# The impact of underwriting loadings on pricing

To: The underwriting team, ABC Insurance
From: Sam, Pricing Actuary, ABC Insurance
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This note has been prepared in response to an email from Meghan about the pricing impact of the claims experience from policyholders with an underwriting loading. Meghan confirmed that the underwriting loadings are not intended to be prudent, but had heard that there is evidence across the market that there is a level of prudence in the loadings. In this paper we have set out our views on the potential for prudence in the underwriting loadings, and how we respond to this in pricing new policies. It will cover:

- How we analyse the past experience, and the way loaded business feeds into this
- The adjustments made in 2020 for loaded business
- The potential impacts of a project to eliminate any prudence in the underwriting loadings

**How we use past experience in pricing**

When setting prices for new business we always look at how business written in the past has performed. This is known as an experience analysis. The objective is to compare how the actual claims that we have seen on the portfolio compare to the claims that we would have expected had the portfolio performed in line with the market average.

We take the policies that we have in our portfolio, and for each one we apply market average claim rates to calculate how likely a claim was. This information is aggregated to form a view of the total claim payments we would have expected to make.

We then compare this ‘expected’ figure to the actual claims that have been paid. We take account of the extent to which claims have been higher or lower than expected when setting our assumptions around future claim rates. These assumptions underpin our pricing. If claims have been higher than expected then we will increase our price, but if they have been lower than expected then we are able to reduce our price.

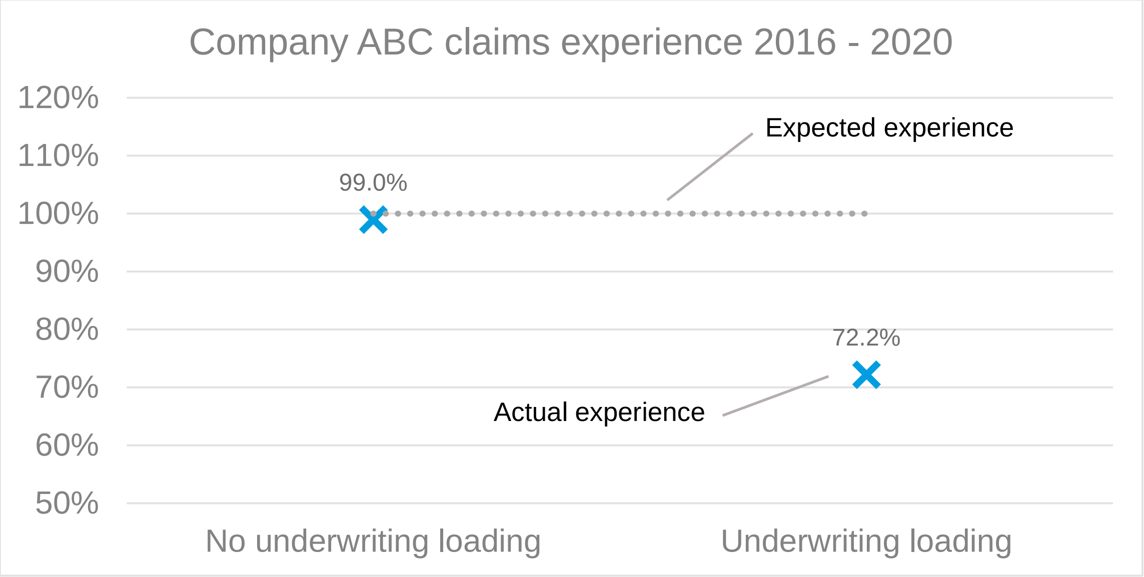
**How is experience on business with an underwriting loading allowed for?**

We do this analysis separately for business that has been written on standard rates, and for business that has been given a loading by the underwriters. When we look at business that has been given a loading, we use the loading to increase our expectations of how likely a policy is to claim. For example, if we expect a standard policy at a particular age to have a 1% chance of claiming in a certain period, an otherwise identical policy that has been given a loading of +50% will be assumed to have a 1.5% chance of claiming over the same period.

If we see lower experience on the business with an underwriting loading than on the standard business, it suggests that the loadings are prudent. The additional mortality resulting from the condition that led to the loading appears to be lower than assumed. Where this is the case, we would make higher margins on business with an underwriting loading than on standard business. To ensure our prices are as competitive as possible, we will reduce our underlying price across all policies by taking credit for the additional margins that we expect on loaded business. This means that the total premium coming in from all policyholders is enough pay claims and meet our profitability targets, but that there is a cross-subsidy between business with an underwriting loading and business without.

**Adjustments made in 2021**

An experience analysis looking at the actual and expected claims between 1 January 2016 and 31 December 2020 was used to set new business prices to apply from 1 April 2021. The results of this experience analysis are shown below.




Claims for standard business are running roughly in line with our expectations. However, we see that the amount paid out in claims for business with an underwriting loading is around 25% to 30% lower than expected. A reduction was applied to all premiums of around 5% to allow for the better than expected experience on business with an underwriting loading.

**Impact of eliminating the prudence in loadings**

A project to eliminate the cross subsidy between policyholders with an underwriting loading and standard policyholders could be beneficial. It would be fairer to loaded policyholders to reduce their premiums so that they are in line with the claims we expect to pay. The aim of this project should be to reduce the uncertainty around the rating and derive a more accurate estimate of the impact on claims. However, it is in line with our pricing philosophy to take a prudent view where significant uncertainty remains.

The project should also look at the commercial impact of any changes. We believe that it is typical to see better experience on loaded business, and that other firms also allow for the cross subsidy described above. Reducing loadings will no doubt allow us to write more business with an underwriting loading, but by reducing the cross subsidy we would be increasing our standard premiums, and volumes of business without a loading could fall.

**Conclusions**

We do see better experience on business with an underwriting loading than on standard business. We pass the benefit of this favourable experience back to policyholders in the form of lower premiums, but this benefit is spread across all policyholders, not just those that have received a loading. A reduction of 5% is made to current new business premiums as a result of this cross subsidy. It may be desirable to investigate whether the prudence inherent in the ratings can be reduced, as this would appear fairer to policyholders with a loading. However, the commercial implications of changing our current approach, particularly given that our current approach appears to be in line with the wider market, should also be considered.

Question 2

1) An understanding of how ratings are applied to life insurance business – Given that the underwriters are the team responsible for deciding on the ratings that policyholders receive, it is fair to assume that they have a detailed knowledge of how the ratings work, and there is no need to explain this.

   An understanding of the commercial links between the volumes of business written and the profits of an insurance company – The basic business case for insurance should be familiar to everyone who works within an insurance company. The link between volume and profit is reasonably simple, and should have been easily grasped by everyone in the underwriting team.

2) In the introduction I start by acknowledging Meghan's questions. This ensures that the underwriting team understands the scope of the paper.
   I explained the background of what an experience analysis is before going into the subtleties of the impact of loaded policies
   I fully explained how the experience analysis works before presenting the most recent results to concentrate only on the impacts for our results
   Finally I addressed the potential for the project – this is looking to the future and so it makes sense to present this last.

3) Credibility – this is an actuarial term with a specific technical meaning. It would not add to the explanation here and so is best left out rather than trying to explain the meaning.
   Pricing multiple – it is far simpler to refer to the percentage of the number of expected claims than going into the details of the adjustments that goes into a pricing multiple.