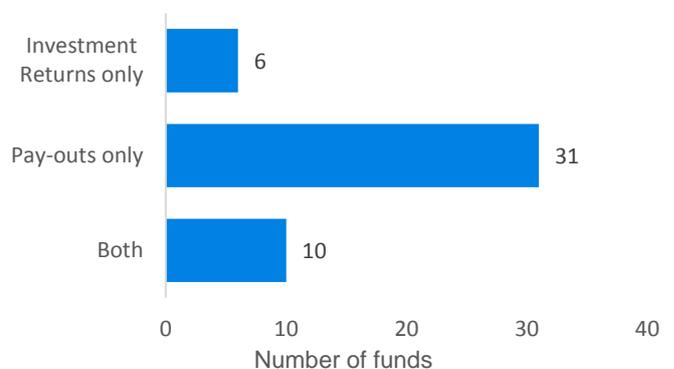
asset shares. The other major approach considered in this paper is the smoothing of investment returns, i.e. where the returns used in the calculation of smoothed asset shares are adjusted.

It is also quite common for firms to apply multiple smoothing approaches, either by applying different approaches to different policy types within the same fund, or by applying multiple forms of smoothing to the same policies. For example a firm may smooth investment returns as well as limit the change in pay-outs year-on-year on equivalent policies.

In this survey, the smoothing approaches applied to with-profits policies in 47 funds across 25 firms in the UK have been considered.

Figure 1 below shows the number of funds out of the 47 surveyed that appear to apply each of the high-level smoothing approaches.

FIGURE 1: NUMBER OF FUNDS APPLYING THE TWO MAIN SMOOTHING APPROACHES



Smoothing of pay-outs

A broad range of approaches to smoothing pay-outs is applied across the market. The most common approach is to limit the change in pay-outs relative to a similar policy of the same duration maturing in the previous year² (as demonstrated in Figure 2 below) with the maximum change often specified within the fund's Principles and Practices of Financial Management ('PPFM').

approach from the information given, without verification from the firms in question.

² Or half year where final bonuses are declared twice yearly.

¹ The analysis in this paper has principally been based on information available in the Principles and Practices of Financial Management ('PPFM') for a variety of funds and companies across the market. Descriptions of smoothing approaches provided in firms' PPFMs are often vague or simplified, therefore the numbers provided in this paper are largely based on our interpretation of the applied

FIGURE 2: EXAMPLE OF SMOOTHING PAY-OUTS



Alternatively, some firms limit the change in pay-outs relative to the same policy if the claim had been made the previous year. Examples of other approaches include:

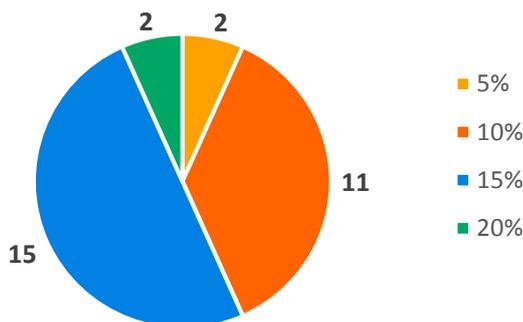
- Limiting the change in declared final bonus rates between periods.
- Adjusting the percentage of asset share targeted on claim to limit changes in claim values between periods.
- Using the historical average of asset shares at maturity for similar policies over recent periods.

In addition to smoothing claim values over time, another common practice is to smooth bonus scales, i.e. limiting the difference between final bonus rates for similar policies maturing within the same period. For example, between a policy with a 19-year term and a policy with a 20-year term maturing in the same month, or between policies with different contribution levels or durations within the same bonus series. The approach to smoothing in this regard tends to be implicit or based on expert judgement, and an explicit approach is not commonly outlined within the PPFM.

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Of the 47 funds surveyed, 30 state in their PPFMs a maximum percentage change in pay-outs on a policy, relative to a similar policy of the same duration maturing in the previous period. The most common limit was a maximum change of 15% over a one-year period (or 7.5% over a six-month period), with 50% (15) of the funds applying this limit. 37% (11) of the funds applied a 10% maximum change annually and only 7% (2) of the funds applied 5% and 20% annual maxima.

FIGURE 3: MAXIMUM PERCENTAGE CHANGE IN PAY-OUTS YEAR-ON-YEAR



In order to manage the cost of smoothing, it is common for any maximum change in pay-outs or other smoothing restriction that is stated in the PPFM to be a 'soft limit', which management reserve the right to flex during periods of extreme market movement or if the cost of smoothing exceeds an implicitly or explicitly defined level.

Many firms find it useful to define a series of limits for the maximum change in pay-outs year-on-year, based on the smoothed pay-out as a percentage of asset share. For example, one fund applies a maximum change between bonus declarations of 15% under normal circumstances, with a further proviso that in extreme investment conditions, the total change year-on-year should still not exceed 25%.

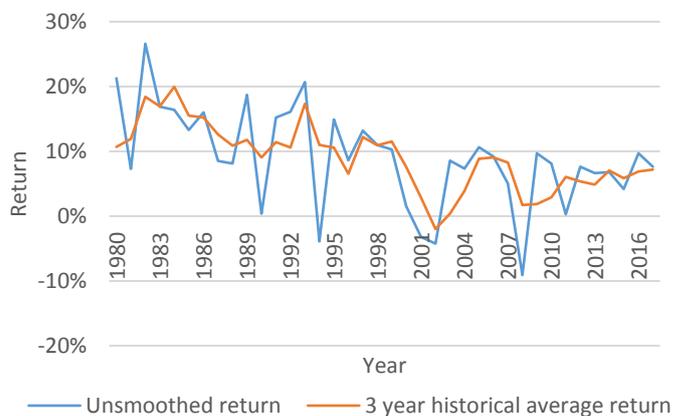
Smoothing of investment returns

As with smoothing of pay-outs, a broad range of approaches are applied by firms who take the approach of smoothing investment returns credited to asset shares. These include:

- Taking a historical arithmetic or geometric average of past investment returns.
 - Taking an arithmetic or geometric average of a combination of past investment returns and projected future returns.
- For example, when calculating smoothed asset share at a given date, one fund takes the average investment return over five years: the actual returns earned over the previous two years and the current year, and the expected return over the next two years.*
- Taking a weighted average of unsmoothed investment returns and an assumed long-term average rate of return.

Taking a simple historical average over the past three years can have quite a significant impact on the monthly investment returns that are credited to asset shares, as shown by the illustrative returns in Figure 4 below.

FIGURE 4: SMOOTHED VERSUS UNSMOOTHED ANNUAL INVESTMENT RETURNS



Under such a smoothing approach, there is still quite a significant degree of variation in returns over time, and sustained reductions in unsmoothed investment returns (such as between 2000 and 2002) can still significantly reduce smoothed returns; however, policyholders are protected from short-term fluctuations in annual returns – for example smoothed returns remained positive during the market crash of 2008, despite the unsmoothed return being negative.

Target pay-out ratios

The asset share of a policy reflects its theoretical value, and so provides a baseline amount for pay-outs. However, due to the pooling of risks in with-profits funds and factors such as smoothing and the impact of guarantees, it is actually quite rare for policies to receive exactly 100% of asset share.

The focus should be on ensuring that individual groups of policyholders are not unfairly disadvantaged by the way the fund is being managed and so a key performance indicator for many with-profits funds is the pay-out ratio, usually defined as the pay-out on a policy as a percentage of its unsmoothed asset share. A particularly high or low pay-out ratio on certain policies or groups of policies, or a rapid change in the pay-out ratio year-on-year for a particular policy group can indicate a problem, for example that the bonus setting methodology may be leading to the unfair treatment of certain groups of policyholders.

For this reason, it is common for firms to target a certain pay-out ratio, but to allow a fairly broad range around this, for example 70% to 130% of unsmoothed asset shares. Common management practices to address a pay-out ratio that is straying out of line include restricting the amount of smoothing when asset shares are outside a certain range, using a 'glide path' formula, which smooths the pay-out ratio back towards an appropriate level over a fixed number of years, or simply applying expert judgement when determining bonus rates.

Managing the cost of smoothing

Section 20.3.8 of the Financial Conduct Authority's ('FCA's') Conduct of Business Sourcebook ('COBS') requires that all firms include a statement in their PPFMs describing the period over which the cost of smoothing is expected to be neutral. Typically this is kept vague, for example the firm might include a statement simply saying that 'the cost of smoothing is expected to be neutral in the long-term'. It is not uncommon however, for firms to define a fixed period over which they expect to manage down the cost of smoothing (or smoothing surplus).

[Since it can be difficult in practice to design a smoothing process that is guaranteed to have a neutral cost, firms need to](#)

³ **Assumptions:** Policies modelled have an asset share of £5,000, 15 years remaining duration and pay monthly premiums of £25. Expense charges are deducted equal to 1% of asset share (capped at £20 inflated at 3.4% p.a. plus 0.25% of asset share). No annual bonuses are allowed for. Assumed investment returns are as shown in Figure 4.

[track their smoothing accounts over time and adapt their approaches when necessary.](#)

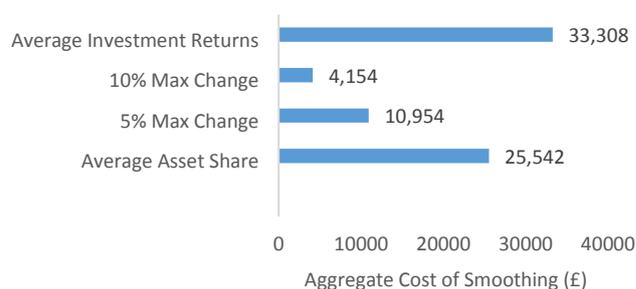
In addition, many firms explicitly state the maximum cost of smoothing that will be permitted either in aggregate or in a single period. Often these limits are expressed in terms of asset share, for example one fund states that smoothing will be reduced if it causes the smoothed asset share to differ from the unsmoothed asset share by more than 1% at the date of calculation, or if the accumulated gain or loss over time exceeds 3% of asset share.

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Milliman consultants have modelled the cost of smoothing under a variety of smoothing approaches, using a model that projects the maturity value of policies that mature in consecutive years over a 20-year period³, all of which have an asset share of £5,000 at the start of the policy's projection and a term to maturity of 15 years.

The graph below shows the estimated aggregate cost of smoothing (also known as the smoothing account) over this 20-year period under a range of smoothing approaches, using the investment returns shown in Figure 4 above.

FIGURE 5: AGGREGATE COST OF SMOOTHING OVER A 20-YEAR PERIOD



The 'Average Investment Returns' approach is where the investment returns credited to asset shares in each year are an arithmetic average of the returns achieved in the current year and the previous two years, i.e. a three-year historical average return. The 5% and 10% maximum change approaches are where the firm does not allow the pay-out/asset share to change by more than 5% or 10% (respectively) relative to a similar policy of the same duration maturing in the previous year. The 'Average Asset Share' approach is where the pay-out is based on the average asset share in the maturity year and the previous two years, i.e. a three-year historical average asset share. Pay-outs are assumed to be equal to 100% of smoothed asset share.

This model and resulting graphs (shown throughout this paper) are for illustrative purposes only and should not be considered as indicative of potential asset shares or smoothing costs that could be achieved in the real world or relied upon for any purpose.

In this example, the lowest cost of smoothing arises from the approach of restricting the change in pay-outs to either 10% or 5% year-on-year, and the largest from the approach of taking a historical average investment return. A point to note is that the modelled investment returns trend downwards over time, and different outcomes may arise in, for example, an upward trending market.

Two similar policies of the same duration that mature in consecutive years will have been invested over the same period for all but one year of each policy's lifetime, limiting the potential for significant investment variation in maturity values (although for regular premium policies there may be additional differences in exposure depending on the timing of the premium payments).

FIGURE 6: ASSET SHARE AT MATURITY

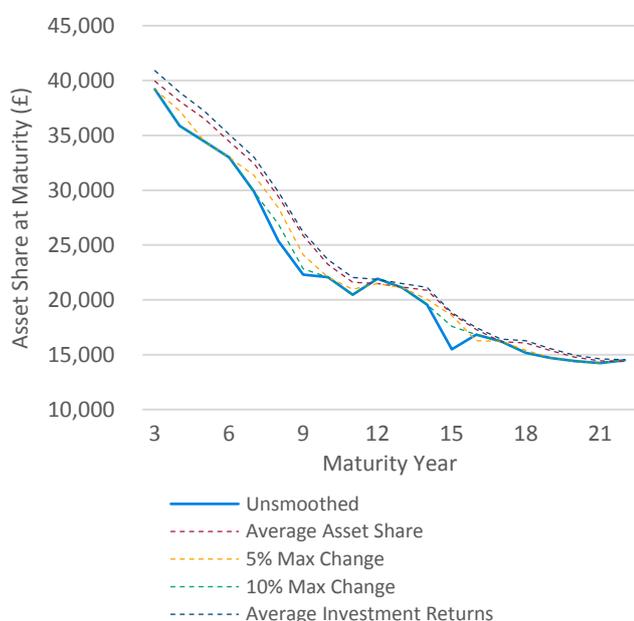


Figure 6 shows the modelled asset share at maturity for policies of the same duration maturing in consecutive years, both unsmoothed and smoothed under the various approaches. The assumptions and sample policies used to produce the results shown in this graph are the same as for Figure 5 and outlined in footnote 3 above.

In line with the larger cost of smoothing seen in Figure 5, the largest smoothed asset share is obtained when applying smoothed investment returns (average of the current year and the previous two years), closely followed by the average asset share approach (again, taking an average over the current year and previous two years). The '10% maximum change' approach tracks very closely to the unsmoothed investment returns, which is as expected given the low cost of smoothing arising under this method.

Policyholder fairness

When considering the ongoing appropriateness of an element of discretion such as the smoothing methodology, it is important to give careful consideration to the fairness of the methodology and its impact on policyholders. It is useful to consider market practice, especially as this may help to highlight possible alternative options, but more importantly firms should be able to demonstrate that their smoothing methodology aligns with their stated articulation of 'fairness'.

Although consistency (as well as any past communications to policyholders and information in the PPFM) should be factored into any assessment of fairness, if the current approach is resulting in truly unfair outcomes then consistency is not enough to justify continuing to use it. Similarly, the current methodology should not passively be assumed to be appropriate or fair simply because it has been applied historically; firms should actively review the reasonableness of their smoothing methodology on a regular basis.

Any changes to a firm's smoothing methodology would need to be carefully considered by those responsible for managing the fund and by the With-Profits Actuary, to ensure that it is objectively fair to policyholders. Being able to demonstrate that due consideration has been given is very important, both from a governance point of view and in case of regulatory interest.

It is a difficult balance to get right: too little smoothing can result in poor policyholder outcomes in adverse market conditions, whereas too much smoothing can lead to poor policyholder outcomes in positive market conditions or a cost of smoothing that places an unfair burden on future generations of policyholders. However, arguably once the balance is decided upon, the right smoothing methodology can result in fairer policyholder outcomes across the board.

In addition, firms may benefit from rationalising fund management in areas such as smoothing, by aligning the approaches used across funds. This can help to simplify processes and reduce costs, and in itself, this could result in improved policyholder outcomes in the form of reduced charges, enable wider understanding of the smoothing methodology within the firm, strengthening fund governance.

Conclusion

The choice of smoothing methodology is a key element of the discretion applied to with-profits funds, and can have a significant impact on pay-outs to policyholders. It is a difficult task to balance the needs of both current and future generations of policyholders – lower smoothing means policyholders claiming in periods of adverse market conditions will lose out, but an overly generous approach to smoothing can be detrimental to future generations of policyholders and even put the fund at risk if the aggregate cost of smoothing is not controlled.

Over the last two decades, as shown in Figure 4, market returns have consistently trended downwards, and funds have also had to weather the 2008 global financial crisis and its implications. Some funds are accruing a large aggregate cost of smoothing which needs addressing, and amending the smoothing approach is one way of doing this.

The important thing is to ensure that sufficient consideration has been given to the impact of a change in smoothing approach on different generations of policyholders. In particular, the With-Profits Actuary, as well as those responsible for managing the fund, will need to give careful consideration to the various implications and the pros and cons of making such a change relative to maintaining the existing approach.

How Milliman can help

Milliman consultants have extensive knowledge of the policyholder issues and fairness considerations that arise in respect of with-profits business.

We have fulfilled With-Profits Actuary roles and With-Profits Committee advisory roles for a wide variety of insurers and acted as the Independent Expert/Actuary for many of the large transactions and transfers of with-profits business over the last few years. We are able to support our clients with in-depth experience and tailored insight in relation to with-profits business, including both the application of discretion (for example, the choice of smoothing methodology) and the general management of with-profits business.

In addition, through these roles and through our recent work with the Financial Conduct Authority, we have a strong understanding of the regulators' requirements in relation to with-profits business, and are well placed to guide you through any dealings with the UK regulators, and to identify and advise on areas that they may query.



Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

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