Institute and Faculty of Actuaries

Periodical Payment Orders Working Party Update

2022 Industry Survey

by the Periodical Payment Orders Working Party

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8 September 2023

The working party acknowledges that during the time period covered by this research data, there have been significant external challenges, including the Covid-19 pandemic and the impact this has had on inflation and investment returns. The authors ask you to bear this in mind when considering the paper.

Industry Survey

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Introduction

Release

The Institute and Faculty of Actuaries' ("IFoA") Periodical Payment Orders ("PPO") Working Party 2022 industry survey consists of a quantitative industry survey, the data for which was taken as at 31 December 2021, and a qualitative industry survey, the responses for which were collected between January 2022 and March 2022 inclusive.

This release of the IFoA PPO Working Party 2022 industry survey supersedes any prior publication.

Similar studies have been published by the IFoA PPO Working Party annually since 2010.

Each year, the participants in the quantitative industry survey have changed, and, each year, the analysis uses a new, full historic snapshot from each of the participating companies. Likewise, each year, the participants in the qualitative industry survey have changed.

The data between surveys will therefore not be directly comparable, as a different mix of companies will have participated in each successive survey. Changes in claims classification by insurers can also lead to differences in results between successive surveys.

The February 2022 escalation of the conflict between Russia and Ukraine is having significant economic effects through disruptions of global trade and the supply of food as well as increases to energy costs. This has exacerbated inflationary pressures due to supply chain disruptions and labour shortages resulting from the impact of the global COVID-19 pandemic. The data and survey responses were collected prior to these events, which should be considered when reading this report.

Participants

The data we have received for the quantitative industry survey comprises 539 Motor PPO claims and 64 Liability PPO claims (603 PPO claims in total). We also received data for 215 PPO claims from the Motor Insurers' Bureau (MIB).

The insurers surveyed account for around 75% of the Prudential Regulation Authority ("PRA") regulated market (based on 2020 gross premium volumes) for Motor, including Personal and Commercial insurance, Comprehensive and Non-Comprehensive covers. In addition, there are further companies which contribute to the survey but do not appear in the 2020 PRA returns.

For the qualitative industry survey, 10 insurers and 5 reinsurers were interviewed between January 2022 and March 2022 inclusive.

We are very grateful to all the participants, without whom the industry survey would not be possible.

The following companies are happy to be acknowledged for their participation in the quantitative industry survey (though please note that this list does not include all participants):

- Admiral
- Allianz
- Aviva
- Covéa Insurance
- DLG
- esure
- Motor Insurers' Bureau
- RSA
- Tesco Underwriting

The following companies are happy to be acknowledged for their participation in the qualitative industry survey (though please note that this list does not include all participants):

- Admiral
- Ageas
- Aviva
- AXA
- AXA XL
- Covéa
- DLG
- Liberty Specialty Markets
- NFU Mutual
- RSA
- Swiss Re

Contact

If you have any questions regarding the industry survey, including requests for information or statistics from the data that are not published within this document, please contact Dawn McIntosh at the IFoA (Dawn.McIntosh@actuaries.org.uk) in the first instance, who will put you in contact with the IFoA PPO Working Party. Alternatively, please contact Justin Thomas, Chair of the IFoA PPO Working Party at the time of publication (justin.thomas.uk@gmail.com) or Chris Francis, Industry Survey Lead at the time of publication (chris.francis@wtwco.com).

Notes

The material contained in this report and any oral representation of it by the IFoA PPO Working Party is explicitly outside the scope of Technical Actuarial Standard ("TAS") 100 and TAS 200, as issued by the Financial Reporting Council ("FRC").

This report complies with "APS X2: Review of Actuarial Work", as issued by the IFoA, in that the work documented in this report has been subject to a peer review by an appropriately qualified actuary who was otherwise not involved in the analysis undertaken.

This report supports the research effort of the IFoA PPO Working Party and is not written advice directed at the particular facts and circumstances of any given situation and / or data. No opinions are expressed about the appropriateness of any of the judgements or practices within the participating companies.

The views and opinions expressed in this report are those held by the authors (the members of the IFoA PPO Working Party) individually and do not represent the views and opinions of their employers or the IFoA. Although the authors have used their best efforts, no warranty is given about the accuracy of the information and no liability can be accepted for anybody relying on the accuracy of the information or following the recommendations in this report.

Executive summary

Introduction

In this report, the IFoA PPO Working Party 2022 industry survey, we provide an update on the numbers and sizes of claims settling as PPO claims, PPO propensities, claims inflation and claimant mortality experience, together with claims handling information such as delays to settlement, claimant life expectancies and injury classifications.

We consider the reserving of PPO claims from both a qualitative and quantitative perspective and examine the effect of varying assumptions around the rate of return used for assessing the amount of damages in respect of future loss in personal injury cases.

The headline results for the IFoA PPO Working Party 2022 industry survey are:

PPO propensity (quantitative survey)

- Standardised Motor PPO propensity for claims exceeding £1m has decreased from 12.5% in settlement year 2020 to 6.6% in settlement year 2021.
- Standardised Liability PPO propensity has decreased from 6.1% in settlement year 2020 to 4.0% in settlement year 2021.
- Given the low number of PPOs and the level of volatility in propensity, it is not possible to comment on whether this is anything other than a normal level of volatility.

Reserving for PPO claims (qualitative survey)

- The level of concern about PPO claims has broadly remained at the same level as the previous year, for participating insurers and reinsurers.
- Reserving for Settled PPO claims; 100% of participating insurers and 75% of participating reinsurers use a probabilistic approach to mortality in reserving for settled PPO claims. The remainder are using an annuity certain approach.
- Reserving for future PPO claims; most participating insurers considered future pure IBNR PPO claims within the methods used for future PPO claims on existing large claims. All participating reinsurers established their own reserves for future PPO claims.
- Participating insurers most commonly used a real discount rate of either 0% per annum or -0.5% per annum in GAAP and IFRS reporting. The range was between -2.5% per annum and 0% per annum. When compared with our previous survey there has been no significant shift in real discount rates used by insurers.

Injury type and care regime categorisation (quantitative survey)

In 2014 the IFoA PPO Working Party devised a categorisation of PPO injury types and care regimes, in collaboration with a number of claims professionals. The intention of this categorisation is for it to be UK standard practice, used by all insurers and reinsurers.

This information is used to provide more in-depth analysis of how the characteristics of PPO claims are affected by the type of injury sustained by the claimant and the type of care they receive:

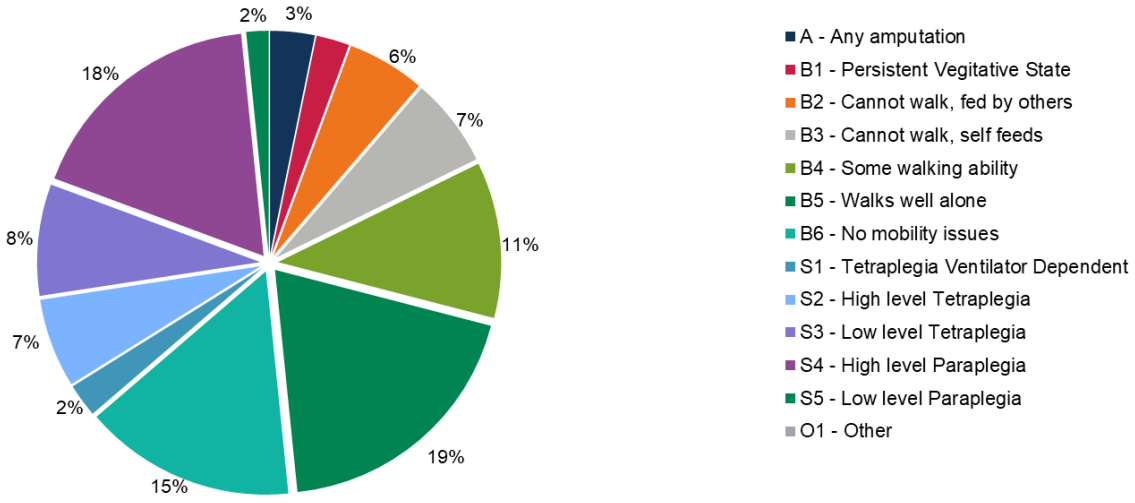

Figure 1: Detailed split of the number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party injury type categorisation

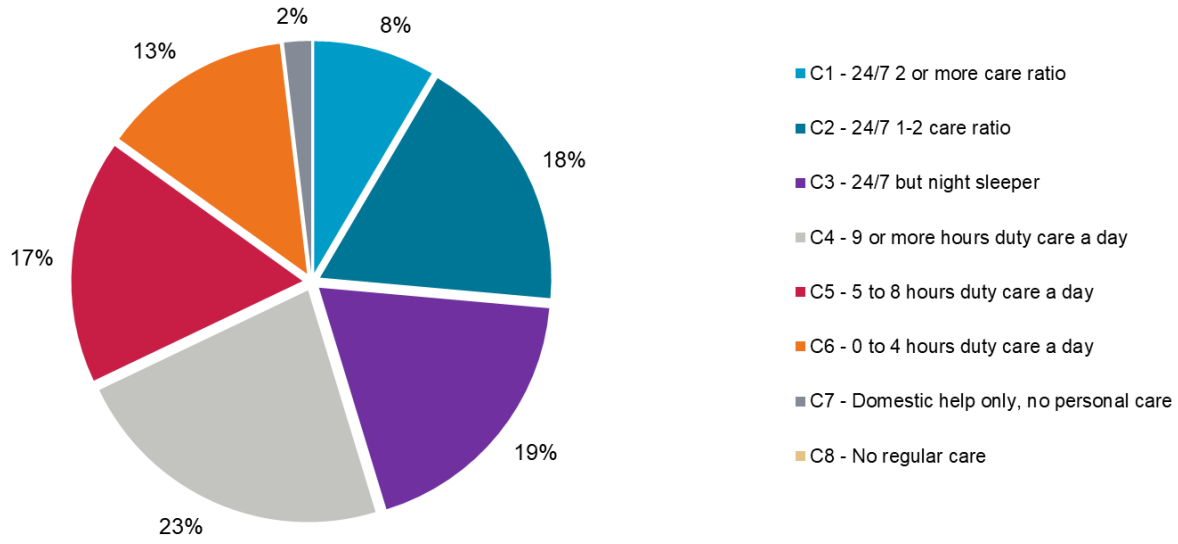

Figure 2: Detailed split of the number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party care regime categorisation

Only 24% of the Motor PPO claims and 19% of the Liability PPO claims we received for the 2022 quantitative industry survey had these categorisations attached. ***We urge insurers to use this categorisation, and to provide this information to the IFoA PPO Working Party to enable us to better help the market understand trends and uncertainties relating to PPO claims.***

Highlights of the 2022 quantitative industry survey

In this section, we provide some of the key highlights of the 2022 quantitative industry survey, the data for which was taken as at 31 December 2021. We provide more detailed results of the analysis carried out as part of the quantitative industry survey in Appendices B to R to this report.

The insurers surveyed account for around 75% of the PRA-regulated market (based on 2020 gross premium volumes) for Motor, including Personal and Commercial insurance, Comprehensive and Non-Comprehensive covers. In addition, there are further companies which contribute to the survey but do not appear in the 2020 PRA returns.

The insurers which have agreed to be acknowledged for their participation in this survey are listed in the Introduction to this report, although please note that the list does not include all participants.

PPO propensity and other summary statistics on general characteristics of PPO claims

In Appendix E to this report, we provide summary statistics for all of the PPO claims in the 2022 quantitative survey, for a number of characteristics, both cumulative across all settlement years and also separately for the pre-2021 settlement years and the 2021 settlement year alone.

For example, Figure 3 shows that, for Motor (non-MIB) PPO claims, the average age of the claimant at settlement is 34.4 years, with an average delay of 6.4 years between the accident date and settlement date, an average future life expectancy at settlement date of 41.8 years which represents an average reduction in life expectancy of 15.3 years, and with an average settlement of £1.90 million lump sum and £98.2 thousand annual PPO payment. (See the notes in Appendix E for further detail on the interpretation of these statistics, in particular for the payment components.)

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	34.4	28.8	17.1	1.0	539
Delay until settlement	6.4	5.6	3.4	1.7	539
Future life expectancy at settlement	41.8	43.7	18.1	-0.3	523
Life expectancy reduction	15.3	13.2	11.9	1.6	522
Annual PPO payment (£)	98,241	67,000	89,937	1.8	539
Lump sum (£)	1,897,024	1,700,000	1,376,028	1.6	537
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	34.2	28.6	17.0	1.0	528
Delay until settlement	6.4	5.6	3.4	1.6	528
Future life expectancy at settlement	42.0	43.8	17.9	-0.4	512
Life expectancy reduction	15.2	13.1	11.9	1.6	511
Annual PPO payment (£)	96,658	65,821	87,870	1.9	528
Lump sum (£)	1,875,790	1,689,807	1,359,749	1.6	526
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	41.0	43.4	22.3	0.0	11
Delay until settlement	5.8	5.1	3.1	2.4	11
Future life expectancy at settlement	31.5	32.7	20.3	0.4	11
Life expectancy reduction	18.0	13.4	11.1	1.4	11
Annual PPO payment (£)	174,211	87,323	140,845	0.3	11
Lump sum (£)	2,912,412	2,900,000	1,723,502	1.8	11

Figure 3: Summary statistics for Motor (non-MIB) PPO claims

Number of PPO claims

The key headline figure is the propensity of an injury claim to settle as a PPO claim. Unless stated otherwise, the PPO propensity statistics discussed in this report are defined as the number of settled PPO claims as a proportion of settled large claims. The definition of a large claim is a claim that is

greater than £1 million in 2011 terms, indexed at 7% per annum. (See the notes in Appendix C to this report for further detail on the definition of large claims.)

Figure 4 shows the number of Motor (non-MIB) PPO claims and Motor (non-MIB) non-PPO large claims underlying the PPO propensity statistics, by settlement year. Since 2012 the number of claims settling as a PPO has been broadly decreasing, with an 84.4% reduction in claims settling as a PPO in 2021 compared with 2012. Since 2018 the number has been broadly consistent around 10-15 claims settling as a PPO per year. The number of large claims settling as a lump sum claim (i.e. a non-PPO claim) remained at a broadly similar level between 2017 and 2020 (notably lower than the levels seen in the 2013-2015 settlement years). In 2021 there has been an increase in the number of large claims settling as a lump sum, representing a 37.0% increase compared with 2017-2020 and only 4.5% lower than in 2013-2015. It is not clear whether the increase is a one-off or a sign of a return to normative levels of large claim settlements, however it may be due to any Ogden or COVID-19 related backlog starting to clear. It is worth noting that the post 2016 numbers will have been heavily impacted by the changes in the Ogden discount rate in 2017 and 2019, and the below figure has not been adjusted to compensate for this.

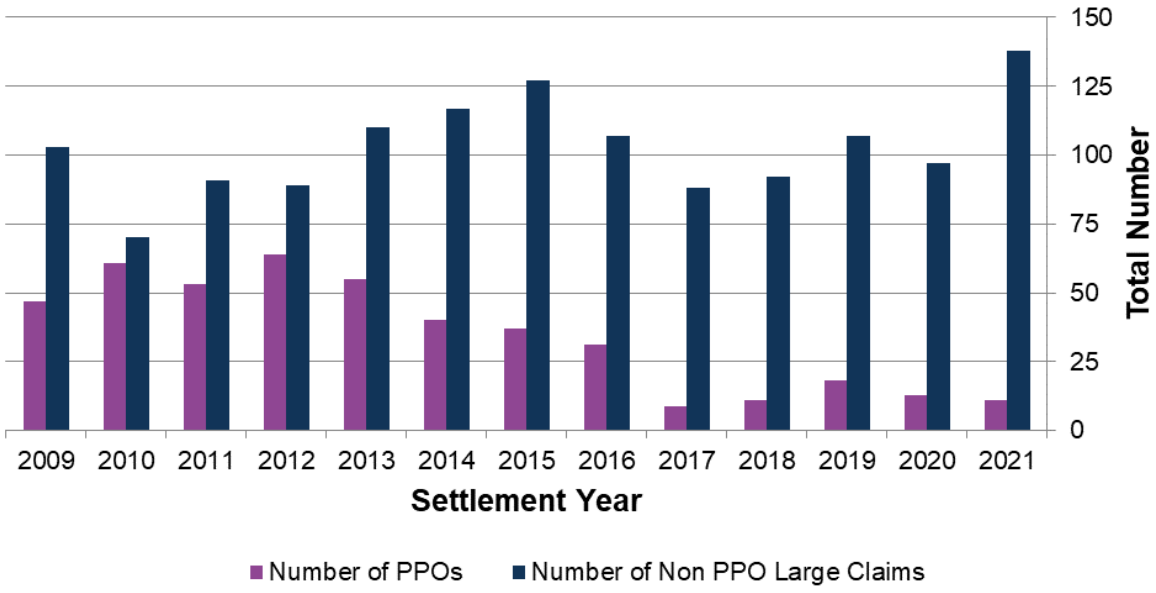

Figure 4: Number of Motor (non-MIB) PPO claims and Motor (non-MIB) non-PPO large claims underlying the PPO propensity statistics, by settlement year

Figure 5 shows the number of Motor (MIB) PPO claims, by settlement year. The number of claims settling as a PPO claim in 2021 has decreased relative to that observed for 2020, although the number of claims settling as a PPO claim since 2006 has been quite variable from year to year. Again, the 2017 and post settlement year numbers will have been affected by the Ogden discount rate changes. The number of Motor (MIB) non-PPO large claims was not available for our analysis and so this cannot be compared to give a view on propensity.

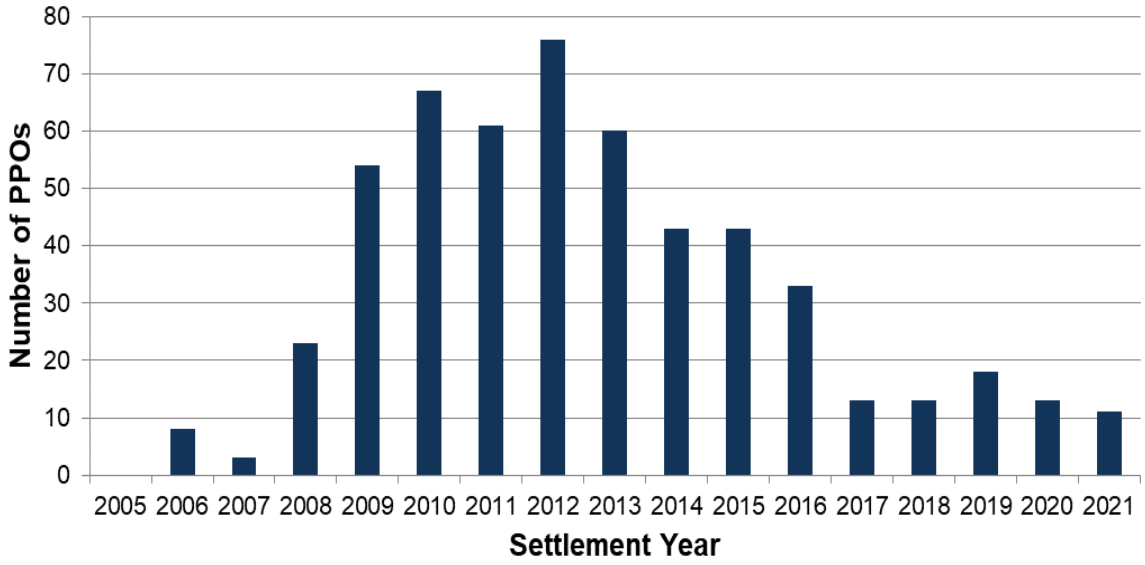

Figure 5: Number of Motor (MIB) PPO claims, by settlement year

Figure 6 shows the proportion of Motor claims settling as a PPO claim that are settled by the MIB. Considering the period where PPO settlements have been more widespread, say settlement years 2009 and post (i.e. following the Court of Appeal upholding the ruling in the Thompstone vs Tameside and Glossop Acute Services NHS Trust court case – see Appendix M to this report for further details), the MIB has settled 26.0% of all Motor PPO claims collected in the survey.

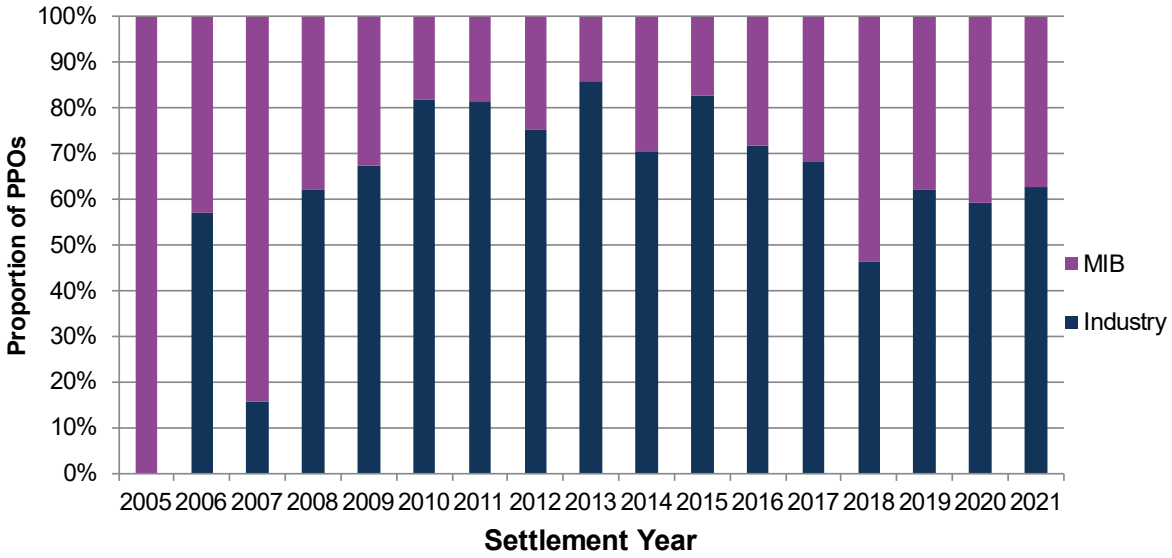

Figure 6: Proportion of PPO claims, by settlement year – MIB and the rest of the industry

Figure 7 shows the number of Liability claims settling as a PPO claim, by settlement year. Eight Liability claims have settled as a PPO since 2016, with only one claim settling as a PPO in settlement year 2021. With such low numbers of claims it is not possible to comment on whether the observed PPOs settled during this time is anything other than volatility. However, the average number of claims settling as a PPO claim in settlement years 2013-2021 is 72.0% lower than the average

number of claims settling as a PPO claim in settlement years 2009-2012. As with the Motor figures, the 2017 and post years are subject to a different Ogden discount rate, which has not been adjusted for.

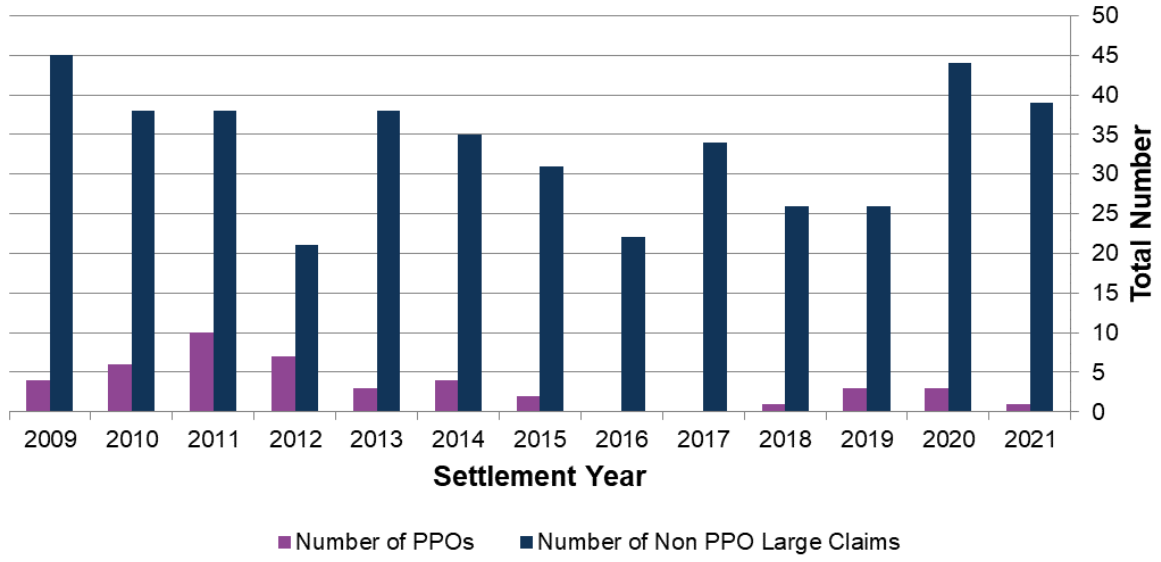

Figure 7: Number of Liability PPO claims and Liability non-PPO large claims underlying the PPO propensity statistics, by settlement year

Appendix F contains further information on the number of PPO claims, including Liability and MIB Motor, splits by Private and Commercial Motor, and splits by comprehensive and non-comprehensive cover.

PPO Propensity by Year

Whilst the PPOs that are settled in any one year will originate from a range of accident years, sometimes many years previously, the simplest way that we can start to look at propensity is to ignore the maturity of the claims and to compare the number of PPO large claims settling with the number of settled large claims each calendar year.

In our statistics looking at the change in PPO propensity by settlement year, we have considered a standardised PPO propensity which adjusts for (or removes) the volatility in the PPO propensity arising from differences in the mix of large claims by amount between years. In Appendix B to this report, we explain the standardisation basis for Motor (non-MIB) claims and for Liability claims.

The data collected from the MIB does not include non-PPO large claims, and so we are not able to produce PPO propensity statistics or standardised PPO propensity statistics for MIB claims.

Figure 8 shows the Motor (non-MIB) PPO propensity and the standardised Motor (non-MIB) PPO propensity, by settlement year. The standardised Motor (non-MIB) PPO propensity has decreased from 12.5% in settlement year 2020 to 6.6% in settlement year 2021 (a decrease from 11.8% to 7.4% on a non-standardised basis). The weighted average standardised Motor (non-MIB) PPO propensity was 24.9% (25.2% on a non-standardised basis). The 2017 and post settlement years numbers in the below chart will have been affected by the Ogden discount rate changes in 2017 and 2019; there has been no adjustment made for this.

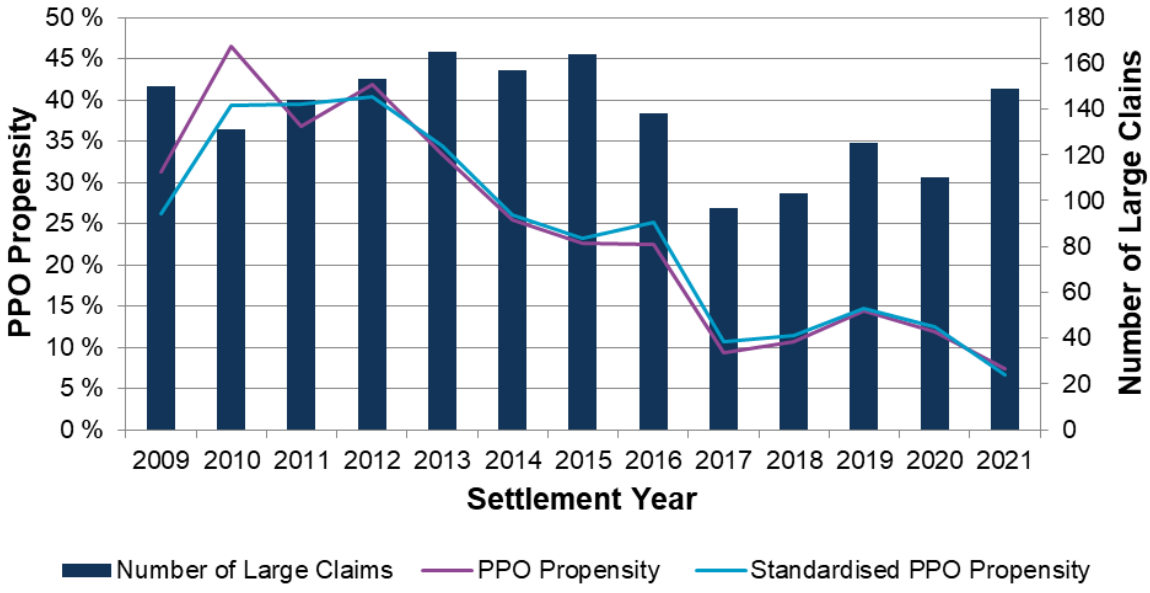

Figure 8: Motor (non-MIB) PPO propensity and standardised Motor (non-MIB) PPO propensity, by settlement year

Given the reduction in Ogden discount rate in March 2017, and further change in August 2019, the cost of large claims is higher compared with pre-2017 and so we would expect an increase in the number of large claims settling above £1 million. The number of large claims settling in 2021 has increased significantly compared to 2020, and is now more in line with pre-2017 settlement years. This may indicate that any previous backlog in open large claims has now cleared.

There was a step change in propensity in the 2017 settlement year, when the Ogden discount rate changed from 2.5% to -0.75%. In 2019, when the Ogden discount rate changed from -0.75% to -0.25%, there was a smaller upward step change. However, the standardised propensity has since decreased by around 8%pts, and indeed the 2021 propensity remains at a lower level than pre-2017.

It is clear that the change in the Ogden discount rate had some impact on lump sum and PPO settlements, however it is difficult to understand how much of the overall impact can be attributable to the different drivers. One of the key drivers is the numerical impact on the propensity calculation from a change in the Ogden discount rate. An Ogden discount rate of -0.25% (and -0.75%) results in claims being valued at a higher level compared with the old 2.5% rate. This results in more claims being valued as large under our £1 million definition which somewhat artificially reduces the PPO propensity.

Figure 9 shows an example of the Ogden multipliers under a 2.5%, -0.25% and -0.75% discount rate for a male aged 55 at settlement, with £50 thousand annual care cost and £50 thousand loss of earnings. Using a 2.5% Ogden discount rate this claim would not be classified as large, however under a -0.25% and -0.75% Ogden discount rate this claim breaches the £1 million threshold and would be included within our analysis.

		Ogden discount rate		
Claim component	Annual Payment	2.50%	-0.25%	-0.75%
Care	50,000	20.2	30.8	33.6
Loss of Earnings	50,000	8.6	9.8	10.1
Lump sum		**1,442,500**	**2,033,000**	**2,186,000**
Lump sum (2011 terms)		**733,294**	**1,033,474**	**1,111,252**

Using Tables 1 and 9 from the Actuarial Tables for use in personal injury and fatal accident cases - 8th edition

Figure 9: Example claim under different Ogden discount rates

Within this report we present the PPO propensity on an Ogden adjusted basis, where we have revalued the large claims to be on a Ogden 2.5% basis. This enables better comparison to the 2016 and prior settlement years by removing the numerical impact of the Ogden discount rate change. Note that the change in Ogden discount rate will have impacts beyond the numerical ones as, all other aspects being equal, claims being valued at a higher level would act as a greater incentive for a claimant to choose a lump sum settlement rather than a PPO and so the expectation would be a further reduction in the PPO propensity.

Figure 10 shows the standardised PPO propensity on an Ogden adjusted basis, as well as with no adjustment made. The numerical Ogden adjustment has a material impact to the PPO propensity, with the Ogden adjusted figures in 2017-2020 settlement years much more in line with the 2014-2016 propensity of 24.8%. There is a smaller impact to the 2021 settlement year, with the adjusted propensity still at a much lower level than pre-2016.

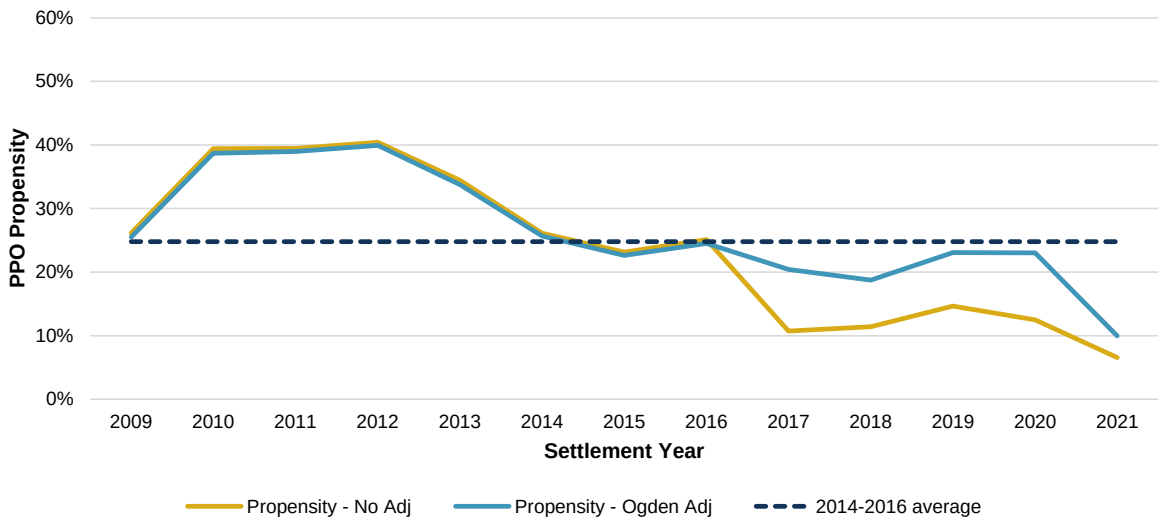

Figure 10: Standardised PPO propensity on an unadjusted and Ogden adjusted basis, by settlement year

Figure 11 shows the Liability PPO propensity, by settlement year. We have seen 8 Liability claims settle as a PPO since 2015. With such low numbers of claims it is not possible to comment on whether the observed PPOs settling is anything other than volatility. However, the average number of claims settling as a PPO claim in settlement years 2013-2021 is 72.0% lower than the average number of claims settling as a PPO claim in settlement years 2009-2012. As with the Motor figures, the 2017 and post years are subject to a different Ogden discount rate, which has not been adjusted for.

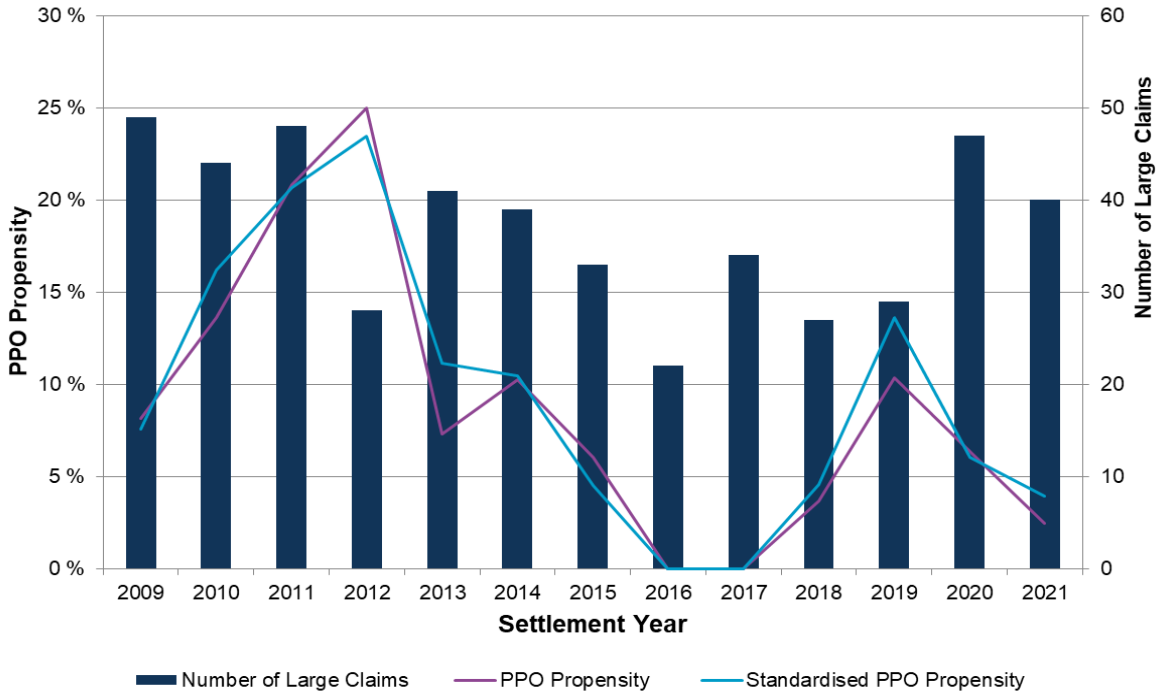

Figure 11: Liability PPO propensity and standardised Liability PPO propensity, by settlement year

Further information relating to PPO Propensity by Year is provided in Appendix G (Motor) and Appendix H (Liability).

PPO Propensity by Claim Size

The data collected for the quantitative industry survey clearly shows that the likelihood of a claim settling as a PPO varies with the size of the claim, with larger claims being more likely to have settled as a PPO (see Figure 12).

In a few of the analyses summarised in this report, we consider claims in various claim size bands. As for the definition of large claims, in each case, the claim size thresholds are also defined in 2011 terms, indexed at 7% per annum. A claim falls in a given band if it is greater than or equal to the lower bound of the band, but less than the upper bound of the band (where there is an upper bound). For PPO claims, the claim size band is determined by their Ogden equivalent value using a real discount rate of 2.5% per annum if it settled prior to 17 March 2017, 0.5% if it settled in the period from 17 March 2017 to 5 August 2019, and the prevailing discount rate of -0.25% if it settled since 5 August 2019. The non-PPO large claims are taken at whichever discount rate they settled at without adjustment. (See the notes in Appendix C to this report for further detail on the definition of large claims and for an explanation of the distinction between incremental threshold and cumulative threshold.)

Figure 12 shows how the Motor (non-MIB) PPO propensity varies by claim size band, and Figure 13 shows this trend by settlement year.

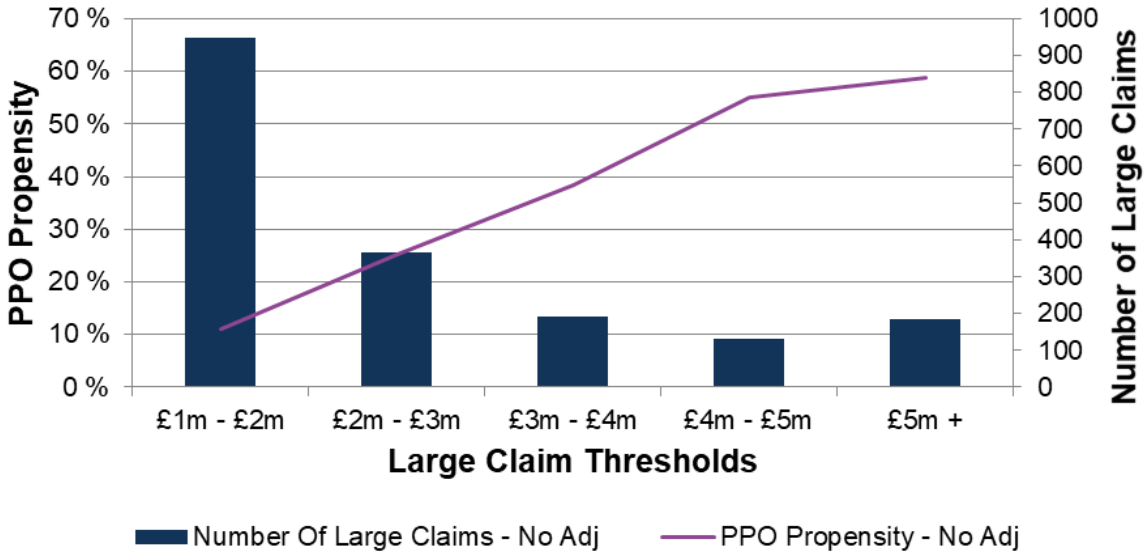

Figure 12: Motor (non-MIB) PPO propensity, by incremental large claim threshold band (2011 terms), for claims settled since 2009

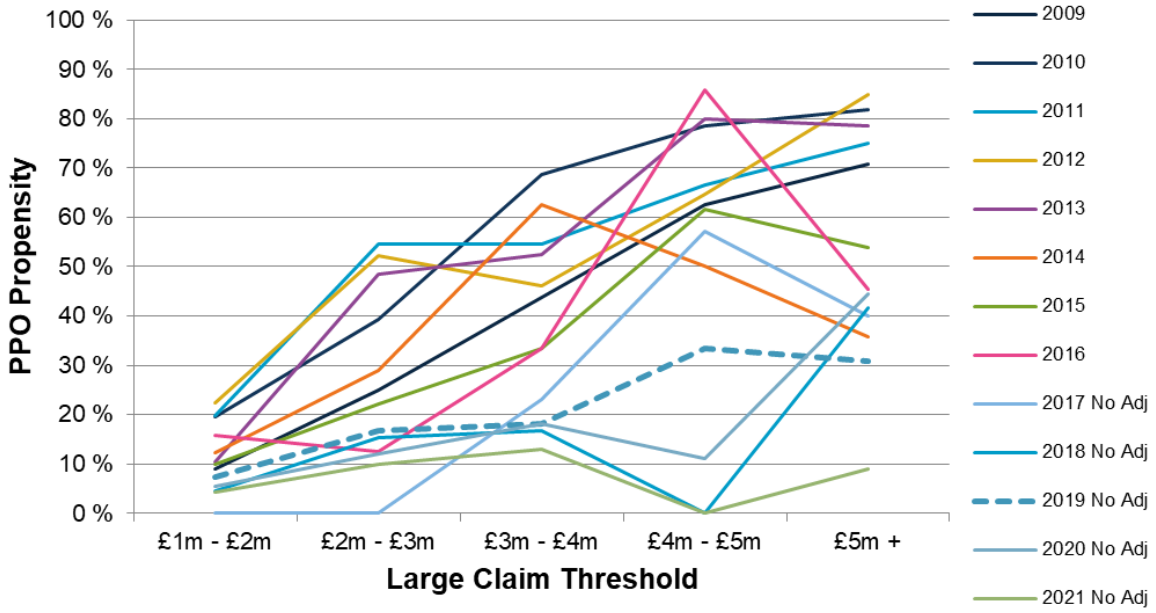

Figure 13: Motor (non-MIB) PPO propensity, by incremental large claim threshold band (2011 terms), and by settlement year, for claims settled since 2009

The equivalent graphs for Liability PPO claims are shown in Figure 14 and Figure 15. (Note that, in Figure 15, the claim size bands have been grouped in order to reduce the volatility and to emphasise the underlying trend.)

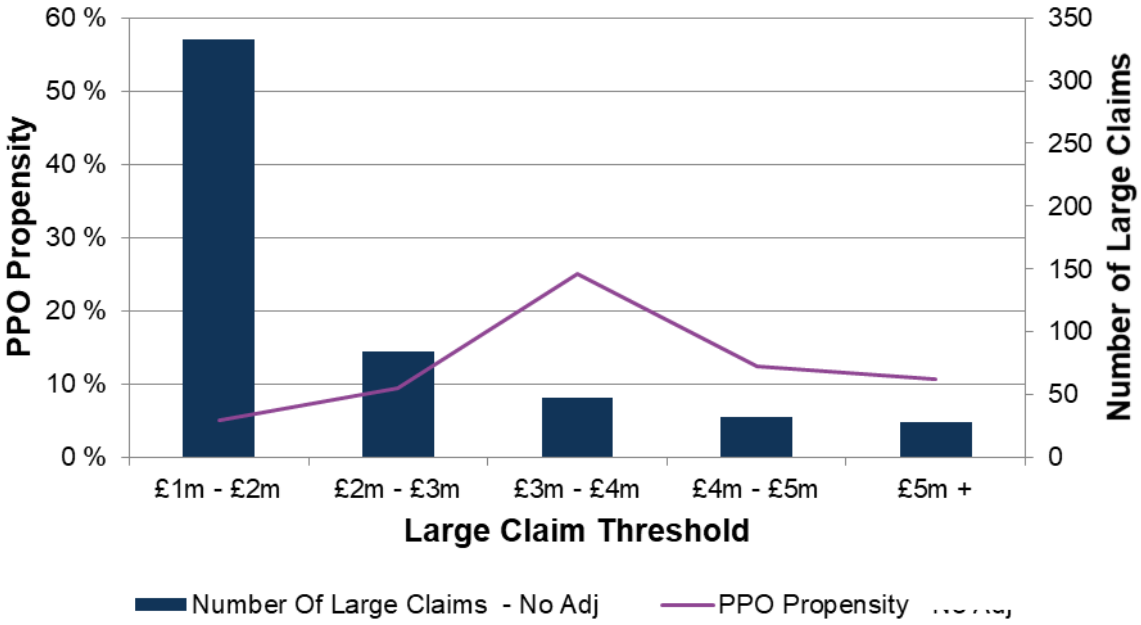

Figure 14: Liability PPO propensity, by incremental large claim threshold band (2011 terms), for claims settled since 2009

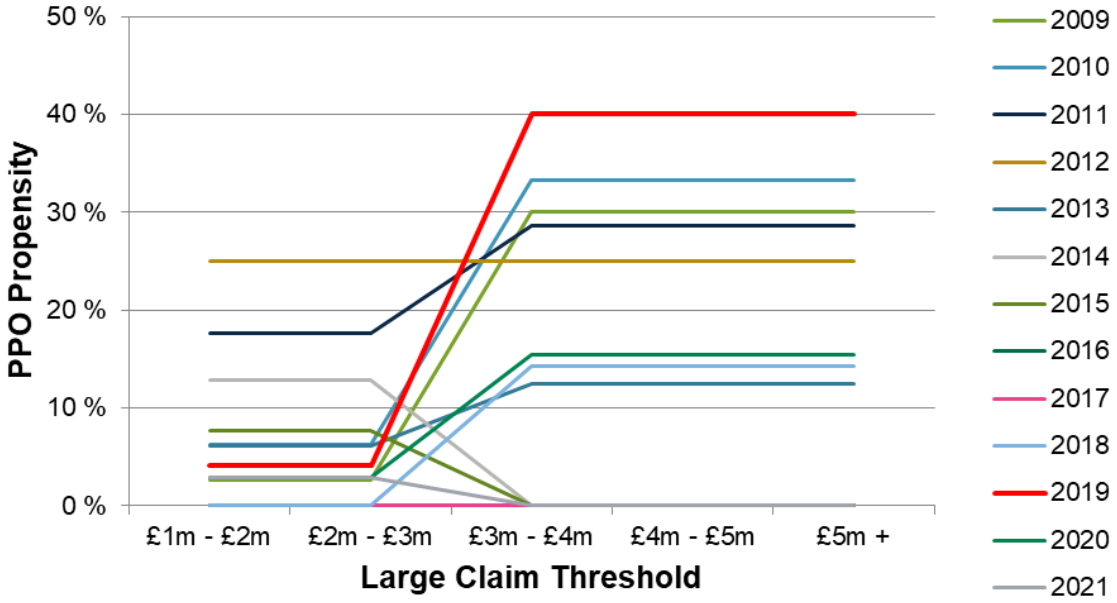

Figure 15: Liability PPO propensity, by grouped (£1m-£3m, £3m+) incremental large claim threshold band (2011 terms), and by settlement year, for claims settled since 2009

Further information relating to PPO Propensity by Claims Size is provided in Appendix G (Motor) and Appendix H (Liability).

PPO Characteristics

We provide a large number of further summary statistics and analysis of the number, propensity and general characteristics of the Motor (non-MIB) PPO claims, Liability PPO claims and Motor (MIB) PPO claims in the 2021 quantitative survey in Appendices F to S to this report. Examples for Motor (non-MIB) PPO claims include the number of PPO claims by age of driver at accident date and by gender of driver (Figure 16), the number of PPO claims by age of claimant at accident date and by gender of claimant (Figure 17), the delay between the accident date and settlement date (Figures 18 to 21) and the future life expectancy of the claimant at settlement (Figure 22 and Figure 23).

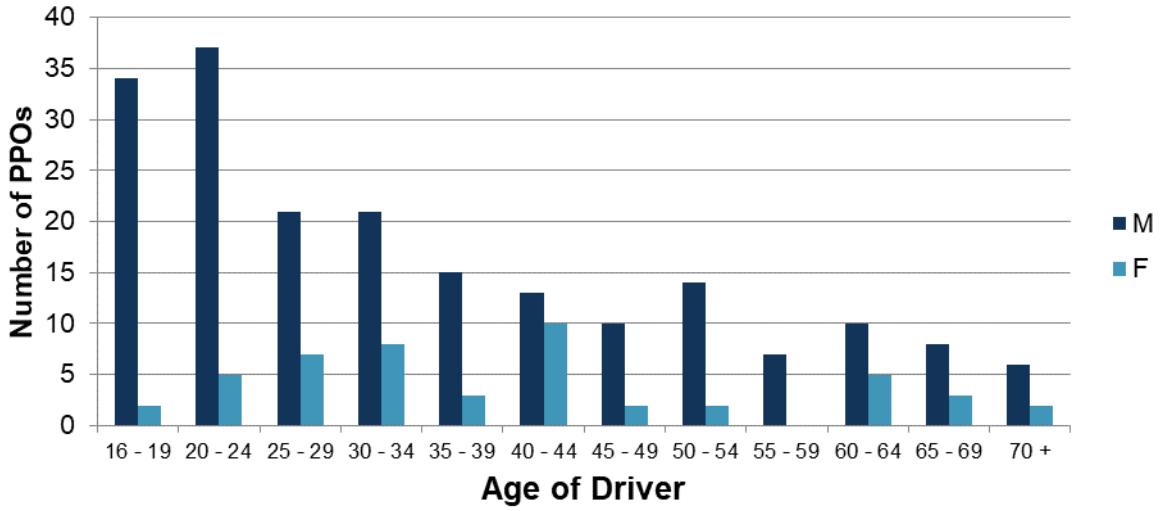

Figure 16: Number of Motor (non-MIB) PPO claims, by age of driver at accident date and by gender of driver

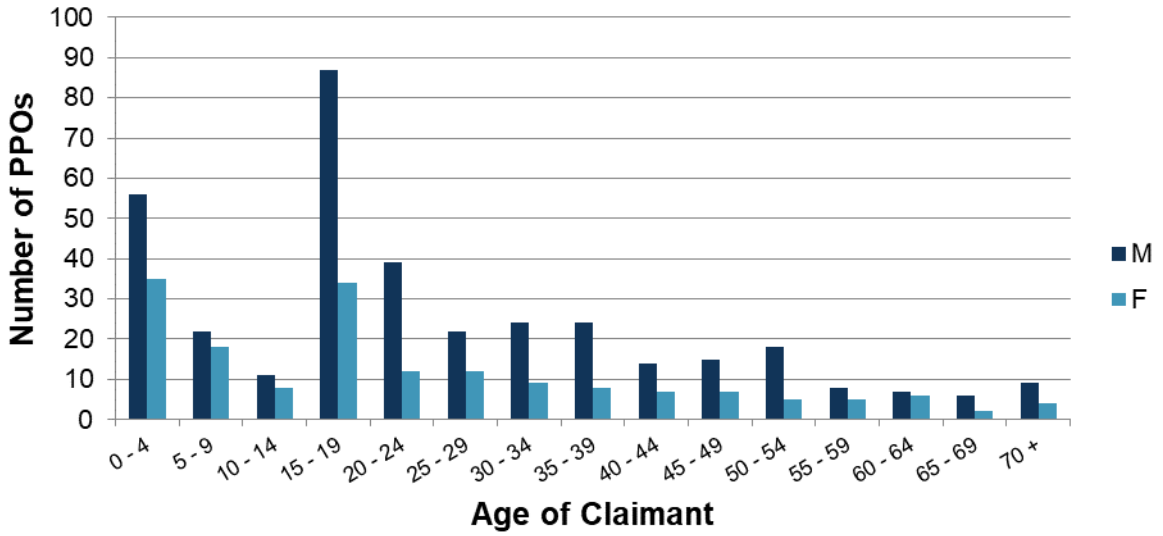

Figure 17: Number of Motor (non-MIB) PPO claims, by age of claimant at accident date and by gender of claimant

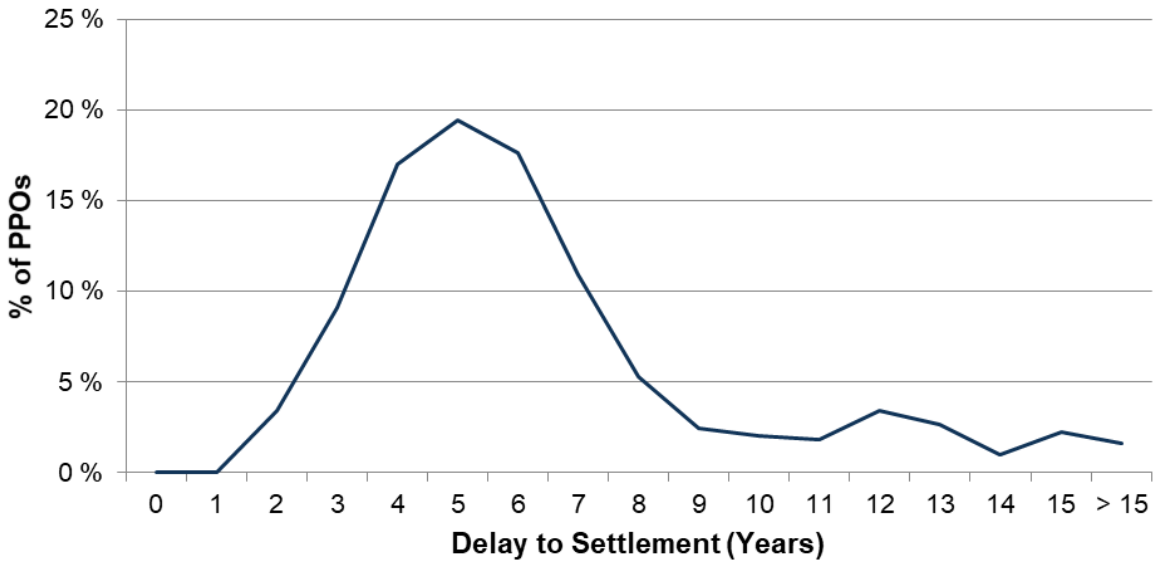

Figure 18: Distribution of the delay to settlement for Motor (non-MIB) PPO claims, for claims settled since 2009

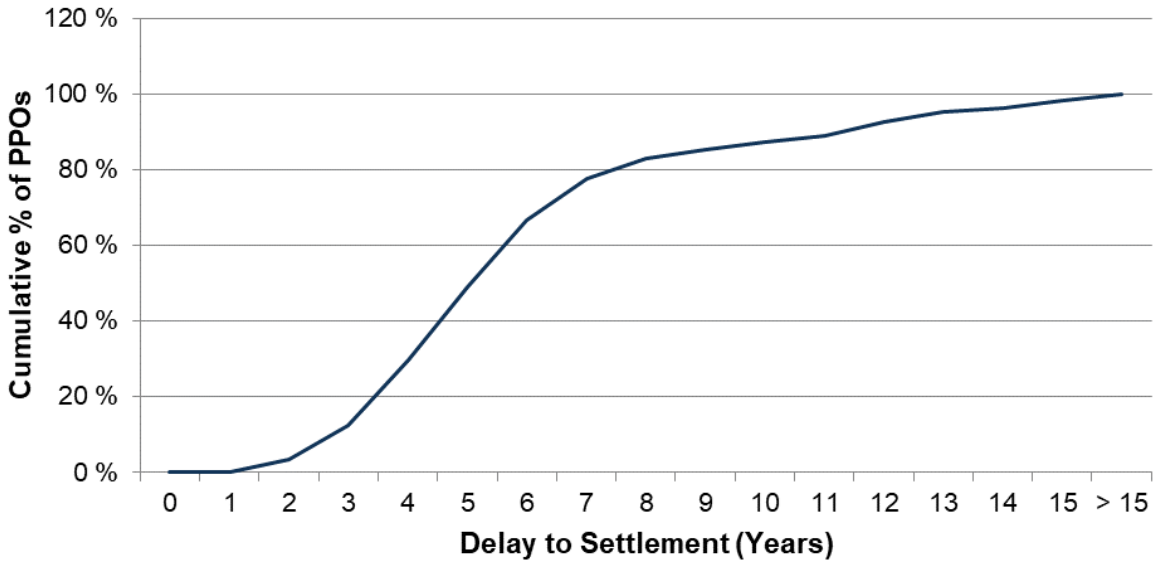

Figure 19: Cumulative distribution of the delay to settlement for Motor (non-MIB) PPO claims, for claims settled since 2009

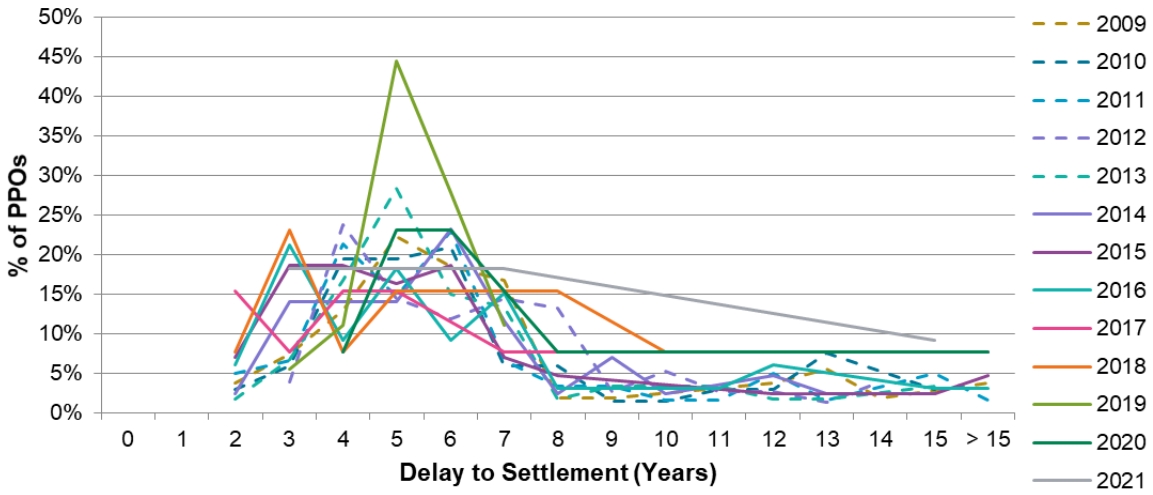

Figure 20: Distribution of the delay to settlement for Motor (non-MIB) PPO claims, by settlement year, for claims settled since 2009

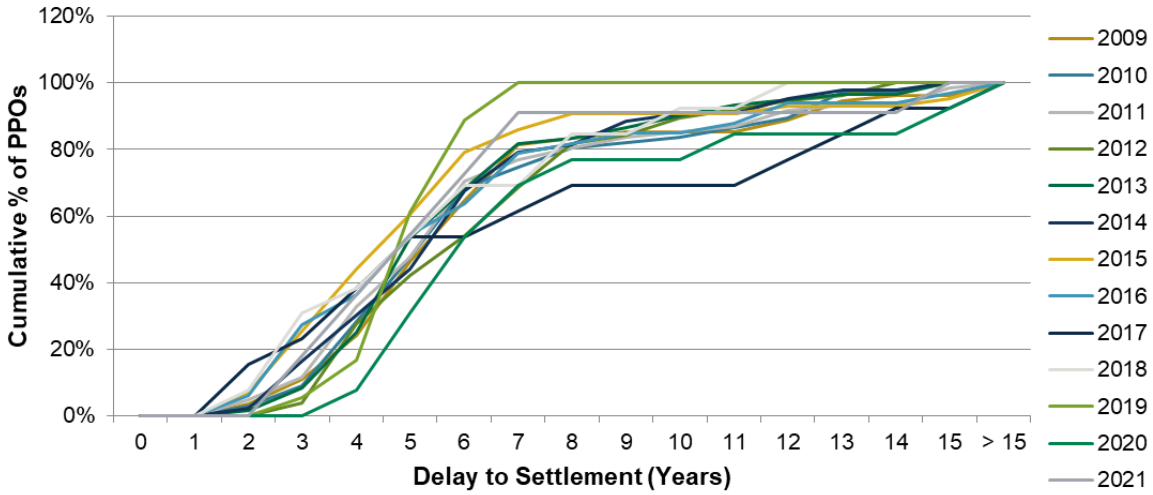

Figure 21: Cumulative distribution of the delay to settlement for Motor (non-MIB) PPO claims, by settlement year, for claims settled since 2009

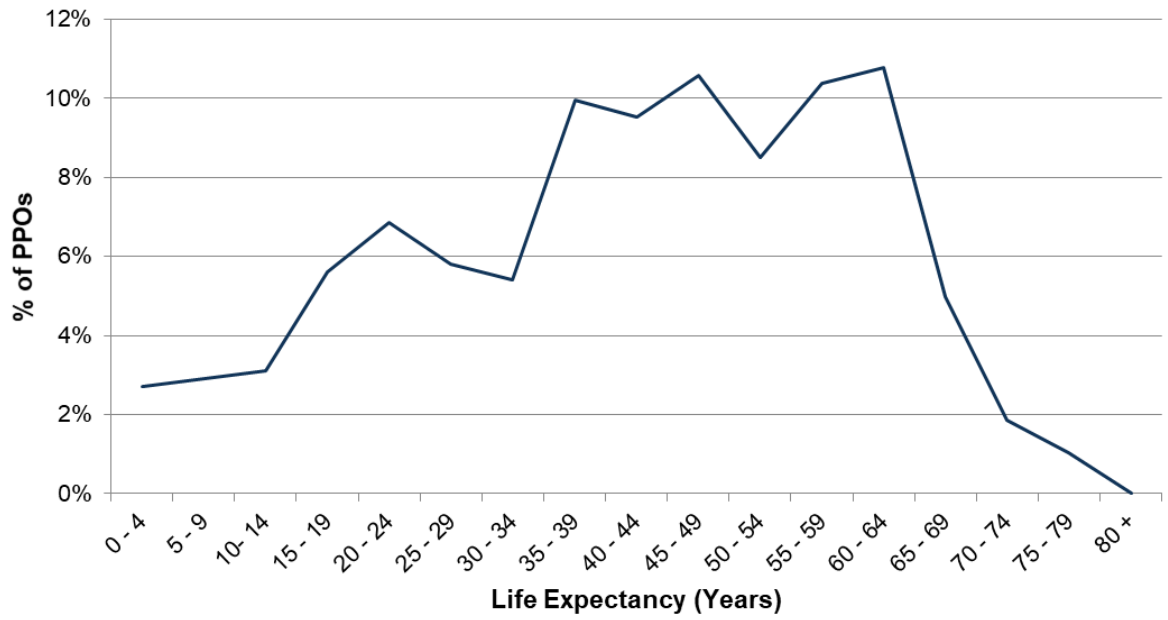

Figure 22: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, for claims settled since 2009

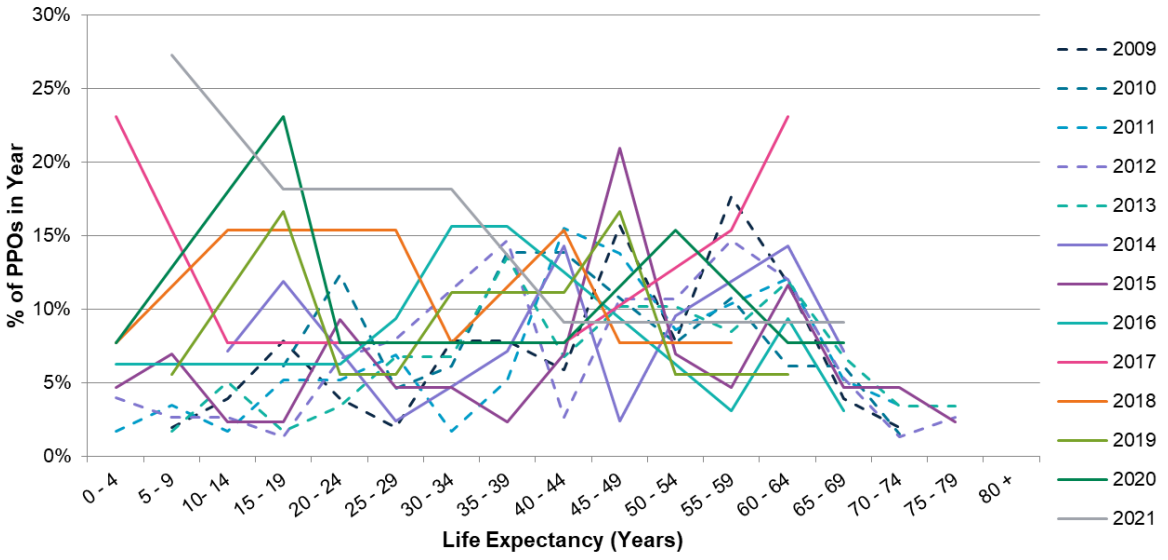

Figure 23: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, by settlement year, for claims settled since 2009

PPO Development Patterns

In Appendix I to this report, we provide triangles of non-PPO large claims, PPO claims and PPO propensity rates for non-MIB Motor claims, which take into account the accident year of a claim as well as its time to settlement. Figure 24 is an example. We have also provided graphs showing the accident year cumulative development of the number of non-MIB Motor PPO claims. It is clear from the data for the older accident years that we can expect some further development of the number of PPO claim settlements, even for these older accident years, although the extent of this development is difficult to quantify.

As we have only collected data on large claims settled since 2008, the cells shaded in blue should be treated with caution, as these are missing settlements prior to 2008.

	Years to Settlement																			
Accident Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2000 and prior									7	16	28	33	37	38	39	42	43	44	44	44	45
2001								3	6	7	8	10	10	11	11	12	12	12	12	12	12
2002							3	9	12	14	18	21	23	23	23	23	23	23	23	23	
2003						3	10	14	16	20	22	23	24	24	25	25	25	25	25		
2004					3	13	23	28	36	37	37	37	39	40	40	40	40	40			
2005				2	9	22	33	39	42	44	44	45	45	45	45	46	46				
2006			0	4	18	24	36	43	44	44	44	44	45	45	45	46					
2007		0	1	4	18	27	35	42	44	45	45	45	45	45	45						
2008	0	0	1	6	17	28	34	37	38	39	40	40	40	40							
2009	0	0	2	5	18	25	30	35	35	35	35	36	36								
2010	0	0	1	6	12	20	23	24	25	25	25	25									
2011	0	0	1	5	12	16	16	16	16	16	16										
2012	0	0	2	6	10	12	14	18	18	18											
2013	0	0	4	11	12	14	16	19	19												
2014	0	0	1	2	3	12	14	16													
2015	0	0	0	3	4	6	8														
2016	0	0	0	0	2	4															
2017	0	0	1	1	4																
2018	0	0	0	0																	
2019	0	0	0																		
2020	0	0																			
2021	0																				

Figure 24: Triangle showing the accident year cumulative development of the number of Motor (non-MIB) PPO claims

Indexation of PPO claims

We provide a number of summary statistics for Motor (non-MIB) PPO claims, Liability PPO claims and Motor (MIB) PPO claims in relation to the index used to inflate PPO claim regular payments.

The index used to inflate PPO claim regular payments was originally automatically linked to the Retail Prices Index ("RPI").

However, in 2006, a court case was brought in the form of Thompstone vs Tameside and Glossop Acute Services NHS Trust which questioned this assumption and suggested that the payments for future cost of care would be better linked to wage inflation. The court agreed and the annual inflation increase was linked to the Annual Survey of Hours and Earnings ("ASHE"). The case was appealed and a number of other cases were put on hold pending the outcome. In 2008, the Court of Appeal upheld the ruling that an index other than RPI can be chosen if thought more appropriate. Since then the majority of PPO claims have had inflation linked to ASHE, as can be seen in Figure 25.

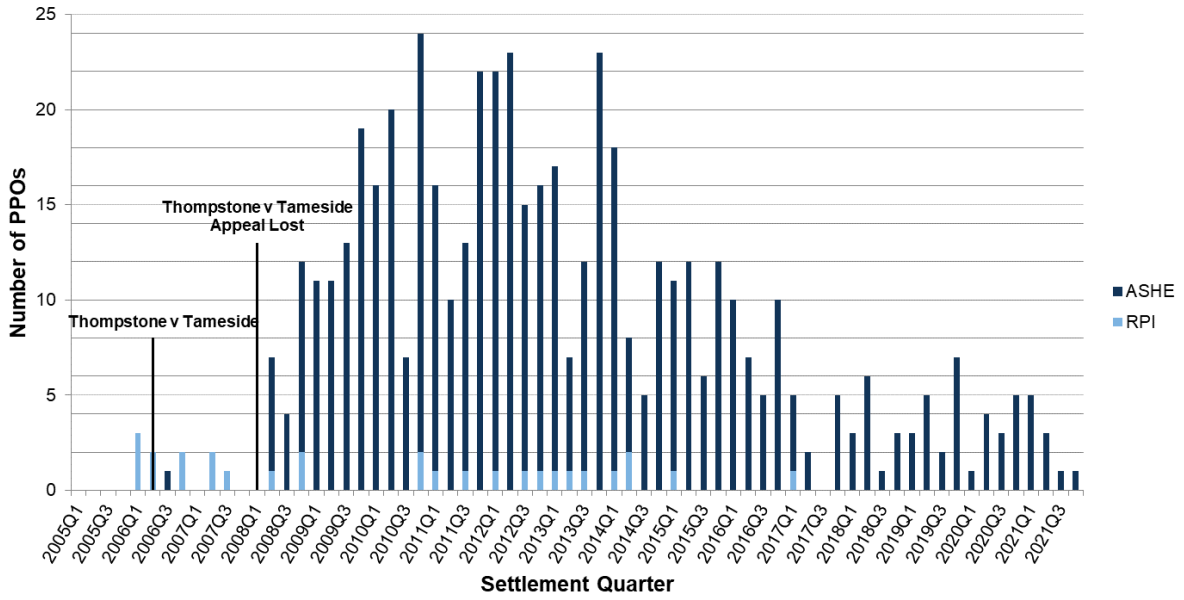

Figure 25: Number of Motor (non-MIB) PPO claims, by settlement quarter and by the index applicable for the primary head of damage of the regular payments

ASHE is published by the Office for National Statistics ("ONS") every October/November, based on data as at April. It covers a wide range of occupations, though the vast majority of PPO claims so far have, in respect of care costs, been linked to sub-category 6115, relating to care assistants and home carers.

Within a particular job category, the ASHE earnings inflation measures are further split into percentiles. A PPO claim will have the annual inflation linked to a specific percentile, for example to those whose earnings are in the top 10% of earners in the category (i.e. the 90th percentile).

Figure 26 shows that, where the applicable index for the primary head of damage is ASHE, the overwhelming majority of Motor (non-MIB) PPO claims for recent settlements are linked to the 80th percentile.

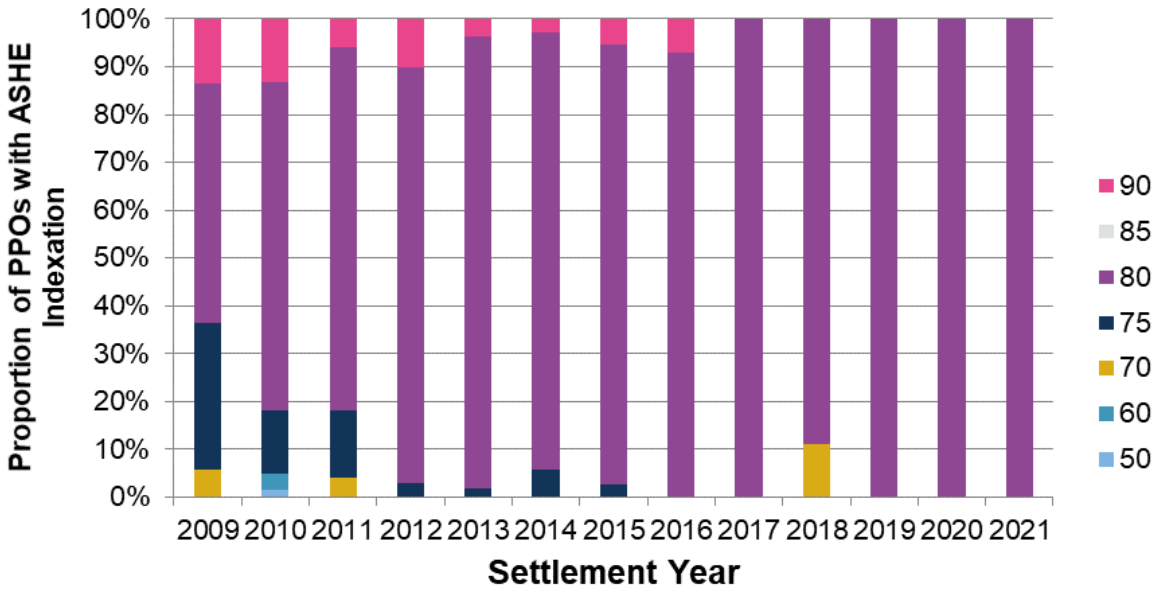

Figure 26: Where the applicable index for the primary head of damage is ASHE, the proportion of Motor (non-MIB) PPO claims linked to specific percentiles, by settlement year

Figures 27 and 28 shows the annual inflation in ASHE 6115 by specific percentile. The published figure in 2021 of 2.3% is significantly lower than seen between 2016 and 2020, which is potentially impacted by COVID-19 and furloughed workers during the UK lockdowns. The figure for 2022 (published 26 November 2022) is 6.6%, although this does not impact any of the data or analysis within this report.

Year	Inflation Statistics by Percentile ASHE 6115 - Care Assistants and Home Carers												
	10	20	25	30	40	60	70	75	80	90	AWE	CPI	RPI
2000	2.78%	3.33%	3.19%	3.53%	3.64%	1.85%	2.36%	3.05%	3.34%	2.61%	0.00%	0.80%	3.00%
2001	5.68%	6.70%	7.62%	7.27%	6.40%	5.45%	4.93%	4.21%	3.97%	4.33%	4.74%	1.20%	1.80%
2002	8.70%	6.98%	6.64%	6.57%	5.44%	7.76%	7.99%	8.22%	8.20%	6.84%	3.89%	1.30%	1.70%
2003	5.88%	8.70%	8.71%	9.34%	7.92%	8.64%	8.13%	8.01%	8.10%	8.91%	3.36%	1.40%	2.90%
2004	7.78%	7.40%	6.49%	4.91%	4.44%	4.71%	3.09%	3.45%	3.99%	4.62%	3.71%	1.30%	3.00%
2005	5.15%	4.10%	4.30%	5.20%	5.23%	4.50%	4.56%	4.70%	4.19%	3.31%	4.17%	2.10%	2.80%
2006	5.29%	4.47%	3.95%	2.80%	3.26%	3.63%	3.74%	2.83%	3.24%	3.59%	3.93%	2.30%	3.20%
2007	5.21%	5.31%	5.12%	4.97%	5.41%	5.45%	5.64%	5.74%	5.84%	6.65%	4.23%	2.30%	4.30%
2008	3.54%	2.44%	2.04%	2.29%	2.71%	2.59%	3.64%	3.80%	3.27%	2.64%	3.71%	3.60%	4.00%
2009	2.56%	2.86%	2.93%	3.13%	3.06%	2.28%	2.41%	2.72%	2.47%	3.68%	1.71%	2.20%	-0.50%
2010	1.00%	1.08%	1.80%	1.88%	1.08%	2.11%	1.18%	0.92%	0.77%	0.41%	1.82%	3.30%	4.60%
2011	0.50%	-0.61%	-0.74%	-0.85%	-1.33%	-2.07%	-1.38%	-1.11%	-1.05%	-1.07%	1.89%	4.50%	5.20%
2012	1.97%	0.61%	0.44%	0.29%	0.27%	-0.23%	-1.39%	-1.12%	-0.87%	-0.42%	1.57%	2.80%	3.20%
2013	1.45%	0.92%	0.29%	0.00%	-0.27%	0.00%	0.22%	0.41%	0.49%	0.33%	0.88%	2.60%	3.00%
2014	1.75%	1.97%	2.06%	1.71%	1.76%	0.59%	0.22%	-0.10%	-0.78%	-0.58%	1.15%	1.50%	2.40%
2015	3.43%	3.56%	2.31%	2.39%	2.52%	2.11%	2.28%	1.65%	1.67%	2.18%	2.25%	0.00%	1.00%
2016	8.60%	5.44%	5.63%	5.62%	4.66%	3.32%	3.39%	3.04%	3.56%	2.38%	2.37%	0.70%	1.80%
2017	4.17%	5.30%	5.60%	4.68%	4.21%	3.77%	2.87%	3.14%	2.51%	2.96%	2.13%	2.70%	3.60%
2018	4.40%	3.48%	3.54%	3.85%	3.56%	3.63%	3.29%	2.95%	3.99%	3.73%	3.08%	2.50%	3.30%
2019	4.85%	5.36%	4.76%	4.54%	4.01%	3.40%	4.24%	4.07%	3.58%	3.60%	3.50%	1.80%	2.60%
2020	6.21%	6.27%	5.70%	5.71%	5.73%	6.08%	4.90%	5.42%	5.31%	3.18%	2.16%	0.90%	1.50%
2021	2.98%	2.56%	2.97%	2.70%	2.82%	2.16%	2.56%	2.28%	2.32%	3.92%	5.14%	2.60%	4.10%

Figure 27: Annual Inflation in ASHE 6115, by specific percentile and by year (as at April of that year), compared with Average Weekly Earnings, CPI and RPI

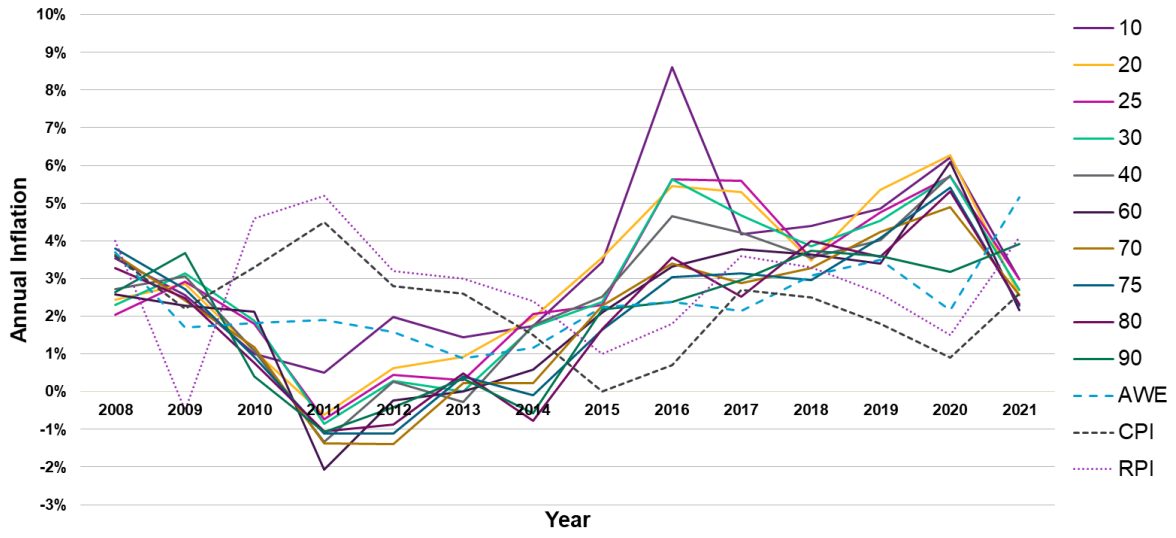

Figure 28: Annual Inflation in ASHE 6115, by specific percentile and by year (as at April of that year), compared with Average Weekly Earnings, CPI and RPI

Further information on the Indexation of PPOs is provided in Appendix M to this report.

Payment components for PPO claims

We referred previously to summary statistics, including Liability and MIB Motor, and splits by Private and Commercial Motor.

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	34.4	28.8	17.1	1.0	539
Delay until settlement	6.4	5.6	3.4	1.7	539
Future life expectancy at settlement	41.8	43.7	18.1	-0.3	523
Life expectancy reduction	15.3	13.2	11.9	1.6	522
Annual PPO payment (£)	98,241	67,000	89,937	1.8	539
Lump sum (£)	1,897,024	1,700,000	1,376,028	1.6	537
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	34.2	28.6	17.0	1.0	528
Delay until settlement	6.4	5.6	3.4	1.6	528
Future life expectancy at settlement	42.0	43.8	17.9	-0.4	512
Life expectancy reduction	15.2	13.1	11.9	1.6	511
Annual PPO payment (£)	96,658	65,821	87,870	1.9	528
Lump sum (£)	1,875,790	1,689,807	1,359,749	1.6	526
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	41.0	43.4	22.3	0.0	11
Delay until settlement	5.8	5.1	3.1	2.4	11
Future life expectancy at settlement	31.5	32.7	20.3	0.4	11
Life expectancy reduction	18.0	13.4	11.1	1.4	11
Annual PPO payment (£)	174,211	87,323	140,845	0.3	11
Lump sum (£)	2,912,412	2,900,000	1,723,502	1.8	11

Figure 29: Summary statistics for Motor (non-MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	44.9	50.5	19.9	-0.5	59
Delay until settlement	6.7	5.3	6.3	5.2	59
Future life expectancy at settlement	27.5	25.3	17.6	0.8	53
Life expectancy reduction	19.8	14.6	18.1	1.8	53
Annual PPO payment (£)	82,626	50,000	84,257	1.2	59
Lump sum (£)	1,543,897	1,300,000	1,061,375	0.8	59

Figure 30: Summary statistics for Liability PPO claims

These summary statistics indicate that:

- For Motor (non-MIB) claims settling as a PPO claim in 2021, the average lump sum payment was £2.91 million and the average initial annual PPO payment (summed across all heads of damage) was £174.2 thousand. Across all settlement years, the equivalent figures were £1.90 million and £98.2 thousand respectively (although note that these figures are in nominal terms and have not been adjusted for inflation, the average settlement date being March 2013).
- For Liability claims settling as a PPO claim, there was only one claim present in the 2021 cohort, and so summary statistics have not been produced separately for the 2021 settlement year alone. Across all settlement years, the average lump sum payment was £1.54 million and the average initial annual PPO payment (summed across all heads of damage) was £82.6 thousand (although note that these figures are in nominal terms and have not been adjusted for inflation, the average settlement date being December 2012).
- For Motor (MIB) claims settling as a PPO claim in 2021, the average lump sum payment was £4.04 million and the average initial annual PPO payment (summed across all heads of damage) was £89.5 thousand. Across all settlement years, the equivalent figures were £1.43 million and £63.6 thousand respectively (although note that these figures are in nominal terms and have not been adjusted for inflation, the average settlement date being March 2013).

Appendix E contains further summary statistics tables, including Liability and MIB Motor, and splits by Private and Commercial Motor.

We provide a number of further summary statistics for the lump sum element of PPO claims and for the initial regular payment amount of PPO claims, separately for Motor (non-MIB) PPO claims, Liability PPO claims and Motor (MIB) PPO claims.

For the purposes of comparison, we also provide some of the equivalent summary statistics for Motor (non-MIB) non-PPO claims, and it is interesting to note that, while the average size of the lump sum element of Motor (non-MIB) claims has been increasing for both PPO claims and non-PPO claims, when stripping out the effect of inflation, the average size of the lump sum element of Motor (non-MIB) PPO claims has been relatively flat whereas the average size of Motor (non-MIB) non-PPO claims has fallen markedly (see Figure 31 and Figure 32).

The lump sum element of non-PPO claims includes compensation for future care costs, whereas the lump sum element of PPO claims does not, as these are included in the annual payments. There are therefore potentially two conclusions that can be drawn from the trends in Figure 31 and Figure 32:

- The lump sum amounts (before stripping out the effect of inflation at 7% per annum) are at a similar level for both Motor (non-MIB) PPO claims and Motor (non-MIB) non-PPO claims. This is consistent with PPOs being awarded in larger cases.

- The marked fall in the average size of Motor (non-MIB) non-PPO claims (after stripping out the effect of inflation at 7% per annum) suggests that the inflation on the cost of care element (and also on the loss of earnings element) assumed within the lump sum settlement may be lower than 7% per annum.

Included within Figure 31 and Figure 32 are trend lines at 3%, 5% and 7% per annum. Against Motor (non-MIB) PPO claims the trend in the underlying data largely supports 7% per annum (or slightly lower) being an appropriate inflation rate. However, for Motor (non-MIB) non-PPO claims a 5% per annum inflation rate fits the underlying data trends more appropriately. The Working Party has plans to investigate and update the 7% inflation rate assumption in 2023, which may have a material impact on the PPO propensity due to the number of claims included as large within the calculation.

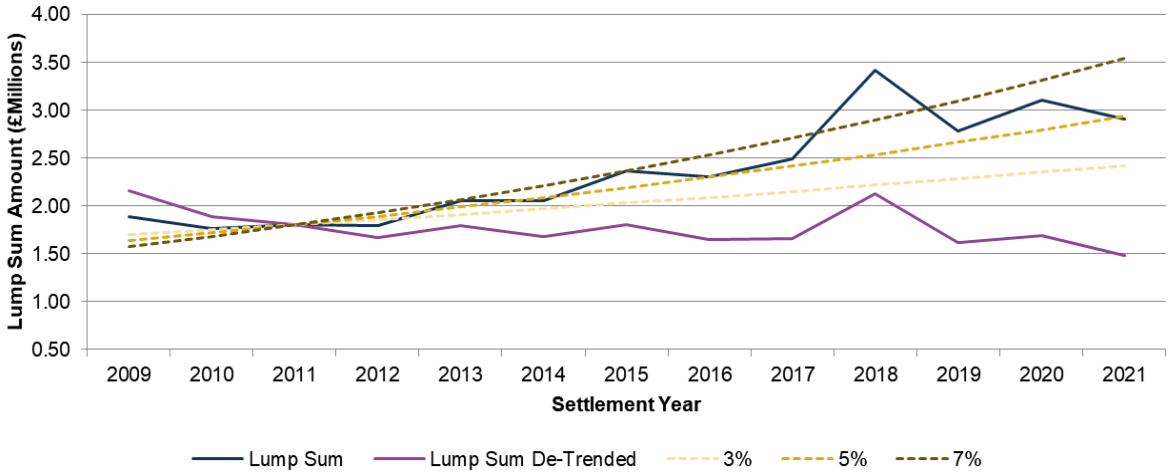

Figure 31: Average size of the lump sum element of Motor (non-MIB) PPO claims, nominal and with inflation removed (assuming inflation of 7% per annum), by settlement year

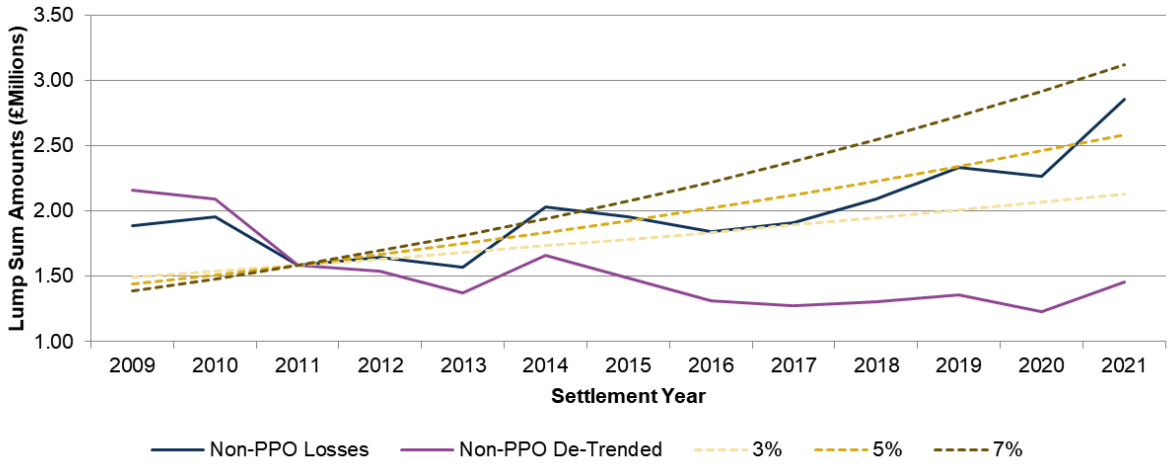

Figure 32: Average size of Motor (non-MIB) non-PPO claims, nominal and with inflation removed (assuming inflation of 7% per annum), by settlement year

Further information on Payment Components of PPOs is provided in Appendix N.

Special features of Motor (non-MIB) PPO claims and other statistics

We provide a number of summary statistics in relation to stepped payments, variation orders and indemnity / reverse indemnity guarantees for Motor (non-MIB) PPO claims, together with a small number of other statistics for these PPO claims. Definitions for these special features are provided in Appendix N to this report.

Figure 33 shows the proportion of Motor (non-MIB) PPO claims with special features.

Feature	Proportion of PPOs	Number of Responses
Stepped Payments	29%	448
Variation Orders	17%	405
Indemnity Guarantees	7%	235
Reverse Indemnity Guarantees	8%	213
Contributory Negligence	18%	152

Figure 33: Proportion of Motor (non-MIB) PPO claims with special features, together with the number of Motor (non-MIB) PPO claims in the survey with responses received on those special features

In terms of injury type:

- 23% of Motor (non-MIB) PPO claims relating to brain injury have a stepped payment.
- 48% of Motor (non-MIB) PPO claims relating to spinal injury have a stepped payment.

This compares with a general Motor (non-MIB) PPO claim population average of 29%, as shown in Figure 33.

Again in terms of injury type:

- 11% of Motor (non-MIB) PPO claims relating to brain injury have a variation order.
- 42% of Motor (non-MIB) PPO claims relating to spinal injury have a variation order.

This compares with a general Motor (non-MIB) PPO claim population average of 17%, as shown in Figure 33.

Further information on Special Features is provided in Appendix O.

Injury type and care regime categorisation

Introduction

The IFoA PPO Working Party, with the help of a number of claims professionals, devised a categorisation of PPO injury types and care regimes, with the intention of this categorisation becoming UK standard practice, to be used by all insurers and reinsurers. This categorisation was presented as part of the output of the IFoA PPO Working Party in 2014 and is reproduced in Appendix P to this report.

Only 24% of the Motor (non-MIB) PPO claims and 19% of the Liability PPO claims we received for the 2020 quantitative industry survey, had this categorisation attached. ***We urge insurers to use this categorisation, and to provide this information to the IFoA PPO Working Party to enable us to better help the market understand trends and uncertainties relating to PPO claims.***

Using this categorisation, we are able to provide more in-depth analysis of how the characteristics of PPO claims are affected by the type of injury sustained by the claimant and the type of care they receive. We have restricted this analysis to the Motor (non-MIB) PPO claims only.

We note, however, that the summary statistics provided here and in Appendix P to this report are based on only a small subset of data, and this is likely to have contributed to the volatility in experience in the summary statistics provided.

Summary Statistics

Figure 34 shows the distribution of Motor (non-MIB) PPO claims by injury type categorisation and Figure 35 shows the distribution of Motor (non-MIB) PPO claims by care regime categorisation.

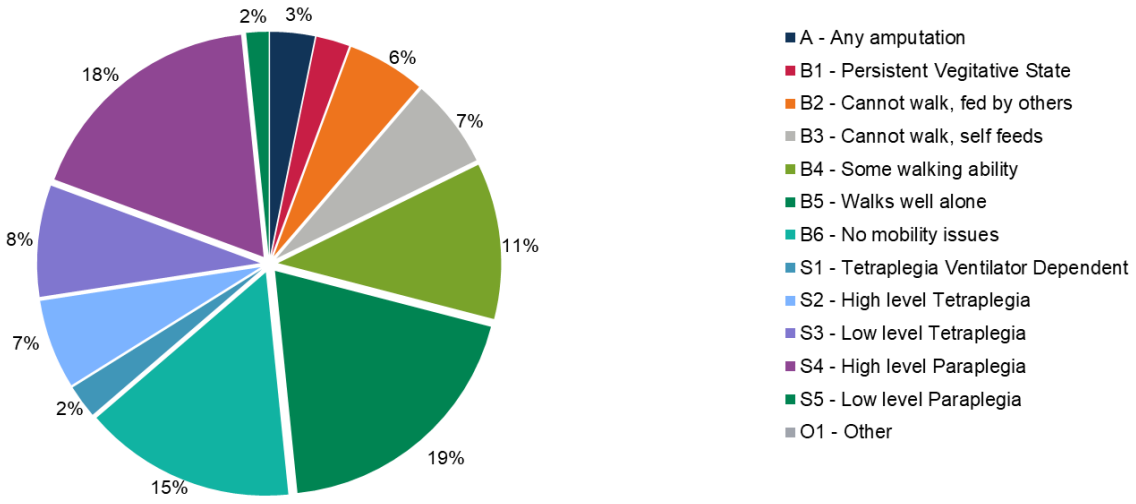

Figure 34: Detailed split of the number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party injury type categorisation

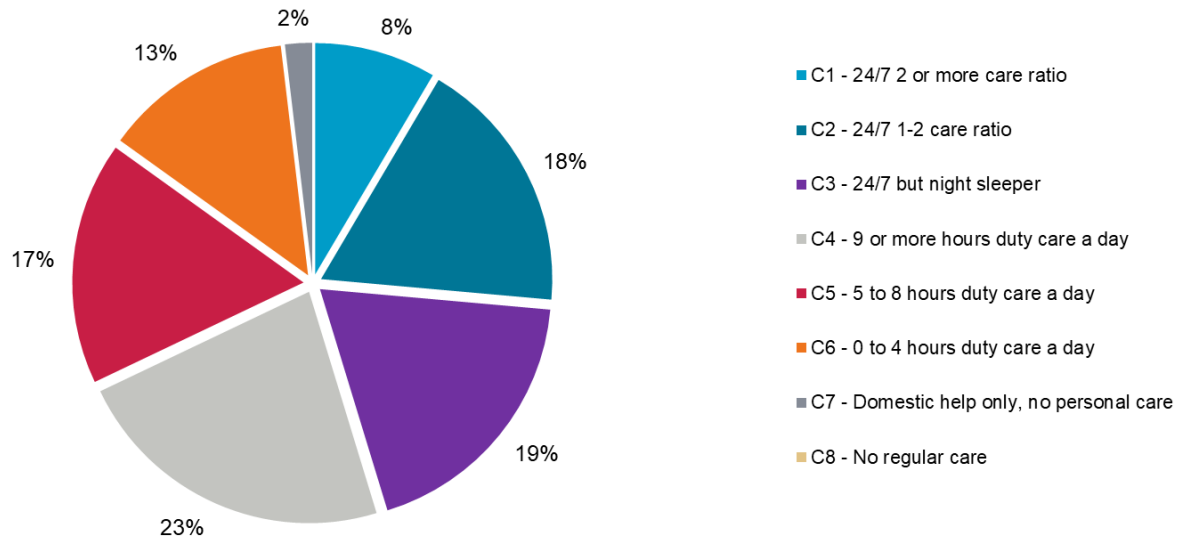

Figure 35: Detailed split of the number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party care regime categorisation

We provide a number of summary statistics in relation to the nature of injury for PPO claims.

We note that 73% of Motor (non-MIB) PPO claims involve brain injury as the primary injury type, with that proportion varying significantly by the age of claimant as shown in Figure 36.

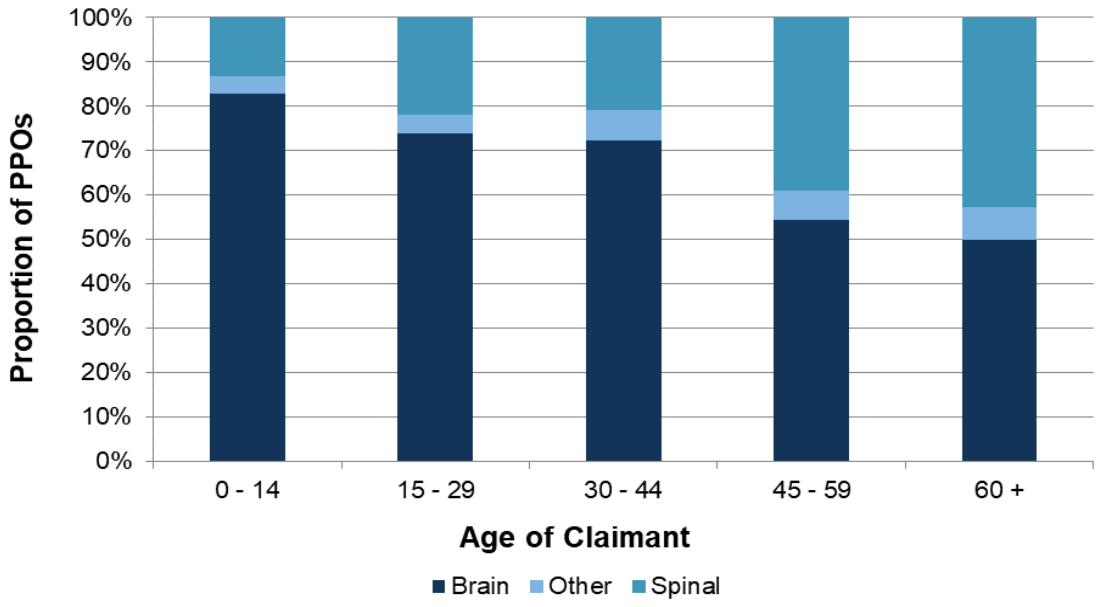

Figure 36: Proportion of Motor (non-MIB) PPO claims, by age of claimant at accident date and by nature of injury

Further information relating to these Summary Statistics is provided in Appendices P and Q.

Mortality of PPO claimants

We provide a number of summary statistics in relation to the mortality of PPO claimants.

To increase the sample size, we have considered all PPO claims in this analysis, i.e. Motor (non-MIB) PPO claims, Liability PPO claims and Motor (MIB) PPO claims combined. We note, however, that there remains very limited data on which to base any firm conclusions. We also note that there is an inherent bias in any such analysis, in that we will not observe people living much longer than expectations for a very long time to come, which is more likely to overstate mortality than to understate mortality. Furthermore, a number of simplifying assumptions have been made in the underlying analysis, as discussed in Appendix R to this report. We therefore stress caution in using the results of the analysis presented here and in Appendix R to this report.

Figure 37 and Figure 38 show the "initial exposure" and number of deaths by age group for male and female claimants respectively, the "initial exposure" being a measure of the total number of years of exposure for PPO claims in the quantitative industry survey, taken as the number of years from settlement date to 31 December 2021 or date of death if applicable.

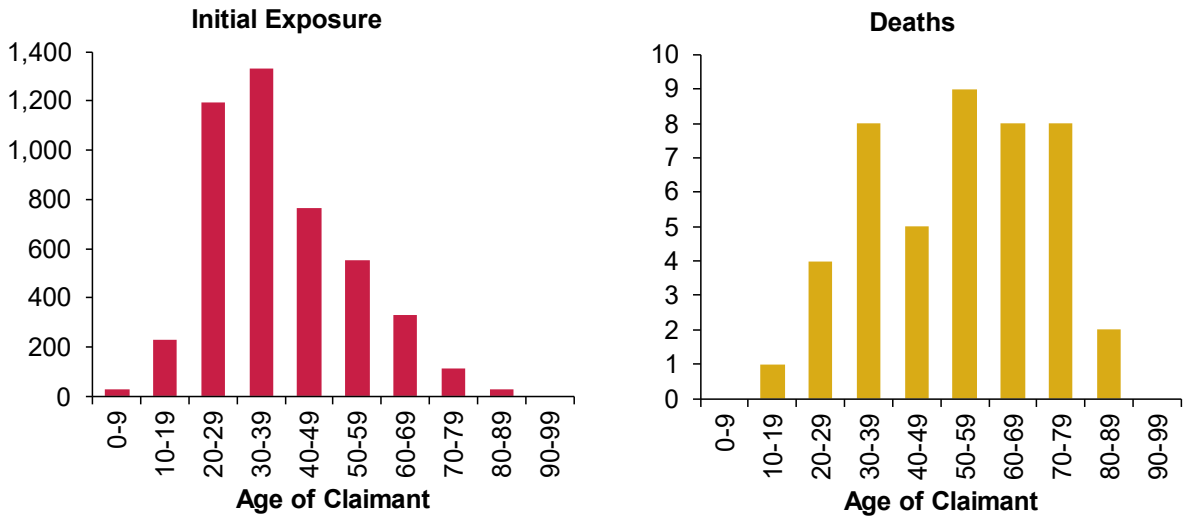

Figure 37: Number of years of exposure for PPO claims and number of deaths, for male PPO claimants, by age of claimant at settlement date

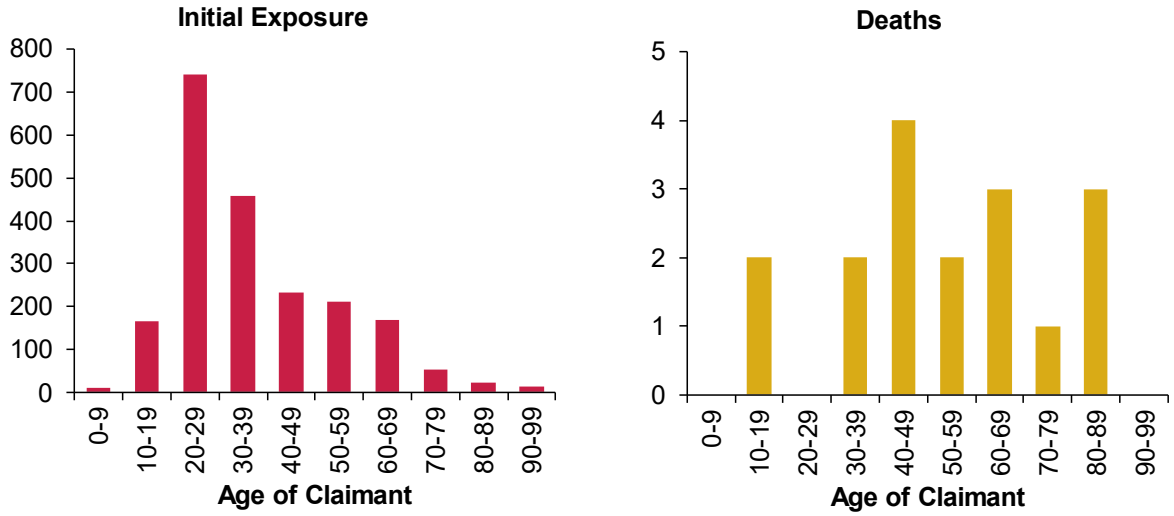

Figure 38: Number of years of exposure for PPO claims and number of deaths, for female PPO claimants, by age of claimant at settlement date

Figure 39 shows the observed (i.e. actual) number of deaths by claimant age band (at settlement date) against those that would have been expected for the survey sample using unimpaired mortality rates based on the ONS mortality rates (its most recent forecast projections, as detailed in Appendix R to this report).

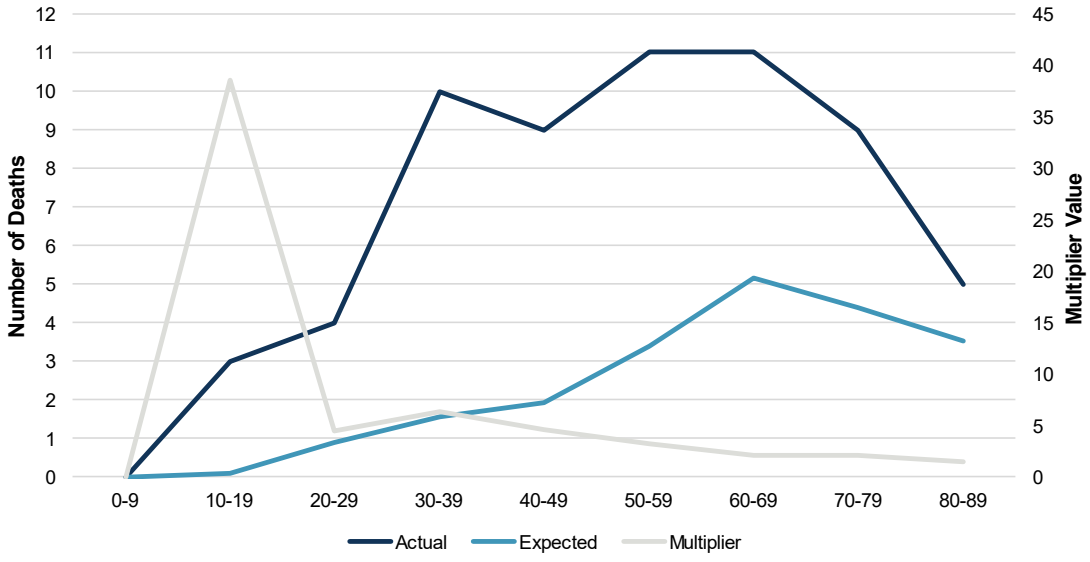

Figure 39: Actual number of PPO claimant deaths, expected number of PPO claimant deaths assuming unimpaired mortality, and the multiplier (actual / expected), by age of claimant at settlement date

We would expect the life expectancy of PPO claimants to be impaired given the serious nature of injuries which give rise to a PPO award. Figure 39 attempts to measure the extent of this impairment by comparing the actual deaths observed in our data with the number that would be expected using unimpaired mortality rates. In total there have been 62 observed deaths since settlement, against an expected number of 24.0 deaths assuming unimpaired mortality, representing a multiplier of 2.6 (for

male and female PPO claimants combined). When analysed by type of injury Brain has multiplier of 2.0, Spinal has a multiplier of 2.5 with Other injuries showing a multiplier of 3.5. We note, once again, the inherent bias in this analysis (and other analyses in Appendix R to this report), in that we will not observe people living much longer than expectations for a very long time to come, which is more likely to overstate mortality than to understate mortality. Of the PPO claimants who have died, all of these have died earlier than the life expectancy assumed at the time of settlement of the claim.

Figure 40 shows the observed (i.e. actual) number of deaths by calendar year against those that would have been expected for the survey sample using unimpaired mortality rates based on the ONS mortality rates (its most recent forecast projections, as detailed in Appendix R to this report).

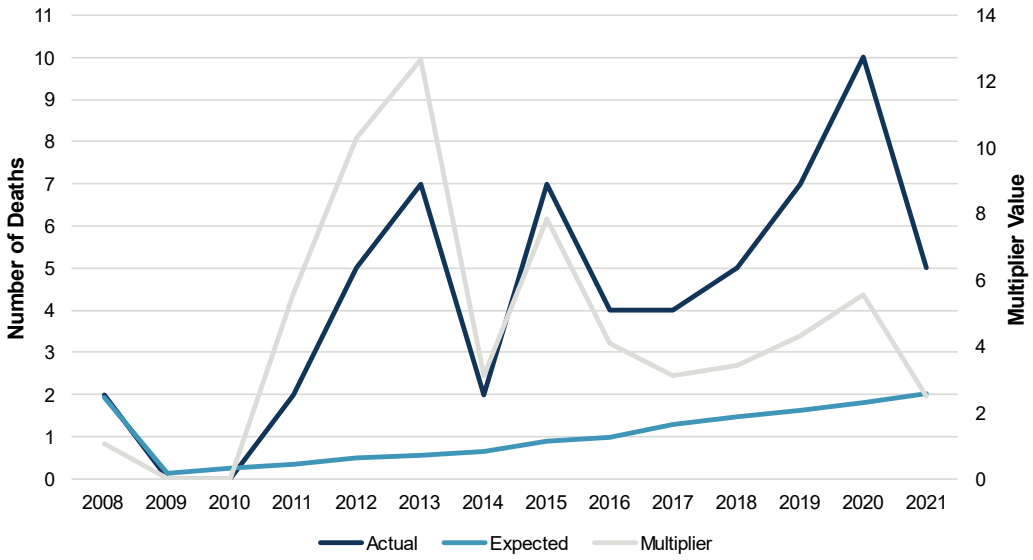

Figure 40: Actual number of PPO claimant deaths, expected number of PPO claimant deaths assuming unimpaired mortality, and the multiplier (actual / expected), by calendar year

Further information relating to Mortality is provided in Appendix R.

Reserves for Motor (non-MIB) PPO claims

We provide a number of summary statistics in relation to the size of reserves for Motor (non-MIB) PPO claims.

In order to consider the size of reserves on a consistent basis, we have estimated the total cost and outstanding reserve for each of the Motor (non-MIB) PPO claims in the quantitative industry survey on a cashflow basis. Given the approximations and assumptions inherent in the underlying analysis, the results here and in Appendix S to this report should be treated with caution.

Figure 41 compares our estimate of outstanding reserves for Motor (non-MIB) PPO claims (i.e. PPO claims in payment), as at 31 December 2021, using discount rate assumptions ranging from -2% per annum to +2.5% per annum, to an estimate at the prevailing Ogden discount rate as at 31 December 2021 of -0.25% per annum.

Real Discount Rate	Reserve Multiple
-2.00%	1.52
-1.00%	1.19
-0.75%	1.12
-0.25%	1.00
0.00%	0.95
1.00%	0.77
2.00%	0.64
2.50%	0.59

Figure 41: Reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at various real discount rates, estimated by the IFoA PPO Working Party, expressed as a multiple of the reserve estimated at a -0.25% per annum real discount rate

Further information relating to Reserves is provided in Appendix S.

Highlights of the 2022 qualitative industry survey

In this section, we provide some of the key highlights of the responses to the 2022 qualitative industry survey. We provide more detail around the responses to the qualitative industry survey in Appendix T to this report.

10 insurers and 5 reinsurers were interviewed for the qualitative industry survey, the responses having been collected between January 2022 and March 2022 inclusive. The companies which have agreed to be acknowledged for their participation in this survey are listed in the Introduction to this report, although please note that the list does not include all participants.

It is worth noting that, very occasionally, some of the survey questions were unanswered by some participants. This was occasionally through choice, but more commonly as the interviewee did not know the answer or could not readily obtain the information.

Level of concern about PPO claims

For both participating insurers and reinsurers, the level of concern about PPO claims has, for the most part, remained at the same level since the previous year. This is also the case for the Boards of the participating insurers and reinsurers.

Reserving for PPO claims

100% of participating insurers and 75% of participating reinsurers use a probabilistic approach to mortality in reserving for settled PPO claims with the remainder using an annuity certain approach. A wider variety of approaches are used for reserving for future PPO claims, with most participating insurers considering future pure IBNR PPO claims within the methods used for future PPO claims on existing large claims, and only a small number reserving for future pure IBNR PPO claims explicitly. All participating reinsurers established their own reserves for future PPO claims.

In valuing PPO claims for reserving purposes, all participating insurers discounted their PPO cashflows. For future PPO claims, 70% of participating insurers discount to valuation date with the remainder discounting to future expected settlement date.

For participating insurers, the range of real discount rates (considering both the inflation of payments and discounting in respect of investment returns) for reporting under current UK Generally Accepted Accounting Principles (“GAAP”) / International Financial Reporting Standards (“IFRS”) was between -2.5% per annum and +0.0% per annum, with the most commonly used real discount rates being 0% and -0.5% per annum. The range and distribution of real discount rates used by insurers has remained broadly the same since our previous survey. Figure 42 shows the distribution of real discount rates used by insurers, compared with last year.

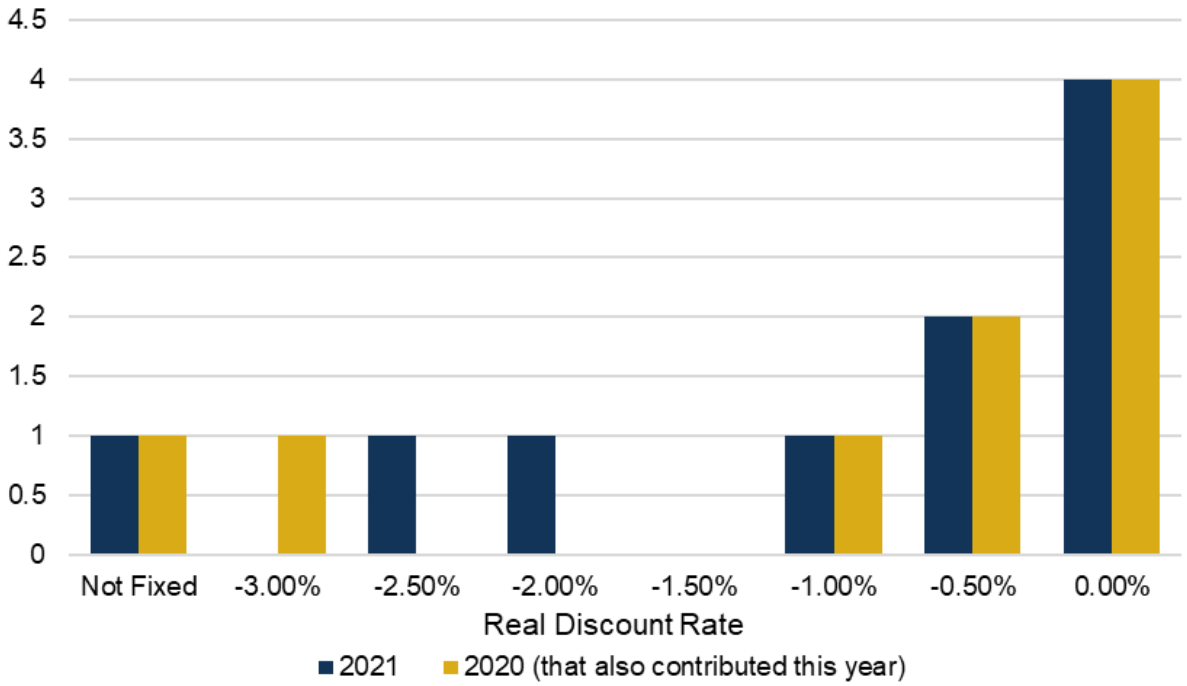

Figure 42: Real discount rate used by insurers in 2021 compared with those used in 2020

For those participating insurers using a fixed assumption, the range of ASHE inflation rates used was between +3.0% per annum and +4.0% per annum, with a similar distribution to last year. For those participating insurers using a fixed assumption, the range of investment returns used was between +2.5% per annum and +4.0% per annum, with the distribution reducing in spread compared with last year. An inflation specific survey was conducted between August and October 2022 in response to the recent economic situation – the responses of this are outlined later within this report.

Under Solvency II, as the investment return assumption is prescribed by the European Insurance and Occupational Pensions Authority ("EIOPA"), it is the choice of the ASHE (or payment) inflation rate that will determine the real discount rate used. Around half of participating insurers used the same ASHE inflation rate assumption for Solvency II as they assume in their UK GAAP / IFRS accounts, with two insurers maintaining a 0% per annum real discount rate by setting the ASHE assumption to equal the EIOPA investment return assumption. Of the other approaches used by participating insurers, responses included using RPI and using market-implied risk-free yields.

Only three participating insurers allowed for variation orders or indemnity / reverse indemnity guarantees coming into force when reserving for PPOs. One of the reinsurers considered variation orders or indemnity / reverse indemnity guarantees when reserving but did not allow it. This finding is unsurprising, given that very few variation orders or indemnity / reverse indemnity guarantees have been triggered to date.

Most participating insurers did not include a reinsurance bad debt provision for PPO claims under current UK GAAP / IFRS but did include a bad debt provision under Solvency II.

All participating insurers and four out of five reinsurers estimate reserve uncertainty for PPOs either stochastically or though scenario testing. For those participants able to provide an estimate, the

majority of net of reinsurance coefficients of variation (calculated as the ratio of the standard deviation to the mean) for settled PPOs were between 15% and 45%. Figure 43 shows the distribution of gross and net coefficient of variation used for settled PPOs by number of participants.

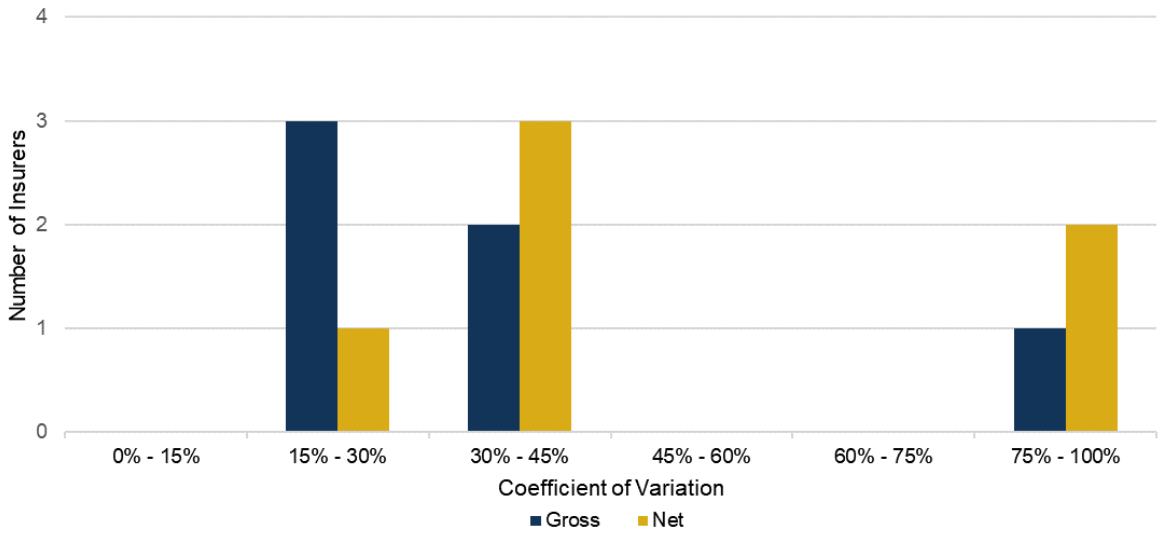

Figure 43: Coefficient of variation used for settled PPOs, gross and net of reinsurance

In terms of risk margin, for those participating insurers that calculated (or could estimate) a PPO risk margin, the (approximate) risk margin ranged between 5% and 65% of the best estimate PPO provision.

Treatment of PPO claims within capital modelling

The majority of participating insurers and reinsurers used an internal model or partial internal model to allow for PPO claims in the Solvency Capital Requirement ("SCR") calculation, with the remainder using the Standard Formula.

Of those participating insurers using an internal model or a partial internal model, the majority had an explicit stochastic PPO model. None of the participating reinsurers used separate stochastic models for PPOs.

In terms of the allowance for PPO claims under Pillar I (which considers the 1/200 level over a one year time horizon) and for the Own Risk and Solvency Assessment ("ORSA") under Pillar II (which considers the volatility of the run off to ultimate), most participating insurers and reinsurers for which this work has been finalised for PPO claims noted that the capital requirement for Pillar 1 was lower or equal to the capital requirement for Pillar II: four said that the one year measure of risk was between 25% and 50% of the ultimate measure of risk; one said the one year measure was between 50% and 75% of the ultimate measure; two said the one year measure was between 75% and 100% of the ultimate measure and three were unable to make a comparison.

Three insurers said that they had different bases for evaluating economic and regulatory capital: one insurer used the standard formula for PPOs in evaluating their SCR but used an internal model for

PPOs in evaluating their economic capital, one insurer used a different volatility adjustment for economic and regulatory capital, and one used different risk appetites.

Treatment of PPO claims within pricing

All participating insurers allow for the cost of PPO claims within their pricing, with 50% doing so implicitly. Likewise, all participating insurers allow for the cost of capital for PPO claims when pricing, albeit only implicitly in 70% of cases. All participating reinsurers explicitly allow for PPO claims in the pricing of their contracts.

The impact of PPO claims on reinsurance purchase and availability

Only one participating insurer had explicitly changed their reinsurance programme as a result of PPO claims. In contrast, all participating reinsurers had changed their reinsurance offerings as a result of PPO claims.

Of those participating reinsurers continuing to write Motor Excess of Loss ("XoL") business, around 60% had either a strong preference for or a requirement for capitalisation clauses. However only 30% of participating insurers had a capitalisation clause on their reinsurance contracts.

Alternative risk transfer for PPO claims

Of the participating insurers, all respondents would consider transferring the risk associated with PPO claims if the right option arose. The most significant hurdles in constructing a transaction were a perceived high price of such risk transfer solutions, and the lack of a solution that matched to ASHE inflation.

Investment strategy in relation to PPO exposures

50% of the participating insurers had changed their investment strategy as a result of PPO claims, with two of these changes coming in the last year. One of the participating reinsurers had changed their investment strategy as a result of PPOs. One participating insurer reviews their asset / liability matching position regularly, adapting for PPO claims implicitly but without explicitly changing investment strategy as such. Only three participating insurers held ring-fenced assets specifically for PPO liabilities, although a number of other insurers held long duration assets to cover all longer-term liabilities. Just one of the participating reinsurers held assets specifically to match PPO liabilities.

Highlights of the ASHE Survey

In response to changes in the economic environment, in particular regarding the growing concern around inflationary pressures and the impact on insurance losses, the PPO Working Party conducted a separate survey in 2022 to focus on inflation and ASHE assumptions.

11 insurers and 2 reinsurers responded to this survey, with responses having been collected between August 2022 and October 2022 inclusive. Throughout 2022 there were multiple events which had significant impacts on the economy, including increased inflationary pressures. The responses to this survey were collected after the escalation of the conflict between Russia and Ukraine (February 2022) but before the impact of the mini budget under Liz Truss' government (October 2022). Given these changes and uncertainty in the economic outlook during and after this period, it may be that contributors would have given different responses, if they were answering the same questions several months earlier or later.

When asked what their views on the level of ASHE were on a short term (generally 1-2 years), medium term (2-5 years) and long term (5+ years) there tended to a forecast of reducing over time, with the average short, medium and long term views at 4.6%, 3.8% and 3.2% respectively. The range of responses was also greater in the shorter and medium term, highlighting the uncertainty within the economic outlook during those timeframes. The majority of responses for a long term view on ASHE were between 3.0% and 3.5% which is consistent with responses from our qualitative survey in recent years. Figure 44 outlines the distribution of responses.

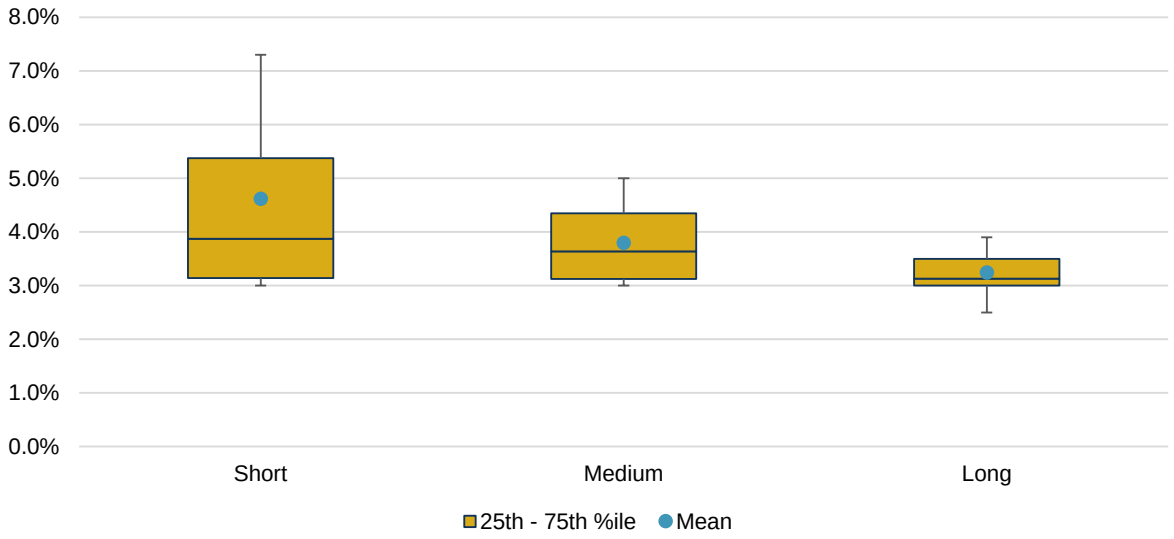

Figure 44: Views on the ASHE assumption in short, medium and long term

Figure 45 shows the approaches used to set the ASHE assumption. 77% of contributors are using forecasts of another economic index as a starting point (with RPI / CPI being the most commonly used) and making an adjustment for the assumed gap between these indices and ASHE. The remaining 23% based their ASHE assumption on explicit analysis of the historical index. Some noted that different approaches were taking depending on the reporting bases and time horizon. 69% of the participants validated the appropriateness of these approaches using back-testing.

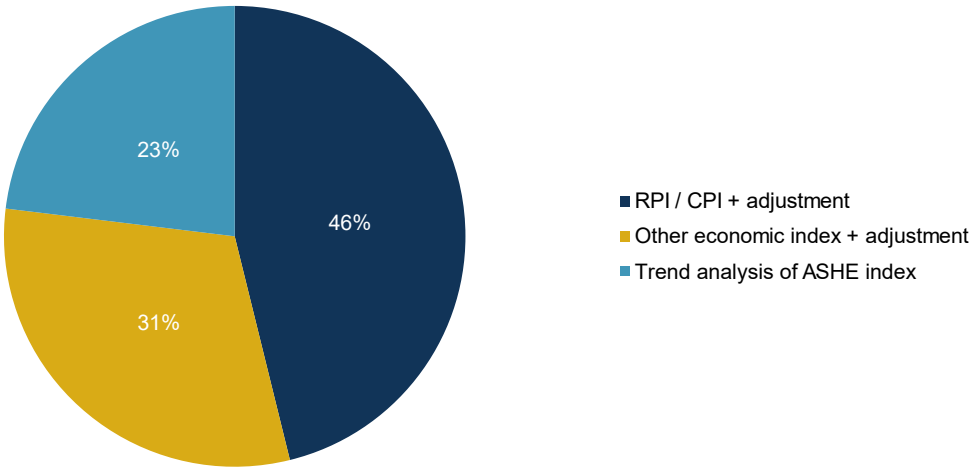

Figure 45: Approach used to set ASHE assumption

Within the last few years there have been several large market events that have had economic impacts (namely Brexit, COVID-19 and the current inflationary environment driven by, among other things, the conflict between Russia and Ukraine). We asked participants whether changes had been made to their ASHE assumptions in light of each of these events. Just under half of respondents had made a change because of each / any of these events, although a further 15% had considered these, even if they had not made a change explicitly linked to the individual events. It is worth noting that many of the participants that answered that they did not change or consider these factors had plans to revisit these assumptions within the 6 months following the survey.

Figure 46 shows the approach to allowing for volatility within the ASHE assumption within their capital models. 85% did make some allowance, with just over half of these doing so using their Economic Scenario Generator ("ESG"), either by linking their ASHE assumption to an existing output from the ESG with a fixed adjustment, or otherwise. The remaining participants who allowed for volatility did so by using stress or scenario tests.

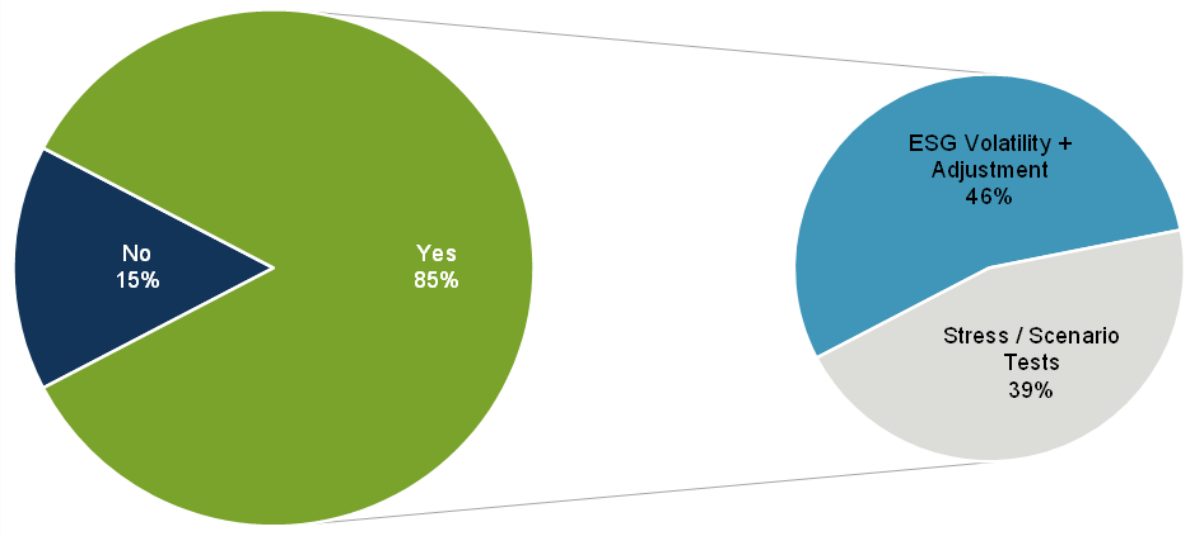

Figure 46: Approach to modelling volatility around ASHE assumption

Figure 47 shows the real long term discount rate assumed by respondents which considers both the view of future inflation as well as the investment returns that can be achieved. No participants assumed a positive real discount rate, with the majority assuming a rate of between -0.5% and 0% (inclusive). This is a slightly more negative shift in the distribution when compared with the same question asked in the qualitative survey between January 2022 and March 2022 (Figure 42) indicating a slightly more pessimistic view in the long term economic outlook although it is worth noting that participants between the two surveys are not necessarily consistent.

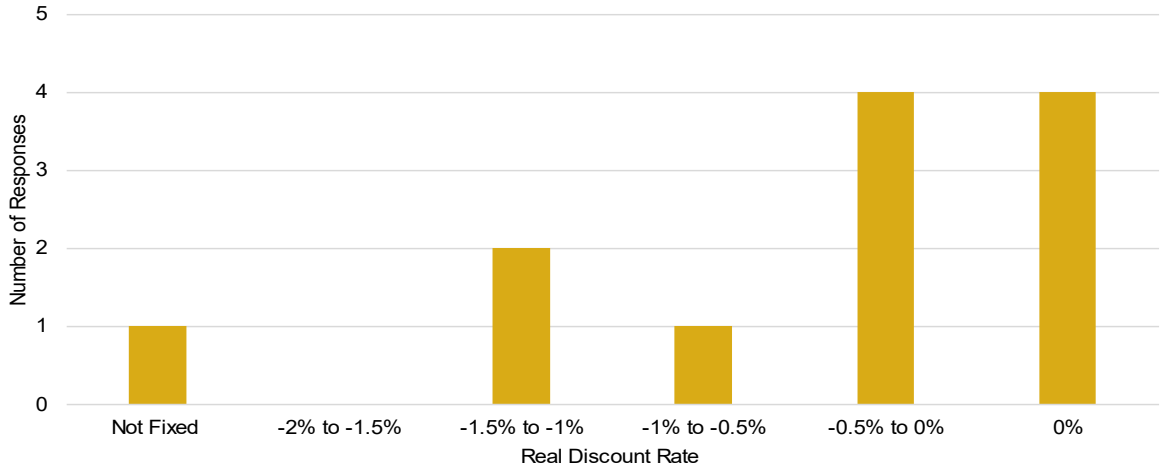

Figure 47: Real discount rate used by participants

Within reinsurance programmes there is often a disparity in the indexation terms compared with that used for the gross PPO claim. We asked participants what the approach and index used for their reinsurance programme and whether this was different in the periods up to and post settlement. Figure 48 shows the results, with around half of participants noting that the index used was different in the period up to settlement compared with post settlement of the PPO. In the period up to settlement the most common method was to index using a different index than that used for the gross PPO, which was typically the Average Weekly Earnings KA5H ("AWE") index. In the period post commencement of the PPO, the index attached to most reinsurance programmes was in line with that used for the gross PPO (i.e. 80th percentile of the ASHE 6115 index).

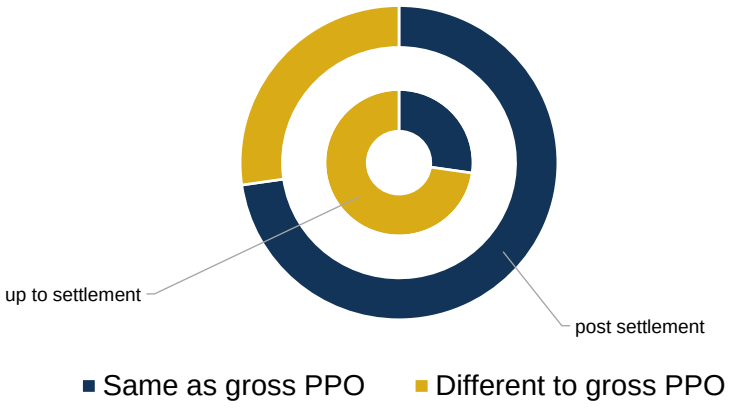

Figure 48: Reinsurance indexation approach

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Civil Liability Bill and Ogden Discount Rate

The Government announced, under the "Civil Liability Bill", its proposals concerning whiplash claims and the Ogden discount rate in England and Wales.

The Civil Liability Bill was introduced to the House of Lords on 20 March 2018, with the key elements of the proposals in relation to whiplash claims (Part 1 of the Bill) appearing to be broadly similar to those set out under the previous Prisons and Courts Bill. These are:

- The introduction of a fixed tariff system for general damages on injury duration between 0 and 24 months for Road Traffic Act ("RTA") whiplash-related claims.
- The raising of the small claims track limit for Personal Injury claims from £1,000 to £2,000 for all Personal Injury claims, and from £1,000 to £5,000 for RTA claims.
- The requirement for medical reports for every RTA whiplash-related claim.

The key elements of the proposals in relation to the Ogden discount rate (Part 2 of the Bill) are:

- Changing the legal framework under which the discount rate is set, in particular setting it with reference to an investment strategy with a higher expected return than assumed under the current framework to reflect how claimants invest their compensation in practice.
- Specifying that the discount rate should be set at least every three years with the Lord Chancellor retaining discretion to set the discount rate within three years if necessary, with the first review initiated within 90 days of the legislation coming into force and requiring completion within 140 days.
- Setting up an expert panel for the Lord Chancellor to consult on the issues to consider in setting the discount rate.

The Civil Liability Bill received its Third Reading in the House of Lords on 27 June 2018 and was introduced to the House of Commons on 28 June 2018 with a number of amendments (such as the first review of the discount rate to take place without the expert panel, and subsequent reviews to be carried out within a maximum of five years rather than three years). The Second Reading in the House of Commons took place on 4 September 2018; the Public Bill Committee Stage took place on 11 September 2018; and was followed by the Report Stage and Third Reading on 23 October 2018. The House of Lords agreed to the House of Commons' amendments on 20 November 2018, and the Civil Liability Bill received Royal Assent on 20 December 2018.

In anticipation of Royal Assent and in preparation for the first review of the Ogden discount rate under the new legislation, the Government opened a consultation "Setting the Personal Injury Discount Rate: A Call for Evidence" (opened 6 December 2018; closed on 30 January 2019), in which it was seeking up-to-date data and information on a wide range of topics relevant to the setting of the discount rate under the provisions of the Civil Liability Bill, including investments available to claimants, investment advice provided to claimants, investments made by claimants and model investment portfolios.

Implementation of Part 1 of the Civil Liability Bill was delayed to 31 May 2021, however implementation of Part 2 followed an independent timetable and a revised Ogden discount rate of -0.25% was announced on 15 July 2019, effective for claims settling after 5 August 2019.

At the timing of writing the Ministry of Justice is in the process of a Call for Evidence to consider the option of a dual rate, feeding into the next review of the Ogden discount rate in England and Wales, which is due by 2024.

In April 2019, the Scottish Government's "Damages (Investment Returns and Periodical Payments) (Scotland) Bill" passed its final stage in Scottish parliament, with some notable differences to the Civil Liability Bill including:

- The discount rate being assessed by the Government Actuary for each review.
- The discount rate being set by reference to a notional investment portfolio constructed on the basis of portfolios described as "cautious".

In October 2019 it was announced that the Scottish discount rate would remain unchanged at -0.75% meaning that claimants in Scotland will receive higher compensation payments than in England and Wales.

Most recently the personal injury discount rate in Northern Ireland has been set at -1.5%, a minor increase from the interim -1.75% rate set in March 2021. The new rate comes into effect for claims settling after 22 March 2022.

Ogden Tables Impact of the change from 2.5% to -0.75% per annum

The reduction in the discount rate from 2.5% per annum to -0.75% per annum in 2017 has a significant impact on the value of individual claim settlements.

Figure 49 and Figure 50 illustrate the percentage increases in the whole of life and loss of earnings multipliers by age at trial and gender, taken from the Ogden tables (8th edition).

Age at Date of Trial	Males			Females		
	2.50% Real Yield (1)	-0.75% Real Yield (2)	Percentage Increase ((2) - (1)) / (1)	2.50% Real Yield (1)	-0.75% Real Yield (2)	Percentage Increase ((2) - (1)) / (1)
5	34.90	116.43	234%	35.32	121.09	243%
10	34.08	106.28	212%	34.57	110.88	221%
20	32.07	87.19	172%	32.74	91.68	180%
30	29.53	69.82	136%	30.38	74.05	144%
40	26.35	54.10	105%	27.39	57.97	112%
50	22.47	40.06	78%	23.66	43.43	84%
60	17.83	27.67	55%	19.15	30.53	59%

Figure 49: Multipliers for pecuniary loss for life from the Ogden tables (males Table 1 and females Table 2) assuming no impairment, for discount rates of 2.5% per annum and -0.75% per annum

Age at Date of Trial	Males			Females		
	2.50% Real Yield (1)	-0.75% Real Yield (2)	Percentage Increase ((2) - (1)) / (1)	2.50% Real Yield (1)	-0.75% Real Yield (2)	Percentage Increase ((2) - (1)) / (1)
20	26.72	52.25	96%	26.90	52.75	96%
30	22.91	38.87	70%	23.11	39.31	70%
40	18.14	26.60	47%	18.33	26.92	47%
50	12.18	15.37	26%	12.29	15.54	26%
60	4.61	4.99	8%	4.64	5.03	8%

Figure 50: Multipliers for loss of earnings to pension age 65 from the Ogden tables (males Table 9 and females Table 10) assuming no impairment, for discount rates of 2.5% per annum and -0.75% per annum

Following the Lord Chancellor's announcement on 27 February 2017, a claim was settled on a PPO basis with damages totalling £28 million based on predicted life expectancy, reported to be the highest settlement that has been approved in respect of a personal injury claim. The lump sum element of the PPO claim was revised from an initial agreed figure of £4.9 million in January 2017 to a revised figure of £9.1 million in March 2017.

In terms of industry impact, estimates have varied considerably, but figures of £4 billion to £6 billion one-off reserve charges for insurers and reinsurers were discussed in the insurance press. Insurance premiums increased soon after, with Motor Comprehensive premiums increasing by 8.4% in the second quarter of 2017 (largely attributable to the reduction in the discount rate and an increase in Insurance Premium Tax) and by 18.5% in the year to 30 June 2017, according to the Confused.com Car Insurance Price Index in association with WTW. At the 1 January 2018 reinsurance renewal, rate increases of around 75% were seen for primary layers below £5m and around 50% for layers above £10m.

Ogden Tables Impact of the change from -0.75% to -0.25% per annum

The increase in the discount rate from -0.75% per annum to -0.25% per annum in 2019 again has a significant impact on the value of individual claim settlements.

Figure 51 and Figure 52 illustrate the percentage increases (in this case decreases) in the whole of life and loss of earnings multipliers by age at trial and gender, taken from the Ogden tables (8th edition).

Age at Date of Trial	Males			Females		
	-0.75% Real Yield (1)	-0.25% Real Yield (2)	Percentage Increase ((2) - (1)) / (1)	-0.75% Real Yield (1)	-0.25% Real Yield (2)	Percentage Increase ((2) - (1)) / (1)
5	116.43	92.47	-21%	121.09	95.61	-21%
10	106.28	85.71	-19%	110.88	88.90	-20%
20	87.19	72.46	-17%	91.68	75.75	-17%
30	69.82	59.75	-14%	74.05	63.00	-15%
40	54.10	47.63	-12%	57.97	50.75	-12%
50	40.06	36.24	-10%	43.43	39.09	-10%
60	27.67	25.68	-7%	30.53	28.20	-8%

Figure 51: Multipliers for pecuniary loss for life from the Ogden tables (males Table 1 and females Table 2) assuming no impairment, for discount rates of -0.75% per annum and -0.25% per annum

Age at Date of Trial	Males			Females		
	-0.75% Real Yield (1)	-0.25% Real Yield (2)	Percentage Increase ((2) - (1)) / (1)	-0.75% Real Yield (1)	-0.25% Real Yield (2)	Percentage Increase ((2) - (1)) / (1)
20	52.25	46.53	-11%	52.75	46.95	-11%
30	38.87	35.55	-9%	39.31	35.93	-9%
40	26.60	24.97	-6%	26.92	25.27	-6%
50	15.37	14.81	-4%	15.54	14.96	-4%
60	4.99	4.93	-1%	5.03	4.97	-1%

Figure 52: Multipliers for loss of earnings to pension age 65 from the Ogden tables (males Table 9 and females Table 10) assuming no impairment, for discount rates of -0.75% per annum and -0.25% per annum

Ogden Tables Impact of the change from 7th Edition to 8th Edition

In July 2020 the Government Actuary's Department released the Actuarial tables for use in personal injury and fatal accident cases – 8th edition. The multipliers published in the 8th edition were calculated using mortality rates from the 2018-based projections, compared with the 7th edition where multipliers were calculated using mortality rates from the 2008-based projections.

Somewhat surprisingly, given the previous upward trend in the projected life expectancy data, the expectations of life (and hence the multipliers derived from them at all discount rates and ages) in the 8th edition of the Ogden tables are lower than in the 7th edition, notwithstanding the 10 year difference in the data. This reflects both the lower decreases in mortality than previously projection between 2008 and 2018 and more pessimistic assumptions adopted by the ONS regarding the future rates of improvement of mortality at some ages over the next few years, but especially at older ages.

Figures 53 and Figure 54 illustrate the percentage increases (in this case decreases for pecuniary loss) in the whole of life and loss of earnings multipliers by age at trial and gender, from the 7th edition to 8th edition of the Ogden tables (using a -0.25% discount rate).

Age at Date of Trial	Males			Females		
	Ogden 7th Edition (1)	Ogden 8th Edition (2)	Percentage Increase ((2) - (1)) / (1)	Ogden 7th Edition (1)	Ogden 8th Edition (2)	Percentage Increase ((2) - (1)) / (1)
5	93.74	92.47	-1.4%	98.11	95.61	-2.5%
10	86.89	85.71	-1.4%	91.28	88.90	-2.6%
20	73.56	72.46	-1.5%	77.94	75.75	-2.8%
30	60.83	59.75	-1.8%	65.03	63.00	-3.1%
40	48.76	47.63	-2.3%	52.64	50.75	-3.6%
50	37.30	36.24	-2.8%	40.88	39.09	-4.4%
60	26.95	25.68	-4.7%	30.00	28.20	-6.0%

Figure 53: Multipliers for pecuniary loss for life from the Ogden tables (males Table 1 and females Table 2) assuming no impairment, for Ogden tables 7th edition and 8th edition for discount rate -0.25% per annum

Age at Date of Trial	Males			Females		
	Ogden 7th Edition (1)	Ogden 8th Edition (2)	Percentage Increase ((2) - (1)) / (1)	Ogden 7th Edition (1)	Ogden 8th Edition (2)	Percentage Increase ((2) - (1)) / (1)
20	46.34	46.53	0.4%	46.91	46.95	0.1%
30	35.41	35.55	0.4%	35.90	35.93	0.1%
40	24.89	24.97	0.3%	25.23	25.27	0.2%
50	14.73	14.81	0.5%	14.92	14.96	0.3%
60	4.92	4.93	0.2%	4.96	4.97	0.2%

Figure 54: Multipliers for loss of earnings to pension age 65 from the Ogden tables (males Table 9 and females Table 10) assuming no impairment, for Ogden tables 7th edition and 8th edition for discount rate -0.25% per annum

Impact of the change in the Ogden discount rate

Qualitative indications

Since 2017 the IFoA PPO Working Party has asked questions specifically in relation to the changes in the Ogden discount rate to -0.75% per annum and -0.25% per annum within the qualitative survey.

In this section, we provide some of the key highlights of the responses to these questions. We provide more detail around the other questions asked in the qualitative survey in Appendix T of this report.

All of the participating insurers valued non-PPO claims within the Actuarial Best Estimate reserves on an Ogden -0.25% per annum basis (i.e. the prevailing discount rate) however some respondents noted that they had succeeded in settling large claims at rates higher than -0.25% per annum since the Ogden discount rate change (i.e. at 0% per annum to +1% per annum).

Participating insurers were asked what percentage change (relative to an Ogden 2.5% per annum basis) in PPO propensity they assumed as part of their Actuarial Best Estimate calculations. There were a wide range of responses from no reduction to an 80% reduction, with the majority of participants assuming a 50% reduction.

Participating insurers were asked what their assumed reductions in PPO propensity would be (relative to an Ogden 2.5% per annum basis), from scenario analyses, if the Ogden discount rate moved to between 1.0% and -1.5% per annum. Generally, the lower the discount rate, the larger the percentage decrease in PPO propensity participating insurers expected. However, some participating insurers expected the same reduction in propensity across multiple scenarios. 4 participants responded to this question. Figure 55 shows the distribution of assumed PPO propensity reduction by Ogden discount rate.

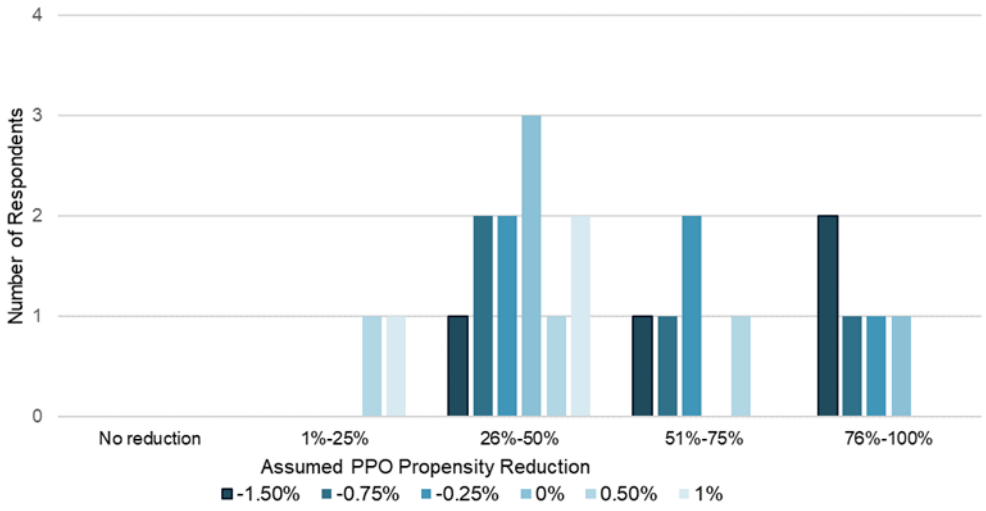

Figure 55: Assumed PPO propensity reduction by Ogden discount rate

In terms of additional reserve margins for further reductions in the Ogden discount rate, this was often as part of a general margin, with no participants holding an explicit margin for this.

Participating insurers were asked if they had seen any changes in the speed of settlement of claims or in claimant / lawyer behaviour.

Around half of insurers said that they had noticed a slowing down of claim settlements, particularly in the period running up to the rate change announcement on 27 February 2017, with the remaining half saying they had seen no difference. Most insurers noted that settlement speeds have started to pick up with no large backlog of open claims caused by Ogden uncertainty.

Quantitative indications

As part of our analysis on the 2021 year-end data we have captured the change to PPO propensity following the changes in the Ogden discount rate in March 2017 and August 2019.

Below shows the impact of this Ogden Adjustment on PPO Propensity. Details on methodology are provided in Appendix C.

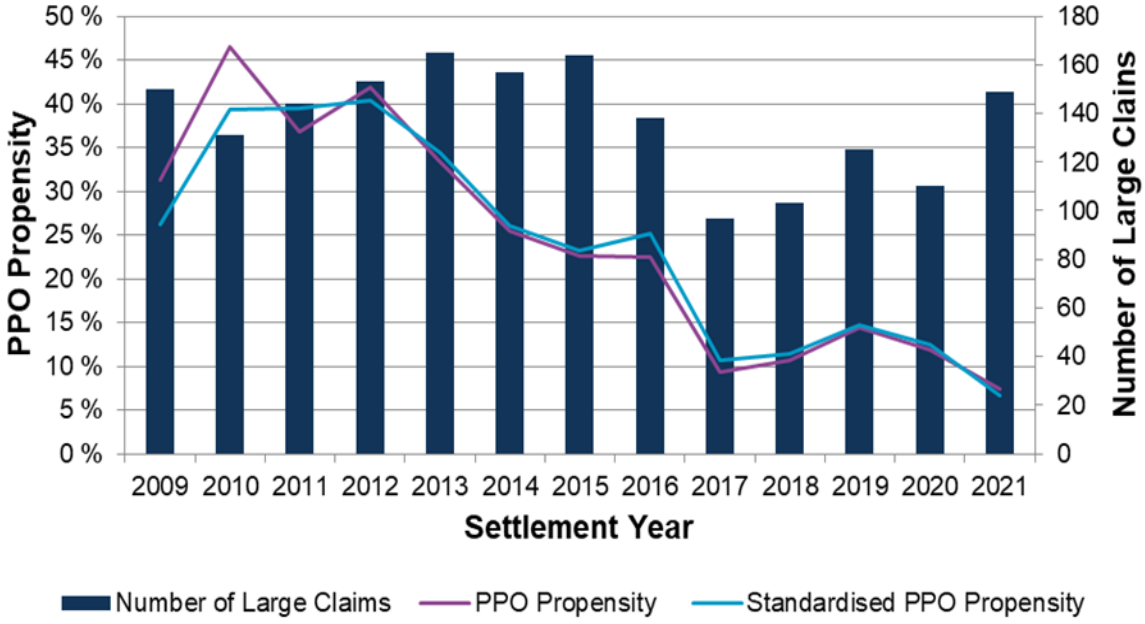

Figure 56: Motor (non-MIB) PPO propensity and standardised Motor (non-MIB) PPO propensity, by settlement year, without an Ogden adjustment

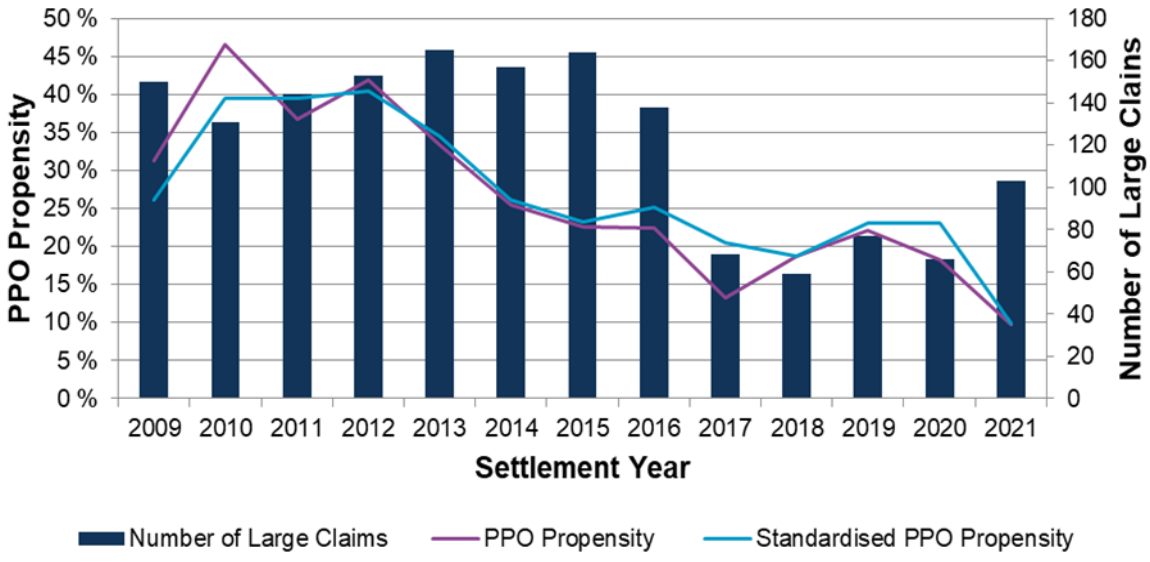

Figure 57: Motor (non-MIB) PPO propensity and standardised Motor (non-MIB) PPO propensity, by settlement year, with an Ogden adjustment

The charts above show some interesting developments following the change in the Ogden discount rate in March 2017. On an Ogden adjusted basis, the number of large claims, represented by the bars, has seen a large reduction compared with the 2016 and prior settlement years. This is surprising as we would expect there to now be more large claims above £1 million. We have previously suggested that this could be a result of a slowing down in the settlement of claims, driven by the uncertainty surrounding the Ogden discount rate, as well as an impact of COVID-19 court closures and delays. Questions regarding settlement rates were asked as part of the qualitative survey, documented in Appendix T, and indicate that whilst there were some backlogs whilst the Ogden discount rate was at -0.75%, these have now cleared. There has been an increase in the number of large claims settling in 2021 compared with 2017-2020 which is potentially driven by any backlogs starting to clear.

On a non-Ogden adjusted basis, the standardised Motor (non-MIB) PPO propensity has decreased from 12.5% in settlement year 2020 to 6.6% in settlement year 2021 (a decrease from 11.8% to 7.4% on a non-standardised basis). The weighted average standardised Motor (non-MIB) PPO propensity was 24.9% (25.2% on a non-standardised basis).

On an Ogden adjusted basis the standardised Motor (non-MIB) PPO propensity has decreased from 23.0% in settlement year 2020 to 9.9% in settlement year 2021. The standardised propensity seen on the 2017-2020 settlement years is broadly the same level as the average seen across the 2014-2016 settlement years, which may suggest that the reduction in propensity seen in 2017 is primarily driven by the numerical impact of the Ogden discount rate change. It is not clear what is driving the sharp reduction in propensity seen in the 2021 settlement year. The weighted average standardised Motor (non-MIB) PPO propensity was 28.5% (28.4% on a non-standardised basis).

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Appendix A Glossary of terms

ASHE	Annual Survey of Hours and Earnings
AWE	Average Weekly Earnings
Capitalisation clause	A clause which allows (or even compels) a reinsurer to settle an individual PPO liability as a lump sum with an insurer, on a pre-agreed basis, once such an award has been made / agreed
EIOPA	European Insurance and Occupational Pensions Authority
FRC	Financial Reporting Council
GAAP	Generally Accepted Accounting Principles
IFoA	Institute and Faculty of Actuaries
IFRS	International Financial Reporting Standards
ILG(s)	Index-linked gilt(s)
MoJ	Ministry of Justice
Ogden tables	Government Actuary's Department's "Actuarial Tables with explanatory notes for use in Personal Injury and Fatal Accident Cases" published by The Stationery Office
ONS	Office for National Statistics
ORSA	Own Risk and Solvency Assessment
PPO(s)	Periodical Payment Order(s)
PRA	Prudential Regulation Authority
RPI	Retail Prices Index
RTA	Road Traffic Act
SCR	Solvency Capital Requirement (under the Solvency II regime)
TAS	Technical Actuarial Standard
XoL	Excess of Loss (reinsurance programme)

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Appendix B Standardisation for PPO propensity statistics

The data collected for the quantitative industry survey clearly shows that the likelihood of a claim settling as a PPO varies with the size of the claim, with larger claims being more likely to have settled as a PPO (see Figure G.18 and Figure H.8, for example).

In our statistics looking at the change in PPO propensity by settlement year, we have therefore considered a standardised PPO propensity which adjusts for (or removes) the volatility in the PPO propensity arising from differences in the mix of large claims by amount between years.

In this appendix, we explain the standardisation basis for Motor (non-MIB) claims and for Liability claims. The data collected from the MIB does not include non-PPO large claims, and so we are not able to produce PPO propensity statistics or standardised PPO propensity statistics for MIB claims.

B.1 Standardisation for Motor (non-MIB) claims

Figure B.1 shows the proportion of Motor (non-MIB) large claims in each claim size band, for each settlement year. The claim size thresholds are defined in 2011 terms, indexed at 7% per annum.

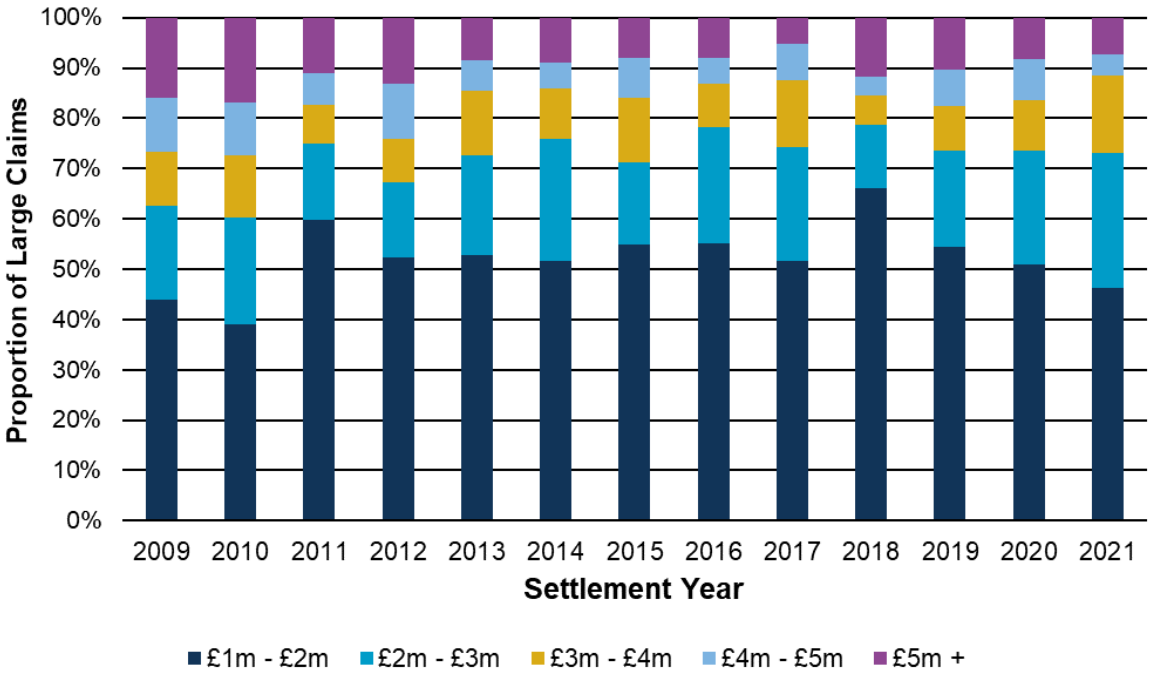

Figure B.1: Proportion of Motor (non-MIB) large claims in each claim size band, by settlement year

Averaging across settlement years 2009 to 2021 gives the proportion of large claims in each claim size band shown in Figure B.2, and this is the large claim distribution that underlies the standardised Motor (non-MIB) PPO propensity figures discussed in this report.

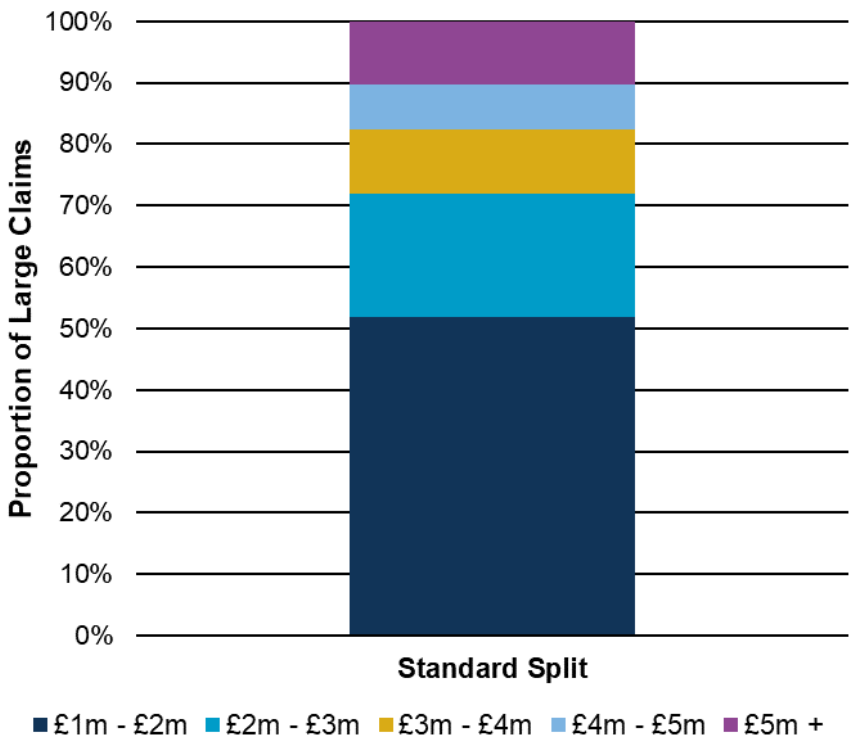

Figure B.2: Proportion of Motor (non-MIB) large claims in each claim size band, averaged across settlement years 2009 to 2021 inclusive, used for standardisation

The standardised Motor (non-MIB) PPO propensity for a given year is estimated by combining the Motor (non-MIB) PPO propensities for each claim size band for that settlement year, as shown in Figure G.19, with the proportion of large claims in each claim size band shown in Figure B.2.

B.2 Standardisation for Liability claims

Figure B.3 shows the proportion of Liability large claims in each claim size band, for each settlement year. The claim size thresholds are defined in 2011 terms, indexed at 7% per annum. Averaging across settlement years 2009 to 2021 (for consistency with the Motor analysis) gives the proportion of large claims in each claim size band shown in Figure B.4, and this is the large claim distribution that underlies the standardised Liability PPO propensity figures discussed in this report. The standardised Liability propensity for a given year is estimated by combining the Liability PPO propensities for each claim size band for that settlement year, as shown in Figure H.10, with the proportion of large claims in each claim size band shown in Figure B.4.

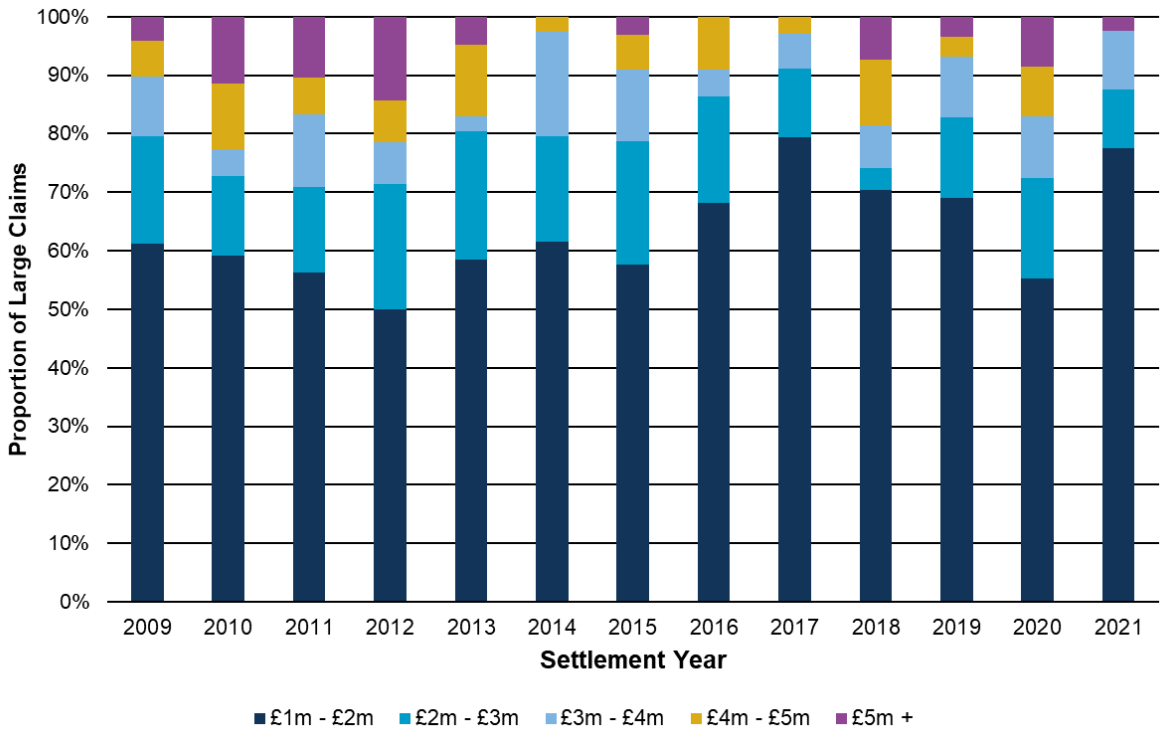

Figure B.3: Proportion of Liability large claims in each claim size band, by settlement year

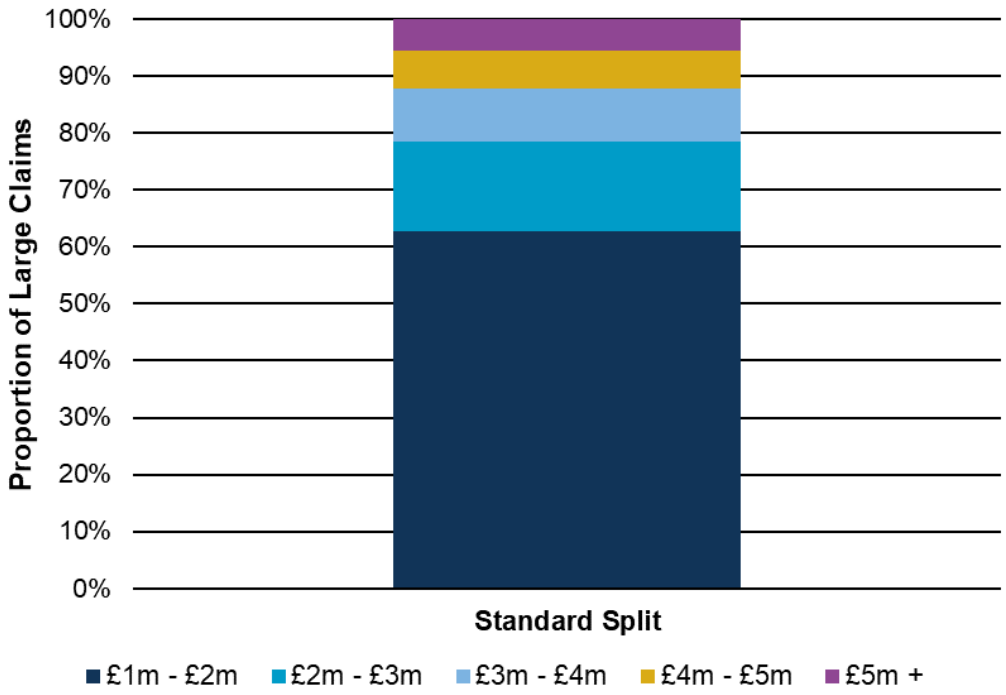

Figure B.4: Proportion of Liability large claims in each claim size band, averaged across settlement years 2009 to 2021 inclusive, used for standardisation

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Appendix C Definitions of large claims, and incremental and cumulative thresholds

C.1 Large claims

The PPO propensity statistics discussed in this report are defined as the number of PPO claims as a proportion of large claims.

The definition of a large claim is a claim that is greater than £1 million in 2011 terms, indexed at 7% per annum (based on the historical claims inflation seen within the Third Party Working Party analysis). So, if considering settlement year, a claim settling in 2008 is deemed large if it is greater than £816,298 (£1,000,000 x 1.07^{-3}), and a claim settling in 2021 is deemed large if it is greater than £1,967,151 (£1,000,000 x 1.07^{10}).

In a number of the analyses summarised in this report, we consider claims in various claim size bands. In each case, the claim size thresholds are also defined in 2011 terms, indexed at 7% per annum. A claim falls in a given band if it is greater than or equal to the lower bound of the band, but less than the upper bound of the band (where there is an upper bound). For PPO claims, the claim size is determined by calculating the discounted total cost (using a real discount rate as outlined in Appendix D).

C.2 Incremental threshold and cumulative threshold

A number of the analyses are described as using incremental thresholds and cumulative thresholds.

In an incremental threshold analysis, a claim will only fall in a single claim size band. In a cumulative threshold analysis, a claim may fall in multiple claim size bands.

For example, considering the two Motor (non-MIB) PPO propensity figures below, a £3.25 million claim (in 2011 terms) will fall in the £3m-£4m band in Figure C.1, and it will fall in each of the £1m+, £1.5m+, £2m+, £2.5m+ and £3m+ bands in Figure C.2.

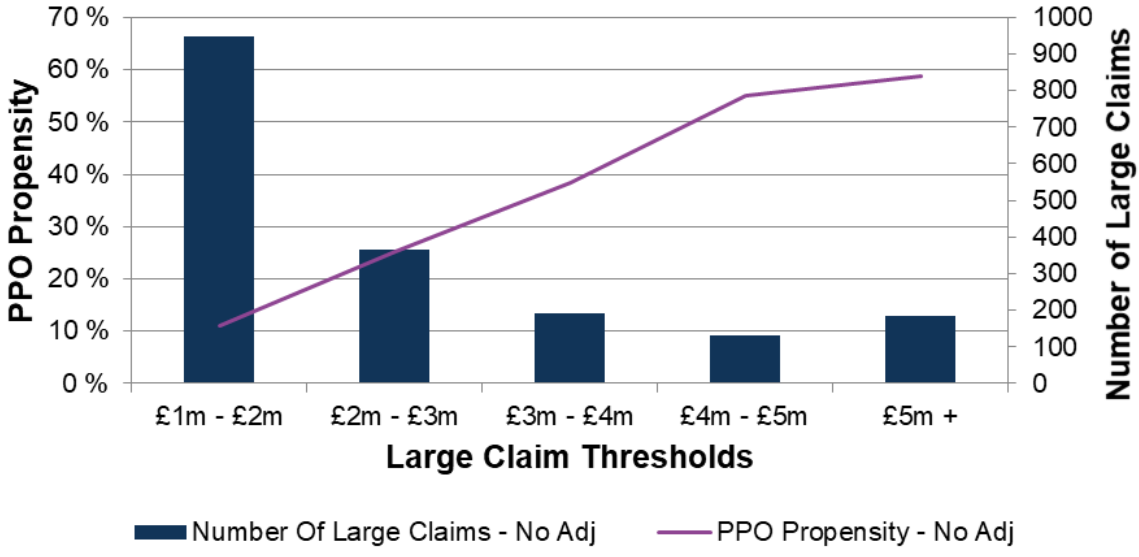

Figure C.1: Motor (non-MIB) PPO propensity, by incremental large claim threshold band (2011 terms), for claims settled since 2009

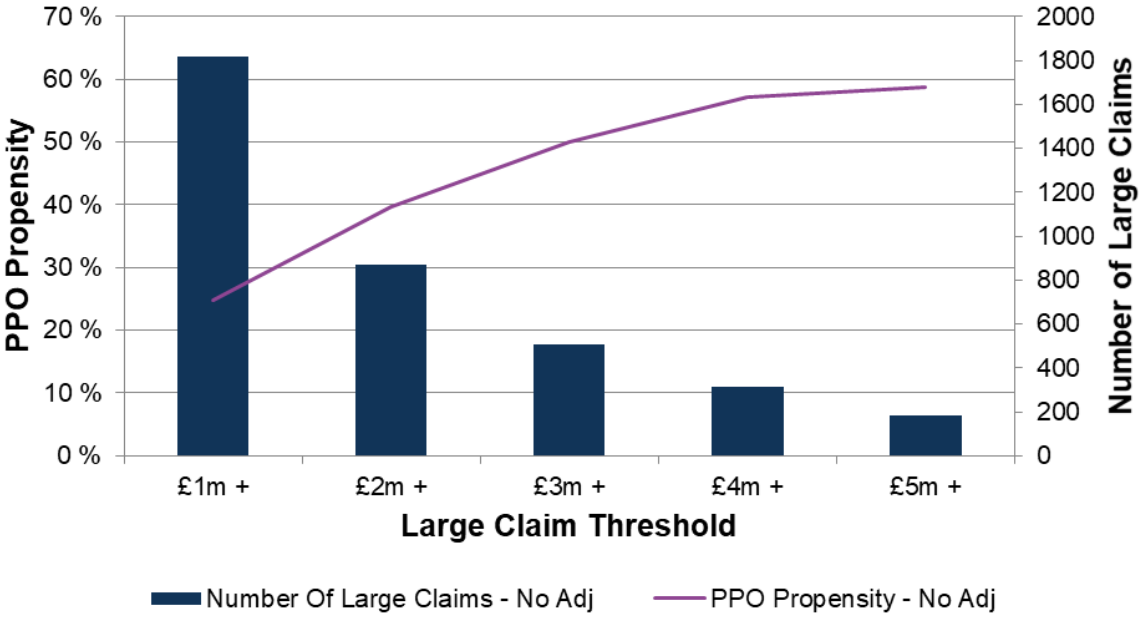

Figure C.2: Motor (non-MIB) PPO propensity, by cumulative large claim threshold band (2011 terms), for claims settled since 2009

Appendix D Standardisation for differing Ogden discount rates

The data collected for the analysis in this report includes two different Ogden Discount Rate environments. This affects the valuation of the large non-PPO claims and also how we value the Ogden equivalent value for PPOs within our analysis.

By way of example, during the period post 20 March 2017 we would expect there to be more large claims above £1 million as the discount rate used to value them has decreased significantly. We might expect this to affect PPO Propensity as less significant injuries which would have a lower chance of becoming a PPO are now valued above a million and are captured in our analysis.

As part of our analysis, therefore, we have provided results on a basis consistent with all claims being values at a 2.5% Ogden Discount Rate. In order to revalue the large claims post 20 March 2017 we have used the claimant's characteristics, the discount rate used when settling the claim and the Ogden table multipliers.

In terms of the value taken in our analysis for PPOs, we have used the Ogden equivalent value to best match the large claims basis at that point in time. The Ogden equivalent PPO value discount rate for claims between 20 March 2017 and 5 August 2019 of 0.5% is based on the results of our market research for the qualitative survey. For claims settling post 5 August 2019 we have assumed an Ogden equivalent PPO value discount rate in line with the prevailing Ogden discount rate of -0.25%. The table below shows the rates we have used for our unadjusted and adjusted basis.

Time period / adjusted or not	Ogden equivalent PPO value discount rate	Large Claim discount rate
Pre March 2017	2.5%	2.5%
March 2017 – August 2019 (unadjusted)	0.5%	Rate used in settlement
Post August 2019 (unadjusted)	-0.25%	Rate used in settlement
Post March 2017 (adjusted)	2.5%	2.5%

Figure D.1: Discount rates used for propensity analysis

When a "raw" PPO propensity is mentioned we are referencing the unadjusted, unstandardised figure.

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Appendix E Summary statistics for all PPO claims

In this appendix, we provide summary statistics for all of the PPO claims in the quantitative industry survey, for the following characteristics:

- Age of claimant at settlement (years)
- Delay from accident date until settlement date (years)
- Future life expectancy at settlement date (years)
- Life expectancy reduction (years)
- Initial annual PPO payment (summed across all heads of damage) (£ nominal)
- Lump sum payment (£ nominal).

The figures are shown cumulative across all settlement years, and also separately for the pre-2021 settlement years and the 2021 settlement year alone.

In this year's survey there is only one Liability claim in the 2021 settlement year, so no summary statistics are displayed for this cohort. Additionally, where a limited number of claims are available in a given cohort, summary statistics are not provided for reasons of data protection, e.g. Figure E.5.

The figures have not been adjusted for inflation and so may under-estimate the size profile of future PPO claims. It is worth noting that the average settlement date of a PPO claim contained within the quantitative industry survey is as follows:

- The average settlement date of a non-MIB Motor PPO claim is March 2013.
- The average settlement date of a MIB Motor PPO claim is March 2013.
- The average settlement date of a Liability PPO claim is November 2012.

E.1 Motor (non-MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	34.4	28.8	17.1	1.0	539
Delay until settlement	6.4	5.6	3.4	1.7	539
Future life expectancy at settlement	41.8	43.7	18.1	-0.3	523
Life expectancy reduction	15.3	13.2	11.9	1.6	522
Annual PPO payment (£)	98,241	67,000	89,937	1.8	539
Lump sum (£)	1,897,024	1,700,000	1,376,028	1.6	537
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	34.2	28.6	17.0	1.0	528
Delay until settlement	6.4	5.6	3.4	1.6	528
Future life expectancy at settlement	42.0	43.8	17.9	-0.4	512
Life expectancy reduction	15.2	13.1	11.9	1.6	511
Annual PPO payment (£)	96,658	65,821	87,870	1.9	528
Lump sum (£)	1,875,790	1,689,807	1,359,749	1.6	526
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	41.0	43.4	22.3	0.0	11
Delay until settlement	5.8	5.1	3.1	2.4	11
Future life expectancy at settlement	31.5	32.7	20.3	0.4	11
Life expectancy reduction	18.0	13.4	11.1	1.4	11
Annual PPO payment (£)	174,211	87,323	140,845	0.3	11
Lump sum (£)	2,912,412	2,900,000	1,723,502	1.8	11

Figure E.1: Summary statistics for Motor (non-MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	33.3	26.2	16.7	1.0	403
Delay until settlement	6.3	5.6	3.2	1.7	403
Future life expectancy at settlement	42.9	45.0	17.6	-0.4	395
Life expectancy reduction	15.2	12.9	12.2	1.6	394
Annual PPO payment (£)	95,750	60,000	93,293	2.0	403
Lump sum (£)	1,943,416	1,700,000	1,365,814	1.7	402
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	33.1	26.1	16.6	1.1	396
Delay until settlement	6.4	5.6	3.2	1.7	396
Future life expectancy at settlement	43.2	45.1	17.4	-0.4	388
Life expectancy reduction	15.1	12.9	12.2	1.6	387
Annual PPO payment (£)	93,142	60,000	90,286	2.1	396
Lump sum (£)	1,924,152	1,700,000	1,341,318	1.7	395
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	45.4	44.1	21.7	-0.1	7
Delay until settlement	4.6	4.4	1.4	0.5	7
Future life expectancy at settlement	24.6	15.7	17.8	0.7	7
Life expectancy reduction	20.5	14.4	12.4	1.1	7
Annual PPO payment (£)	243,286	310,000	133,330	-0.9	7
Lump sum (£)	3,030,445	3,020,940	2,098,767	1.5	7

Figure E.2: Summary statistics for Private Motor (non-MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	37.6	32.9	17.8	0.8	136
Delay until settlement	6.6	5.6	3.8	1.4	136
Future life expectancy at settlement	38.5	40.1	19.0	-0.2	128
Life expectancy reduction	15.6	13.7	11.0	1.5	128
Annual PPO payment (£)	105,624	86,458	78,702	1.0	136
Lump sum (£)	1,758,881	1,644,570	1,396,907	1.4	135
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	37.7	32.9	17.7	0.8	132
Delay until settlement	6.5	5.5	3.8	1.5	132
Future life expectancy at settlement	38.3	40.1	18.9	-0.2	124
Life expectancy reduction	15.7	13.8	11.2	1.5	124
Annual PPO payment (£)	107,208	87,083	79,257	1.0	132
Lump sum (£)	1,729,965	1,600,000	1,403,818	1.4	131
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	33.4	30.9	21.3	0.4	4
Delay until settlement	7.9	6.2	4.0	1.8	4
Future life expectancy at settlement	43.6	44.4	18.9	-0.2	4
Life expectancy reduction	13.5	11.7	6.3	1.3	4
Annual PPO payment (£)	53,331	50,000	21,935	0.8	4
Lump sum (£)	2,705,856	2,731,711	627,120	-0.2	4

Figure E.3: Summary statistics for Commercial Motor (non-MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	34.2	27.7	17.3	0.9	258
Delay until settlement	6.2	5.4	3.0	1.8	258
Future life expectancy at settlement	40.6	42.8	17.7	-0.3	256
Life expectancy reduction	16.2	14.1	12.6	1.7	255
Annual PPO payment (£)	107,276	70,000	103,190	1.9	258
Lump sum (£)	1,848,925	1,615,000	1,334,955	1.2	258
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	34.1	27.5	17.1	0.9	253
Delay until settlement	6.2	5.4	3.0	1.8	253
Future life expectancy at settlement	40.9	42.9	17.6	-0.3	251
Life expectancy reduction	16.0	13.9	12.6	1.7	250
Annual PPO payment (£)	104,254	67,269	100,954	2.0	253
Lump sum (£)	1,820,092	1,600,000	1,289,608	1.0	253
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	41.8	44.1	21.7	0.0	5
Delay until settlement	5.2	5.1	1.3	-0.2	5
Future life expectancy at settlement	24.2	15.7	17.2	1.2	5
Life expectancy reduction	24.3	19.3	12.8	0.5	5
Annual PPO payment (£)	260,200	310,000	99,492	-1.6	5
Lump sum (£)	3,307,874	3,020,940	2,373,545	1.3	5

Figure E.4: Summary statistics for Private Comprehensive Motor (non-MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	27.2	23.6	11.8	1.4	50
Delay until settlement	8.0	6.6	3.9	1.2	50
Future life expectancy at settlement	50.2	52.1	14.4	-0.6	49
Life expectancy reduction	13.9	11.7	11.7	1.5	49
Annual PPO payment (£)	70,831	52,879	52,007	1.2	50
Lump sum (£)	1,820,759	1,692,450	869,608	0.3	50

Figure E.5: Summary statistics for Private Non-Comprehensive Motor (non-MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	32.2	26.2	15.9	1.1	327
Delay until settlement	6.8	5.8	3.4	1.6	327
Future life expectancy at settlement	44.9	47.4	17.5	-0.4	317
Life expectancy reduction	14.3	10.7	12.8	1.9	316
Annual PPO payment (£)	89,661	60,000	79,067	1.9	327
Lump sum (£)	1,989,367	1,818,948	1,305,644	2.2	326
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	32.2	26.2	15.9	1.1	321
Delay until settlement	6.8	5.8	3.4	1.6	321
Future life expectancy at settlement	45.0	47.5	17.4	-0.5	311
Life expectancy reduction	14.2	10.5	12.8	1.9	310
Annual PPO payment (£)	88,125	60,000	76,679	1.9	321
Lump sum (£)	1,971,123	1,818,948	1,272,954	2.1	320
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	31.8	29.1	15.4	0.5	6
Delay until settlement	6.5	5.6	3.9	1.8	6
Future life expectancy at settlement	37.2	38.7	20.3	0.0	6
Life expectancy reduction	21.3	16.9	13.5	0.7	6
Annual PPO payment (£)	171,833	157,500	138,819	0.1	6
Lump sum (£)	2,962,395	2,415,470	2,288,221	1.6	6

Figure E.6: Summary statistics for Brain injury Motor (non-MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	40.0	33.9	18.9	0.5	99
Delay until settlement	4.5	4.3	2.0	2.0	99
Future life expectancy at settlement	35.3	37.5	16.1	-0.2	95
Life expectancy reduction	16.7	15.7	7.8	0.5	95
Annual PPO payment (£)	126,429	86,250	117,111	1.6	99
Lump sum (£)	2,564,797	2,275,000	1,381,720	1.4	98
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	39.4	33.7	18.3	0.6	94
Delay until settlement	4.5	4.2	2.1	2.1	94
Future life expectancy at settlement	35.9	38.3	15.8	-0.2	90
Life expectancy reduction	16.8	16.3	7.9	0.5	90
Annual PPO payment (£)	123,735	85,625	114,936	1.7	94
Lump sum (£)	2,549,333	2,194,134	1,412,062	1.4	93
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	52.1	62.9	24.2	-1.3	5
Delay until settlement	5.0	4.5	1.1	0.4	5
Future life expectancy at settlement	24.7	18.6	18.1	1.0	5
Life expectancy reduction	14.0	12.8	5.1	1.8	5
Annual PPO payment (£)	177,065	87,323	143,185	0.7	5
Lump sum (£)	2,852,433	2,900,000	495,246	-0.2	5

Figure E.7: Summary statistics for Spinal injury Motor (non-MIB) PPO claims

E.2 Liability PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	44.9	50.5	19.9	-0.5	59
Delay until settlement	6.7	5.3	6.3	5.2	59
Future life expectancy at settlement	27.5	25.3	17.6	0.8	53
Life expectancy reduction	19.8	14.6	18.1	1.8	53
Annual PPO payment (£)	82,626	50,000	84,257	1.2	59
Lump sum (£)	1,543,897	1,300,000	1,061,375	0.8	59

Figure E.8: Summary statistics for Liability PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	46.1	50.5	20.7	-0.5	31
Delay until settlement	6.7	5.9	3.4	1.5	31
Future life expectancy at settlement	29.4	26.9	20.1	0.6	27
Life expectancy reduction	16.3	10.5	17.9	2.4	27
Annual PPO payment (£)	71,238	46,280	77,443	1.4	31
Lump sum (£)	1,447,146	1,222,507	1,201,324	1.1	31

Figure E.9: Summary statistics for Brain injury Liability PPO claims

E.3 Motor (MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	34.0	29.8	13.4	0.8	215
Delay until settlement	7.4	7.4	3.1	1.4	215
Future life expectancy at settlement	43.6	46.0	16.8	-0.4	215
Life expectancy reduction	13.2	10.8	11.4	1.6	215
Annual PPO payment (£)	63,558	43,520	60,550	2.2	215
Lump sum (£)	1,428,031	1,100,000	1,116,628	2.9	215
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	34.1	29.9	13.3	0.7	209
Delay until settlement	7.4	7.4	3.1	1.4	209
Future life expectancy at settlement	43.4	46.0	16.6	-0.4	209
Life expectancy reduction	13.2	10.8	11.5	1.6	209
Annual PPO payment (£)	62,814	42,750	60,291	2.3	209
Lump sum (£)	1,353,055	1,092,866	1,026,068	3.4	209
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	29.3	22.1	15.2	2.0	6
Delay until settlement	7.4	7.4	0.0		6
Future life expectancy at settlement	49.9	57.5	19.5	-1.2	6
Life expectancy reduction	11.4	11.8	7.4	0.0	6
Annual PPO payment (£)	89,503	76,250	63,746	1.9	6
Lump sum (£)	4,039,715	4,394,146	994,665	-1.6	6

Figure E.10: Summary statistics for Motor (MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	31.7	27.9	12.6	1.1	142
Delay until settlement	7.8	7.4	3.1	1.4	142
Future life expectancy at settlement	48.0	50.0	15.2	-0.6	142
Life expectancy reduction	11.0	9.6	9.8	1.6	142
Annual PPO payment (£)	57,770	45,000	42,074	1.4	142
Lump sum (£)	1,327,780	1,000,000	1,166,175	3.7	142
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	32.0	27.9	12.6	1.0	139
Delay until settlement	7.8	7.4	3.2	1.4	139
Future life expectancy at settlement	47.6	50.0	15.1	-0.6	139
Life expectancy reduction	11.2	9.6	9.8	1.6	139
Annual PPO payment (£)	57,301	44,000	42,397	1.4	139
Lump sum (£)	1,272,624	1,000,000	1,097,964	4.2	139
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	19.4	19.9	1.0	-1.5	3
Delay until settlement	7.4	7.4	0.0		3
Future life expectancy at settlement	65.8	64.5	2.2	1.7	3
Life expectancy reduction	4.4	4.6	2.2	-0.3	3
Annual PPO payment (£)	79,500	77,500	4,708	1.4	3
Lump sum (£)	3,883,333	4,500,000	1,357,899	-1.4	3

Figure E.11: Summary statistics for Brain injury Motor (MIB) PPO claims

All	Mean	Median	Standard Deviation	Skewness	Sample Size
Age at settlement	36.7	34.4	13.1	0.4	36
Delay until settlement	7.1	6.7	3.4	1.3	36
Future life expectancy at settlement	36.0	38.0	14.4	0.0	36
Life expectancy reduction	18.1	17.0	8.7	1.6	36
Annual PPO payment (£)	97,887	50,000	99,103	1.5	36
Lump sum (£)	2,074,995	2,012,500	970,087	0.7	36
Pre 2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	36.5	36.3	12.8	0.3	33
Delay until settlement	7.1	6.4	3.6	1.3	33
Future life expectancy at settlement	36.2	38.0	14.2	0.1	33
Life expectancy reduction	18.1	16.8	9.1	1.5	33
Annual PPO payment (£)	97,739	50,000	99,977	1.6	33
Lump sum (£)	1,882,168	1,922,478	756,718	0.2	33
2021	**Mean**	**Median**	**Standard Deviation**	**Skewness**	**Sample Size**
Age at settlement	39.1	31.8	16.3	1.4	3
Delay until settlement	7.4	7.4	0.0		3
Future life expectancy at settlement	34.0	38.0	15.8	-0.9	3
Life expectancy reduction	18.4	17.2	2.2	1.6	3
Annual PPO payment (£)	99,507	43,520	88,909	1.7	3
Lump sum (£)	4,196,097	4,288,292	293,115	-1.1	3

Figure E.12: Summary statistics for Spinal injury Motor (MIB) PPO claims

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Appendix F Number of PPO claim settlements

In this appendix, we provide summary statistics for the number of PPO claims in the quantitative industry survey, by settlement quarter and by settlement year.

F.1 Motor (non-MIB) PPO claims and Liability PPO claims combined

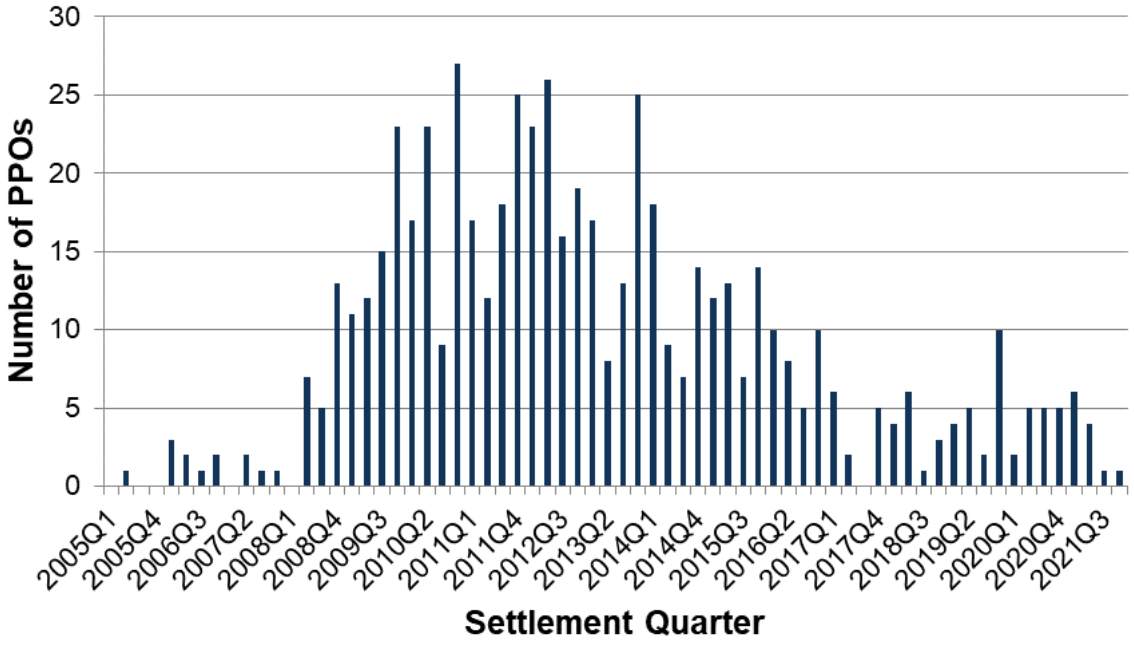

Figure F.1: Number of (non-MIB) PPO claims, by settlement quarter

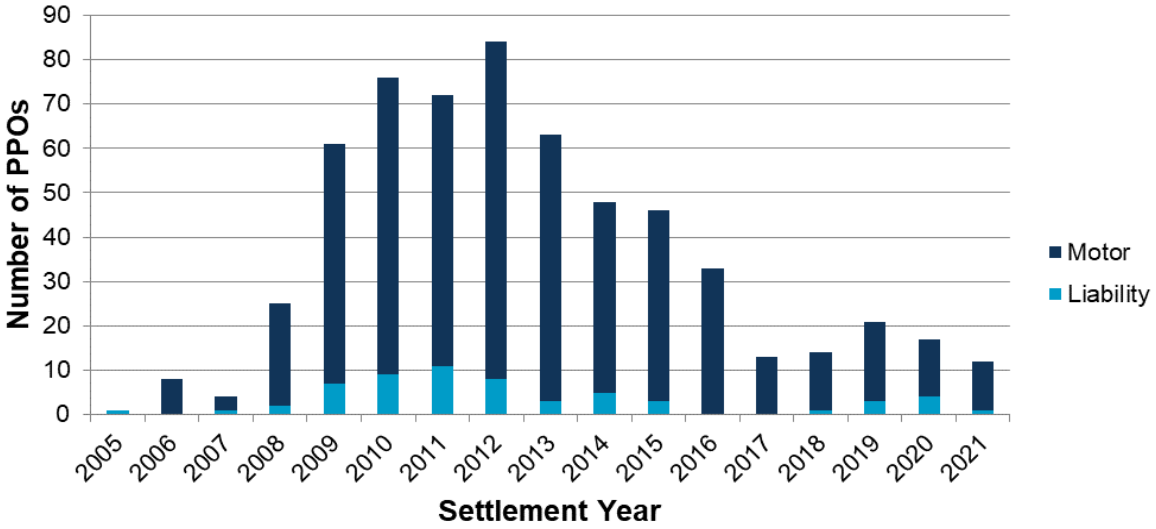

Figure F.2: Number of (non-MIB) PPO claims, by settlement year – Motor and Liability

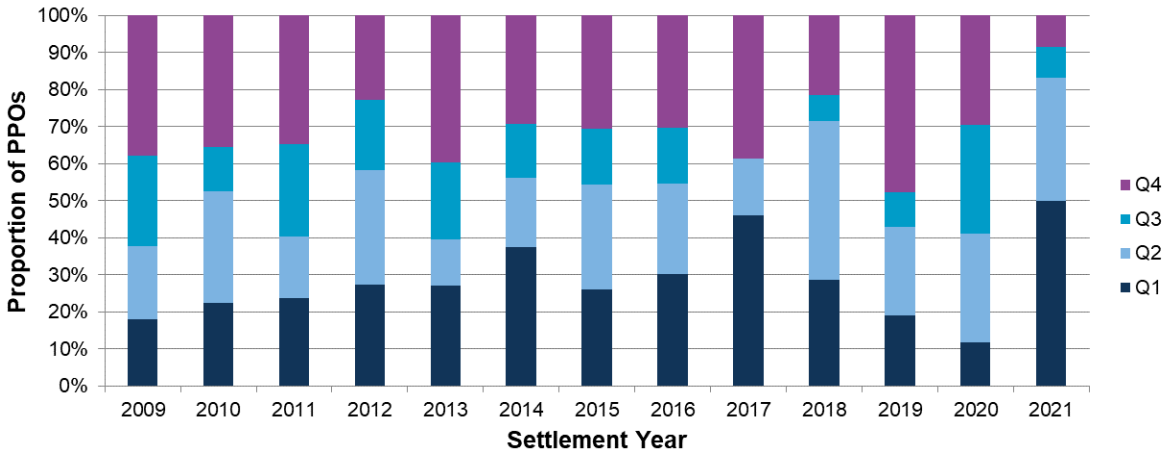

Figure F.3: Proportion of (non-MIB) PPO claims that settle in each quarter, by settlement year

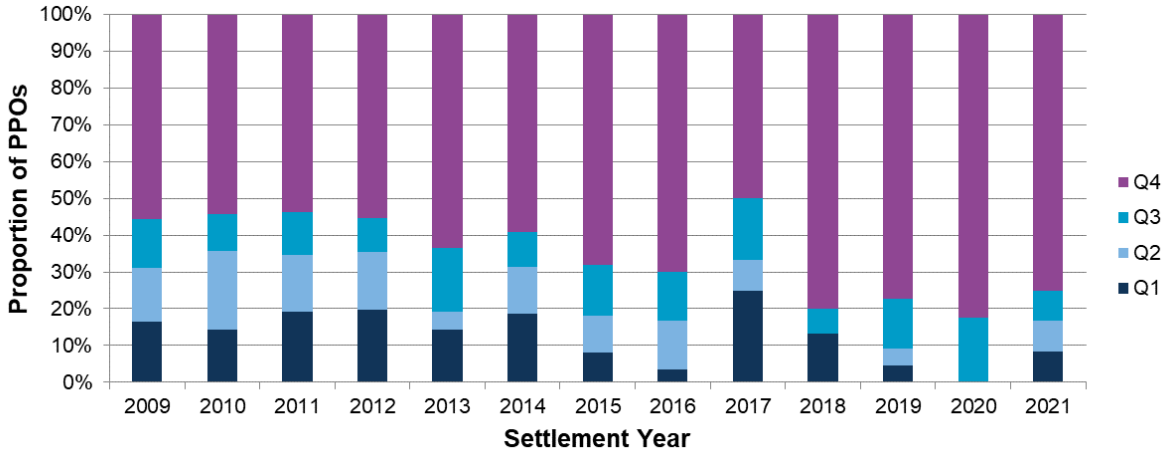

Figure F.4: Proportion of (non-MIB) PPO claims that are paid (i.e. start) in each quarter, by settlement year

F.2 Motor (non-MIB) PPO claims

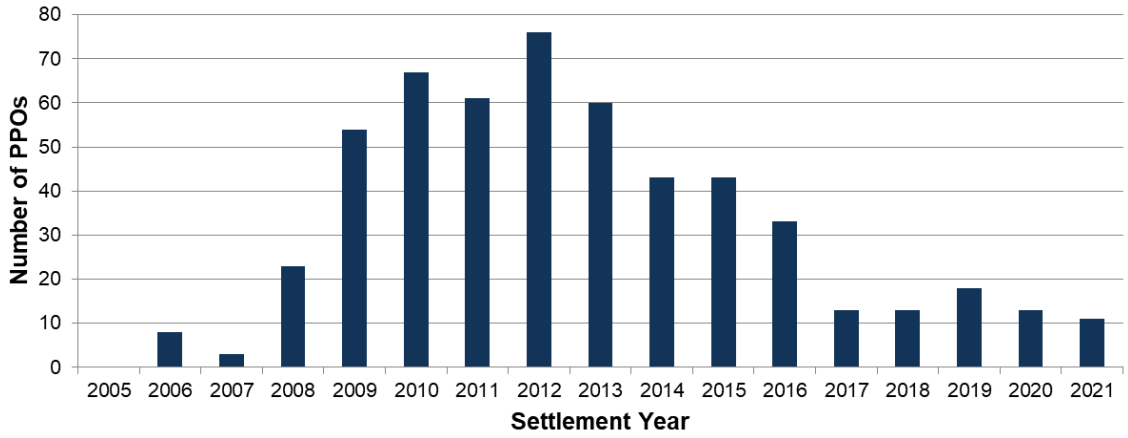

Figure F.5: Number of Motor (non-MIB) PPO claims, by settlement year

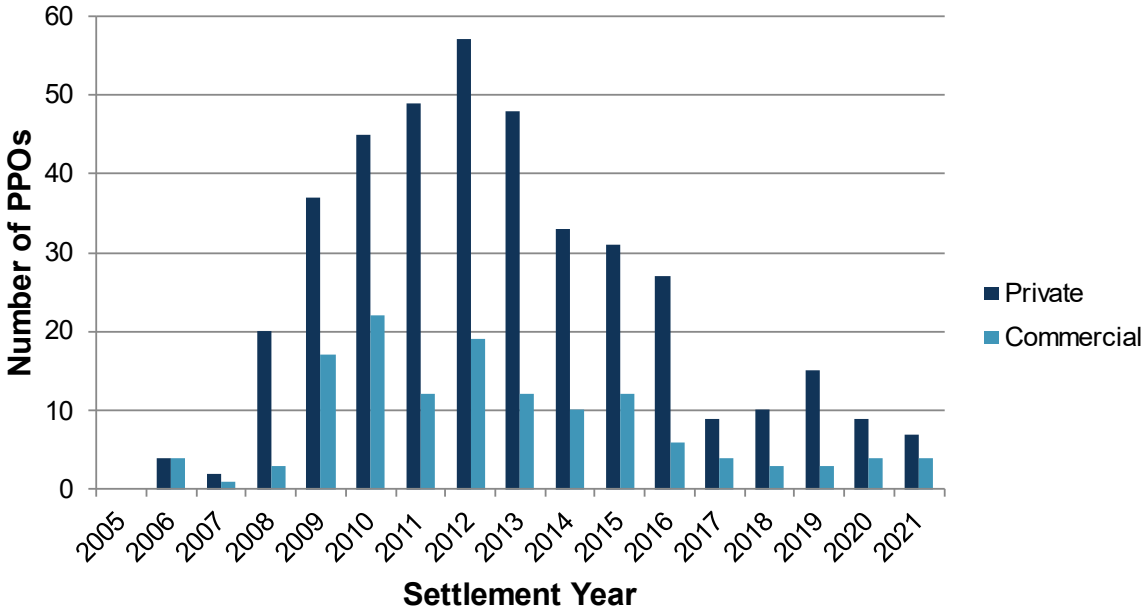

Figure F.6: Number of Motor (non-MIB) PPO claims, for Private and Commercial Motor, by settlement year

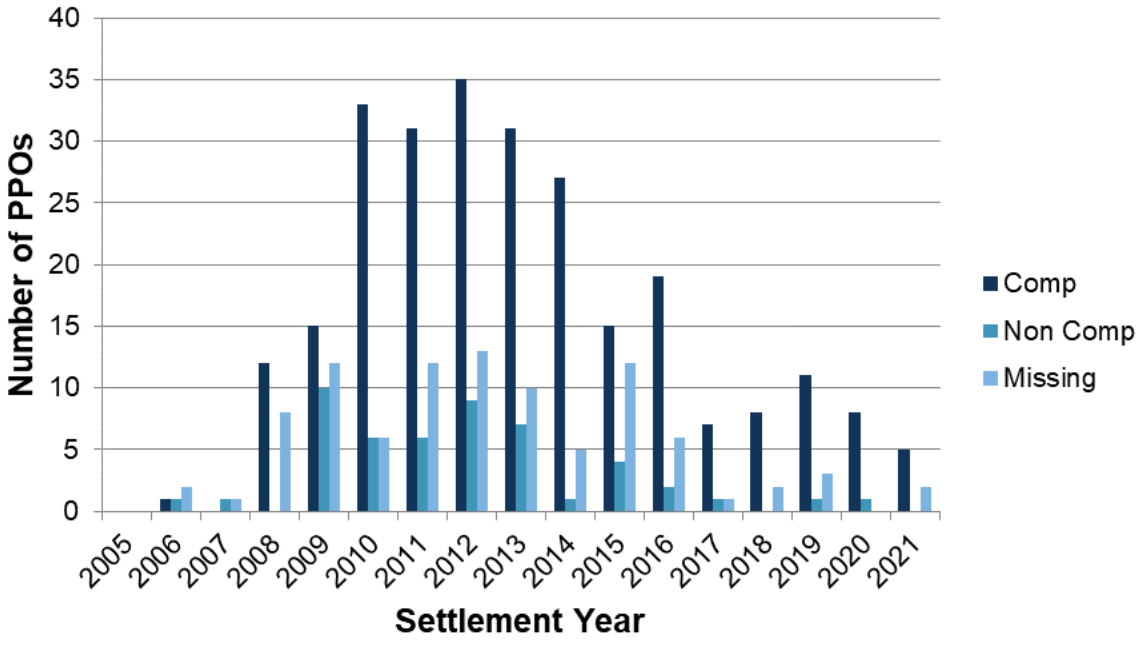

Figure F.7: Number of Motor (non-MIB) PPO claims, for Private Motor, by settlement year and by cover type

F.3 Liability PPO claims

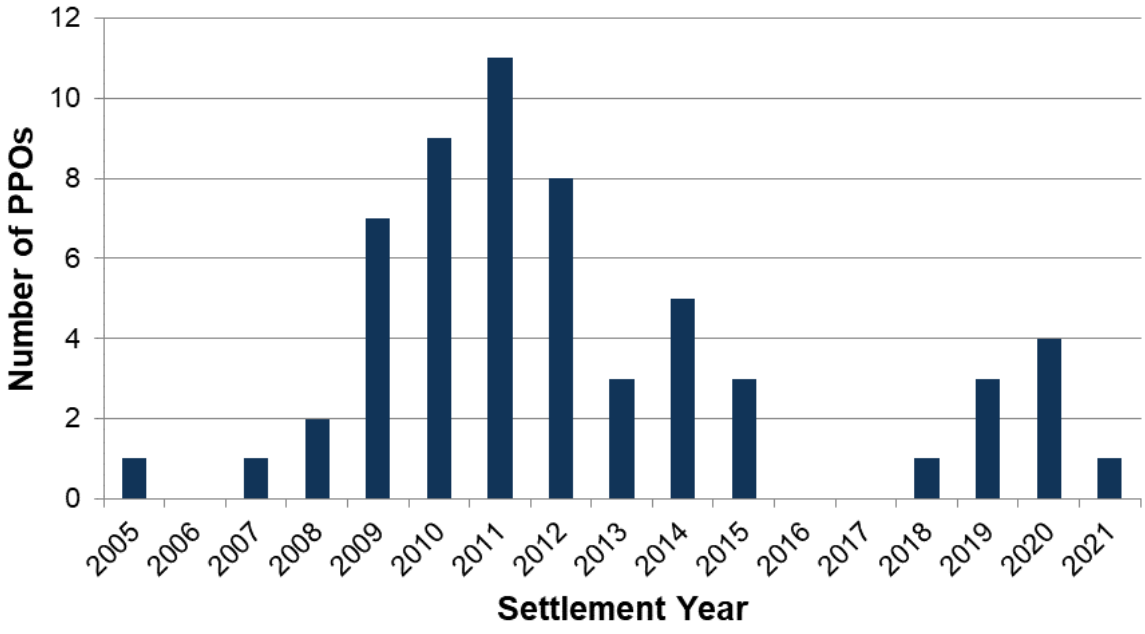

Figure F.8: Number of Liability PPO claims, by settlement year

F.4 Motor (MIB) PPO claims

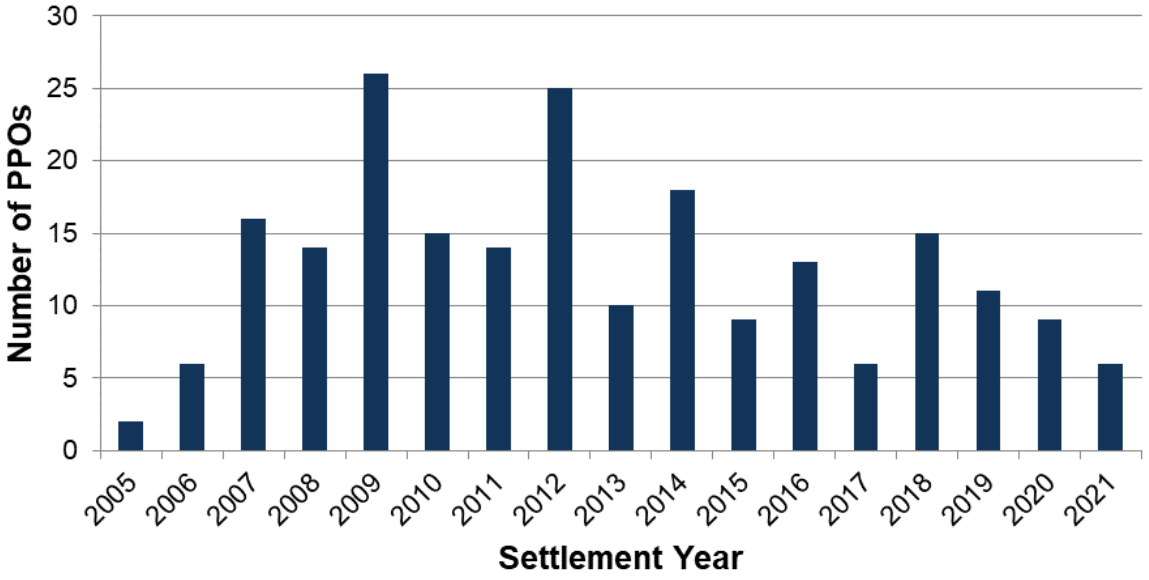

Figure F.9: Number of Motor (MIB) PPO claims, by settlement year

F.5 Motor (MIB) PPO claims versus the rest of the industry (i.e. Motor (non-MIB)) PPO claims

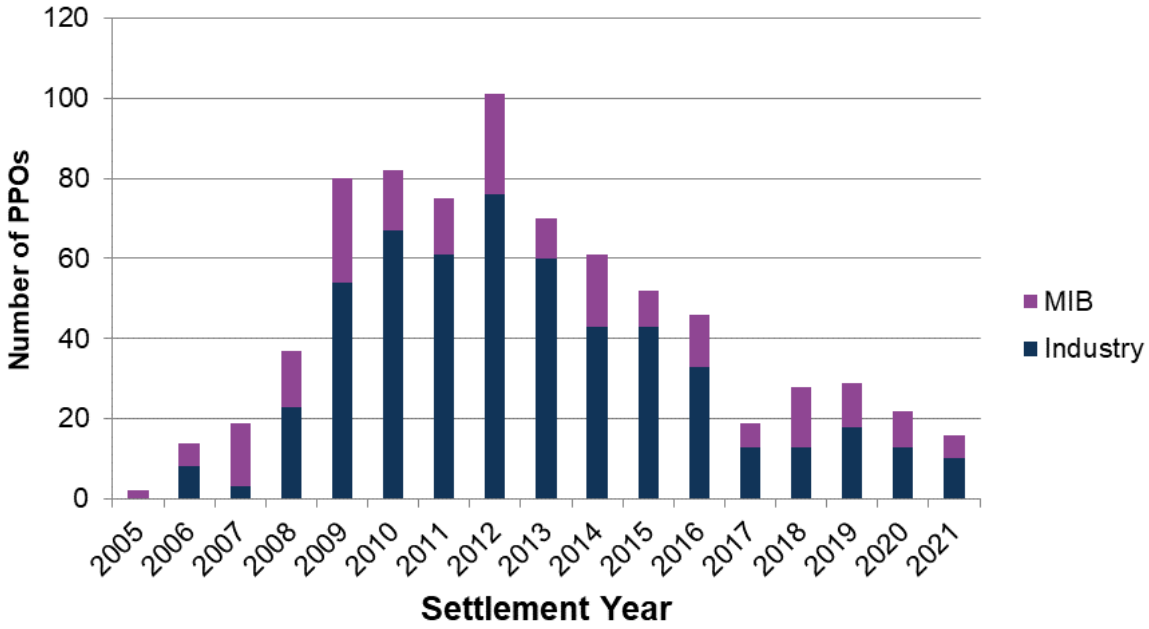

Figure F.10: Number of PPO claims, by settlement year – MIB and the rest of the industry

Figure F.11: Proportion of PPO claims, by settlement year – MIB and the rest of the industry

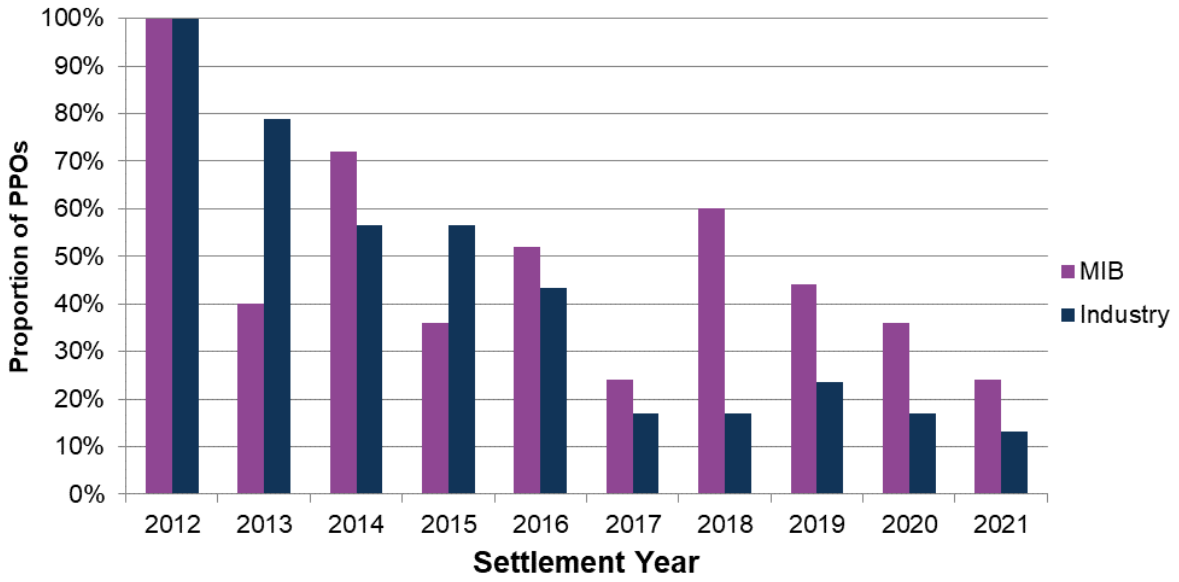

Figure F.12: Relative level of PPO claims compared with 2012 – MIB and the rest of the industry

Appendix G Propensity of Motor (non-MIB) PPO claims

In this appendix, we provide summary statistics for the propensity of Motor (non-MIB) PPO claims by:

- Settlement year
- Accident year
- Insurer
- Cover type and class of business
- Incremental large claim threshold band (two different sets of bandings)
- Cumulative large claim threshold band (two different sets of bandings)
- Type of injury
- Claimant characteristics (age at accident and gender)
- Driver characteristics (age at accident and gender).

Unless otherwise specified, the propensity is expressed as the number of PPO claims as a proportion of the number of large claims.

The raw PPO propensity for settlement years prior to 2009 are considerably lower than that for subsequent years, and so the data underlying the summary statistics within this appendix have been restricted to settlement years 2009 and post to reduce the potential for distortion.

See Appendix C for the definition of a large claim, and an explanation of the incremental threshold analysis and the cumulative threshold analysis. See Appendix B for an explanation of the standardisation basis for claim size used for Motor (non-MIB) claims. See Appendix D for an explanation of the standardisation basis for Ogden discount rate used.

Within this section we have produced analysis with an "Ogden Adjustment". The reason for doing this is so that we can effectively look at data in a consistent 2.5% Ogden discount rate world. To do this we have taken the Ogden tables and used the information provided by insurers to extract the relevant multipliers by discount rate, age and gender. We can then rebase data attributed to large claims and PPOs settling after 20 March 2017 back to a 2.5% Ogden discount rate world.

The table below articulates what discount rates we have assumed for what settlement periods. Note that we assume large claims have settled as a discount rate of 0.5% on average in the period from 17 March 2017 to 5 August 2019, and have settled at the prevailing Ogden discount rate of -0.25% since 5 August 2019.

Time period / adjusted or not	Ogden equivalent PPO value discount rate	Large Claim discount rate
Pre March 2017	2.5%	2.5%
March 2017 – August 2019 (unadjusted)	0.5%	Rate used in settlement
Post August 2019 (unadjusted)	-0.25%	Rate used in settlement
Post March 2017 (adjusted)	2.5%	2.5%

The reason why we believe it is important to analyse the data with this adjustment is to separate the effect of the change in the mix of claimants, owing to more large claims settling above £1 million, on PPO propensity from any behavioral changes. You may, for instance, expect to have more less severe claims settling at above £1 million, which would be less likely to settle as a PPO, since 20 March 2017.

Figure G.1 below shows an example of the Ogden multipliers under a 2.5%, -0.25% and -0.75% discount rate for a male aged 55 at settlement, with £50 thousand annual care cost and £50 thousand loss of earnings. Using a 2.5% Ogden discount rate this claim would not be classified as large, however under a -0.25% and -0.75% Ogden discount rate this claim breaches the £1 million threshold and would be included within our analysis.

Multipliers*		Ogden discount rate		
Claim component	Annual Payment	2.50%	-0.25%	-0.75%
Care	50,000	20.2	30.8	33.6
Loss of Earnings	50,000	8.6	9.8	10.1

Lump sum	**1,442,500**	**2,033,000**	**2,186,000**
Lump sum (2011 terms)	**733,294**	**1,033,474**	**1,111,252**

Using Tables 1 and 9 from the Actuarial Tables for use in personal injury and fatal accident cases - 8th edition

Figure G.1: Example claim under different Ogden discount rates

G.1 Propensity by settlement year

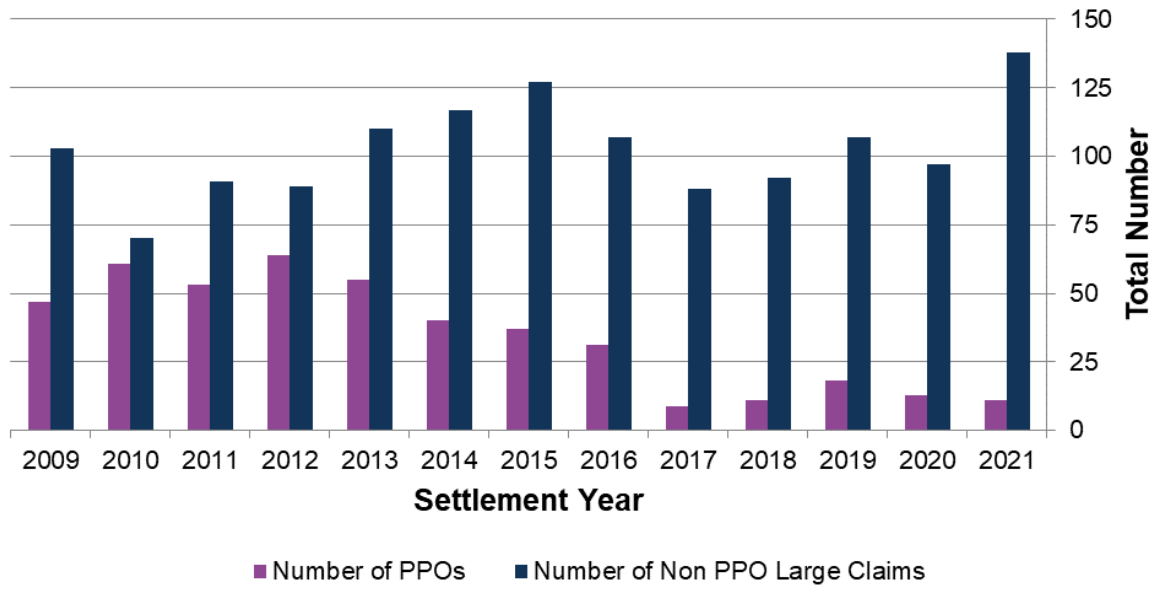

Figure G.2: Number of Motor (non-MIB) PPO claims and Motor (non-MIB) non-PPO large claims underlying the PPO propensity statistics, by settlement year, without an Ogden adjustment

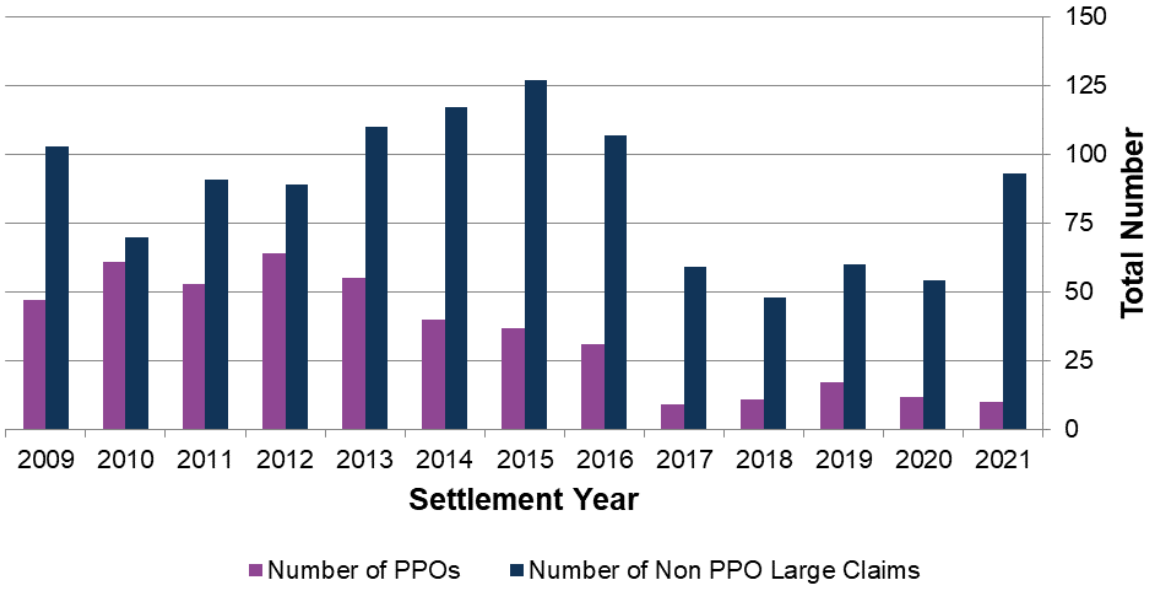

Figure G.3: Number of Motor (non-MIB) PPO claims and Motor (non-MIB) non-PPO large claims underlying the PPO propensity statistics, by settlement year, with an Ogden adjustment

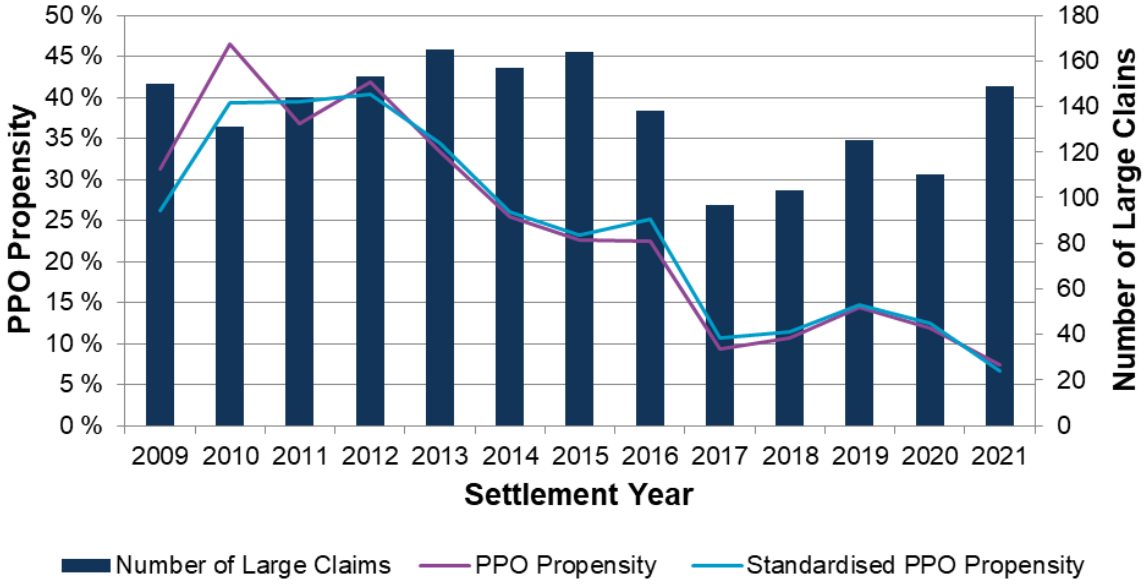

Figure G.4: Motor (non-MIB) PPO propensity and standardised Motor (non-MIB) PPO propensity, by settlement year, without an Ogden adjustment

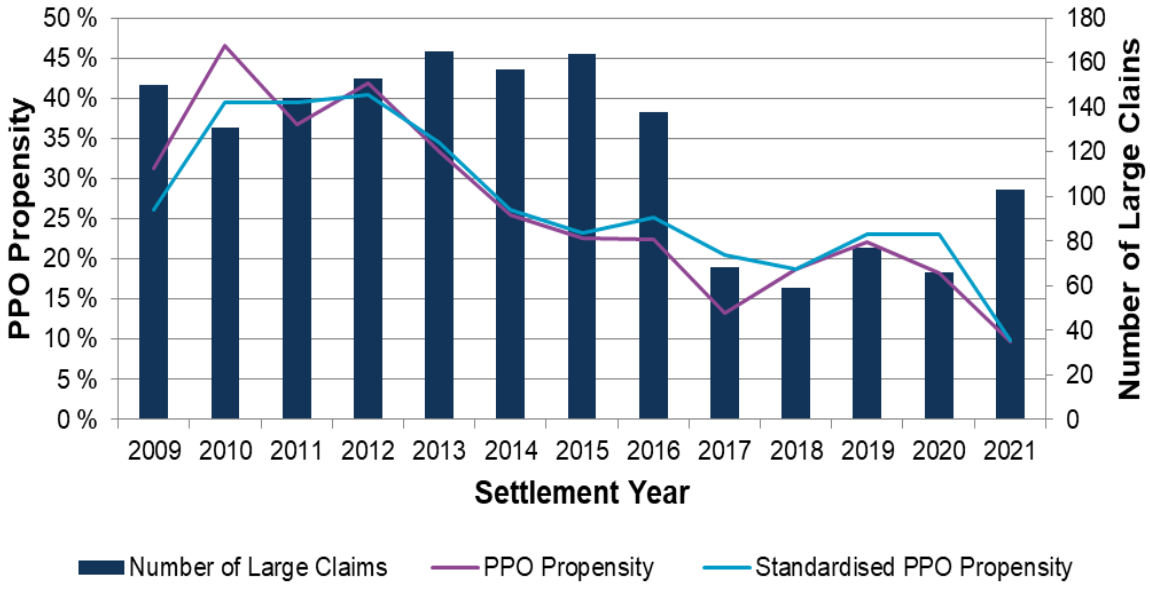

Figure G.5: Motor (non-MIB) PPO propensity and standardised Motor (non-MIB) PPO propensity, by settlement year, with an Ogden adjustment

Given the reduction in Ogden discount rate in March 2017, and further change in August 2019, the cost of large claims is higher compared with pre-2017 and so we would expect an increase in the number of large claims settling above £1 million. The number of large claims settling in 2021 has increased significantly compared to 2020 and is now more in line with pre-2017 settlement years which may indicate that any previous backlog in open large claims has now cleared. On an adjusted for Ogden basis there is still an increase in the number of large claims settling compared with 2020, however this remains at a lower level than pre-2017.

In terms of the PPO propensity, on an unadjusted for Ogden basis there was a step change in propensity in the 2017 settlement year, when the Ogden discount rate changed from 2.5% to -0.75%. In 2019, when the Ogden discount rate changed from -0.75% to -0.25%, there was a smaller upward step change. However, the standardised propensity has since decreased by around 8%pts, and indeed the 2021 propensity remains at a lower level than pre-2017.

The numerical Ogden adjustment has a material impact to the PPO propensity, with the Ogden adjusted figures in 2017-2020 settlement years much more in line with the 2014-2016 propensity of 24.8% on a standardised basis. There is a smaller impact to the 2021 settlement year, with the adjusted propensity still at a much lower level than pre-2016.

Figure G.6 uses a different measure of PPO propensity, expressing the number of PPO claims as a proportion of the average gross earned premium. The number of PPO claims settled in a given year is divided by an average gross earned premium based on the premium earned over a six year period starting seven years earlier (i.e. the number of PPO claims settled in 2018 is divided by the average annual amount of gross premium earned during the period 2012 to 2017 inclusive). These PPO propensity figures include all PPO claims and not just those over £1 million and are in terms of the number of PPO claims per £1,000 million of gross earned premium.

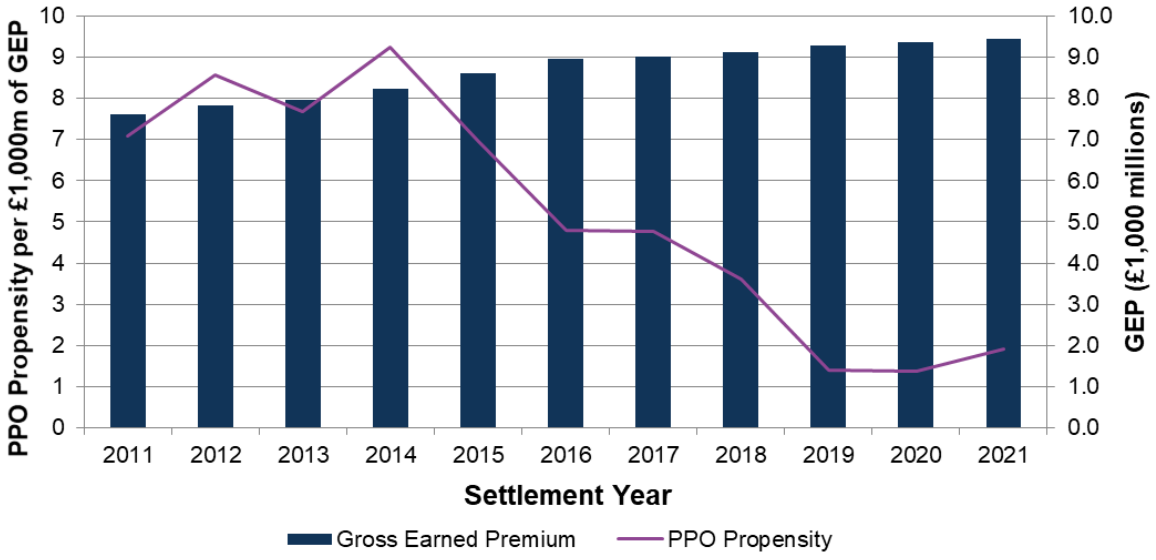

Figure G.6: Motor (non-MIB) PPO propensity, expressed as the number of PPO claims as a proportion of the average gross earned premium, by settlement year

Figure G.7 also uses a different measure of PPO propensity, expressing the number of PPO claims as a proportion of the average earned vehicle years. The number of PPO claims settled in a given year is divided by an average earned vehicle years based on the vehicle years earned over a six year period starting seven years earlier (i.e. the number of PPO claims settled in 2012 is divided by the average annual vehicle years earned during the period 2006 to 2011 inclusive). These PPO propensity figures include all PPO claims and not just those over £1 million and are in terms of the number of PPO claims per million earned vehicle years.

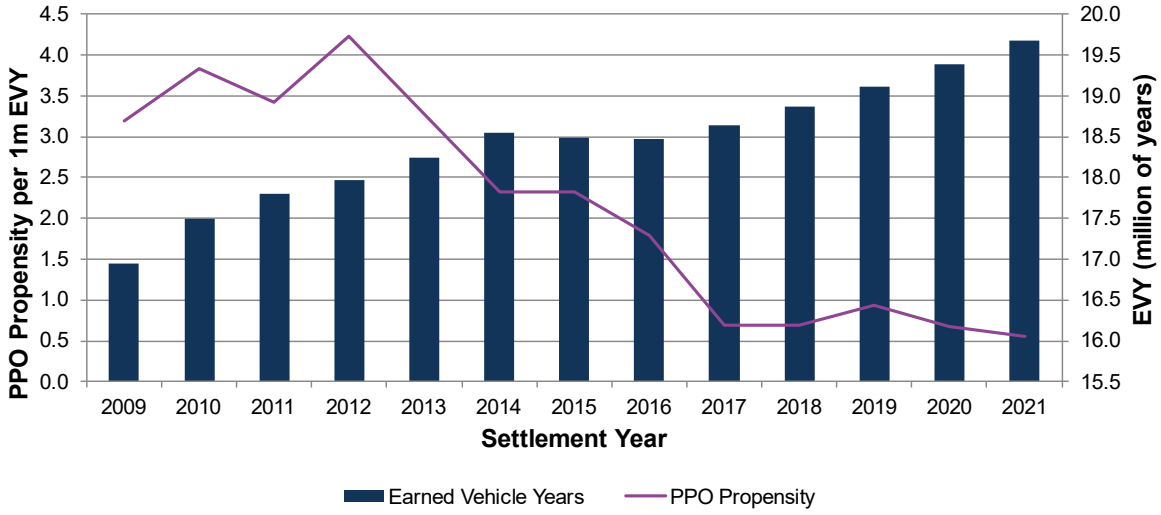

Figure G.7: Motor (non-MIB) PPO propensity, expressed as the number of PPO claims as a proportion of the average earned vehicle years, by settlement year

G.2 Propensity by accident year

The following charts show our propensity analysis by accident year. Before looking at this analysis it is worth noting that we are likely to see distortions when looking at settled PPOs on an accident year period basis. The analysis does not capture the IBNER and IBNR elements for the most recent accident years. This is particularly important as the average delay from accident to settlement is around 6 years for large claims.

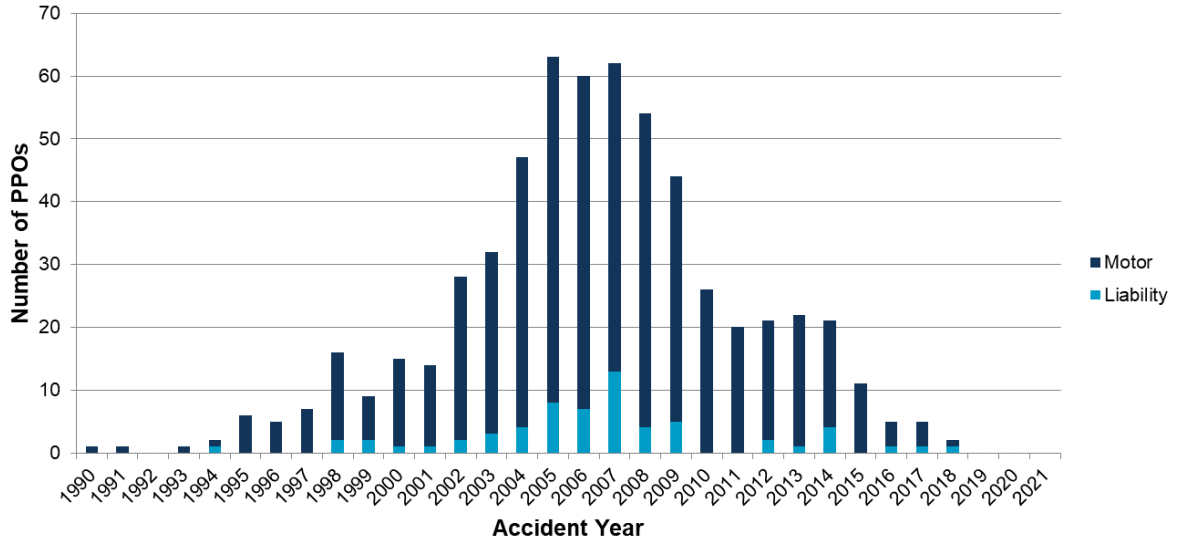

Figure G.8: Number of (non-MIB) PPO claims, by accident year – Motor and Liability

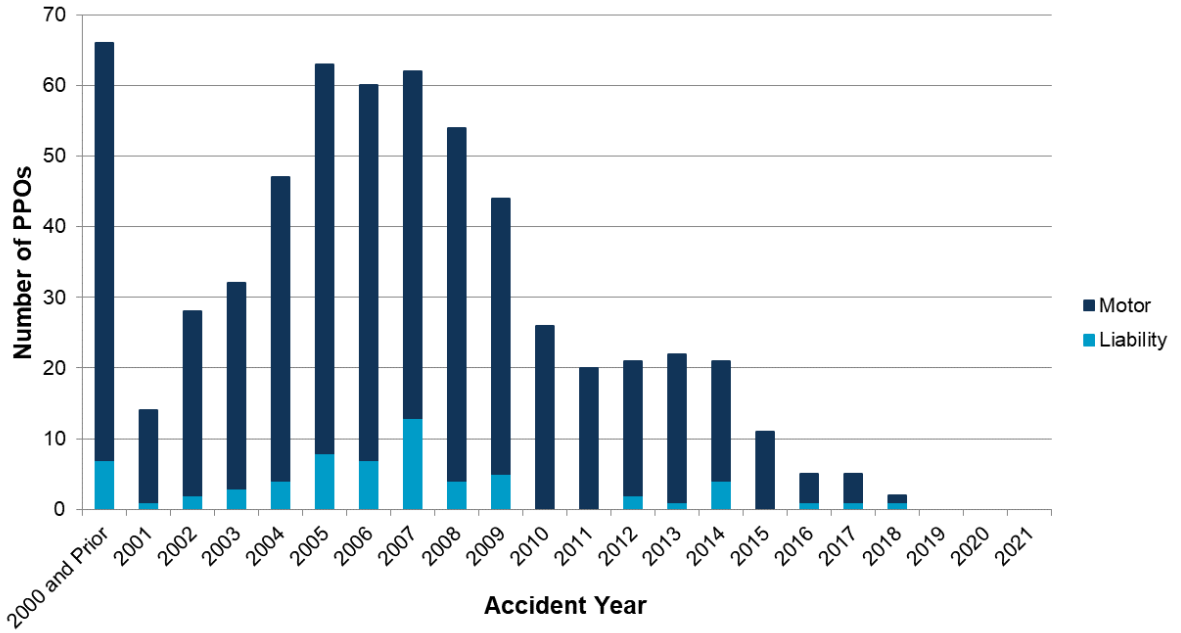

Figure G.9: Number of (non-MIB) PPO claims, by accident year – Motor and Liability

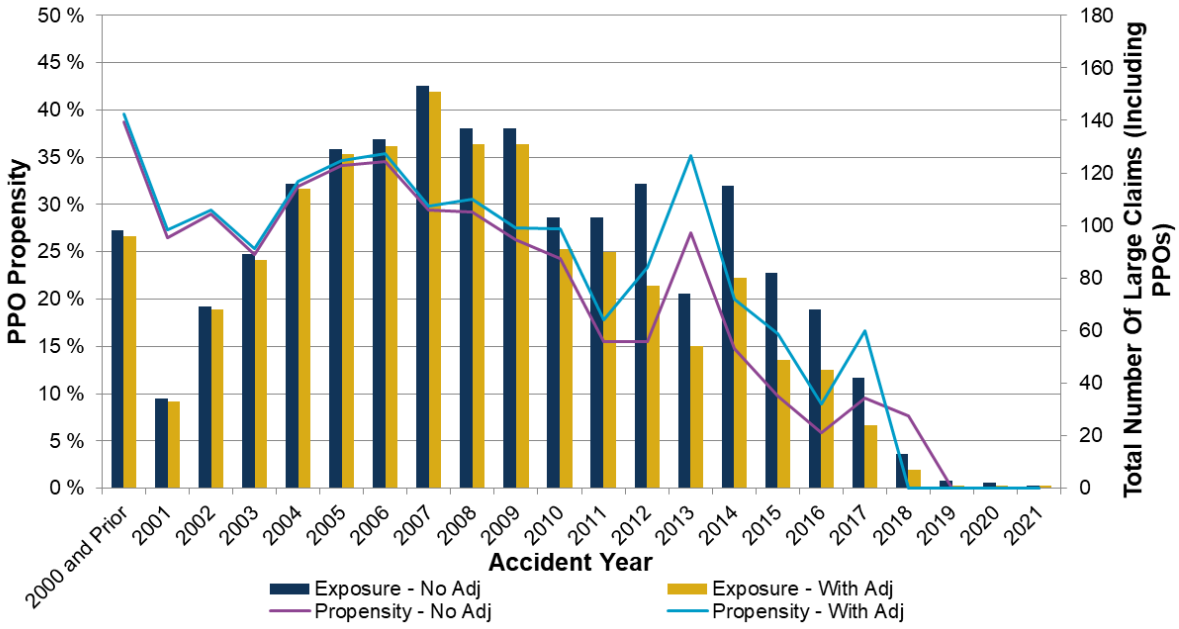

Figure G.10: Motor (non-MIB) PPO propensity, by accident year, with and without Ogden adjustment

G.3 Propensity by insurer

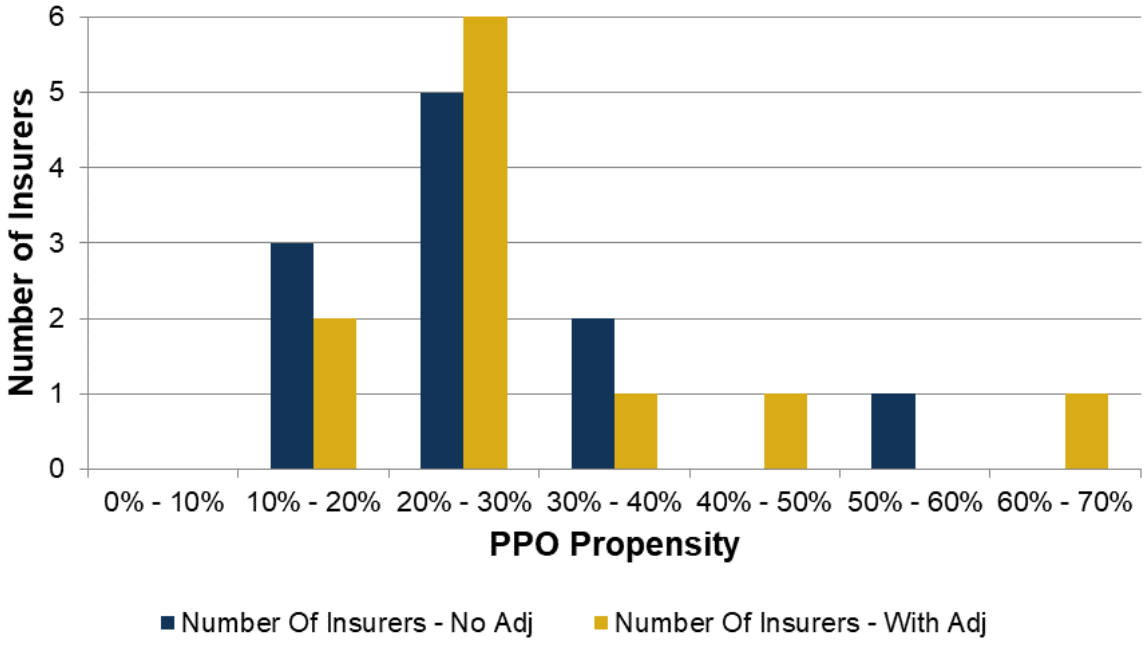

Figure G.11: Distribution of Motor (non-MIB) PPO propensity for insurers that have settled at least 25 large claims (including PPO claims) in the last five years, for claims settled since 2009, with and without an Ogden adjustment

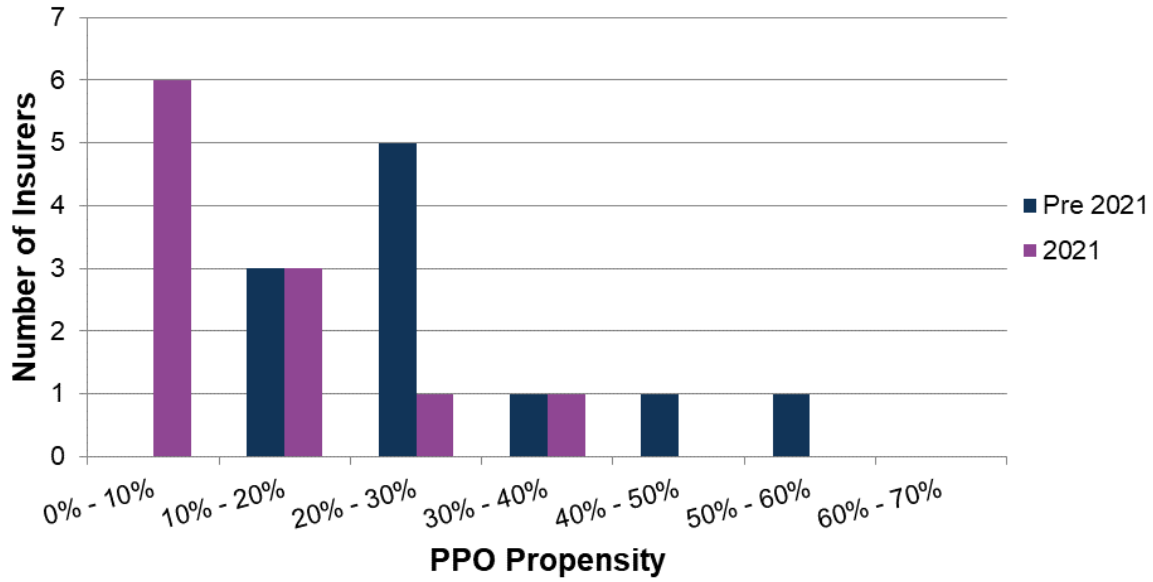

Figure G.12: Distribution of Motor (non-MIB) PPO propensity for insurers that have settled at least 25 large claims (including PPO claims) in the last five years, separately for claims settled between 2009 and 2020 and claims settled in 2021, no Ogden adjustment

In Figure G.13, the size of the bubble (the area) represents the number of insurers in a given propensity band.

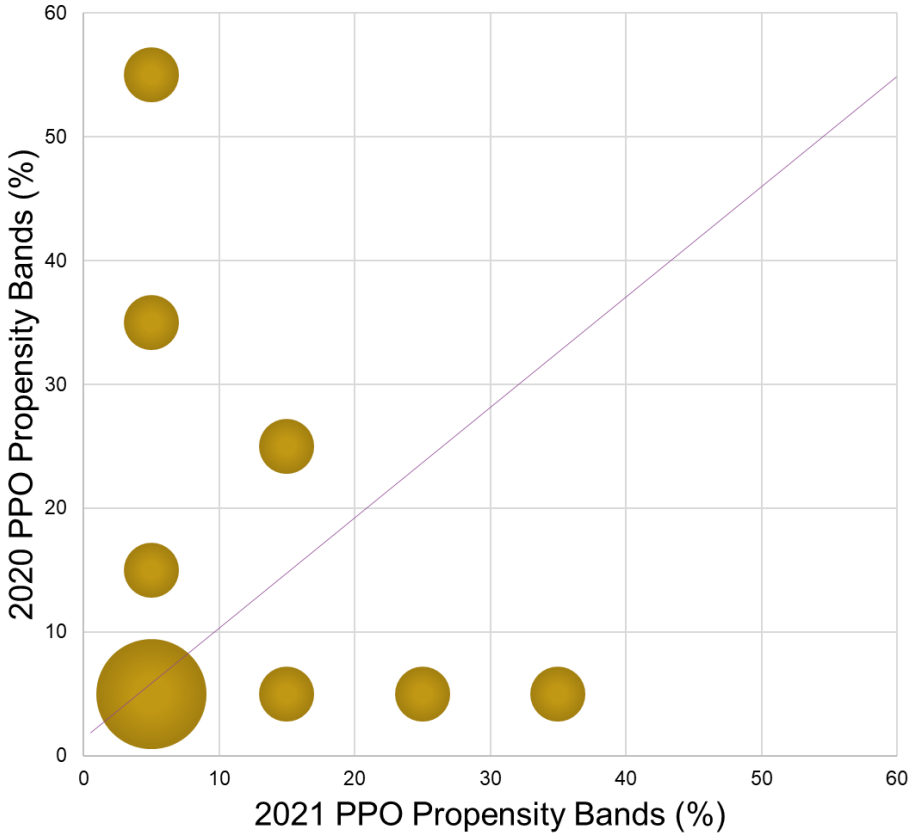

Figure G.13: Distribution of Motor (non-MIB) PPO propensity for insurers that have settled at least 25 large claims (including PPO claims) in the last five years, comparing the PPO propensity of claim settlements in 2020 with those in 2021

G.4 Propensity by cover type and class of business

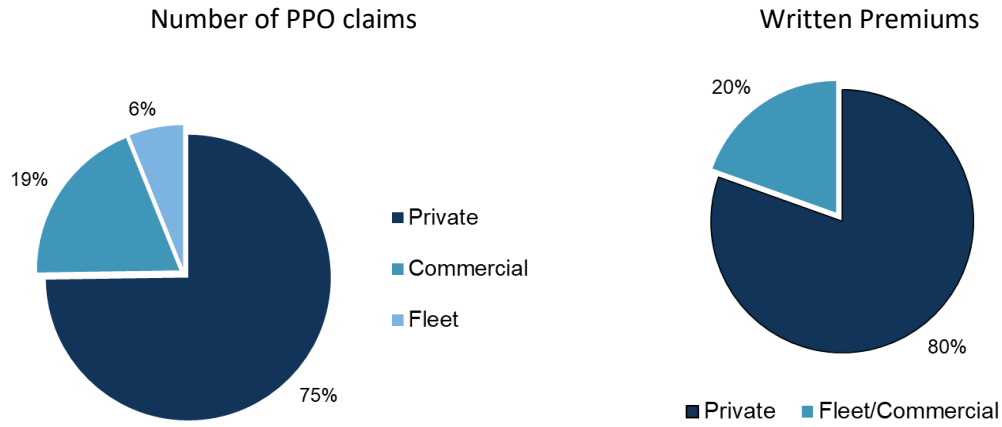

Figure G.14: Private / Commercial split of the number of Motor (non-MIB) PPO claims and Motor written premiums

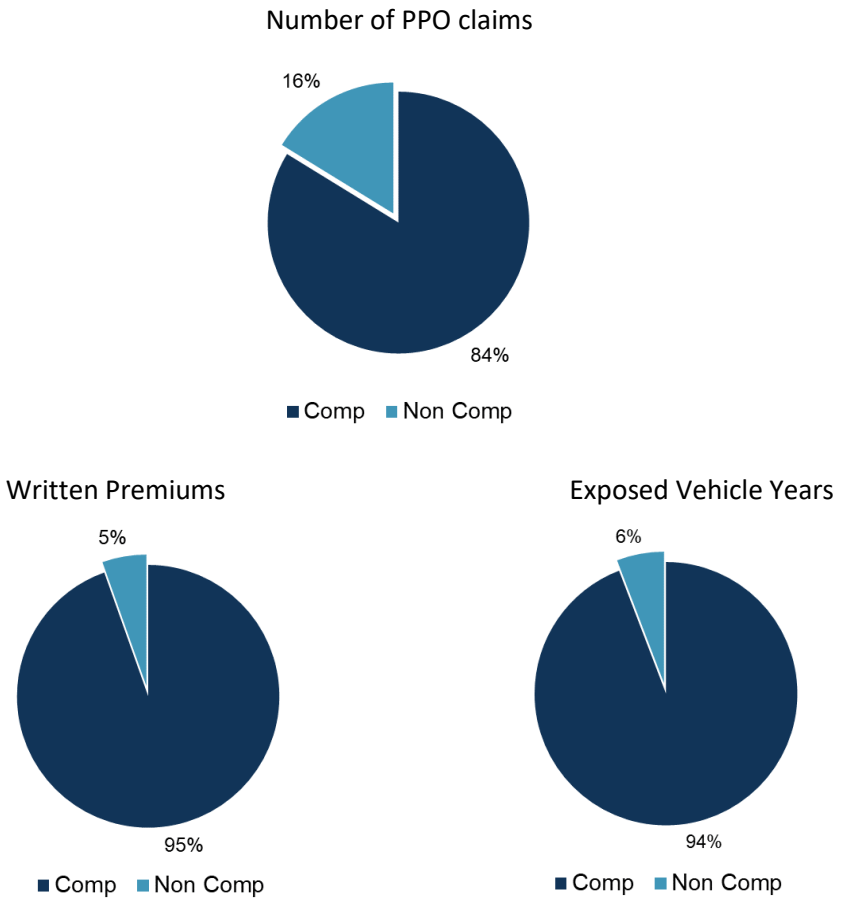

Figure G.15: Private Motor Comprehensive/ Non-Comprehensive split of the number of Motor (non-MIB) PPO claims, Motor written premiums and Motor vehicle years exposed

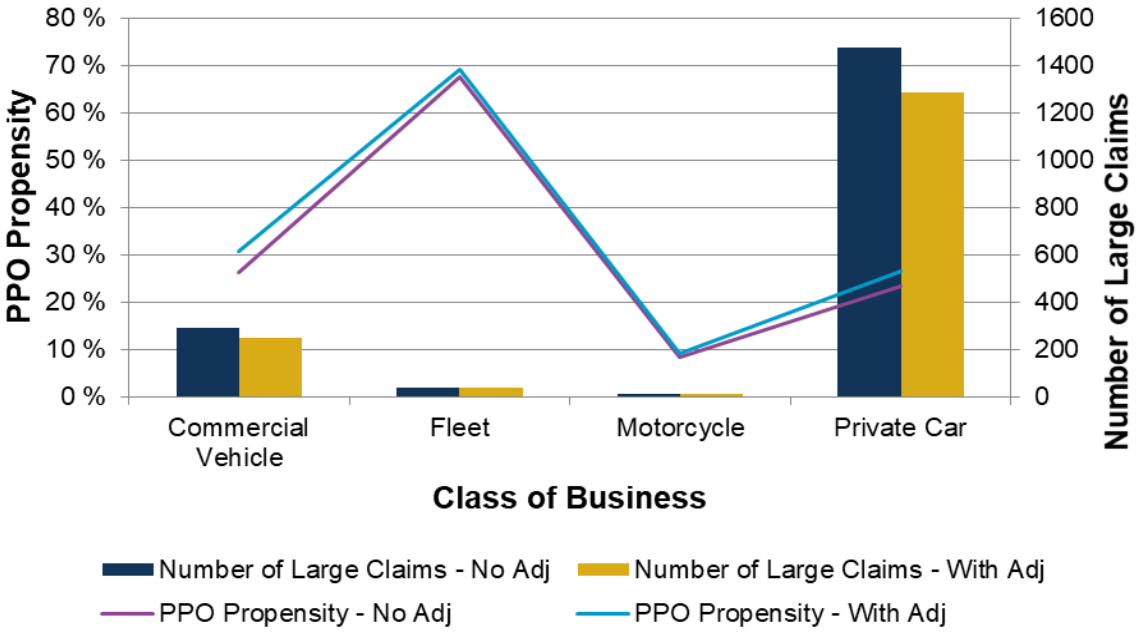

Figure G.16: Motor (non-MIB) PPO propensity, by class of business, for claims settled since 2009, with and without Ogden adjustment

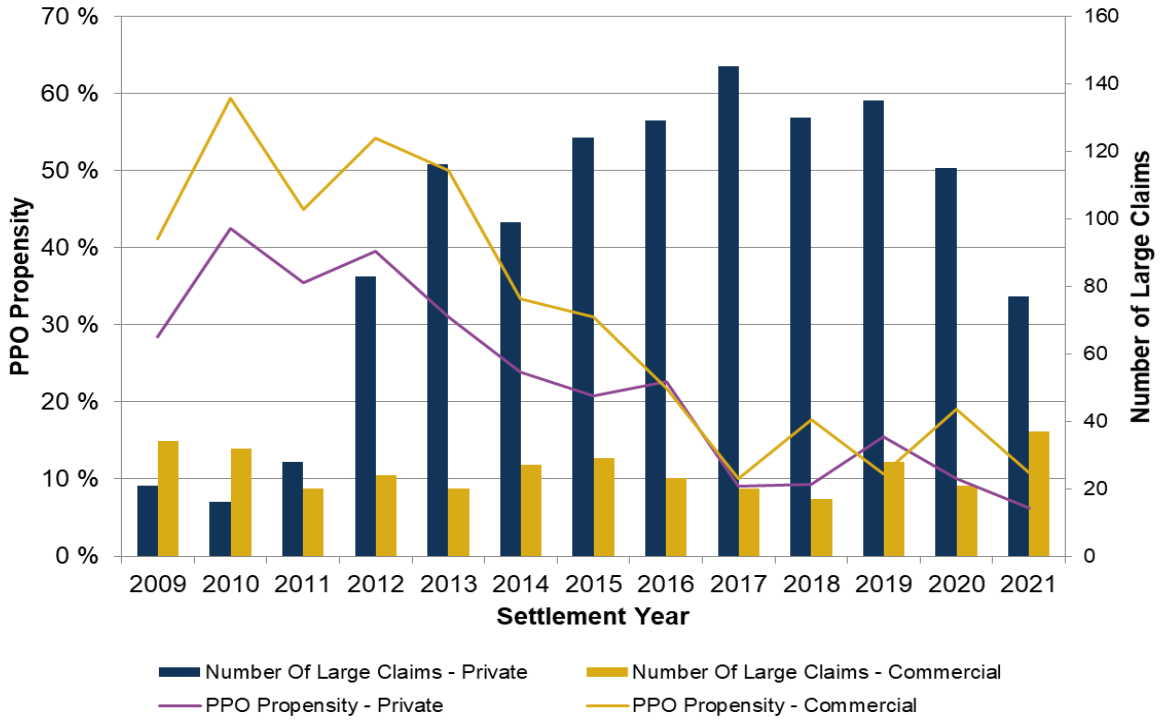

Figure G.17: Motor (non-MIB) PPO propensity, for Private and Commercial Motor, by settlement year, without Ogden adjustment

G.5 Propensity by incremental large claim threshold band

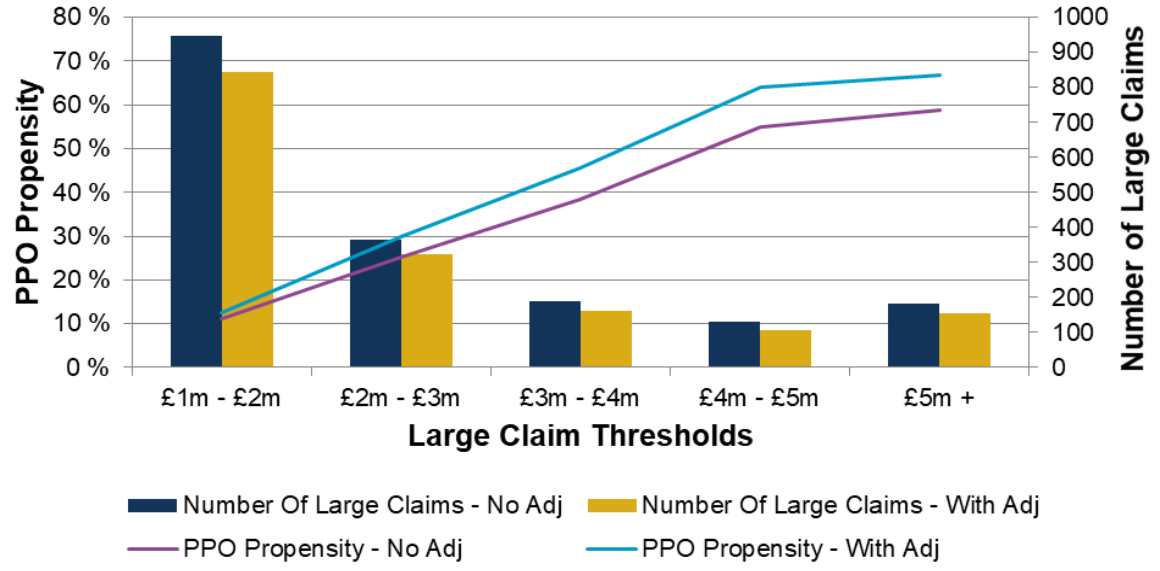

Figure G.18: Motor (non-MIB) PPO propensity, by incremental large claim threshold band (2011 terms), for claims settled since 2009, with and without Ogden adjustment

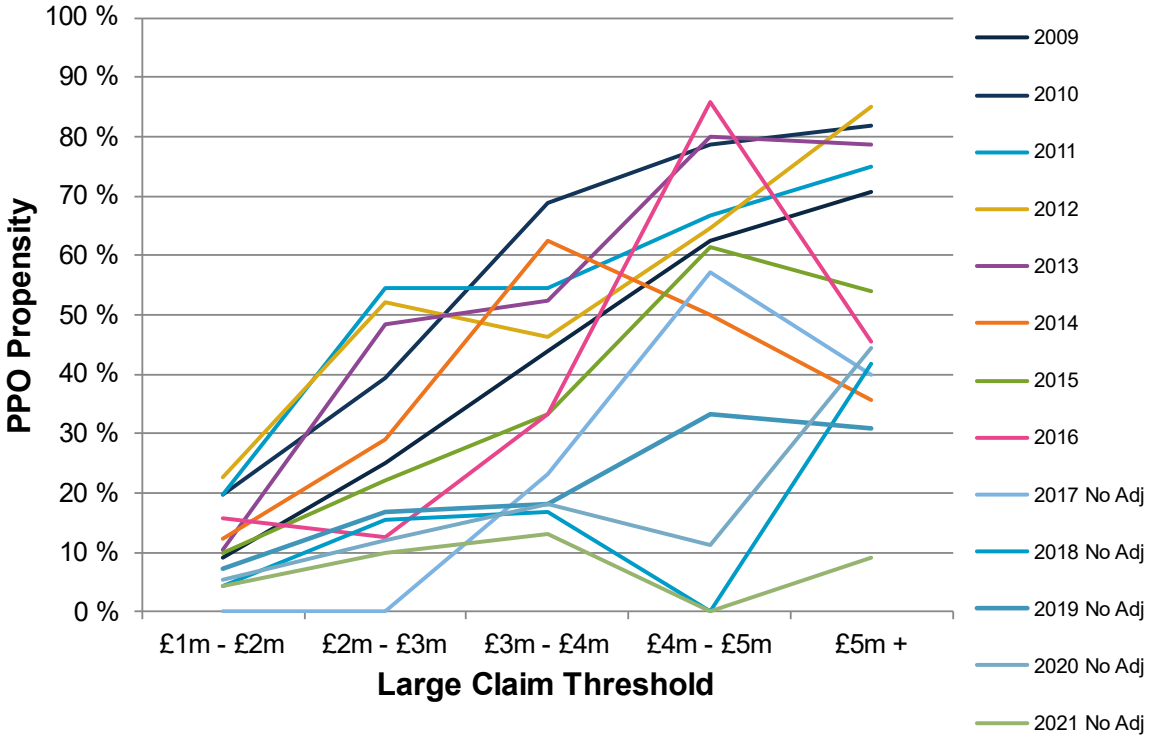

Figure G.19: Motor (non-MIB) PPO propensity, by incremental large claim threshold band (2011 terms), and by settlement year, for claims settled since 2009, without Ogden adjustment

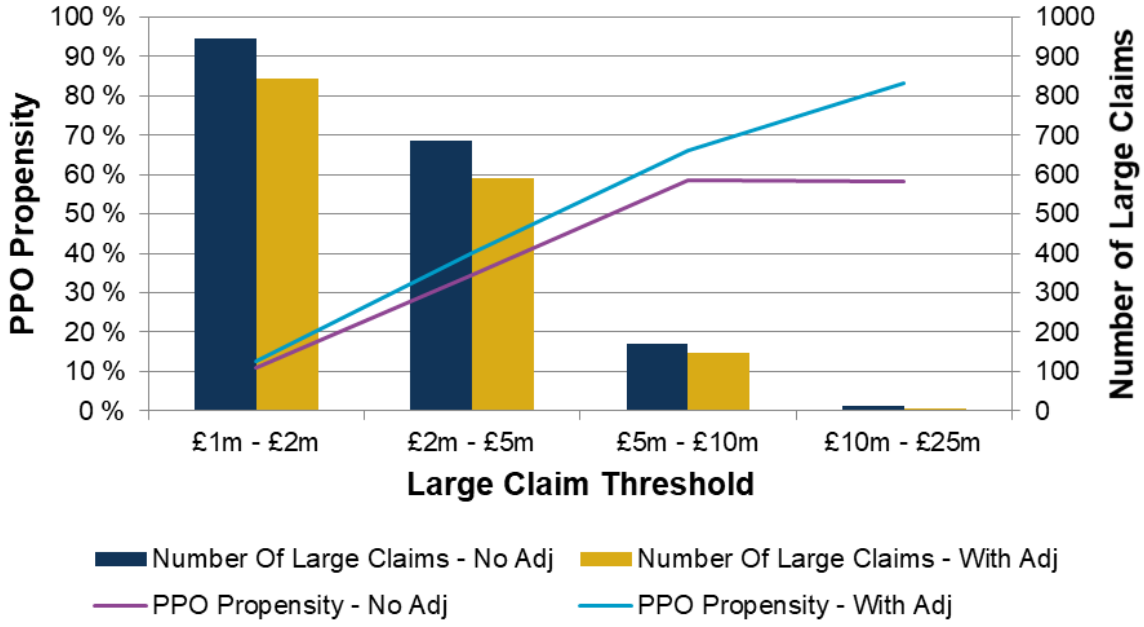

Figure G.20: Motor (non-MIB) PPO propensity, by incremental large claim threshold band (2011 terms), for claims settled since 2009, with and without Ogden adjustment

G.6 Propensity by cumulative large claim threshold band

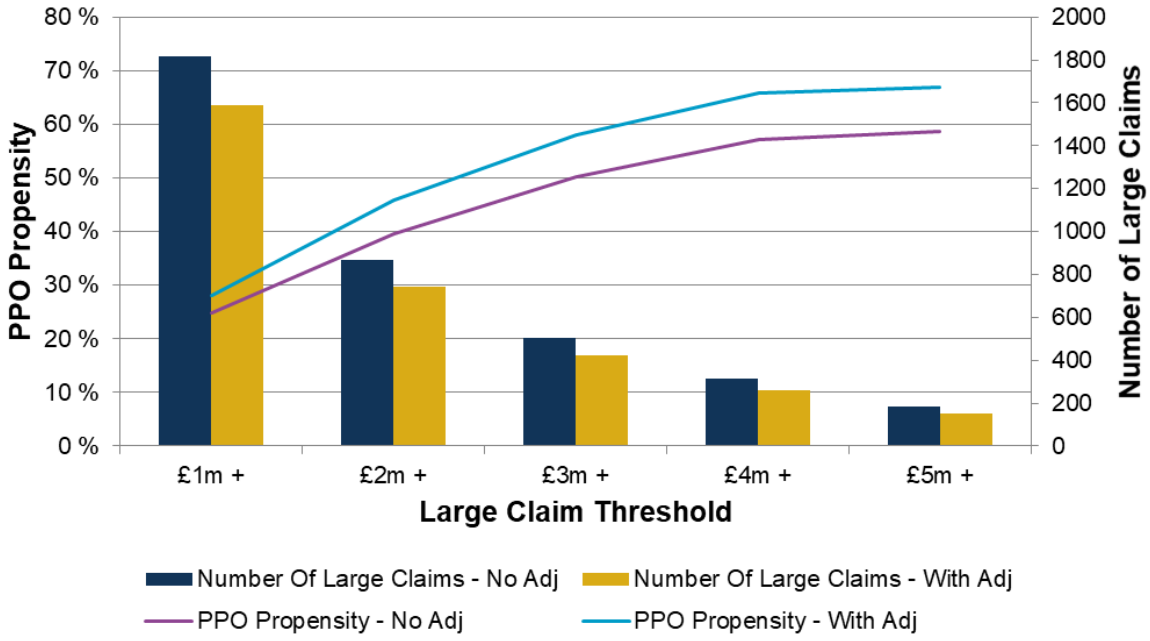

Figure G.21: Motor (non-MIB) PPO propensity, by cumulative large claim threshold band (2011 terms), for claims settled since 2009, with and without Ogden adjustment

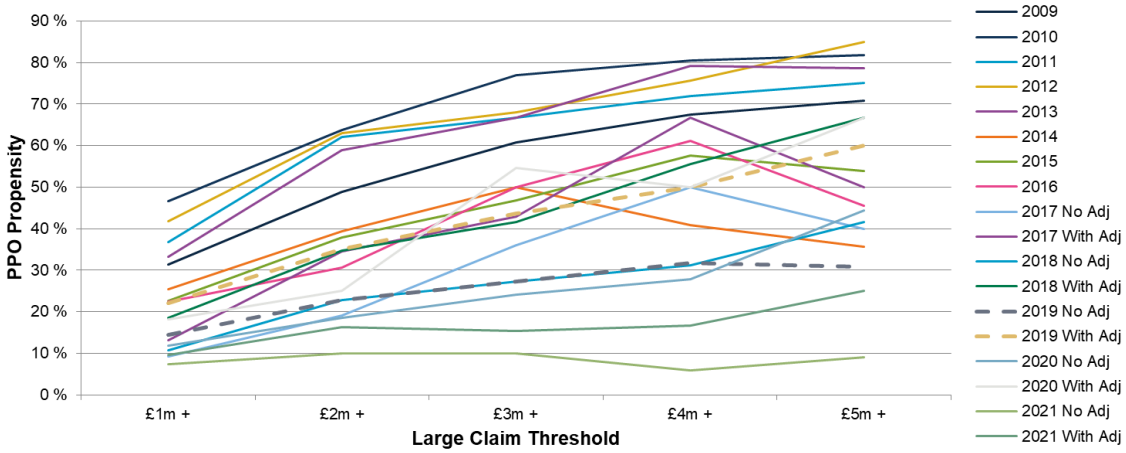

Figure G.22: Motor (non-MIB) PPO propensity, by cumulative large claim threshold band (2011 terms), and by settlement year, for claims settled since 2009, with and without Ogden adjustment

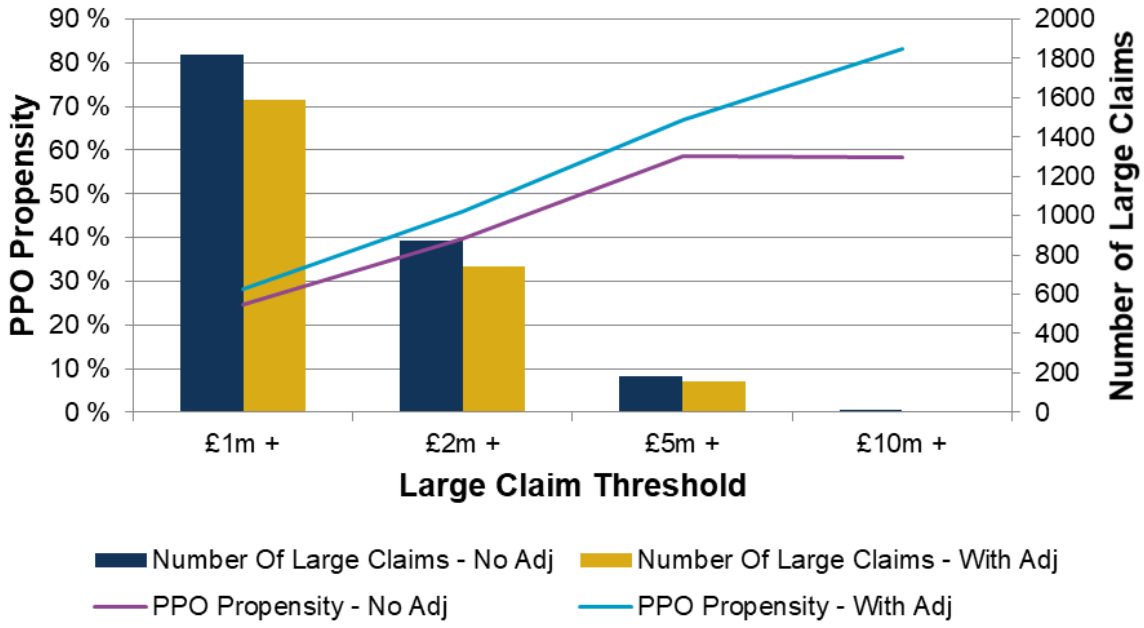

Figure G.23: Motor (non-MIB) PPO propensity, by cumulative large claim threshold band (2011 terms), for claims settled since 2009, with and without Ogden adjustment

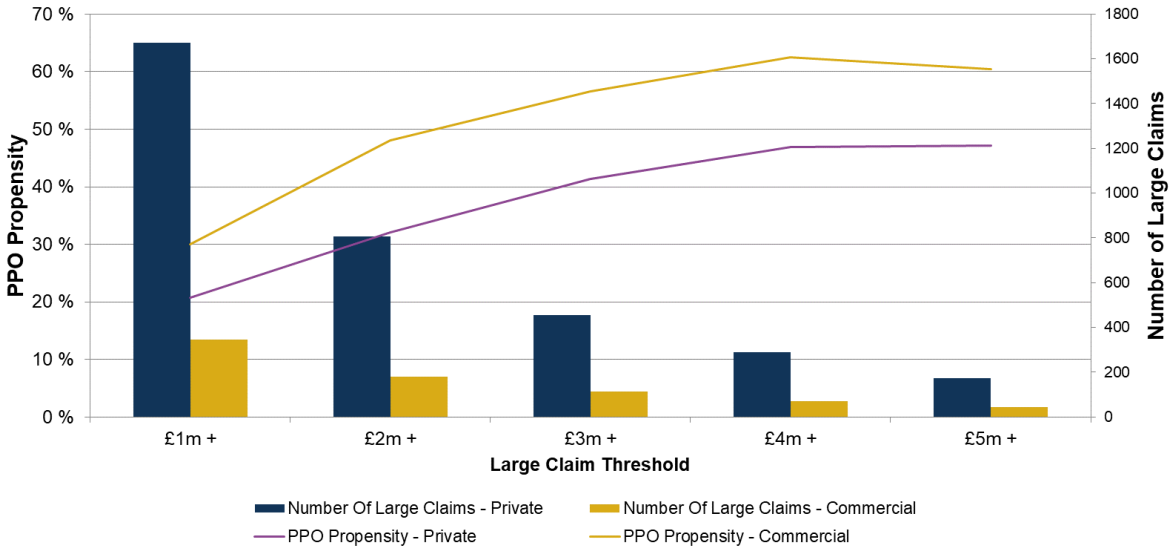

Figure G.24: Motor (non-MIB) PPO propensity, by cumulative large claim threshold band (2011 terms), for Private and Commercial Motor, for claims settled since 2009, without Ogden adjustment

G.7 Propensity by claimant characteristics

Figure G.25 uses data from those insurers that provided the claimant age at accident for their non-PPO large claims as well as for their PPO claims.

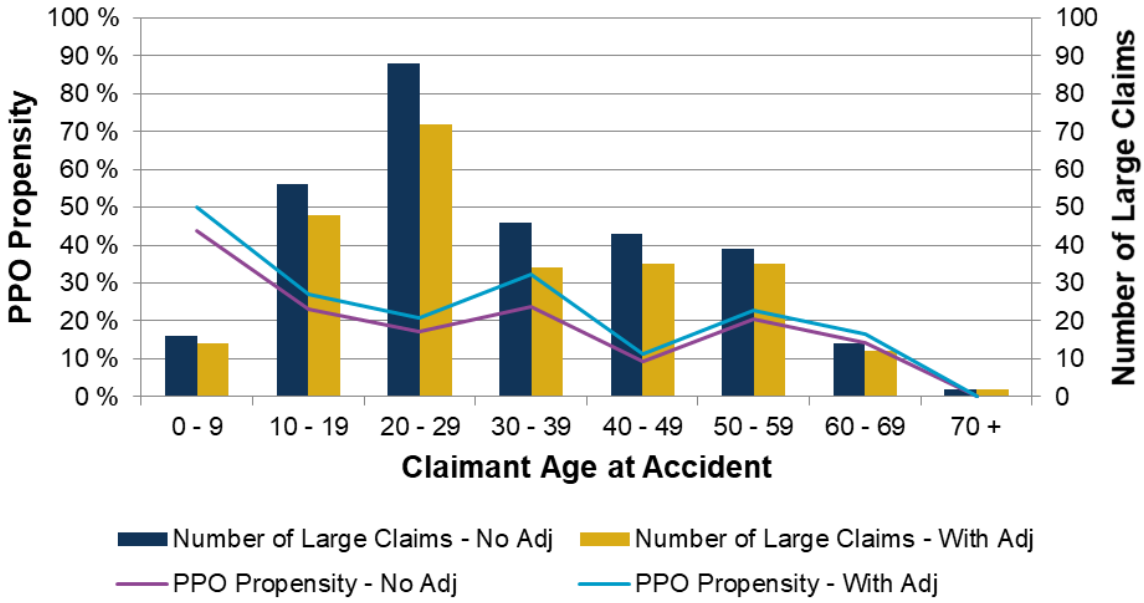

Figure G.25: Motor (non-MIB) PPO propensity, by claimant age at accident, for claims settled since 2009, with and without Ogden adjustment

Figure G.26 uses data from those insurers that provided the claimant gender for their non-PPO large claims as well as for their PPO claims.

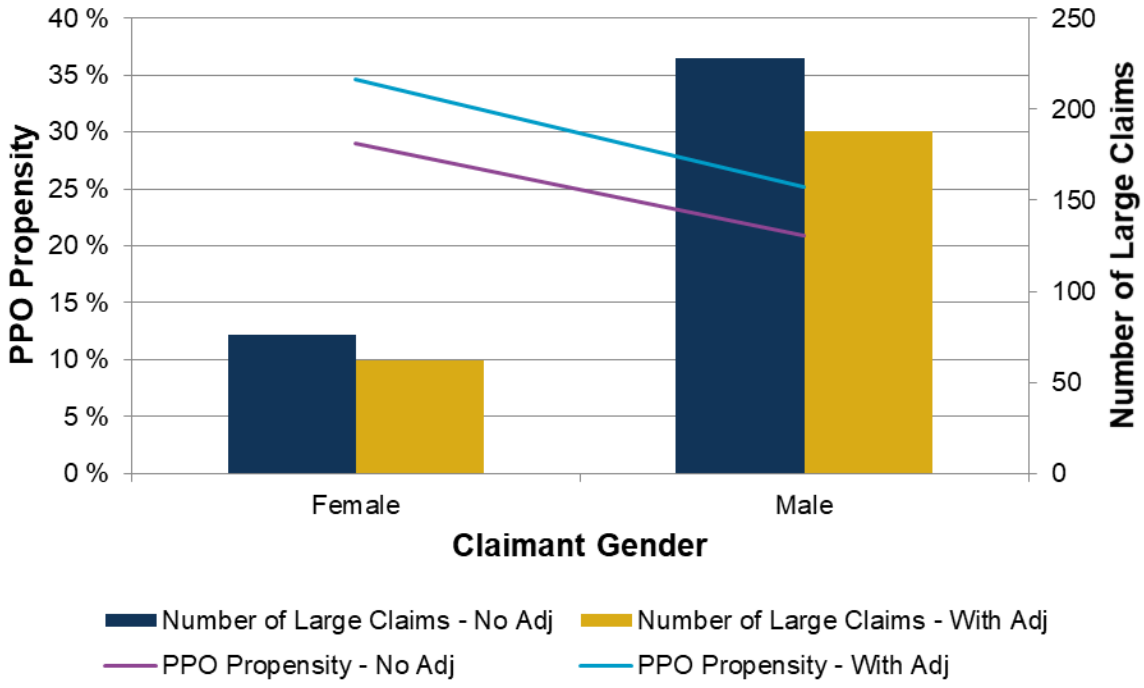

Figure G.26: Motor (non-MIB) PPO propensity, by claimant gender, for claims settled since 2009, with and without Ogden adjustment

G.8 Propensity by driver characteristics

Figure G.27 uses data from those insurers that provided the age of driver at accident for their non-PPO large claims as well as for their PPO claims.

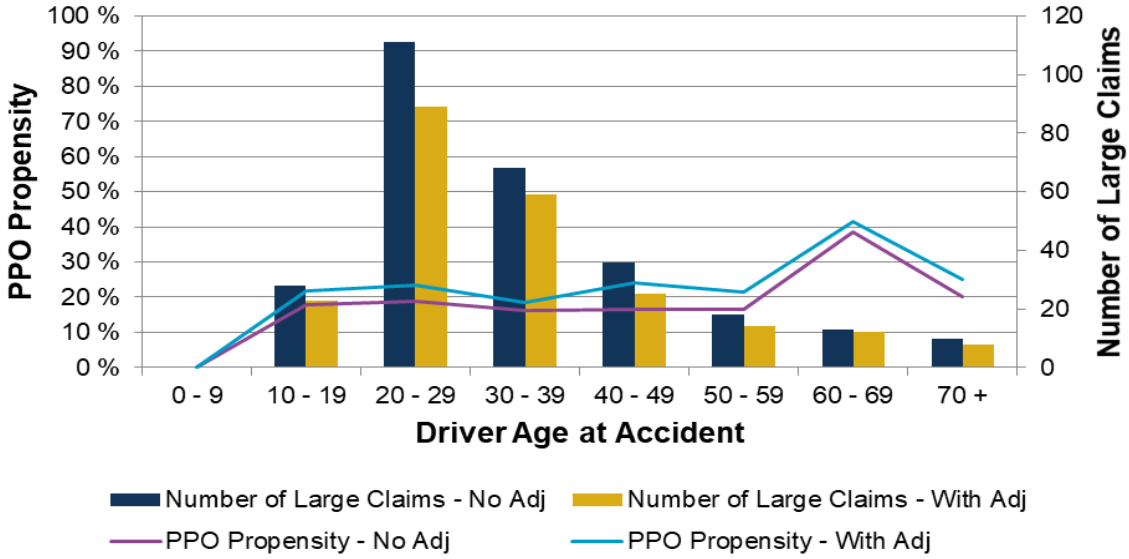

Figure G.27: Motor (non-MIB) PPO propensity, by age of driver at accident, for claims settled since 2009, with and without adjustment

Figure G.28 uses data from those insurers that provided the gender of the driver for their non-PPO large claims as well as for their PPO claims.

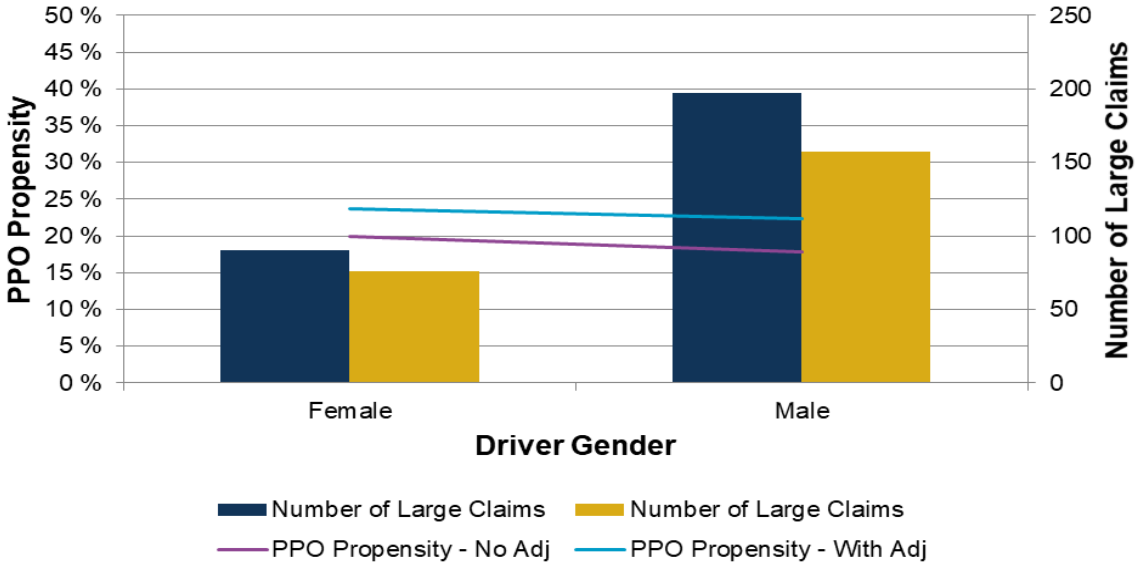

Figure G.28: Motor (non-MIB) PPO propensity, by driver gender, for claims settled since 2009, with and without adjustment

Appendix H Propensity of Liability PPO claims

In this appendix, we provide summary statistics for the propensity of Liability PPO claims by:

- Settlement year
- Insurer
- Class of business
- Incremental large claim threshold band
- Cumulative large claim threshold band.
- Type of injury
- Claimant characteristics (age at accident and gender).

Unless otherwise specified, the propensity is expressed as the number of PPO claims as a proportion of the number of large claims.

In 2008 and prior there were very few Liability claims settling from our contributors and so the data underlying the summary statistics within this appendix have been restricted to settlement years 2009 and post to reduce the potential for distortion.

See Appendix C for the definition of a large claim, and an explanation of the incremental threshold analysis and the cumulative threshold analysis. See Appendix B for an explanation of the standardisation basis or claim size used for Liability claims. See Appendix D for an explanation of the standardisation basis for Ogden discount rate.

The number of Liability claims settled in each year, and also the number of Liability PPO claims, in the data we have received for the quantitative industry survey is small, especially when considered relative to the equivalent Motor claims data received. The small number of Liability claims is likely to have contributed to the volatility in experience in the summary statistics provided in this appendix.

Due to limited data volumes and claim details provided in the 2022 industry survey, we have omitted the summary statistics by type of injury and claimant characteristics. We encourage participants to provide this level of detail in future surveys.

H.1 Propensity by settlement year

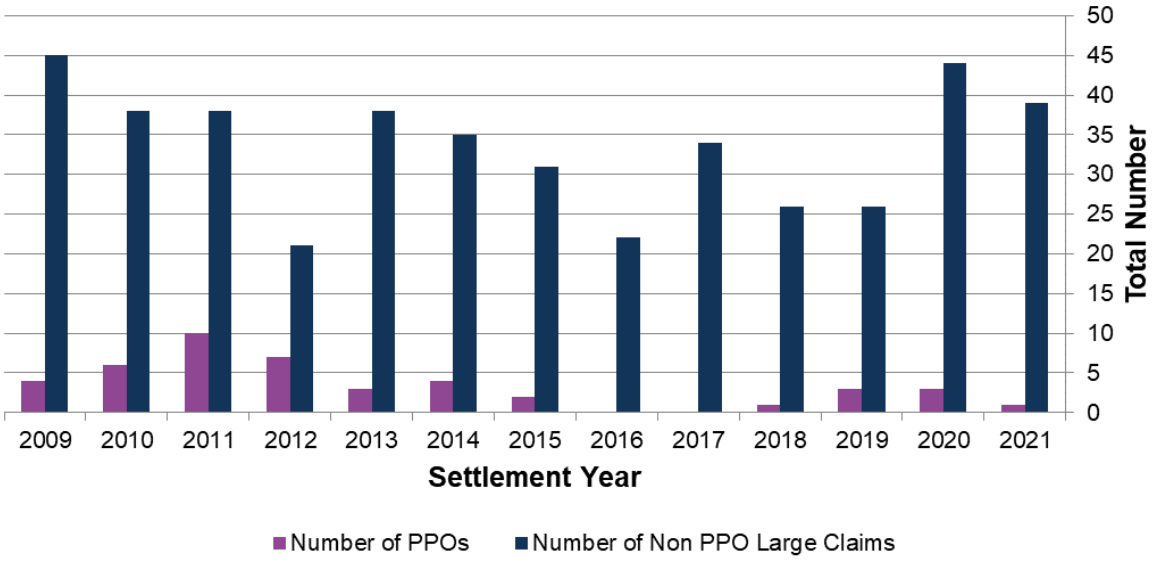

Figure H.1: Number of Liability PPO claims and Liability non-PPO large claims underlying the PPO propensity statistics, by settlement year

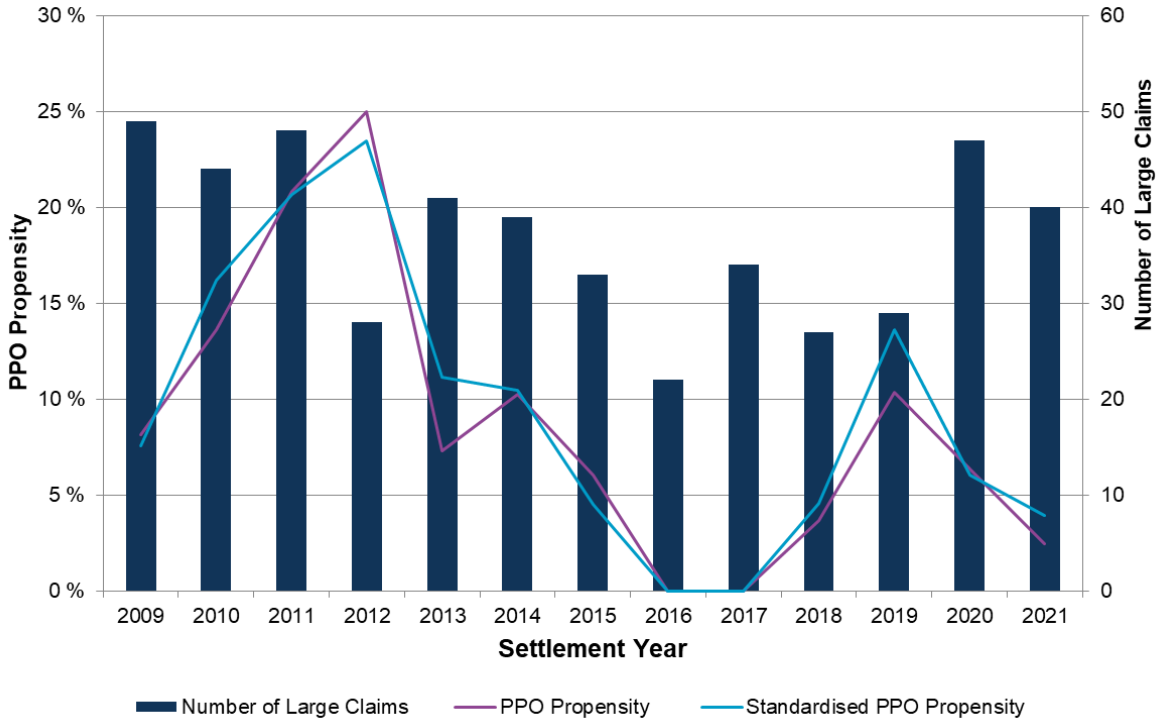

Figure H.2: Liability PPO propensity and standardised Liability PPO propensity, by settlement year

Figure H.3 uses a different measure of PPO propensity, expressing the number of PPO claims as a proportion of the average gross earned premium. The number of PPO claims settled in a given year is divided by an average gross earned premium based on the premium earned over a six year period

starting seven years earlier (i.e. the number of PPO claims settled in 2012 is divided by the average annual amount of gross premium earned during the period 2006 to 2011 inclusive). These PPO propensity figures include all PPO claims and not just those over £1 million and are in terms of the number of PPO claims per £1,000 million of gross earned premium.

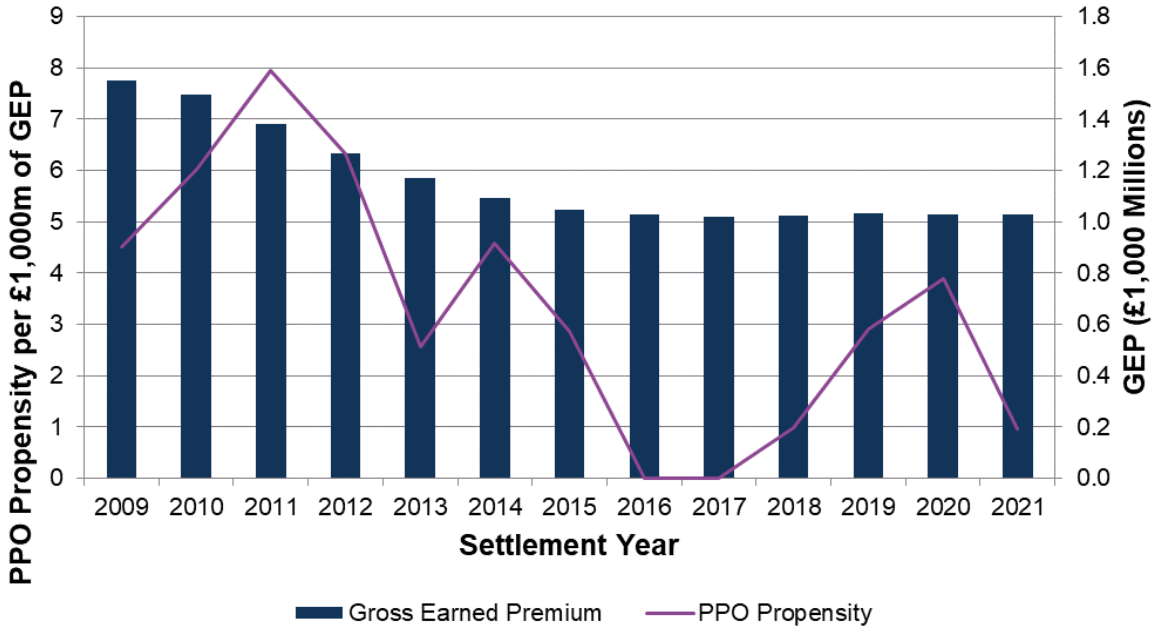

Figure H.3: Liability PPO propensity, expressed as the number of PPO claims as a proportion of the average gross earned premium, by settlement year

H.2 Propensity by insurer

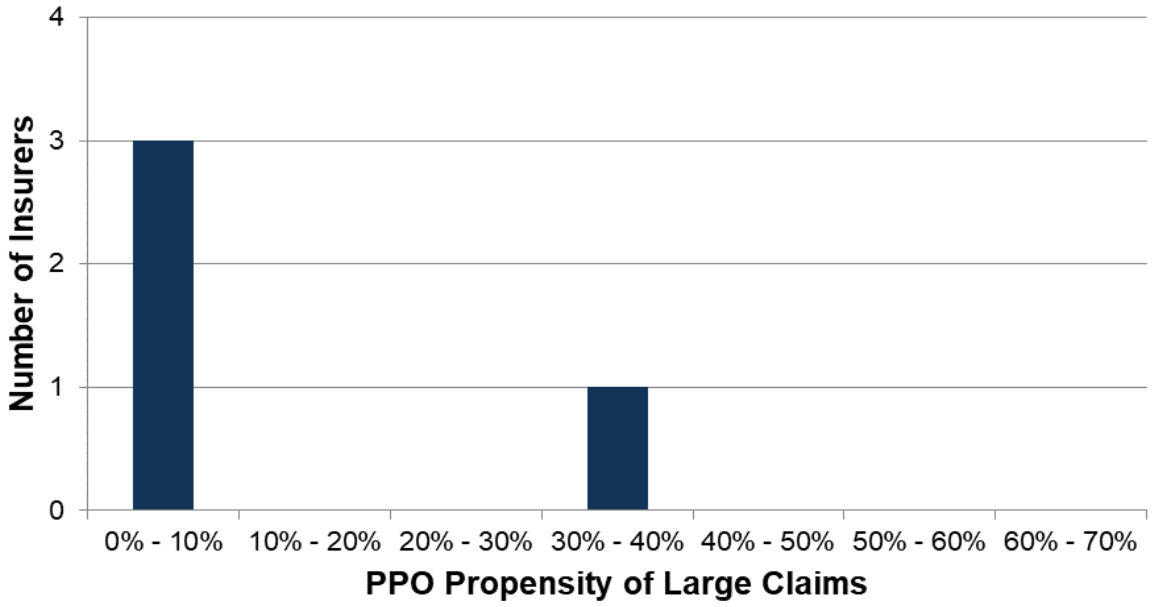

Figure H.4: Distribution of Liability PPO propensity for insurers that have settled at least 25 large claims (including PPO claims) in the last five years, for claims settled since 2009

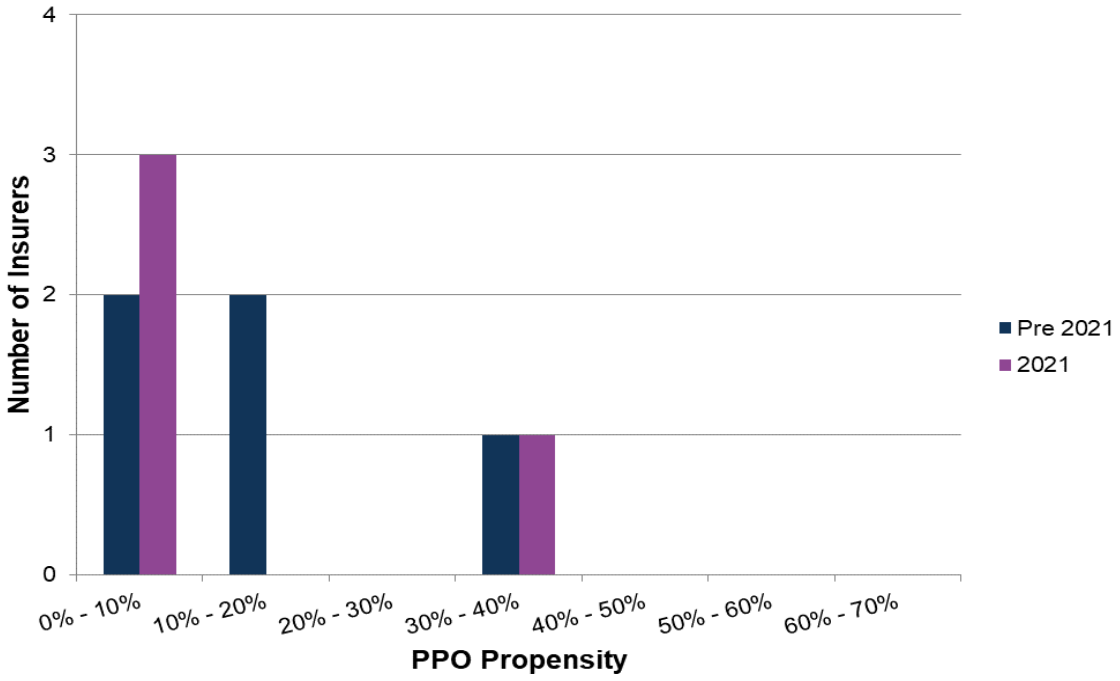

Figure H.5: Distribution of Liability PPO propensity for insurers that have settled at least 25 large claims (including PPO claims) in the last five years, separately for claims settled between 2009 and 2020 and claims settled in 2021

H.3 Propensity by class of business

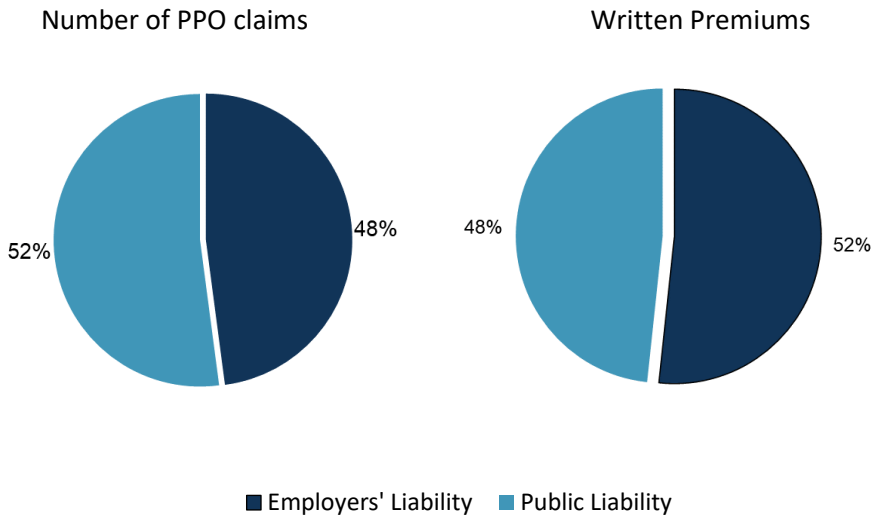

Figure H.6: Employers' Liability / Public Liability split of the number of Liability PPO claims and Liability written premiums

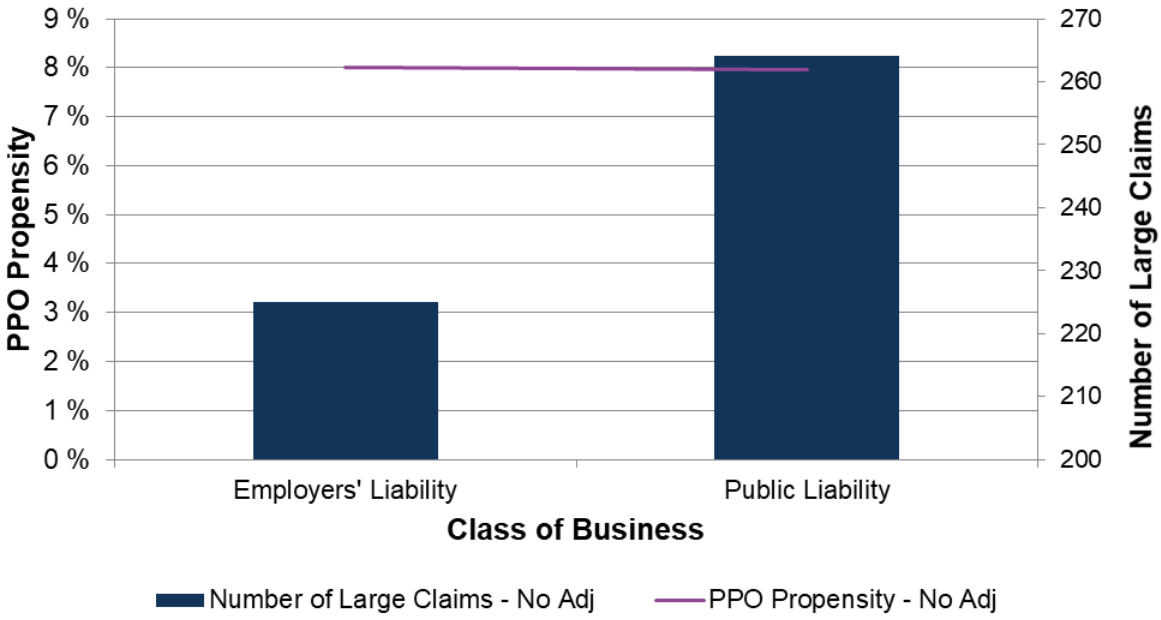

Figure H.7: Liability PPO propensity, by class of business, for claims settled since 2009

H.4 Propensity by incremental large claim threshold band

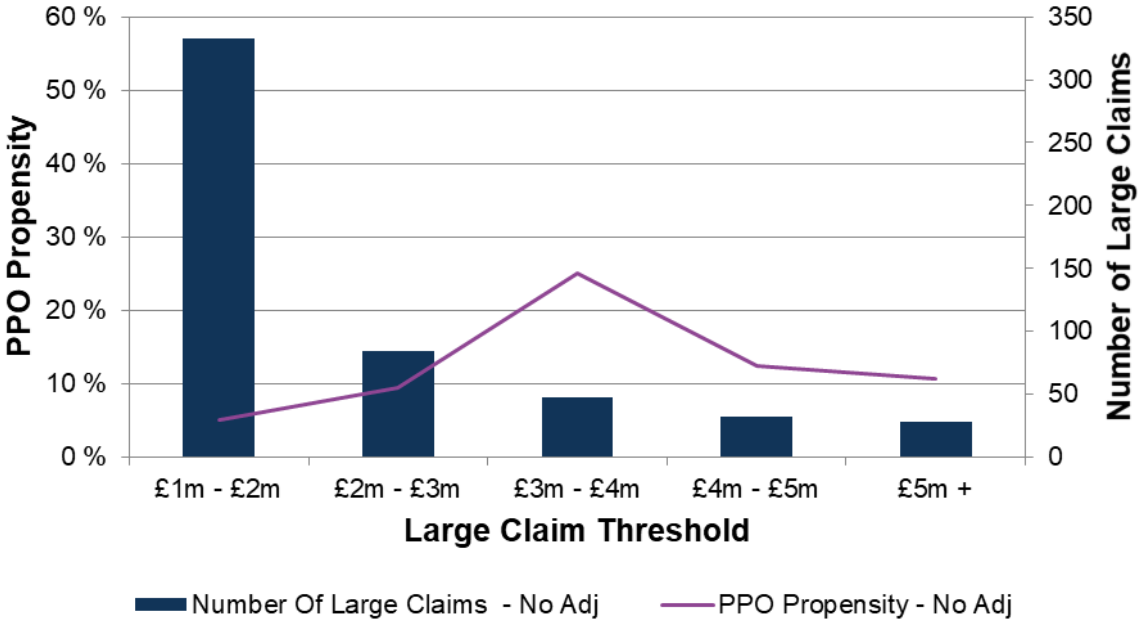

Figure H.8: Liability PPO propensity, by incremental large claim threshold band (2011 terms), for claims settled since 2009

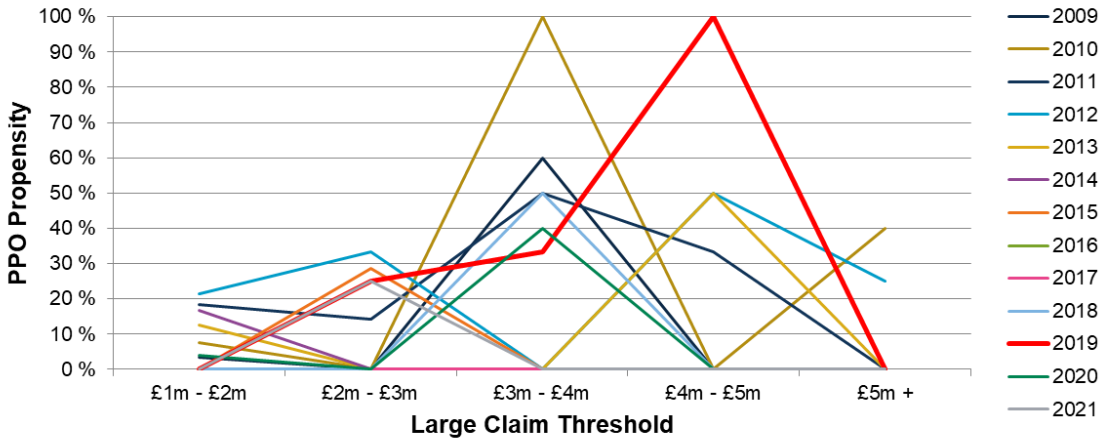

Figure H.9: Liability PPO propensity, by incremental large claim threshold band (2011 terms), and by settlement year, for claims settled since 2009

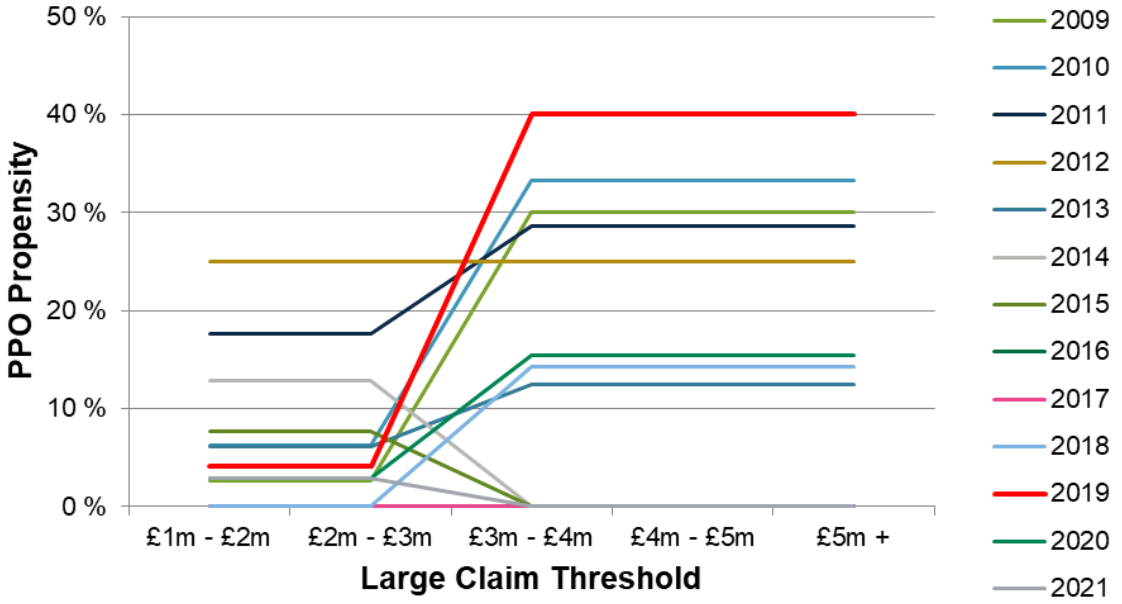

Figure H.10: Liability PPO propensity, by grouped (£1m-£3m, £3m+) incremental large claim threshold band (2011 terms), and by settlement year, for claims settled since 2009

H.5 Propensity by cumulative large claim threshold band

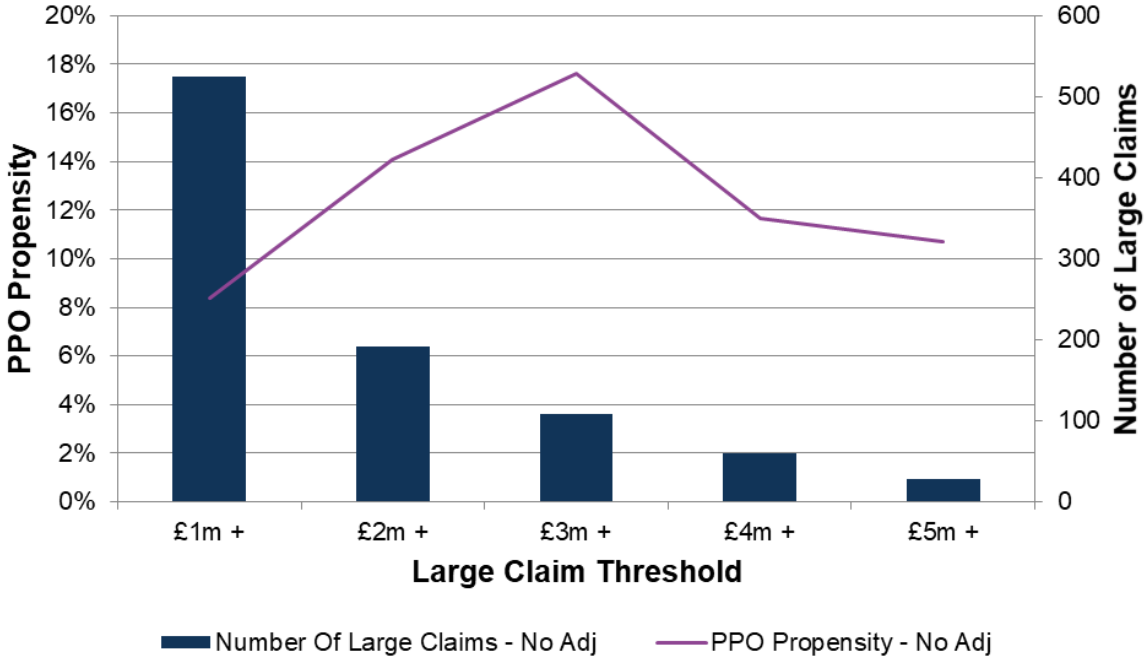

Figure H.11: Liability PPO propensity, by cumulative large claim threshold band (2011 terms), for claims settled since 2009

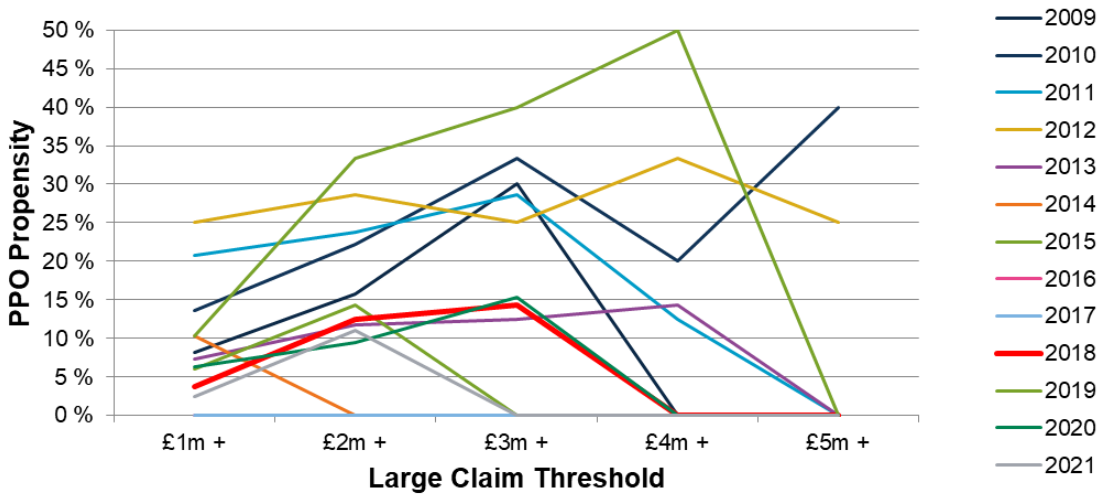

Figure H.12: Liability PPO propensity, by cumulative large claim threshold band (2011 terms), and by settlement year, for claims settled since 2009

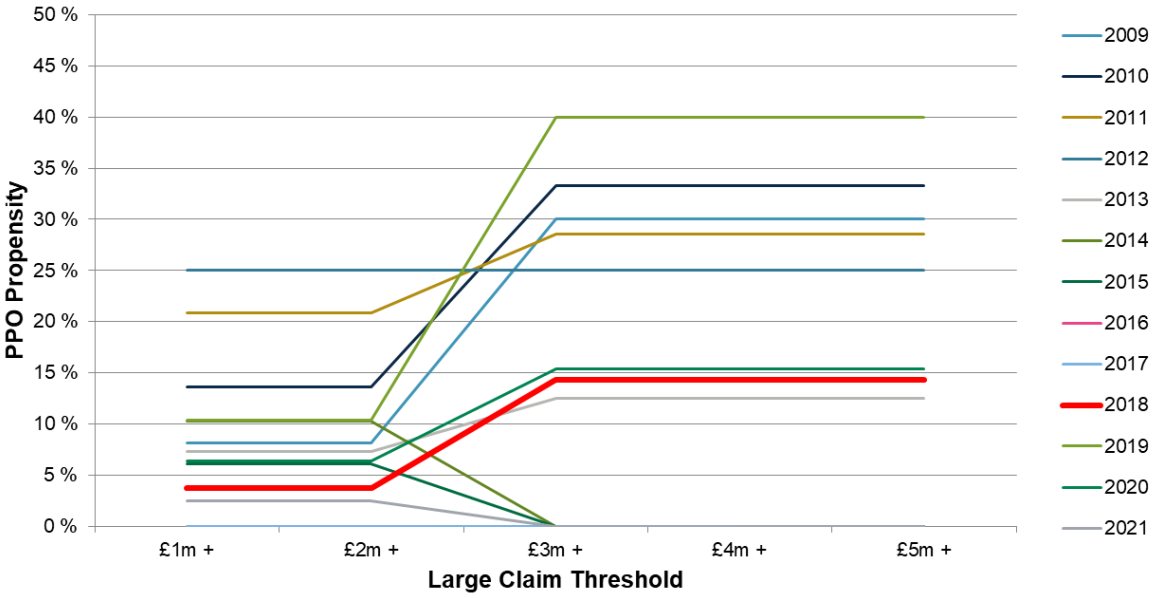

Figure H.13: Liability PPO propensity, by grouped (£1m+ to £2m+, £3m+ to £5m+) cumulative large claim threshold band (2011 terms), and by settlement year, for claims settled since 2009

Appendix I Accident year triangles for Motor (non-MIB) non-PPO and PPO claims

In this appendix, we provide triangles of non-PPO large claims, PPO claims and PPO propensity rates for non-MIB Motor claims, which take into account the accident year of a claim as well as its time to settlement.

As we have only collected data on large claims settled since 2008, the top left hand side of each triangle is incomplete. The cells shaded in blue in the cumulative triangles should therefore be treated with caution, as these are missing settlements prior to 2008.

We have also provided graphs showing the accident year cumulative development of the number of non-MIB Motor PPO claims, separately for the years for which PPO settlements were less commonplace (i.e. prior to 2008) and for the years for which PPO settlements have been more widespread (i.e. 2008 and post). It is clear from the data for the older accident years that we can expect some further development of the number of PPO claim settlements, even for these older years, although the extent of this development is difficult to quantify.

We have combined accident years prior to 2001, and the oldest accident year included is 1986.

I.1 Incremental triangles

	Years to Settlement																				
Accident Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2000 and prior									26	18	9	10	8	1	0	3	4	3	0	1	0
2001								10	6	5	2	5	2	0	0	1	0	2	1	1	0
2002							29	13	8	11	2	6	2	3	1	0	0	1	1	1	
2003						16	26	12	13	4	5	4	0	1	0	0	0	1	1		
2004					9	20	15	13	6	13	6	1	1	1	1	0	2	0			
2005				4	12	10	22	12	7	5	4	1	4	3	2	0	3				
2006			3	5	8	7	16	16	13	7	4	5	0	2	2	2					
2007		0	3	2	7	16	35	20	8	8	1	4	4	0	0						
2008	0	0	1	5	11	12	32	17	4	5	3	2	3	3							
2009	0	0	1	5	11	16	34	13	12	5	2	1	1								
2010	0	0	1	1	10	21	25	6	6	3	3	2									
2011	0	1	1	6	21	19	16	8	5	5	6										
2012	2	0	3	6	17	21	23	15	6	6											
2013	0	1	1	3	6	8	21	10	5												
2014	0	1	2	5	15	21	28	27													
2015	0	1	3	8	22	10	29														
2016	2	1	5	4	14	27															
2017	0	2	1	11	16																
2018	0	1	0	6																	
2019	0	0	0																		
2020	0	1																			
2021	0																				

Figure I.1: Triangle showing the accident year incremental development of the number of Motor (non-MIB) non-PPO large claims

Accident Year	Years to Settlement 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2000 and prior									7	9	12	5	4	1	1	3	1	1	0	0	1
2001								3	3	1	1	2	0	1	0	1	0	0	0	0	0
2002							3	6	3	2	4	3	2	0	0	0	0	0	0	0	
2003						3	7	4	2	4	2	1	1	0	1	0	0	0	0		
2004					3	10	10	5	8	1	0	0	2	1	0	0	0	0			
2005				2	7	13	11	6	3	2	0	1	0	0	0	1	0				
2006			0	4	14	6	12	7	1	0	0	0	1	0	0	1					
2007		0	1	3	14	9	8	7	2	1	0	0	0	0	0						
2008	0	0	1	5	11	11	6	3	1	1	1	0	0	0							
2009	0	0	2	3	13	7	5	5	0	0	0	1	0								
2010	0	0	1	5	6	8	3	1	1	0	0	0									
2011	0	0	1	4	7	4	0	0	0	0	0										
2012	0	0	2	4	4	2	2	4	0	0											
2013	0	0	4	7	1	2	2	3	0												
2014	0	0	1	1	1	9	2	2													
2015	0	0	0	3	1	2	2														
2016	0	0	0	0	2	2															
2017	0	0	1	0	3																
2018	0	0	0	0																	
2019	0	0	0																		
2020	0	0																			
2021	0																				

Figure I.2: Triangle showing the accident year incremental development of the number of Motor (non-MIB) PPO claims

Accident Year	Years to Settlement 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2000 and prior									21%	33%	57%	33%	33%	50%	100%	50%	20%	25%	0%	0%	100%
2001								23%	33%	17%	33%	29%	0%	100%	0%	50%	0%	0%	0%	0%	0%
2002							9%	32%	27%	15%	67%	33%	50%	0%	0%	0%	0%	0%	0%	0%	
2003						16%	21%	25%	13%	50%	29%	20%	100%	0%	100%	0%	0%	0%	0%		
2004					25%	33%	40%	28%	57%	7%	0%	0%	67%	50%	0%	0%	0%	0%			
2005				33%	37%	57%	33%	33%	30%	29%	0%	50%	0%	0%	0%	100%	0%				
2006			0%	44%	64%	46%	43%	30%	7%	0%	0%	0%	100%	0%	0%	33%					
2007		0%	25%	60%	67%	36%	19%	26%	20%	11%	0%	0%	0%	0%	0%						
2008	0%	0%	50%	50%	50%	48%	16%	15%	20%	17%	25%	0%	0%	0%							
2009	0%	0%	67%	38%	54%	30%	13%	28%	0%	0%	0%	50%	0%								
2010	0%	0%	50%	83%	38%	28%	11%	14%	14%	0%	0%	0%									
2011	0%	0%	50%	40%	25%	17%	0%	0%	0%	0%	0%										
2012	0%	0%	40%	40%	19%	9%	8%	21%	0%	0%											
2013	0%	0%	80%	70%	14%	20%	9%	23%	0%												
2014	0%	0%	33%	17%	6%	30%	7%	7%													
2015	0%	0%	0%	27%	4%	17%	6%														
2016	0%	0%	0%	0%	13%	7%															
2017	0%	0%	50%	0%	16%																
2018	0%	0%	0%	0%																	
2019	0%	0%	0%																		
2020	0%	0%																			
2021	0%																				

Figure I.3: Triangle showing the incremental accident year Motor (non-MIB) PPO propensity rates

I.2 Cumulative triangles

Accident Year	Years to Settlement 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2000 and prior									26	44	53	63	71	72	72	75	79	82	82	83	83
2001								10	16	21	23	28	30	30	30	31	31	33	34	35	35
2002							29	42	50	61	63	69	71	74	75	75	75	76	77	78	
2003						16	42	54	67	71	76	80	80	81	81	81	81	82	83		
2004					9	29	44	57	63	76	82	83	84	85	86	86	88	88			
2005				4	16	26	48	60	67	72	76	77	81	84	86	86	89				
2006			3	8	16	23	39	55	68	75	79	84	84	86	88	90					
2007		0	3	5	12	28	63	83	91	99	100	104	108	108	108						
2008	0	0	1	6	17	29	61	78	82	87	90	92	95	98							
2009	0	0	1	6	17	33	67	80	92	97	99	100	101								
2010	0	0	1	2	12	33	58	64	70	73	76	78									
2011	0	1	2	8	29	48	64	72	77	82	88										
2012	2	2	5	11	28	49	72	87	93	99											
2013	0	1	2	5	11	19	40	50	55												
2014	0	1	3	8	23	44	72	99													
2015	0	1	4	12	34	44	73														
2016	2	3	8	12	26	53															
2017	0	2	3	14	30																
2018	0	1	1	7																	
2019	0	0	0																		
2020	0	1																			
2021	0																				

Figure I.4: Triangle showing the accident year cumulative development of the number of Motor (non-MIB) non-PPO large claims

	Years to Settlement																				
Accident Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2000 and prior									7	16	28	33	37	38	39	42	43	44	44	44	45
2001								3	6	7	8	10	10	11	11	12	12	12	12	12	12
2002							3	9	12	14	18	21	23	23	23	23	23	23	23	23	
2003						3	10	14	16	20	22	23	24	24	25	25	25	25	25		
2004					3	13	23	28	36	37	37	37	39	40	40	40	40	40			
2005				2	9	22	33	39	42	44	44	45	45	45	45	46	46				
2006			0	4	18	24	36	43	44	44	44	44	45	45	45	46					
2007		0	1	4	18	27	35	42	44	45	45	45	45	45	45						
2008	0	0	1	6	17	28	34	37	38	39	40	40	40	40							
2009	0	0	2	5	18	25	30	35	35	35	35	36	36								
2010	0	0	1	6	12	20	23	24	25	25	25	25									
2011	0	0	1	5	12	16	16	16	16	16	16										
2012	0	0	2	6	10	12	14	18	18	18											
2013	0	0	4	11	12	14	16	19	19												
2014	0	0	1	2	3	12	14	16													
2015	0	0	0	3	4	6	8														
2016	0	0	0	0	2	4															
2017	0	0	1	1	4																
2018	0	0	0	0																	
2019	0	0	0																		
2020	0	0																			
2021	0																				

Figure I.5: Triangle showing the accident year cumulative development of the number of Motor (non-MIB) PPO claims

	Years to Settlement																				
Accident Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
2000 and prior									0.212	0.267	0.346	0.344	0.343	0.345	0.351	0.359	0.352	0.349	0.349	0.346	0.352
2001								0.231	0.273	0.25	0.258	0.263	0.25	0.268	0.268	0.279	0.279	0.267	0.261	0.255	0.255
2002							0.094	0.176	0.194	0.187	0.222	0.233	0.245	0.237	0.235	0.235	0.235	0.232	0.23	0.228	
2003						0.158	0.192	0.206	0.193	0.22	0.224	0.223	0.231	0.229	0.236	0.236	0.236	0.234	0.231		
2004					0.25	0.31	0.343	0.329	0.364	0.327	0.311	0.308	0.317	0.32	0.317	0.317	0.313	0.313			
2005				0.333	0.36	0.458	0.407	0.394	0.385	0.379	0.367	0.369	0.357	0.349	0.344	0.348	0.341				
2006			0	0.333	0.529	0.511	0.48	0.439	0.393	0.37	0.358	0.344	0.349	0.344	0.338	0.338					
2007		0	0.25	0.444	0.6	0.491	0.357	0.336	0.326	0.313	0.31	0.302	0.294	0.294	0.294						
2008	0	0	0.5	0.5	0.5	0.491	0.358	0.322	0.317	0.31	0.308	0.303	0.296	0.29							
2009	0	0	0.667	0.455	0.514	0.431	0.309	0.304	0.276	0.265	0.261	0.265	0.263								
2010	0	0	0.5	0.75	0.5	0.377	0.284	0.273	0.263	0.255	0.248	0.243									
2011	0	0	0.333	0.385	0.293	0.25	0.2	0.182	0.172	0.163	0.154										
2012	0	0	0.286	0.353	0.263	0.197	0.163	0.171	0.162	0.154											
2013	0	0	0.667	0.688	0.522	0.424	0.286	0.275	0.257												
2014	0	0	0.25	0.2	0.115	0.214	0.163	0.139													
2015	0	0	0	0.2	0.105	0.12	0.099														
2016	0	0	0	0	0.071	0.07															
2017	0	0	0.25	0.067	0.118																
2018	0	0	0	0																	
2019	0	0	0																		
2020	0	0																			
2021	0																				

Figure I.6: Triangle showing the accident year cumulative Motor (non-MIB) PPO propensity rates

I.3 Cumulative development graphs

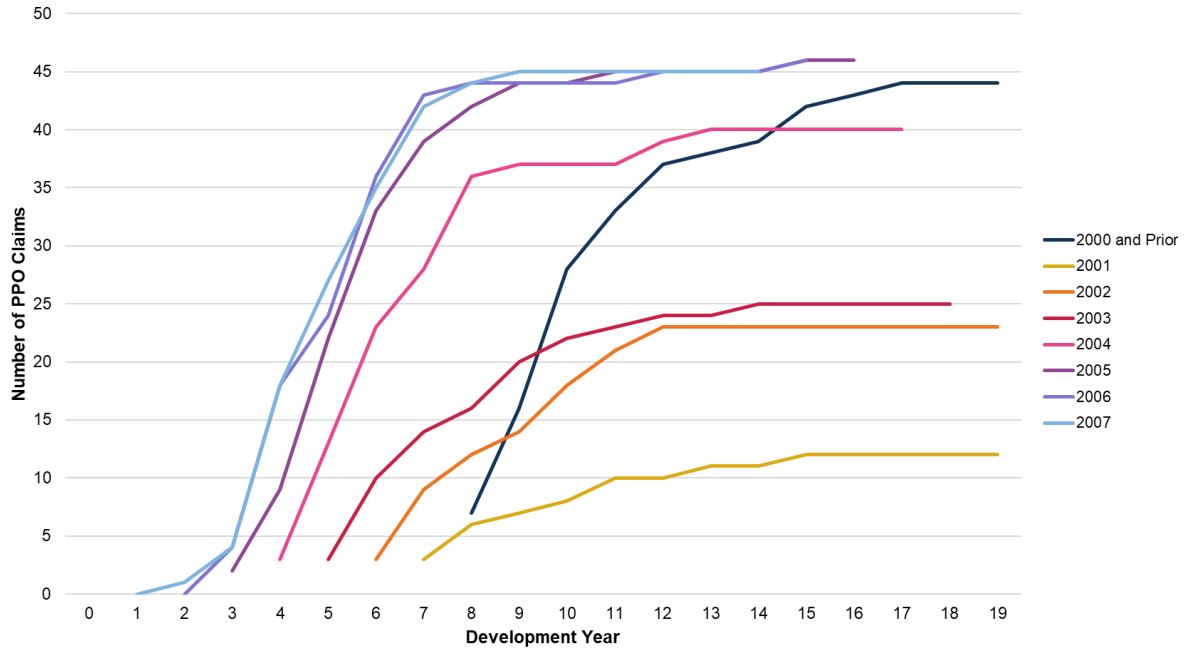

Figure I.7: Graph showing the accident year cumulative development of the number of Motor (non-MIB) PPO claims – years for which PPO settlements were less commonplace

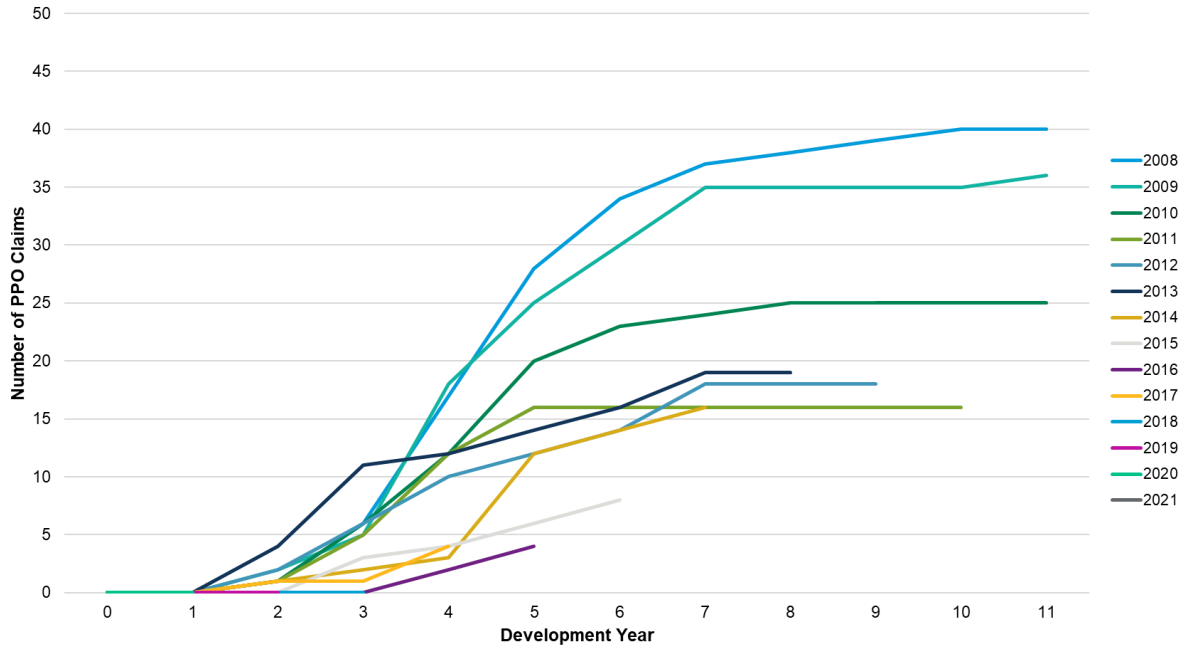

Figure I.8: Graph showing the accident year cumulative development of the number of Motor (non-MIB) PPO claims – years for which PPO settlements have been more widespread

Appendix J General characteristics of Motor (non-MIB) PPO claims

In this appendix, we provide summary statistics for Motor (non-MIB) PPO claims by the following characteristics:

- Age of driver at accident date and gender of driver (including class of business and cover type)
- Age of claimant at accident date and gender of claimant (including class of business and cover type)
- Age of claimant at settlement date and gender of claimant
- Age of driver and age of claimant at accident date
- Delay to settlement
- Life expectancy of claimant at settlement date
- Reduction in life expectancy of the claimant.

J.1 Age of driver at accident date and gender of driver

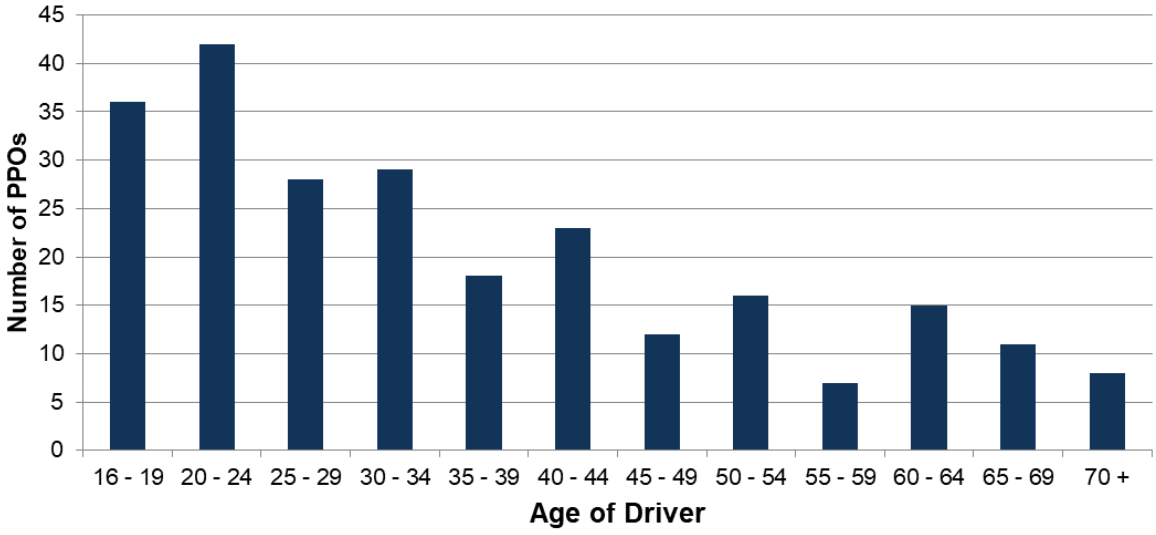

Figure J.1: Number of Motor (non-MIB) PPO claims, by age of driver at accident date

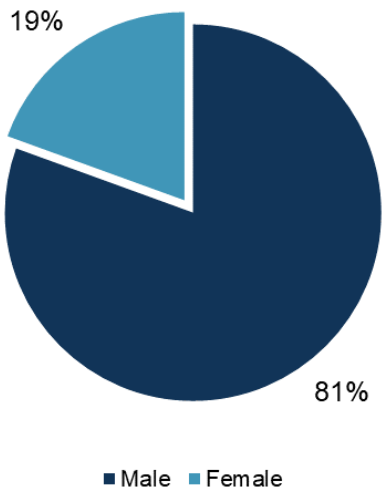

Figure J.2: Split of the number of Motor (non-MIB) PPO claims, by gender of driver

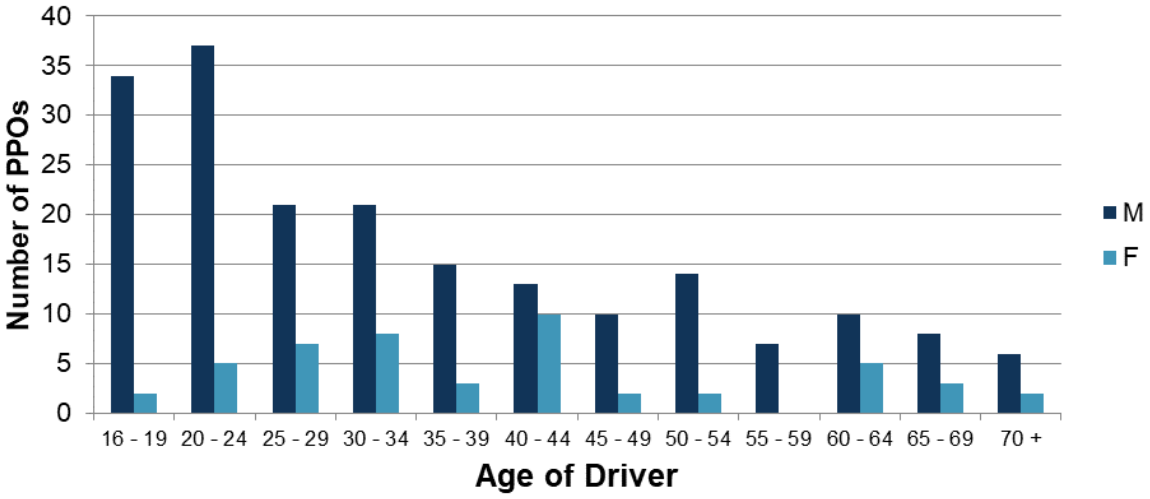

Figure J.3: Number of Motor (non-MIB) PPO claims, by age of driver at accident date and by gender of driver

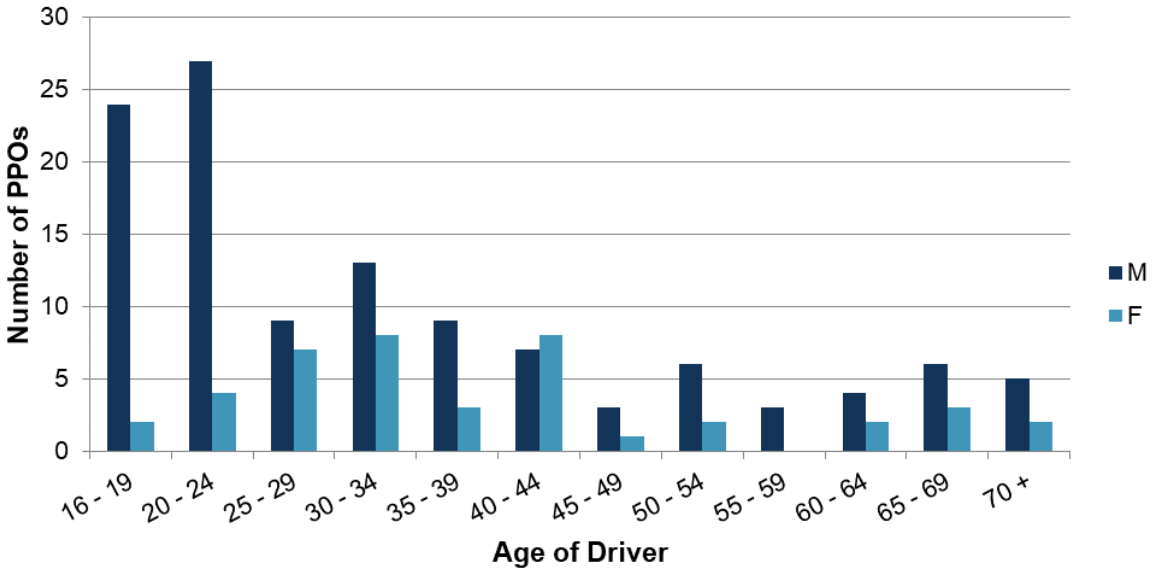

Figure J.4: Number of Motor (non-MIB) PPO claims, for Private Motor, by age of driver at accident date and by gender of driver

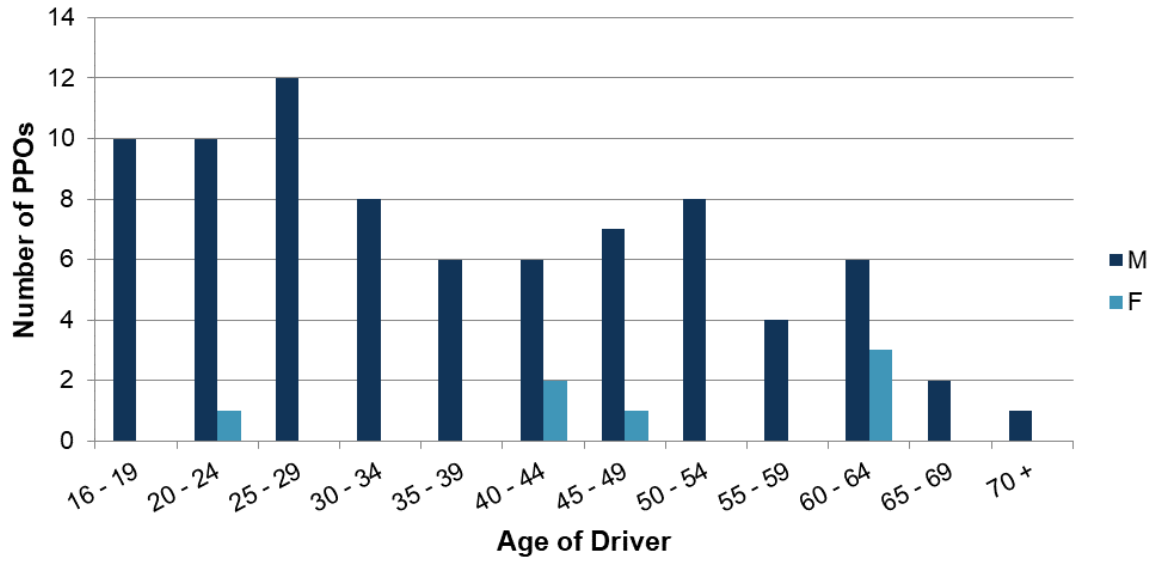

Figure J.5: Number of Motor (non-MIB) PPO claims, for Commercial Motor, by age of driver at accident date and by gender of driver

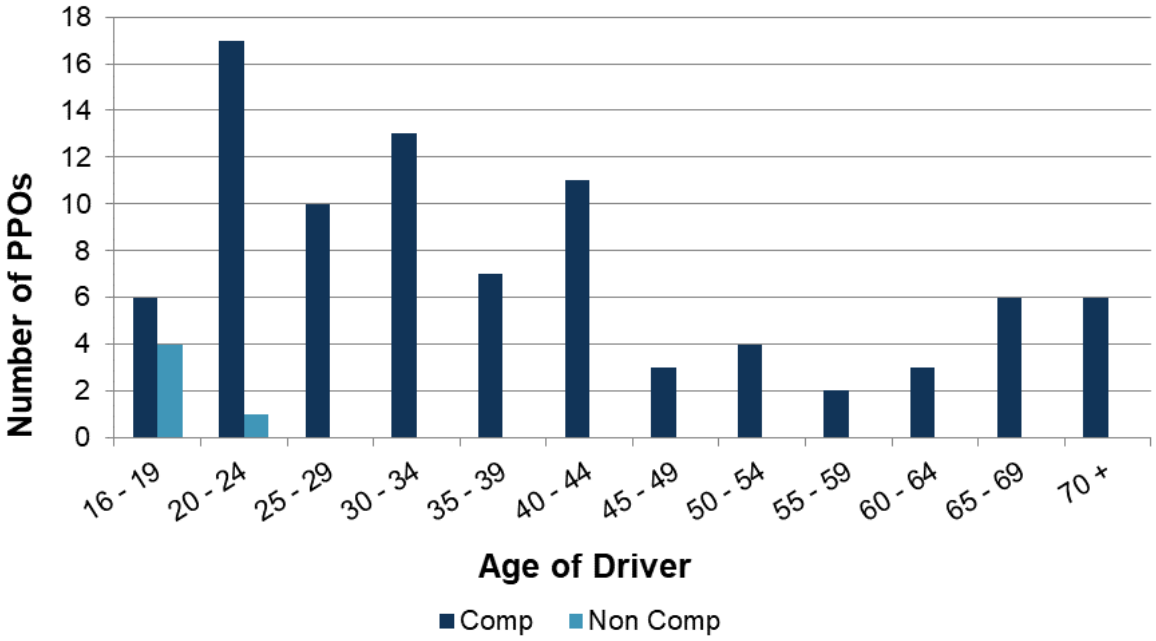

Figure J.6: Number of Motor (non-MIB) PPO claims, for Private Motor, by age of driver at accident date and by cover type

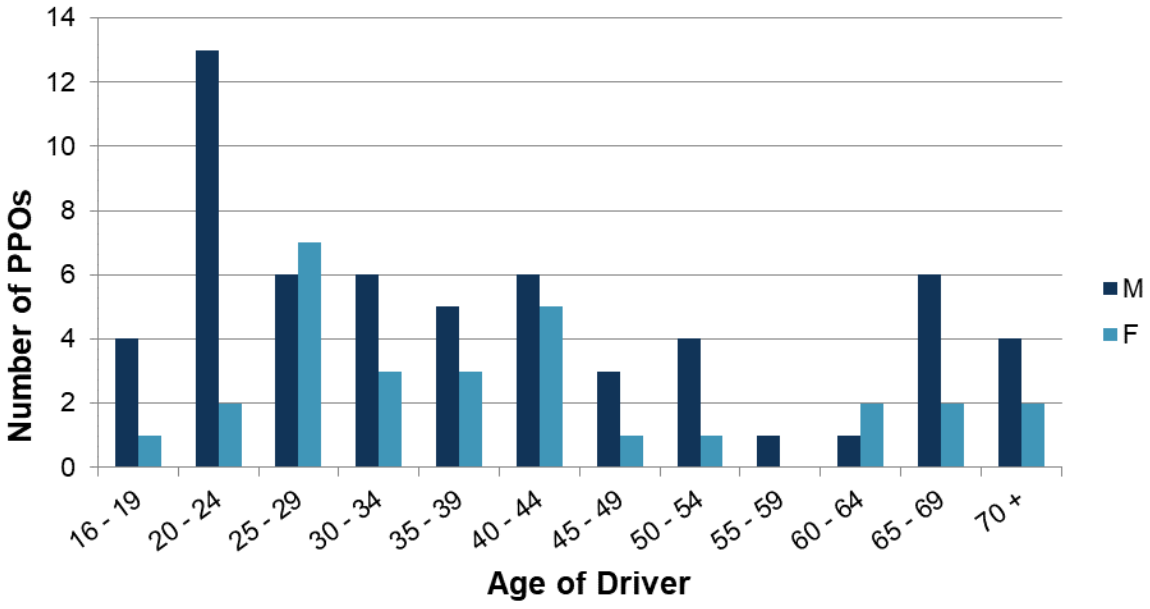

Figure J.7: Number of Motor (non-MIB) PPO claims, for Private Motor Comprehensive, by age of driver at accident date and by gender of driver

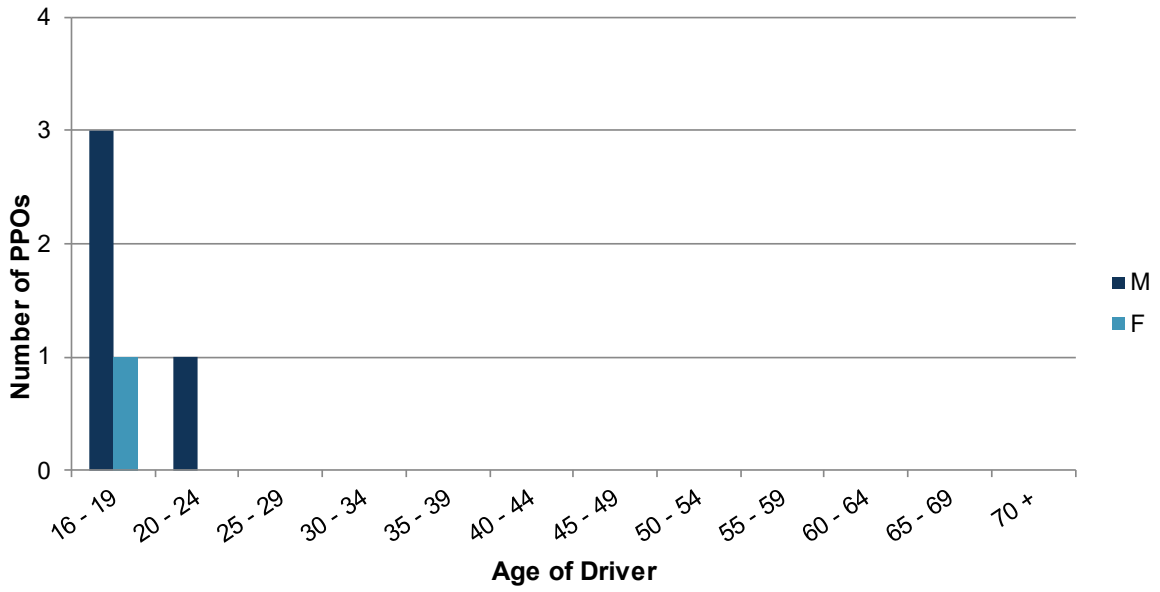

Figure J.8: Number of Motor (non-MIB) PPO claims, for Private Motor Non-Comprehensive, by age of driver at accident date and by gender of driver

J.2 Age of claimant at accident date and gender of claimant

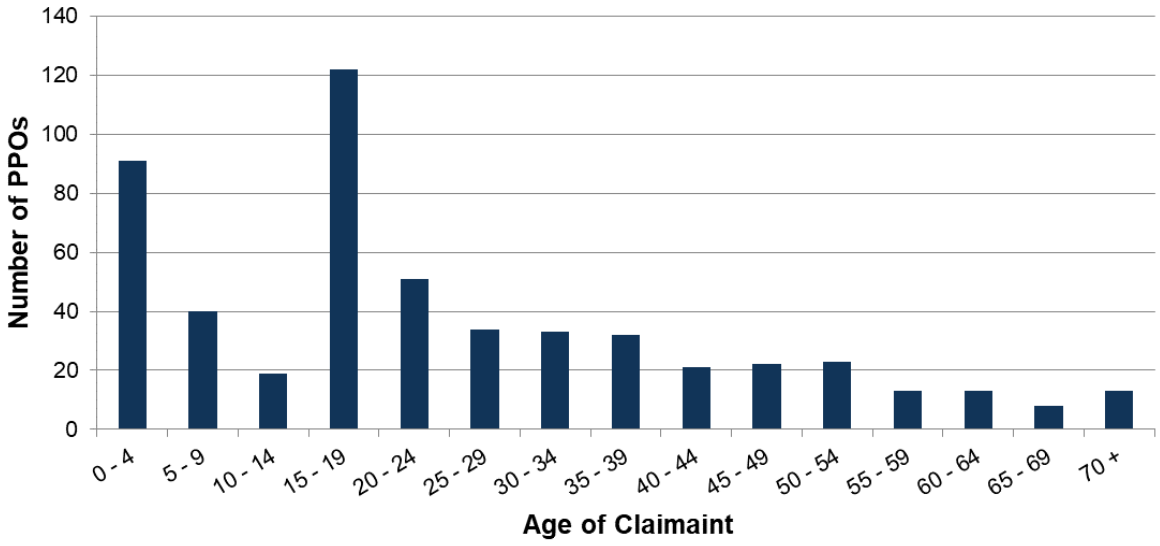

Figure J.9: Number of Motor (non-MIB) PPO claims, by age of claimant at accident date

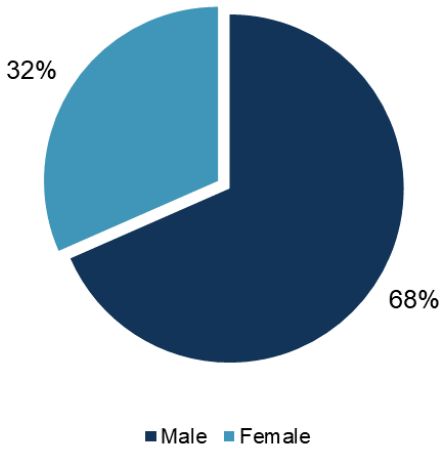

Figure J.10: Split of the number of Motor (non-MIB) PPO claims, by gender of claimant

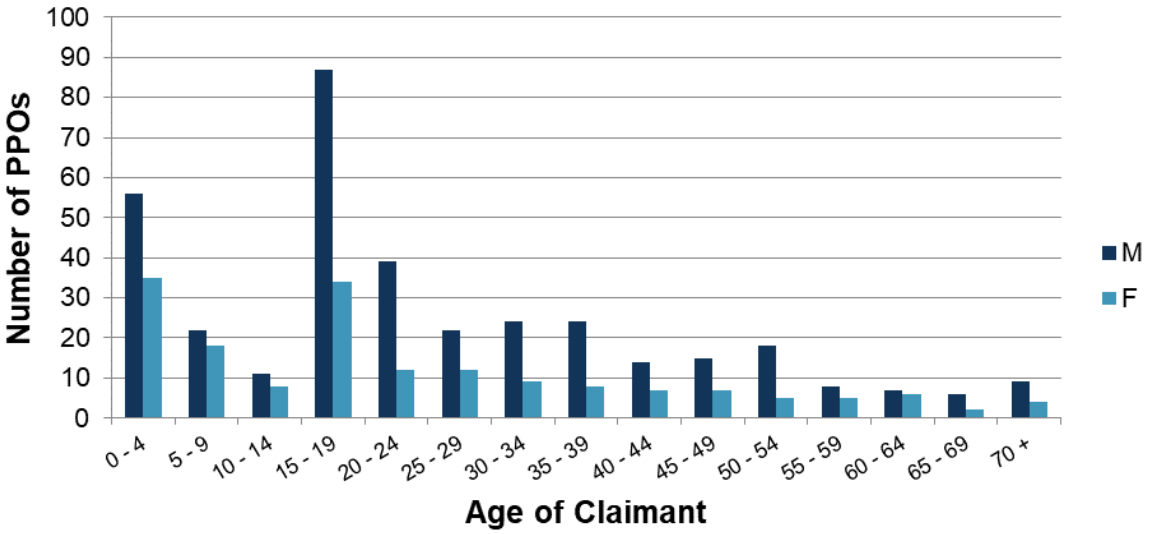

Figure J.11: Number of Motor (non-MIB) PPO claims, by age of claimant at accident date and by gender of claimant

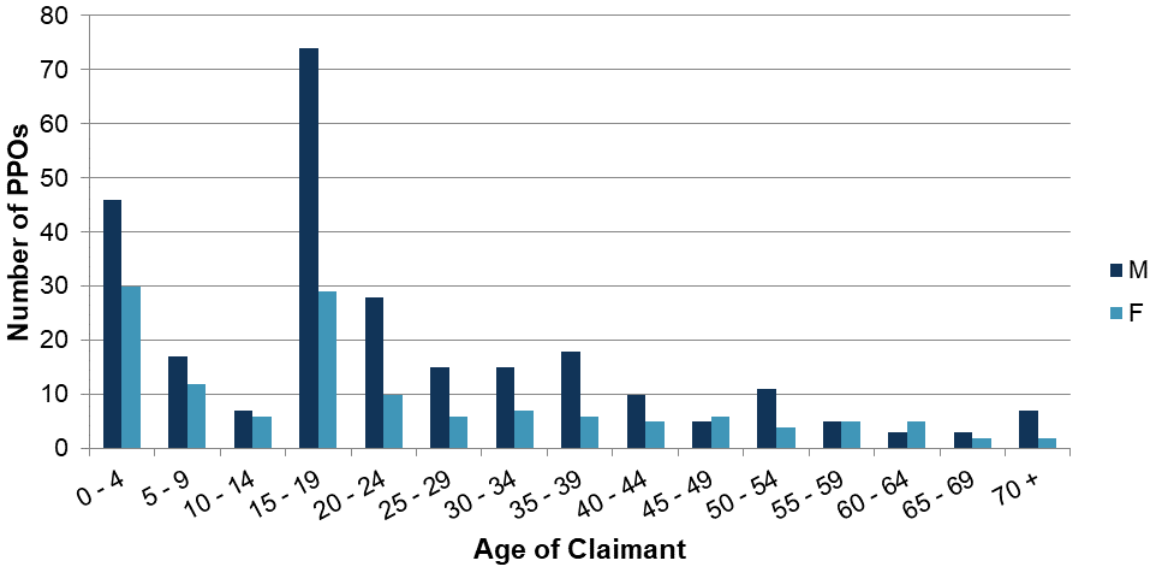

Figure J.12: Number of Motor (non-MIB) PPO claims, for Private Motor, by age of claimant at accident date and by gender of claimant

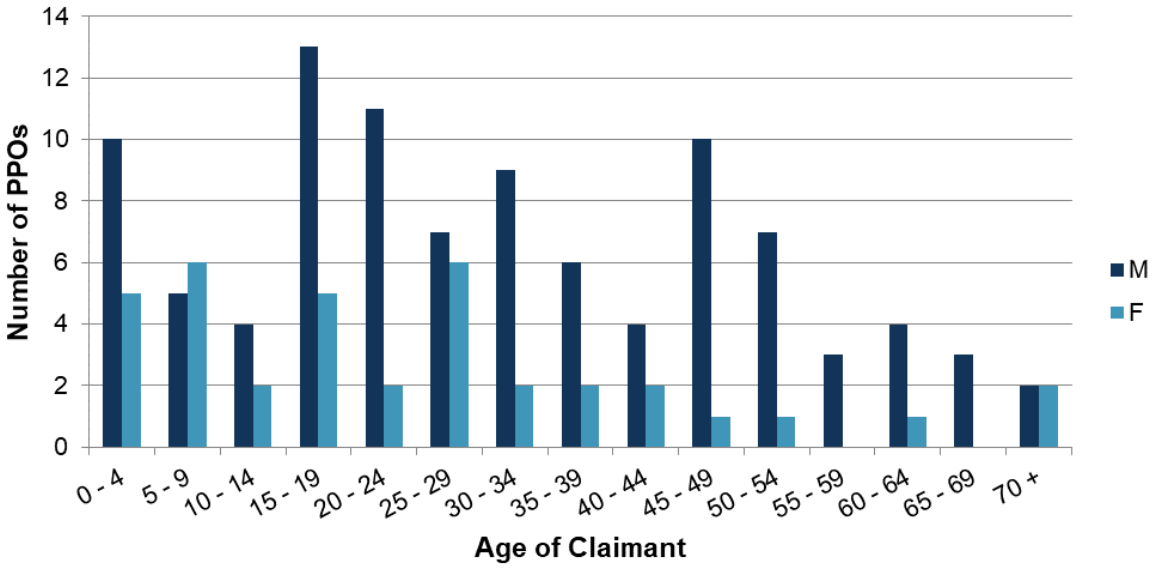

Figure J.13: Number of Motor (non-MIB) PPO claims, for Commercial Motor, by age of claimant at accident date and by gender of claimant

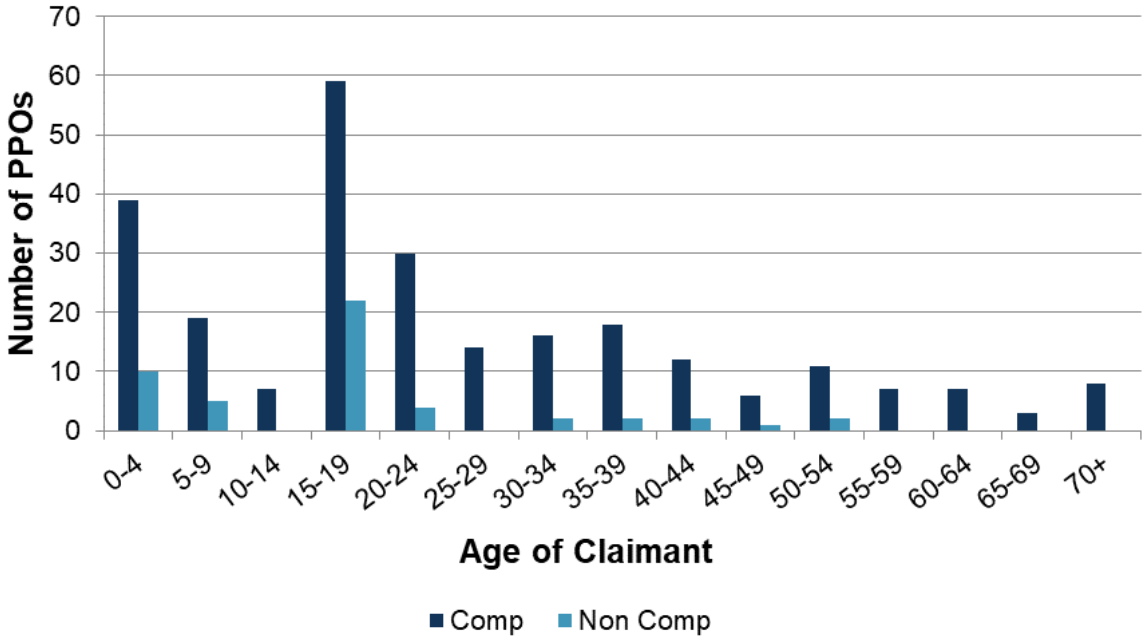

Figure J.14: Number of Motor (non-MIB) PPO claims, for Private Motor, by age of claimant at accident date and by cover type

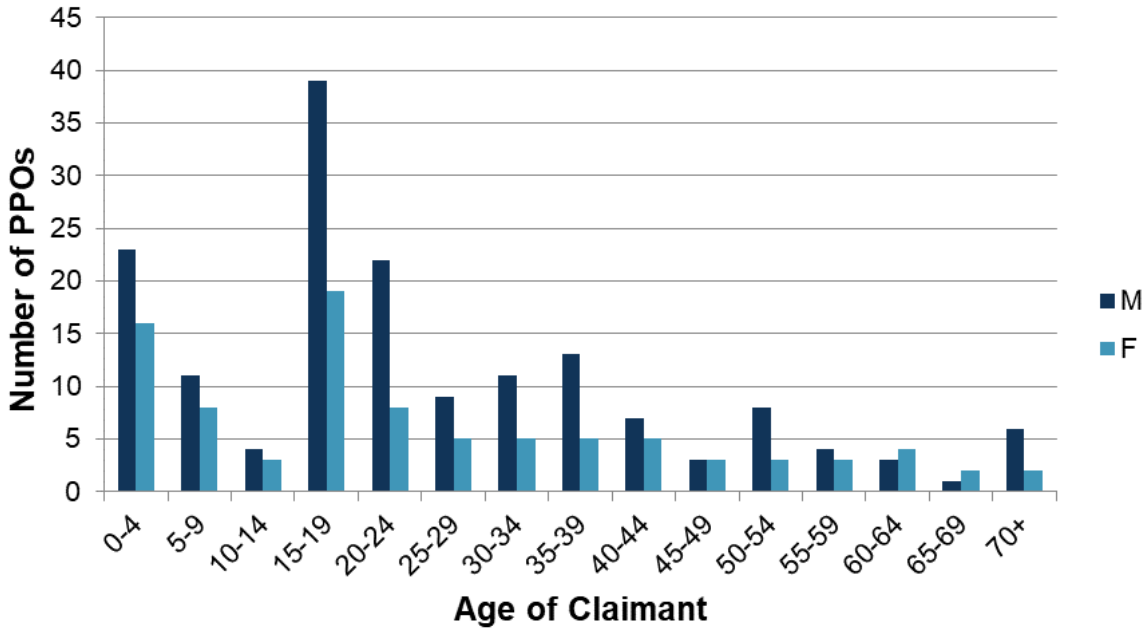

Figure J.15: Number of Motor (non-MIB) PPO claims, for Private Motor Comprehensive, by age of claimant at accident date and by gender of claimant

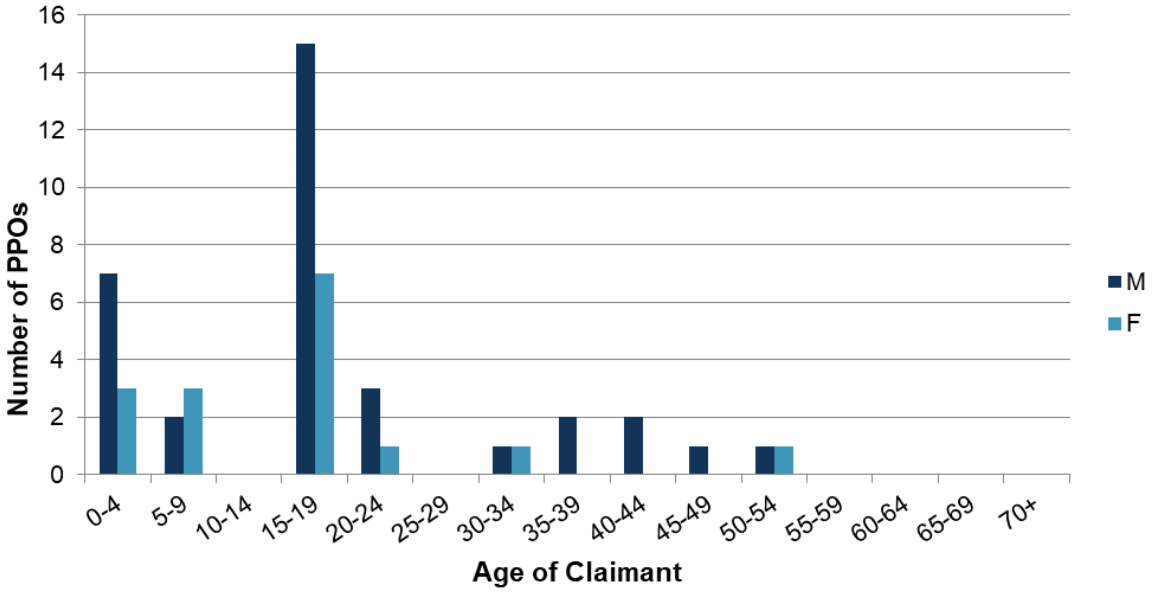

Figure J.16: Number of Motor (non-MIB) PPO claims, for Private Motor Non-Comprehensive, by age of claimant at accident date and by gender of claimant

J.3 Age of claimant at settlement date and gender of claimant

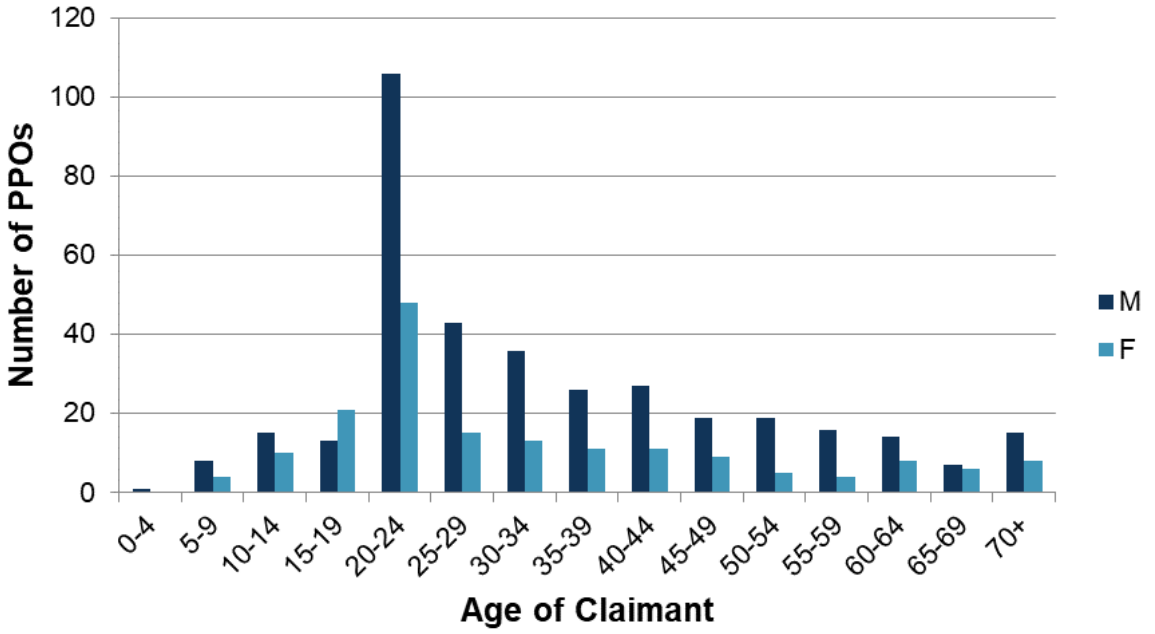

Figure J.17: Number of Motor (non-MIB) PPO claims, by age of claimant at settlement date and by gender of claimant

J.4 Age of driver and age of claimant at accident date

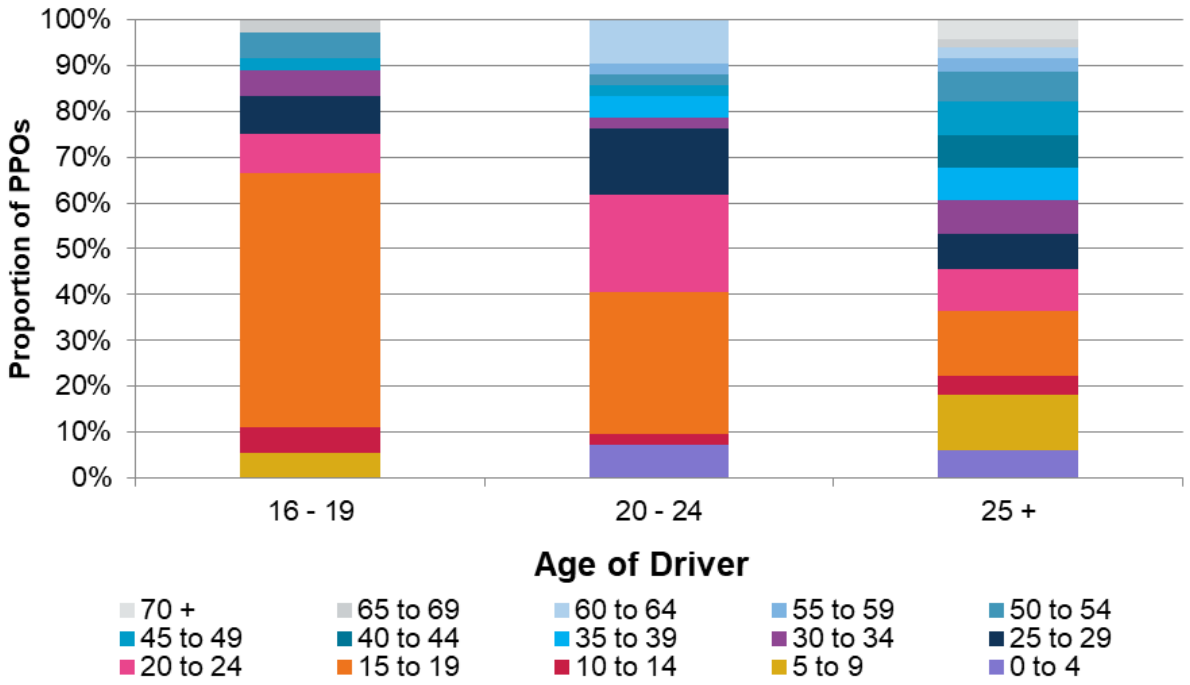

Figure J.18: Proportion of Motor (non-MIB) PPO claims, by age of claimant at accident date and by age of driver at accident date

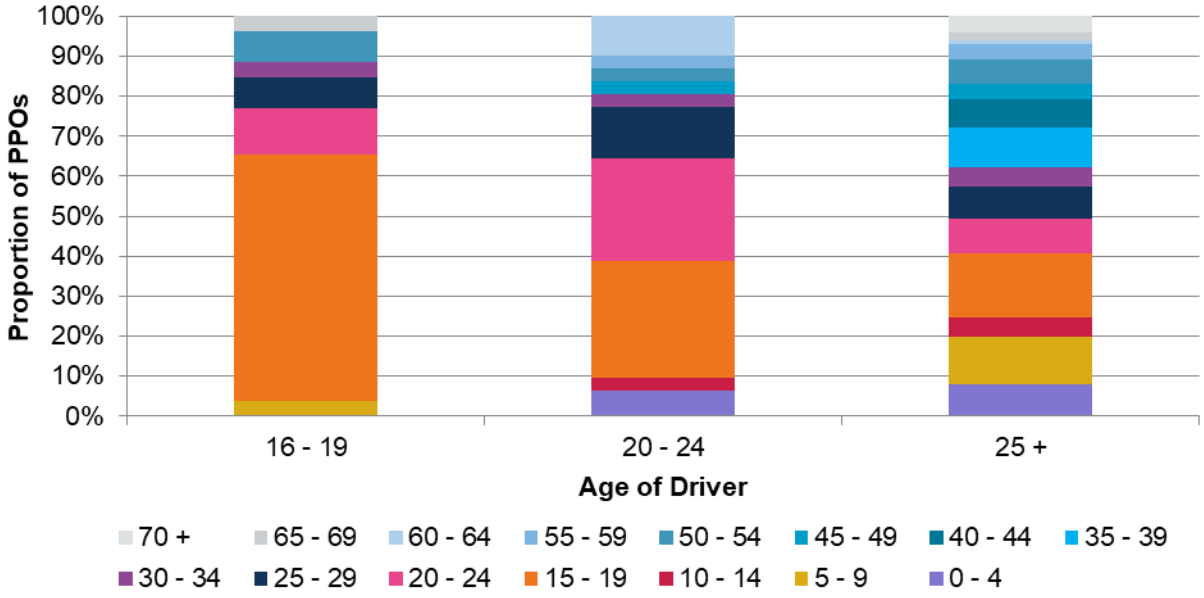

Figure J.19: Proportion of Motor (non-MIB) PPO claims, for Private Motor, by age of claimant at accident date and by age of driver at accident date

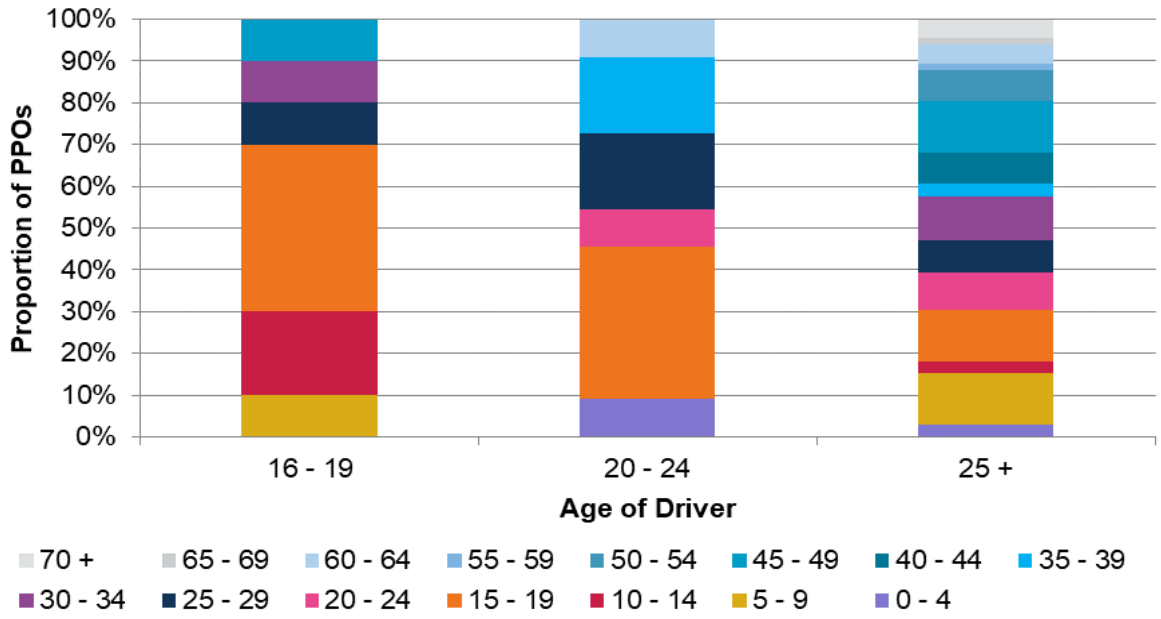

Figure J.20: Proportion of Motor (non-MIB) PPO claims, for Commercial Motor, by age of claimant at accident date and by age of driver at accident date

J.5 Delay to settlement

The delay to settlement is calculated as the time elapsed between the accident date and PPO settlement date, rounded to the nearest whole year.

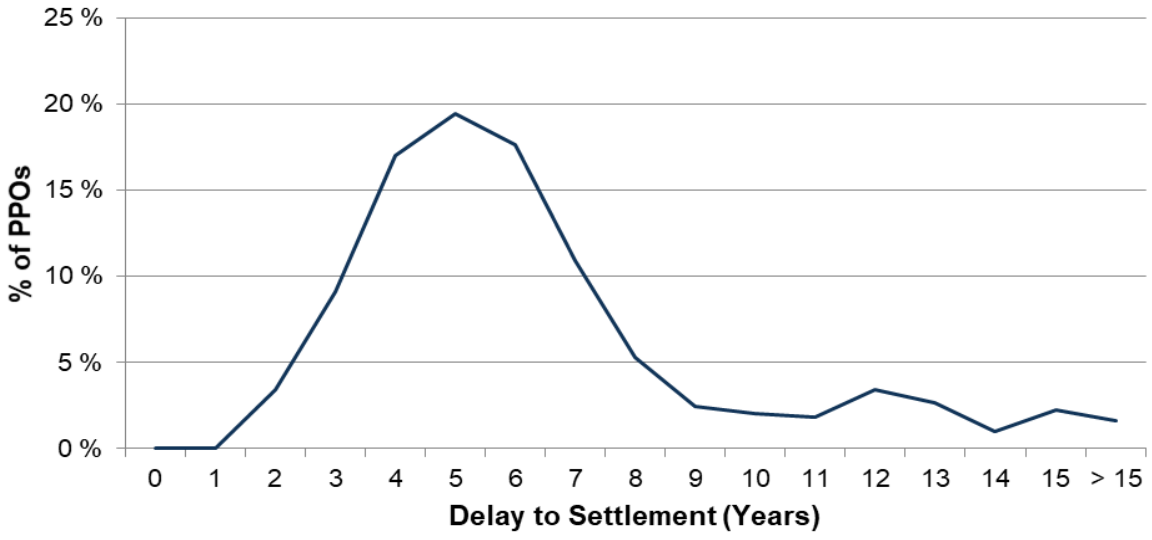

Figure J.21: Distribution of the delay to settlement for Motor (non-MIB) PPO claims, for claims settled since 2009

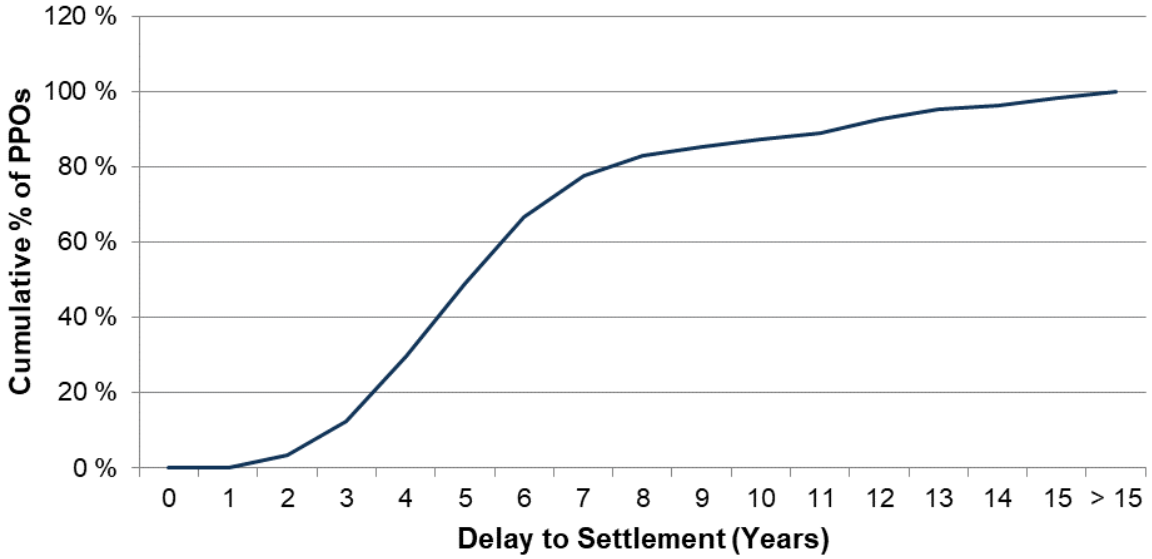

Figure J.22: Cumulative distribution of the delay to settlement for Motor (non-MIB) PPO claims, for claims settled since 2009

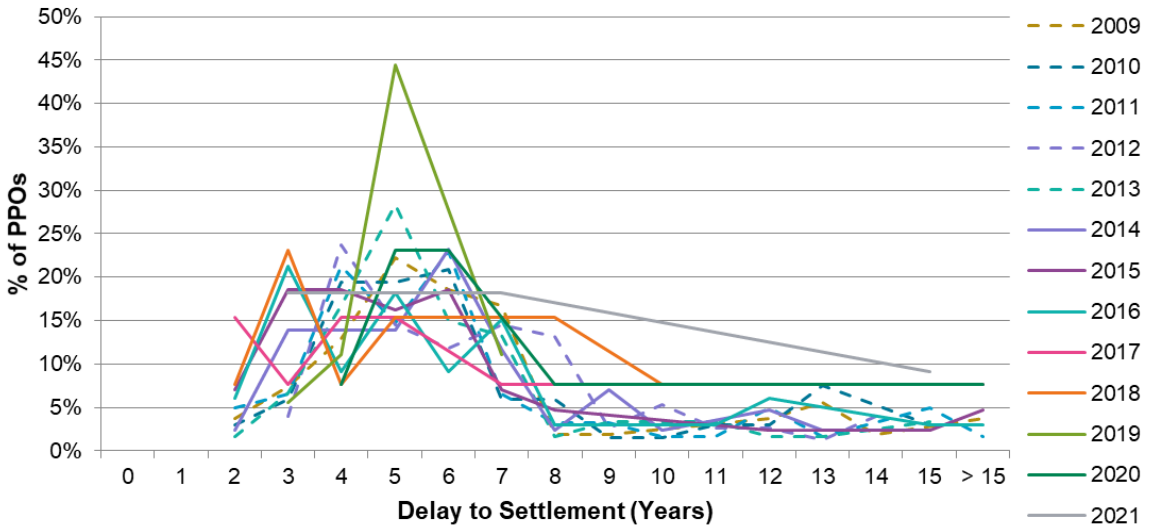

Figure J.23: Distribution of the delay to settlement for Motor (non-MIB) PPO claims, by settlement year, for claims settled since 2009

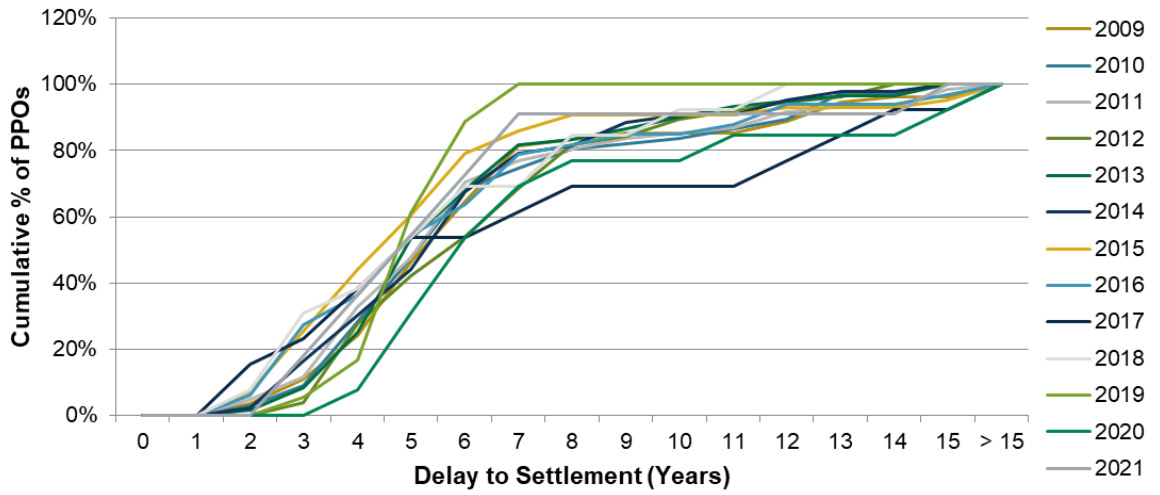

Figure J.24: Cumulative distribution of the delay to settlement for Motor (non-MIB) PPO claims, by settlement year, for claims settled since 2009

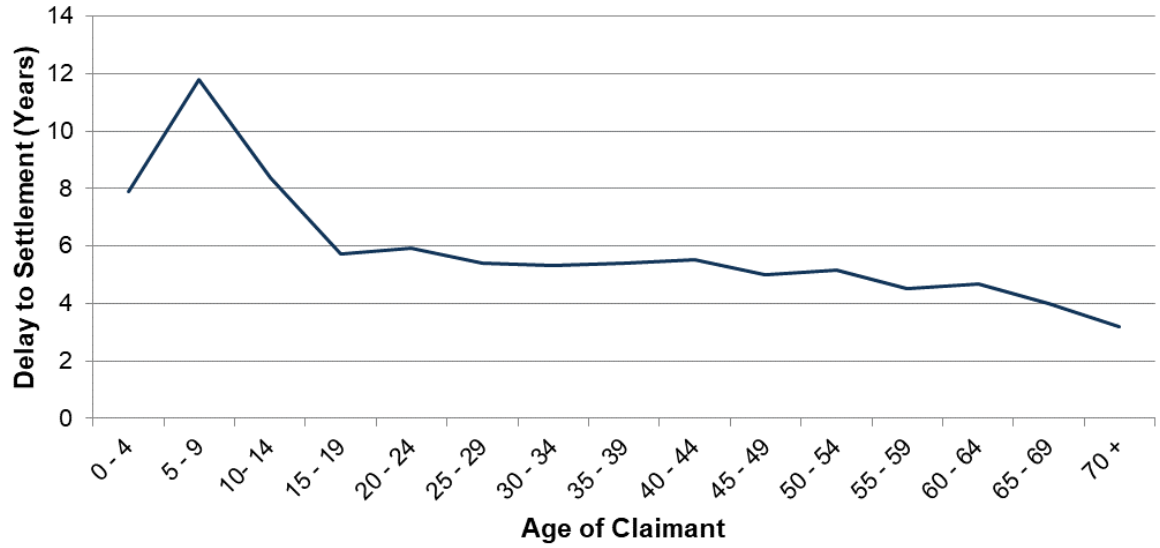

Figure J.25: Average delay to settlement for Motor (non-MIB) PPO claims, by age of claimant at accident date, for claims settled since 2009

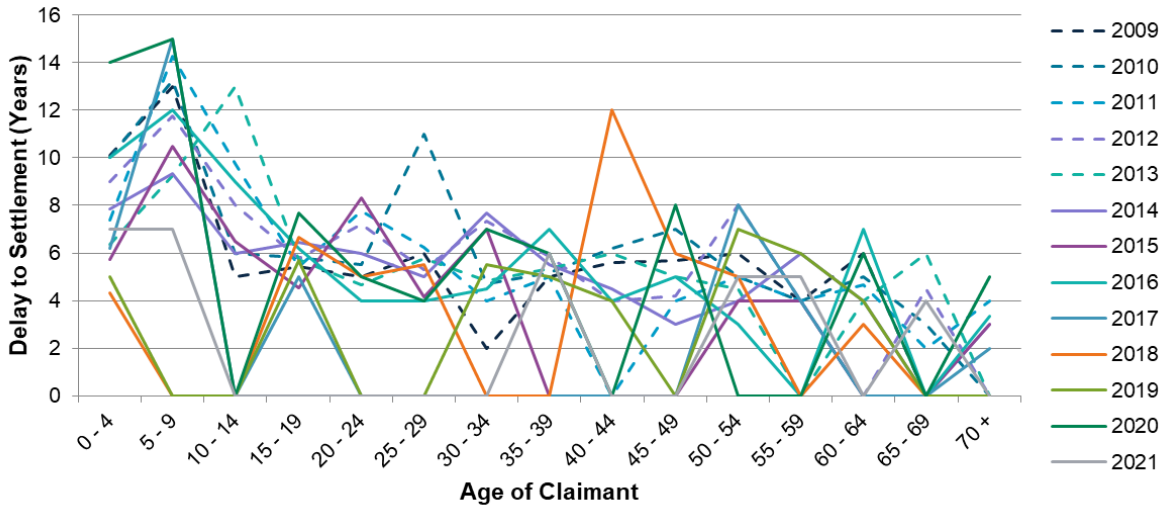

Figure J.26: Average delay to settlement for Motor (non-MIB) PPO claims, by age of claimant at accident date, by settlement year, for claims settled since 2009

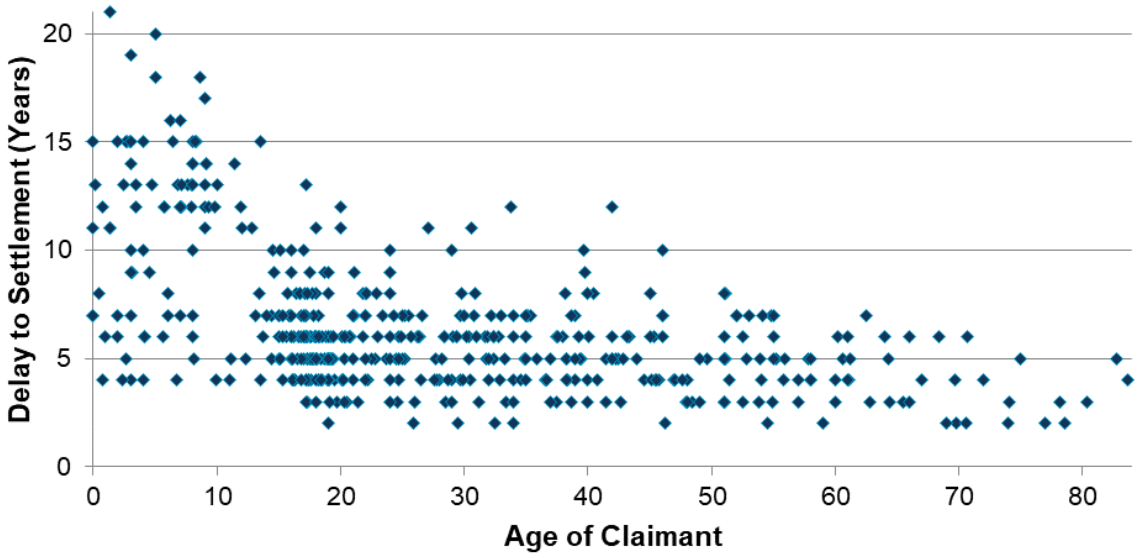

Figure J.27: Scatter graph of the delay to settlement for Motor (non-MIB) PPO claims and the age of claimant at accident date

For the scatter graph in Figure J.27, the correlation coefficients are:

- Pearson correlation coefficient: -0.50
- Spearman correlation coefficient: -0.50

The coefficients represent the strength and direction of the correlation between the two variables, ranging between -1.00 and +1.00. A larger absolute value represents a stronger relationship in the data, the sign indicating the direction.

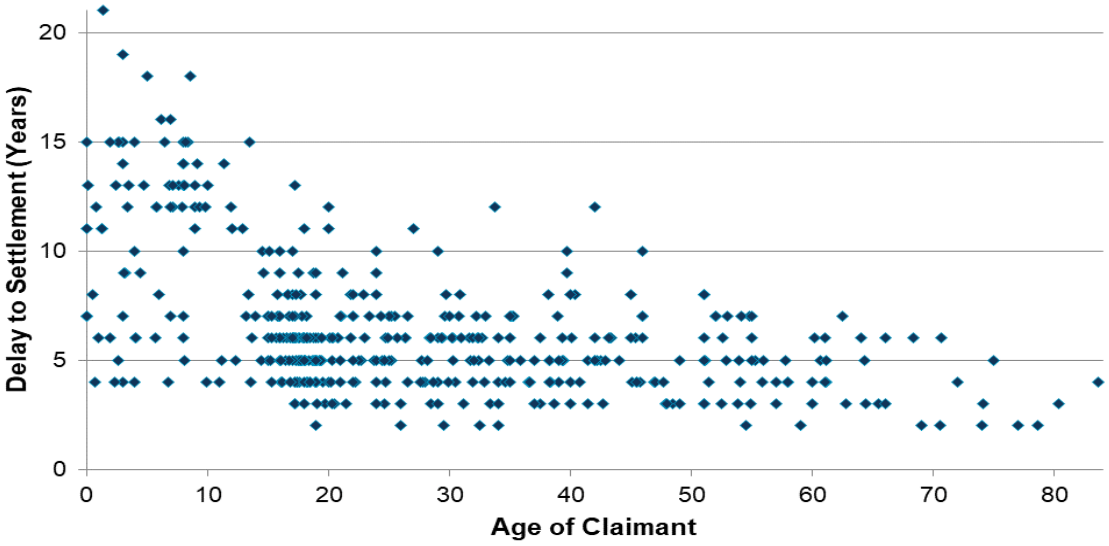

Figure J.28: Scatter graph of the delay to settlement for Motor (non-MIB) PPO claims and the age of claimant at accident date, for claims settled since 2009

For the scatter graph in Figure J.28, the correlation coefficients are:

- Pearson correlation coefficient: -0.49
- Spearman correlation coefficient: -0.47

J.6 Life expectancy of claimant at settlement date

The term "life expectancy" in this document is defined as the future life expectancy at the time of settlement, as per the quantitative industry survey responses. It is not clear whether the data collected represents the claimant experts' views, the defendant experts' views, internal views, or a combination of these.

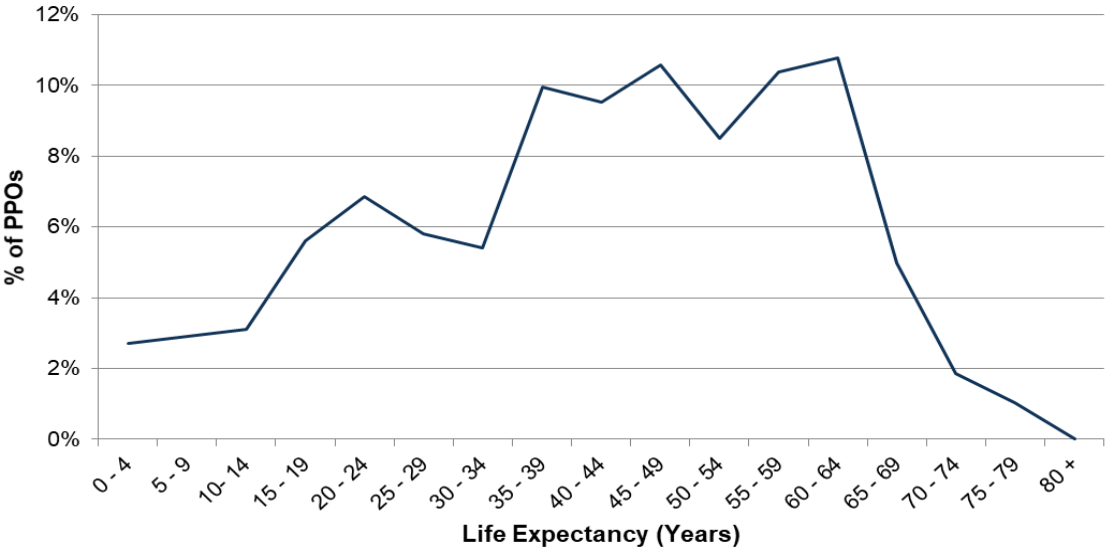

Figure J.29: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, for claims settled since 2009

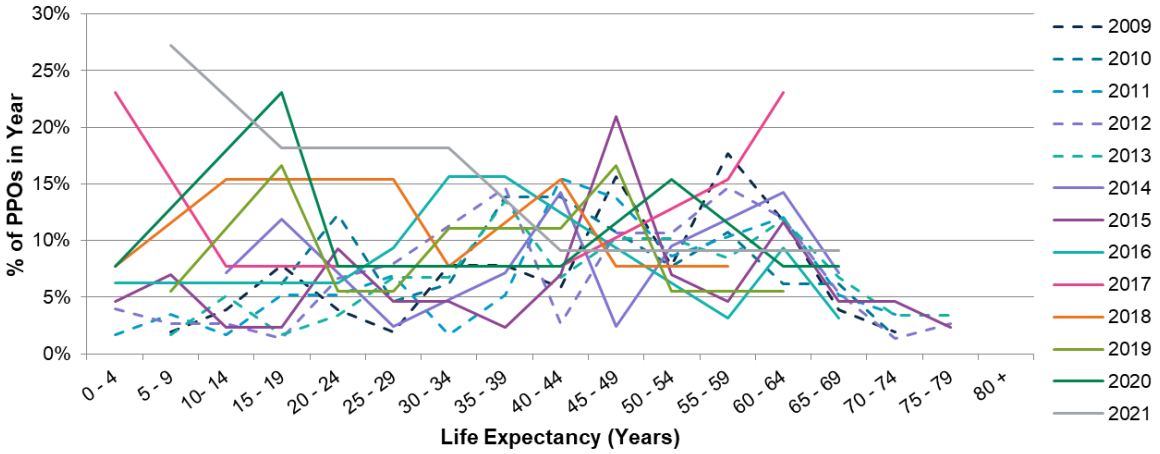

Figure J.30: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, by settlement year, for claims settled since 2009

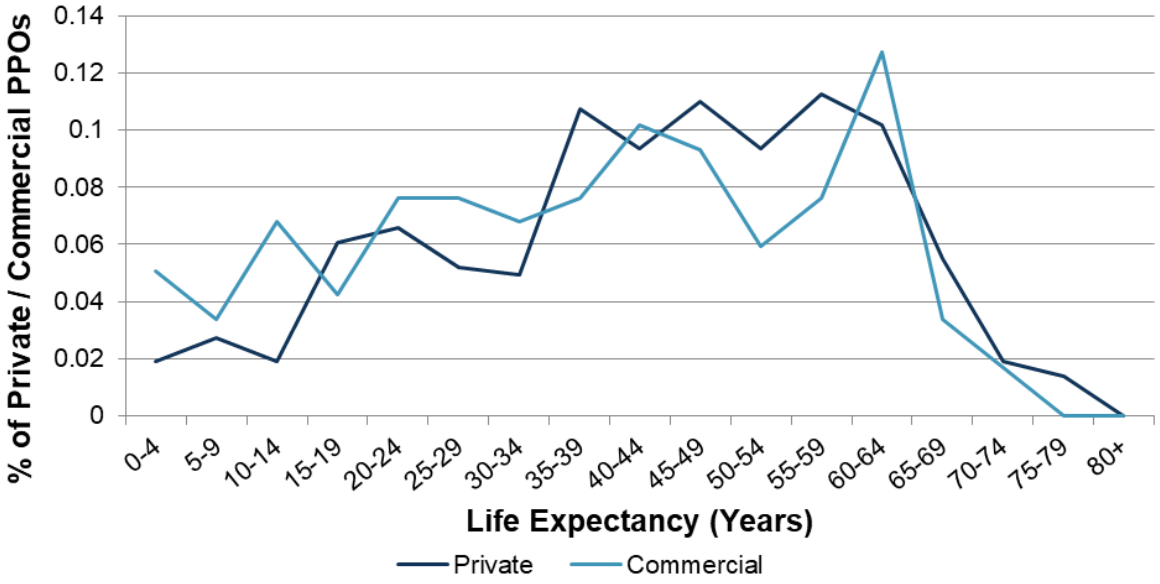

Figure J.31: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, for Private and Commercial Motor, for claims settled since 2009

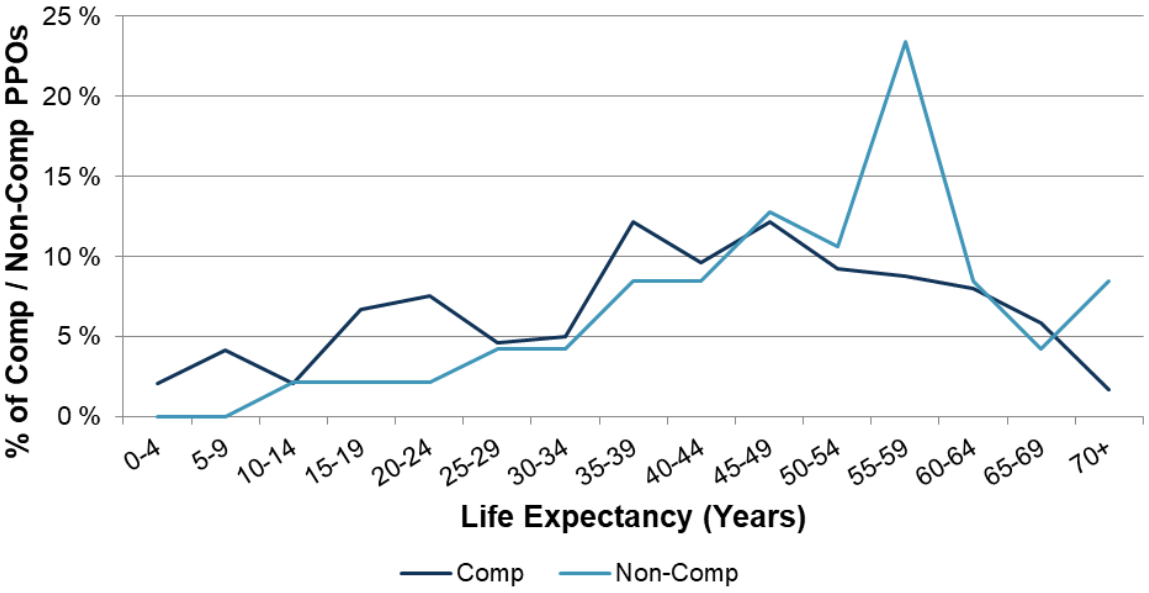

Figure J.32: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, for Private Motor, by cover type, for claims settled since 2009

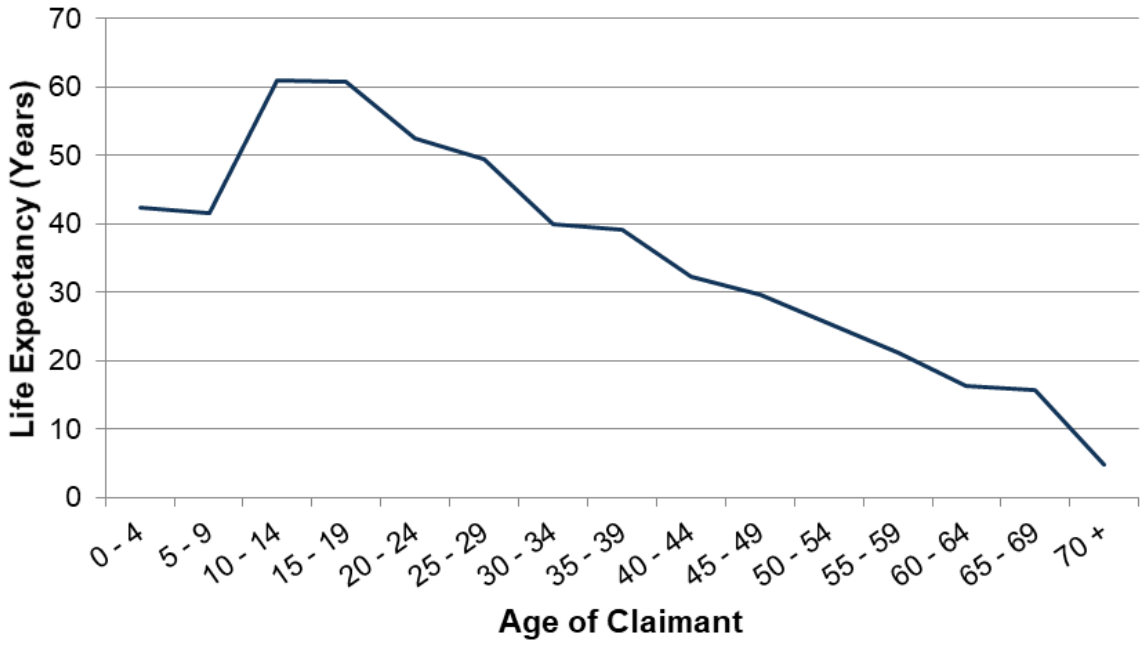

Figure J.33: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, by age of claimant at settlement date, for claims settled since 2009

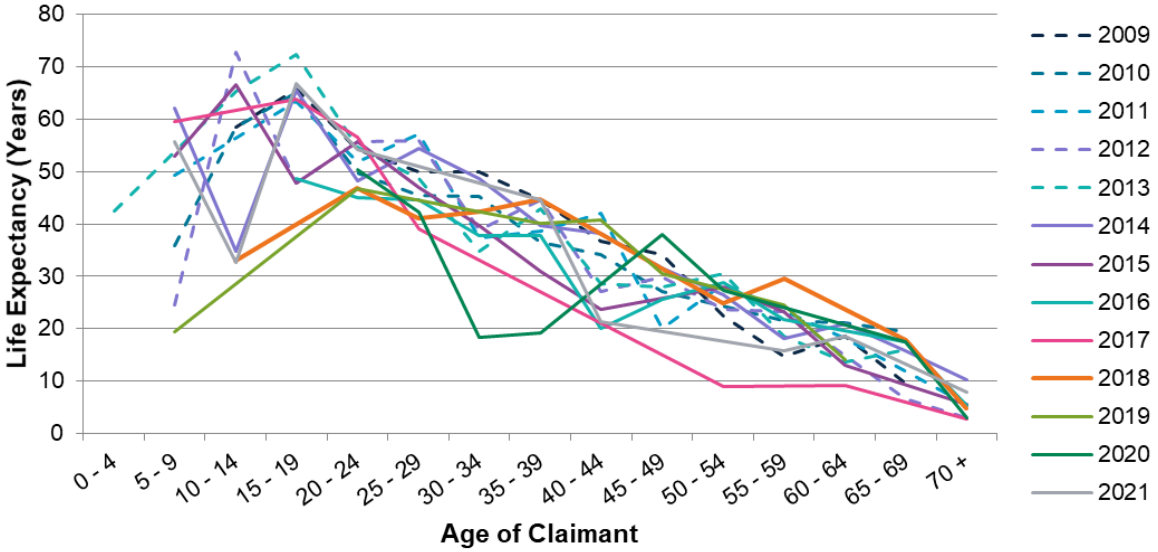

Figure J.34: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, by age of claimant at settlement date, by settlement year, for claims settled since 2009

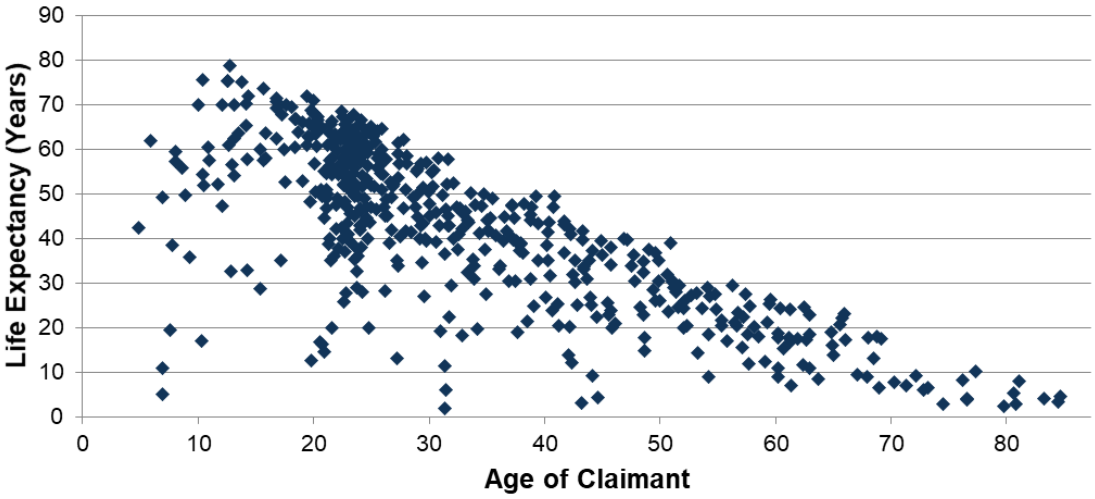

Figure J.35: Scatter graph of the life expectancy of claimant at settlement date for Motor (non-MIB) PPO claims and the age of claimant at settlement date

For the scatter graph in Figure J.35, the correlation coefficients are:

- Pearson correlation coefficient: -0.77
- Spearman correlation coefficient: -0.72

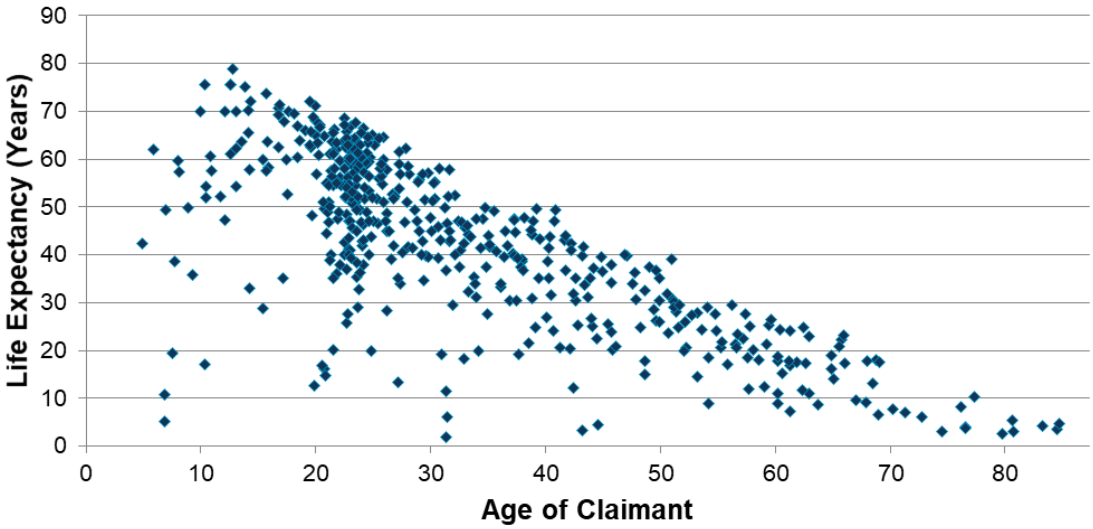

Figure J.36: Scatter graph of the life expectancy of claimant at settlement date for Motor (non-MIB) PPO claims and the age of claimant at settlement date, for claims settled since 2009

For the scatter graph in Figure J.36, the correlation coefficients are:

- Pearson correlation coefficient: -0.77
- Spearman correlation coefficient: -0.73

J.7 Reduction in life expectancy of the claimant

The percentage reduction in life expectancy is defined as:

$$\frac{\text{unimpaired life expectancy - life expectancy as provided by participants}}{\text{unimpaired life expectancy}}$$

where the unimpaired life expectancy is taken from the 2018 ONS United Kingdom mortality tables, and all life expectancies are quoted as at the date of settlement. (Negative percentage reductions in life expectancy may therefore occur if insurers are using more recent (or different) mortality tables.)

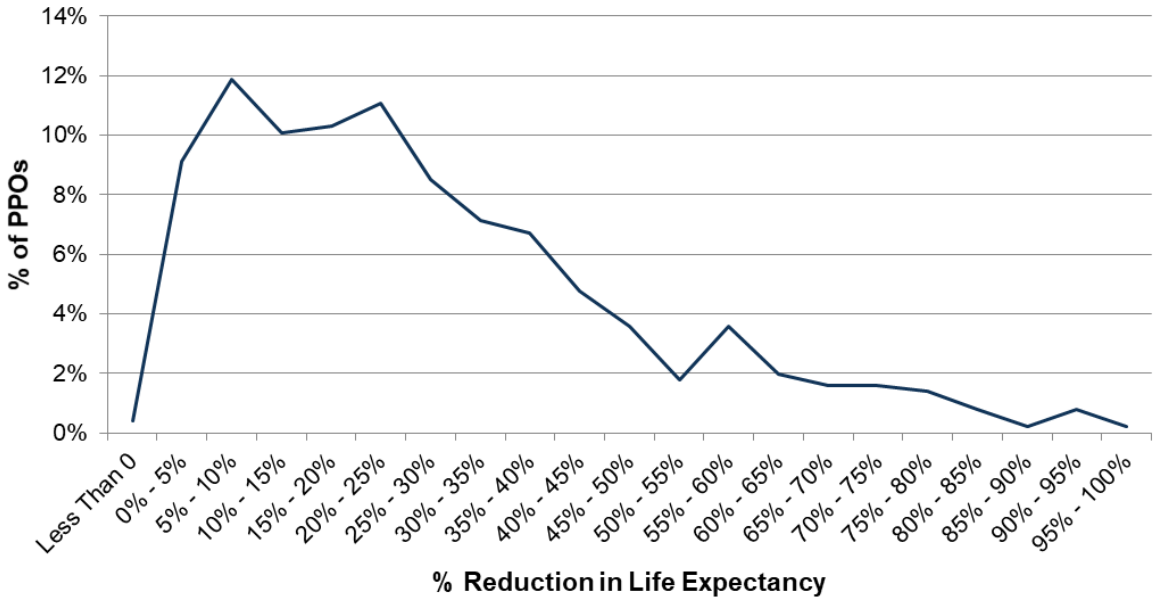

Figure J.37: Distribution of the percentage reduction in life expectancy of a claimant, for Motor (non-MIB) PPO claims, for claims settled since 2009

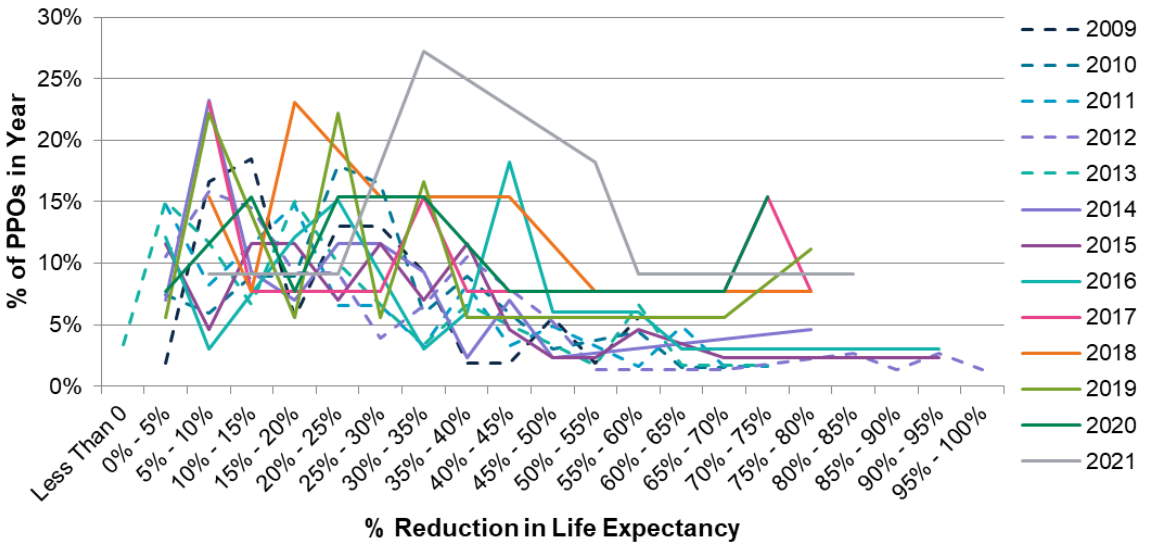

Figure J.38: Distribution of the percentage reduction in life expectancy of a claimant, for Motor (non-MIB) PPO claims, by settlement year, for claims settled since 2009

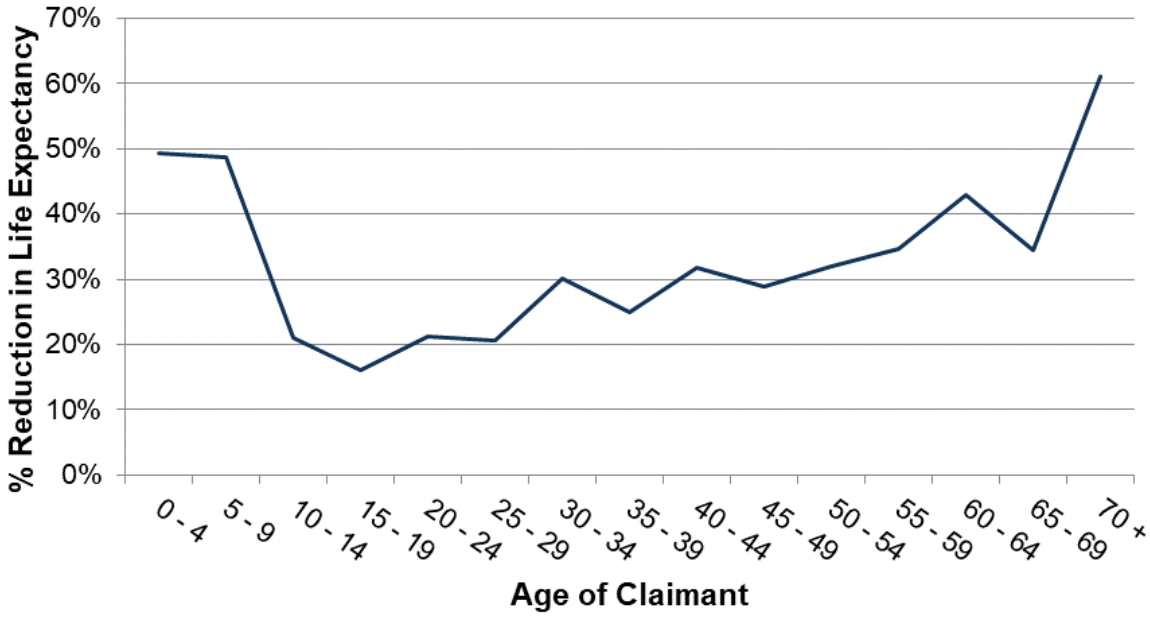

Figure J.39: Distribution of the percentage reduction in life expectancy of a claimant, for Motor (non-MIB) PPO claims, by age of claimant at accident date, for claims settled since 2009

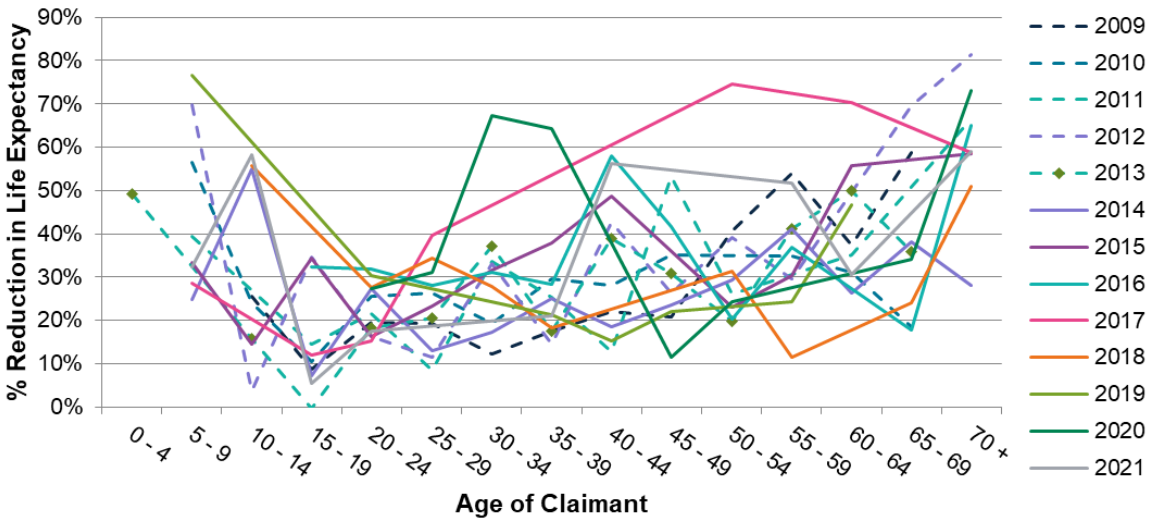

Figure J.40: Distribution of the percentage reduction in life expectancy of a claimant, for Motor (non-MIB) PPO claims, by age of claimant at accident date, by settlement year, for claims settled since 2009

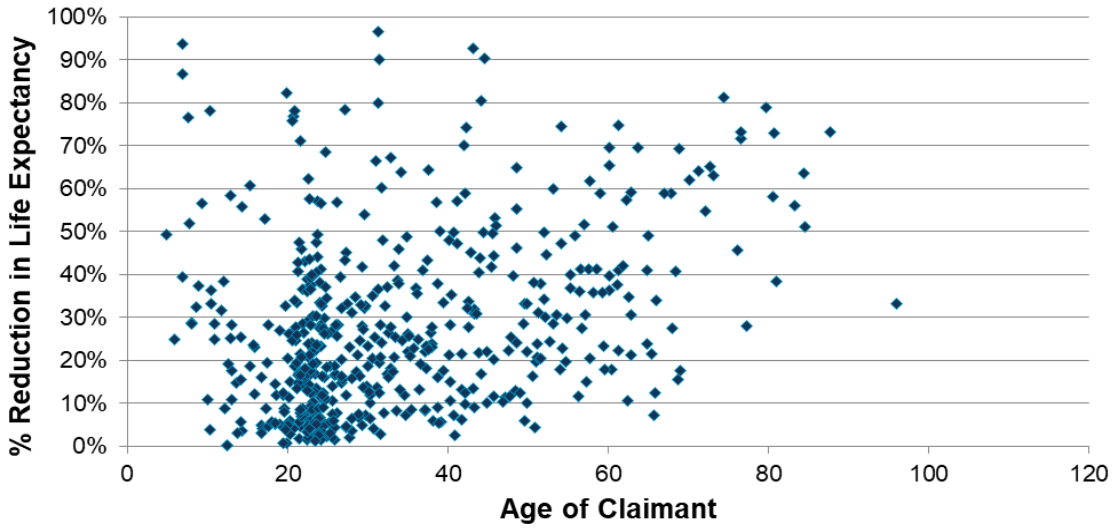

Figure J.41: Scatter graph of the percentage reduction in life expectancy of a claimant at settlement date, for Motor (non-MIB) PPO claims, and the age of claimant at settlement date

For the scatter graph in Figure J.41, the correlation coefficients are:

- Pearson correlation coefficient: 0.34
- Spearman correlation coefficient: 0.33

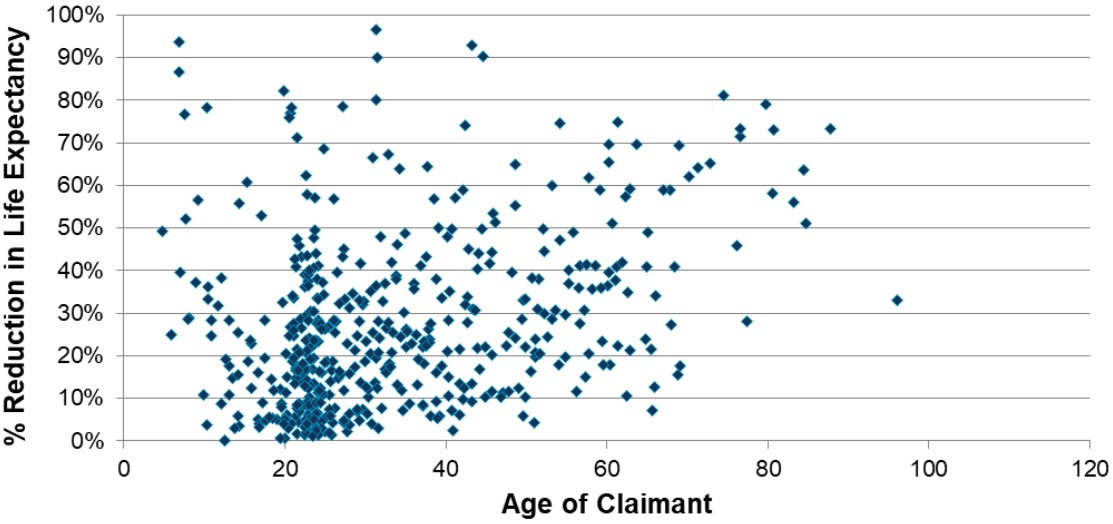

Figure J.42: Scatter graph of the percentage reduction in life expectancy of a claimant at settlement date, for Motor (non-MIB) PPO claims, and the age of claimant at settlement date, for claims settled since 2009

For the scatter graph in Figure J.42, the correlation coefficients are:

- Pearson correlation coefficient: 0.33
- Spearman correlation coefficient: 0.32

Appendix K General characteristics of Liability claims

In this appendix, we provide summary statistics for Liability PPO claims by the following characteristics:

- Age of claimant at accident date and gender of claimant (including class of business)
- Age of claimant at settlement date and gender of claimant
- Delay to settlement
- Life expectancy of claimant at settlement date
- Reduction in life expectancy of the claimant.

For ease of comparison between the summary statistics, a number of the figures in this appendix summarise the data for both Liability PPO claims and Motor (non-MIB) PPO claims.

K.1 Age of claimant at accident date and gender of claimant

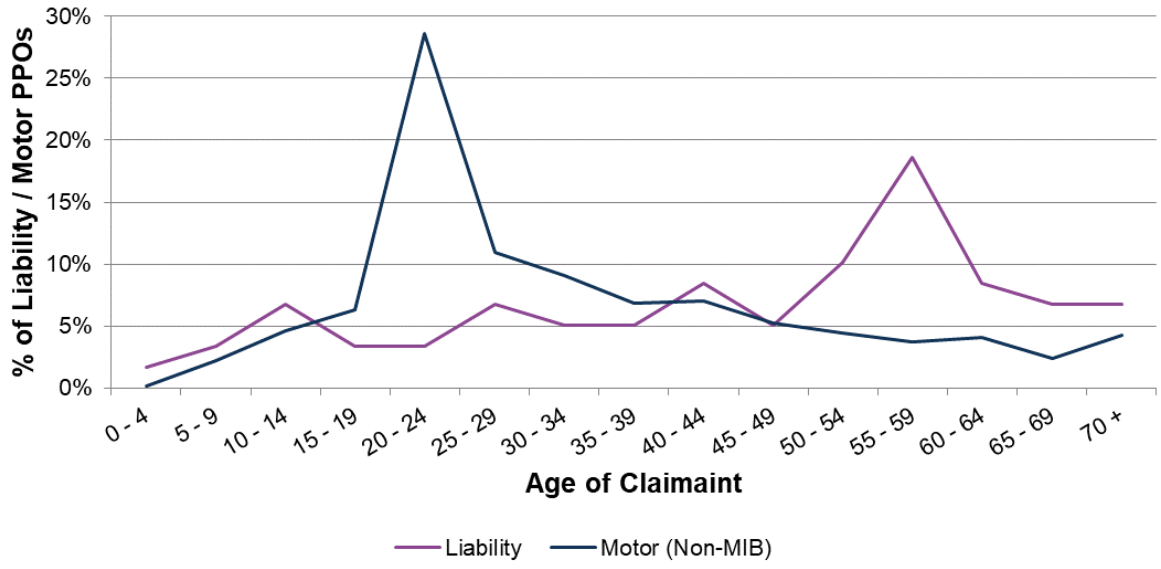

Figure K.1: Distribution of the number of Liability PPO claims and Motor (non-MIB) PPO claims, by age of claimant at accident date

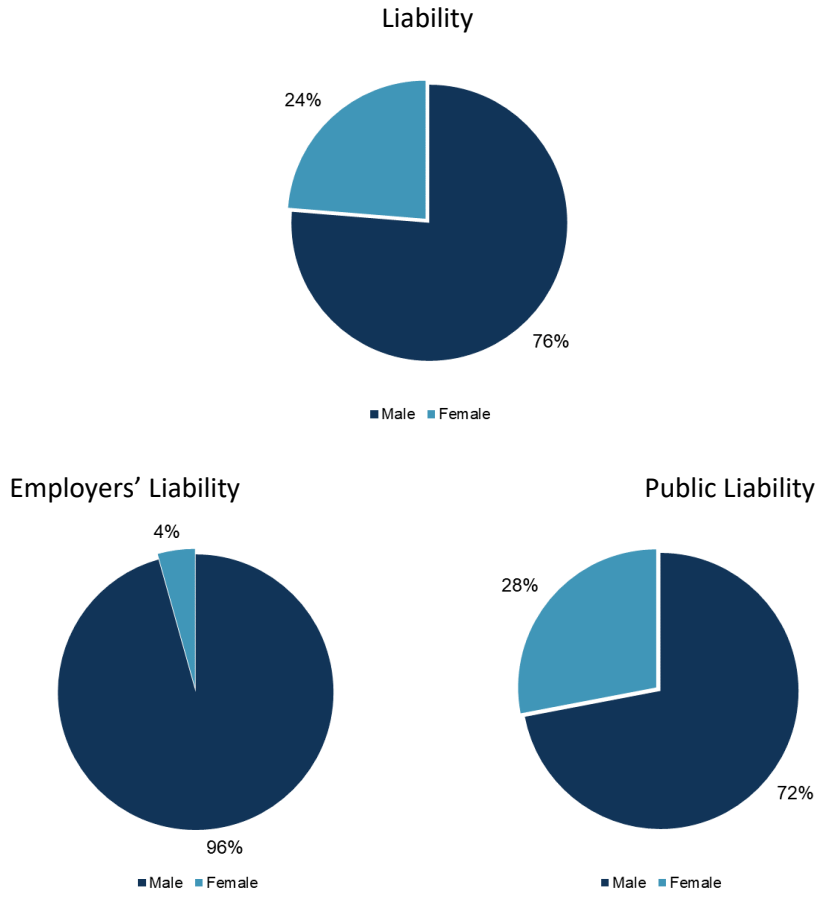

Figure K.2: Split of the number of Liability PPO claims, by gender of claimant

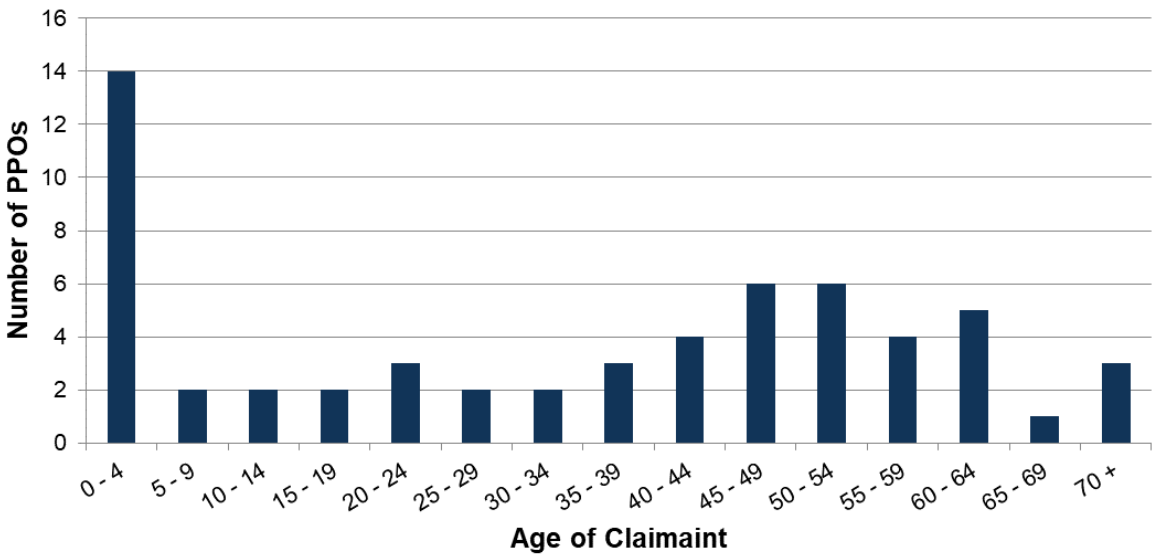

Figure K.3: Number of Liability PPO claims, by age of claimant at accident date

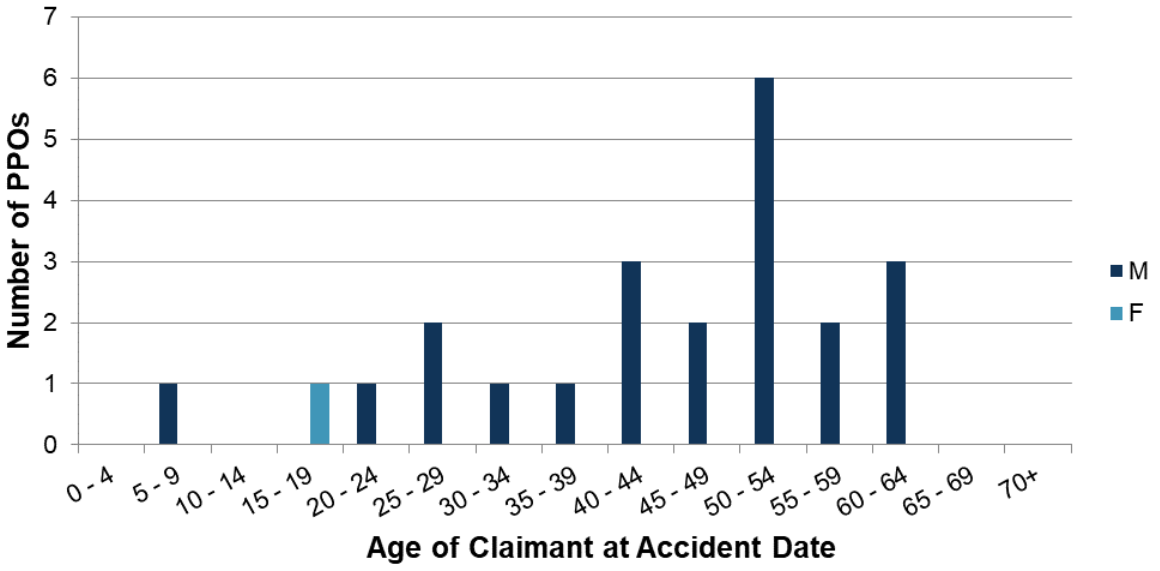

Figure K.4: Number of Liability PPO claims, for Employers' Liability, by age of claimant at accident date and by gender of claimant

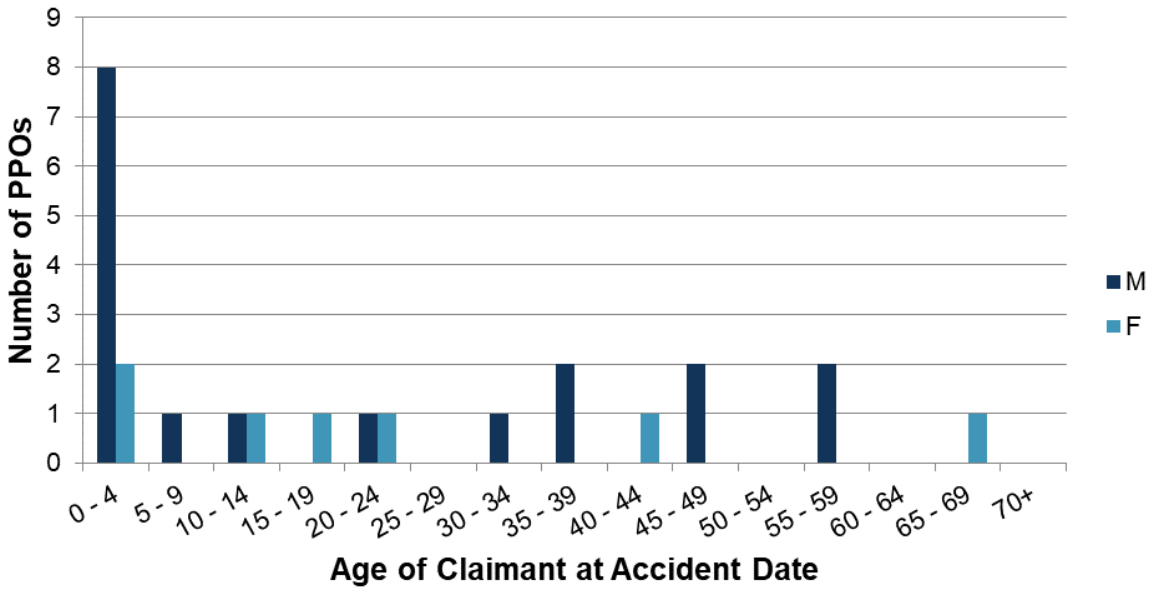

Figure K.5: Number of Liability PPO claims, for Public Liability, by age of claimant at accident date and by gender of claimant

K.2 Age of claimant at settlement date and gender of claimant

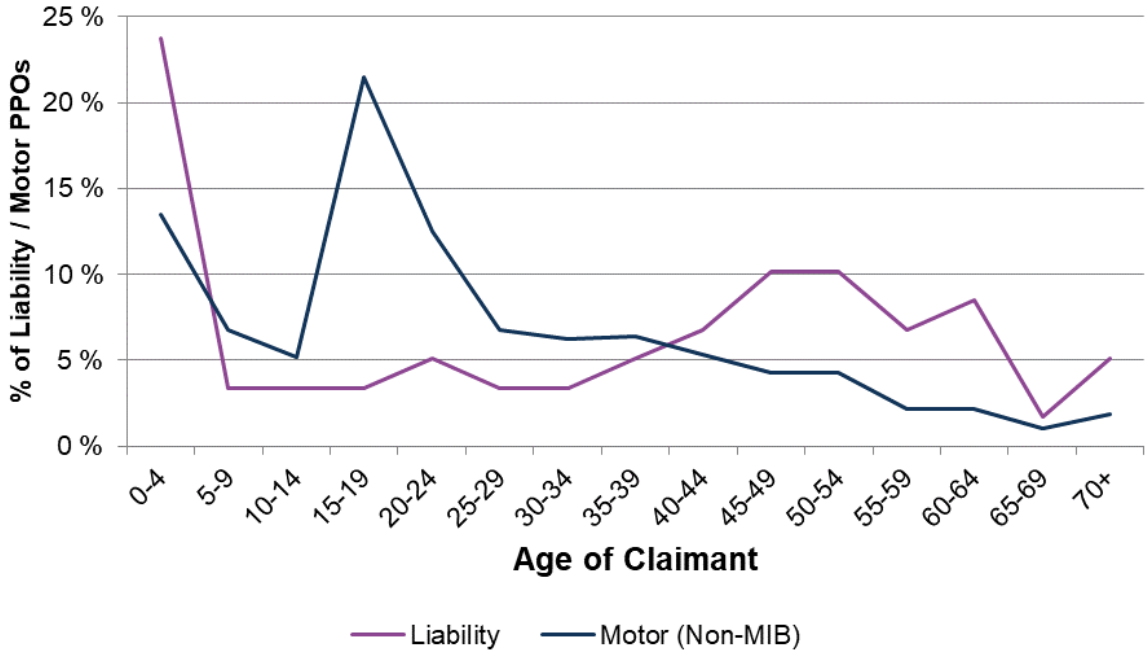

Figure K.6: Distribution of the number of Liability PPO claims and Motor (non-MIB) PPO claims, by age of claimant at settlement date

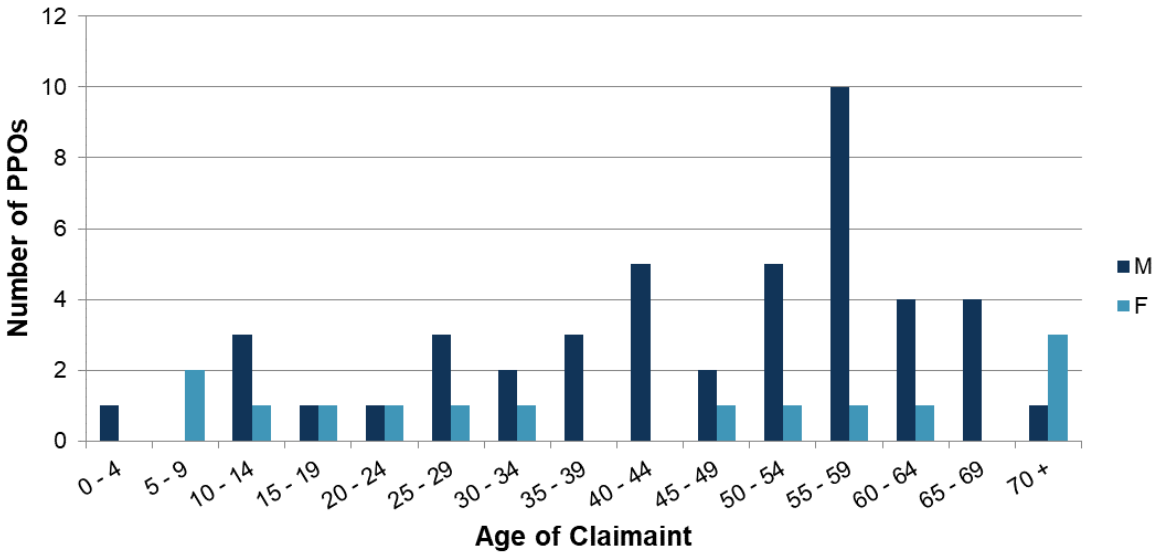

Figure K.7: Number of Liability PPO claims, by age of claimant at settlement date and by gender of claimant

K.3 Delay to settlement

The delay to settlement is calculated as the time elapsed between the accident date and PPO settlement date, rounded to the nearest whole year.

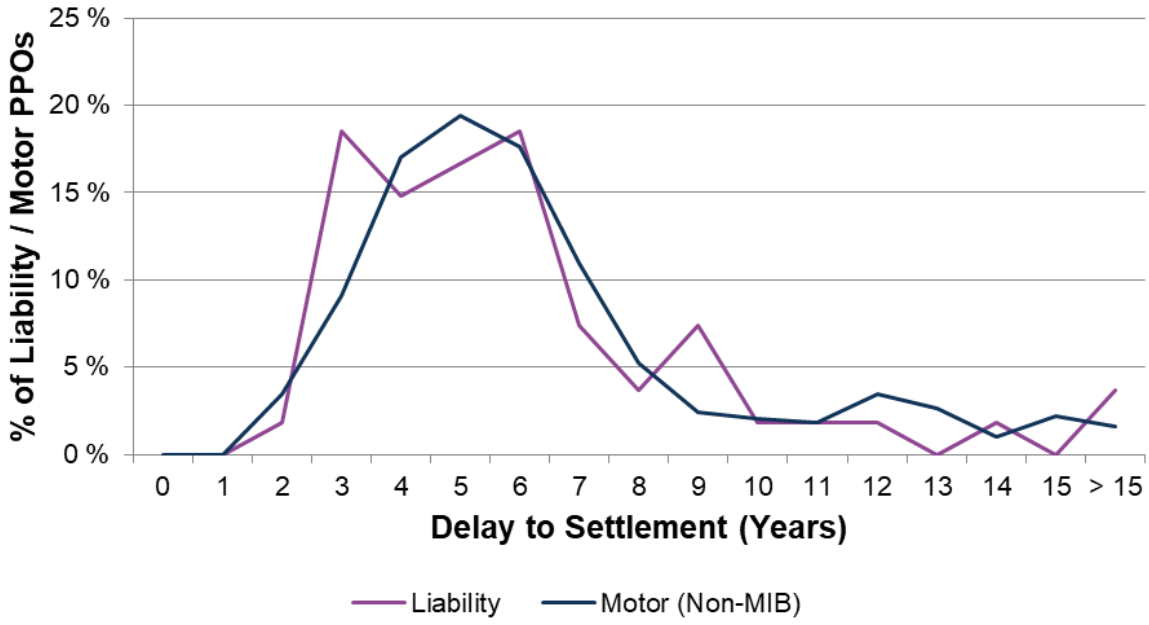

Figure K.8: Distribution of the delay to settlement for Liability PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

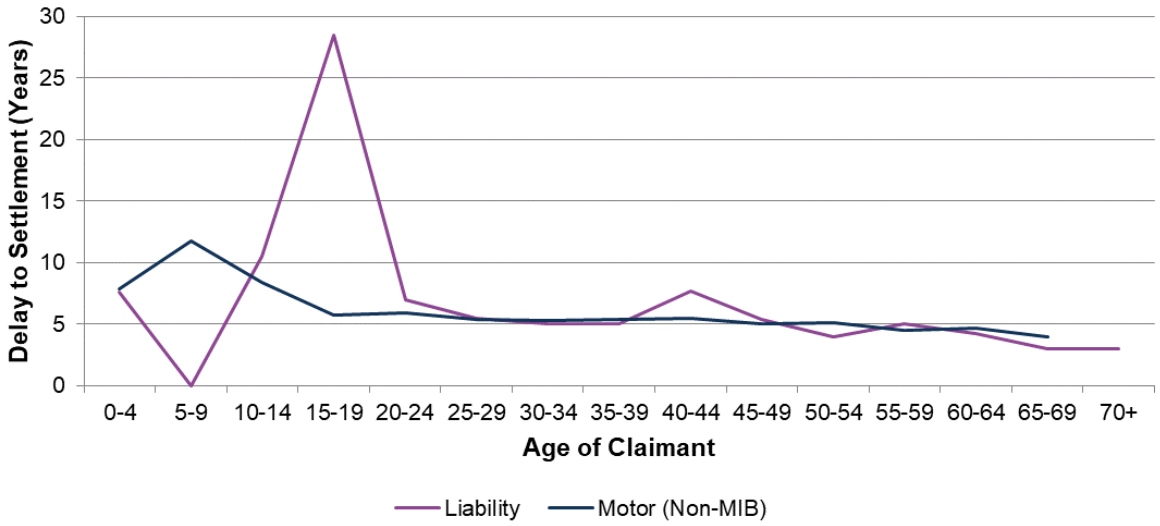

Figure K.9: Distribution of the delay to settlement for Liability PPO claims and Motor (non-MIB) PPO claims, by age of claimant at accident date, for claims settled since 2009

K.4 Life expectancy of claimant at settlement date

The term "life expectancy" in this document is defined as the future life expectancy at the time of settlement, as per the quantitative industry survey responses. It is not clear whether the data collected represents the claimant experts' views, the defendant experts' views, internal views, or a combination of these.

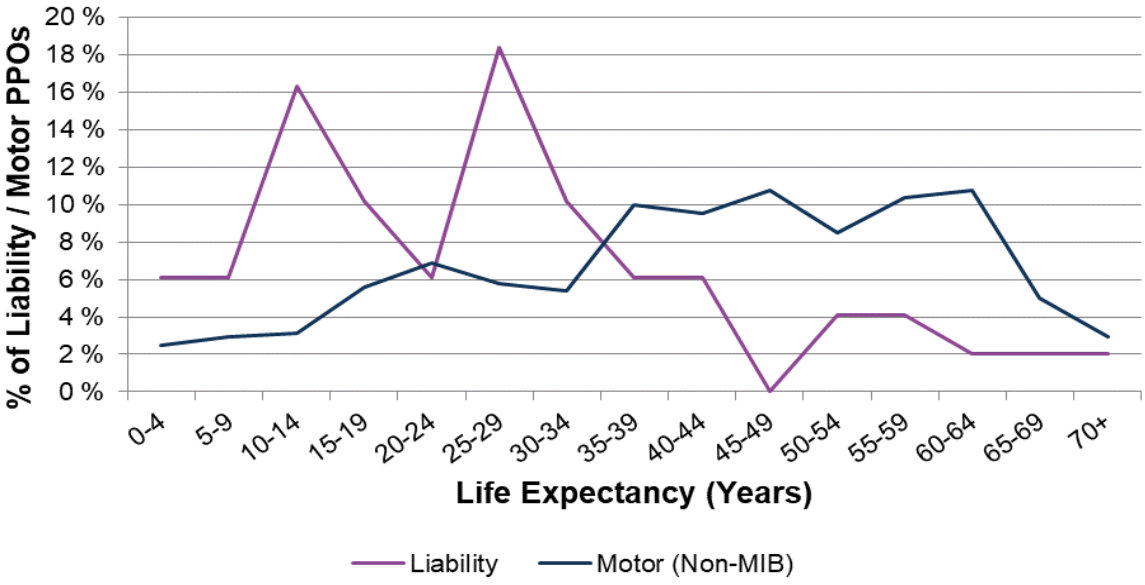

Figure K.10: Distribution of the life expectancy of claimant at settlement date, for Liability PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

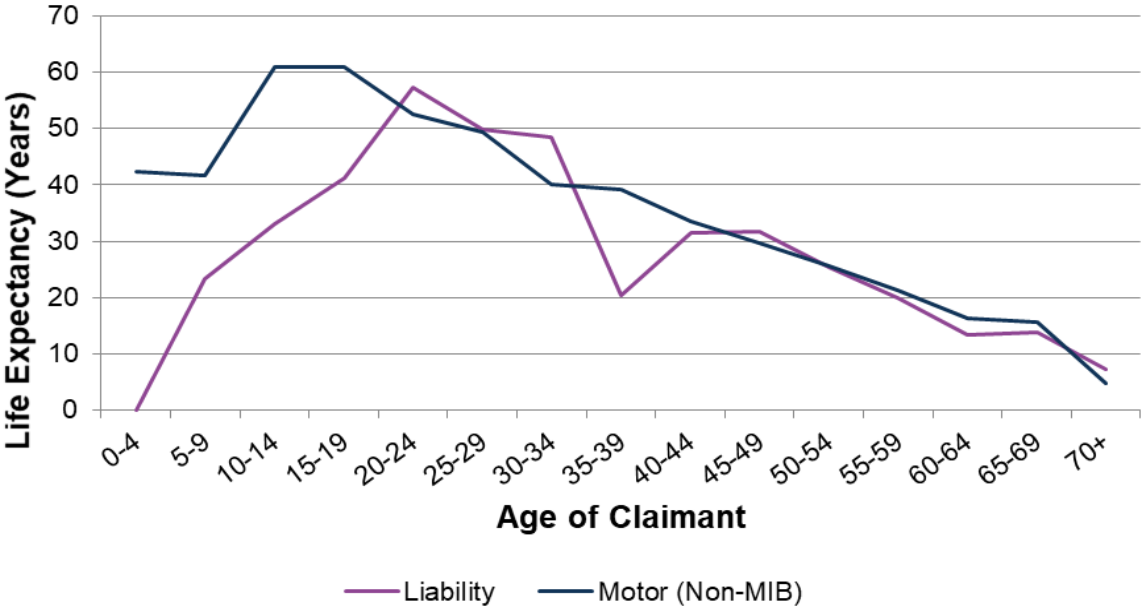

Figure K.11: Distribution of the life expectancy of claimant at settlement date, for Liability PPO claims and Motor (non-MIB) PPO claims, by age of claimant at settlement date, for claims settled since 2009

K.5 Reduction in life expectancy of the claimant

The percentage reduction in life expectancy is defined as:

$$\frac{\text{unimpaired life expectancy - life expectancy as provided by participants}}{\text{unimpaired life expectancy}}$$

where the unimpaired life expectancy is taken from the 2018 ONS United Kingdom mortality tables, and all life expectancies are quoted as at the date of settlement. (Negative percentage reductions in life expectancy may therefore occur if insurers are using more recent (or different) mortality tables.)

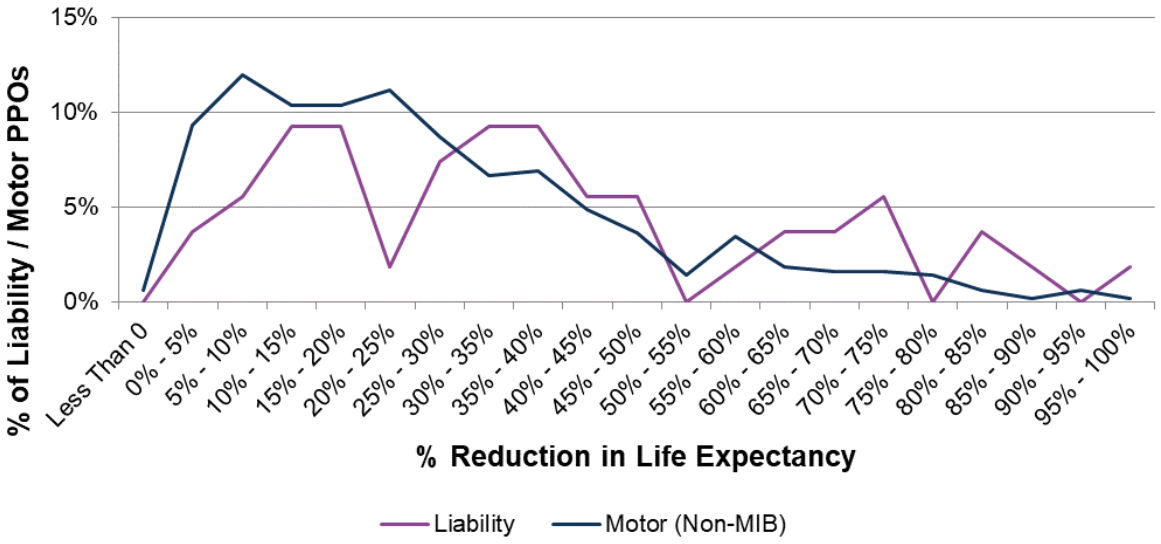

Figure K.12: Distribution of the percentage reduction in life expectancy of a claimant, for Liability PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

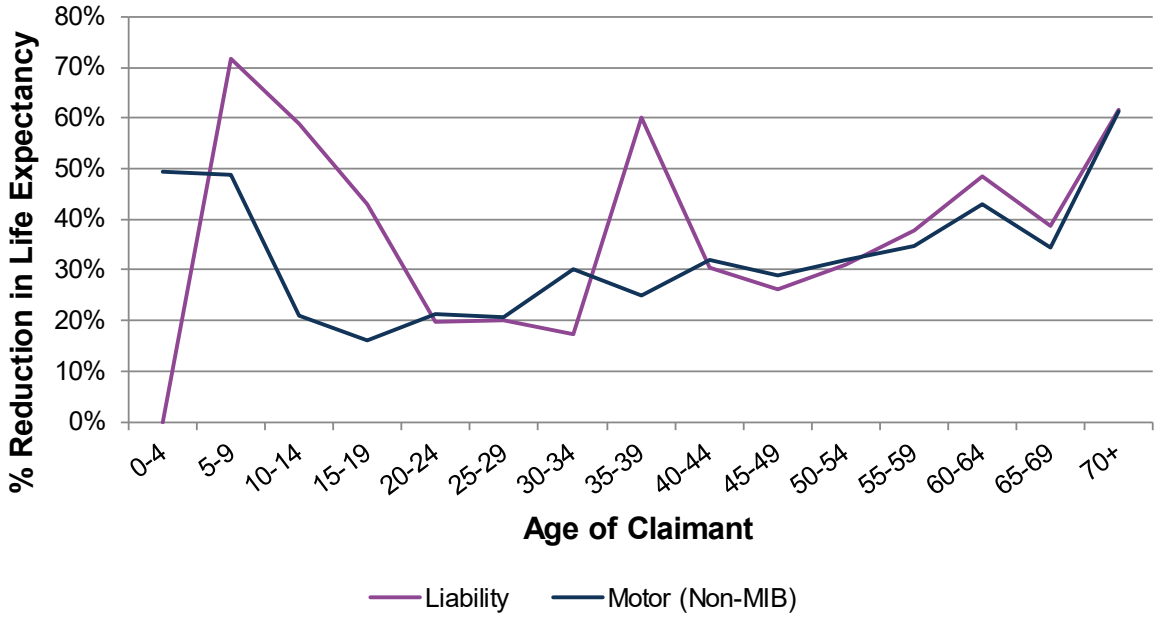

Figure K.13: Distribution of the percentage reduction in life expectancy of a claimant, for Liability PPO claims and Motor (non-MIB) PPO claims, by age of claimant at accident date, for claims settled since 2009

Appendix L General characteristics of Motor (MIB) PPO claims

In this appendix, we provide summary statistics for Motor (MIB) PPO claims by the following characteristics:

- Age of claimant at accident date and gender of claimant (including class of business and cover type)
- Age of claimant at settlement date and gender of claimant
- Delay to settlement
- Life expectancy of claimant at settlement date
- Reduction in life expectancy of the claimant.

For ease of comparison between the summary statistics, a number of the figures in this appendix summarise the data for both Motor (MIB) PPO claims and Motor (non-MIB) PPO claims.

L.1 Age of claimant at accident date and gender of claimant

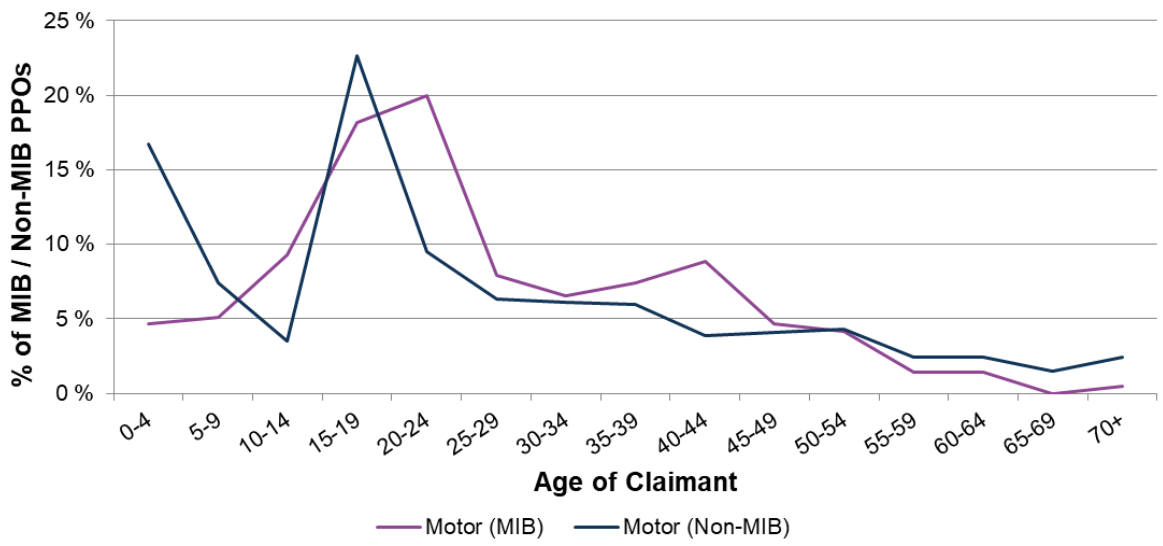

Figure L.1: Distribution of the number of Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, by age of claimant at accident date

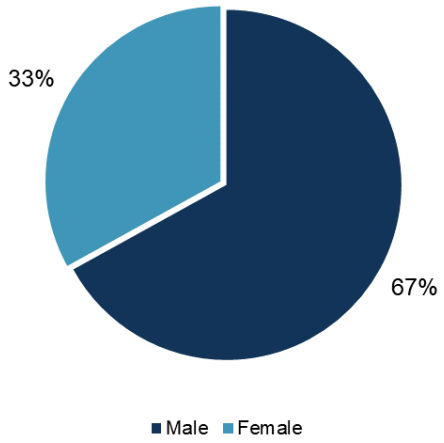

Figure L.2: Split of the number of Motor (MIB) PPO claims, by gender of claimant

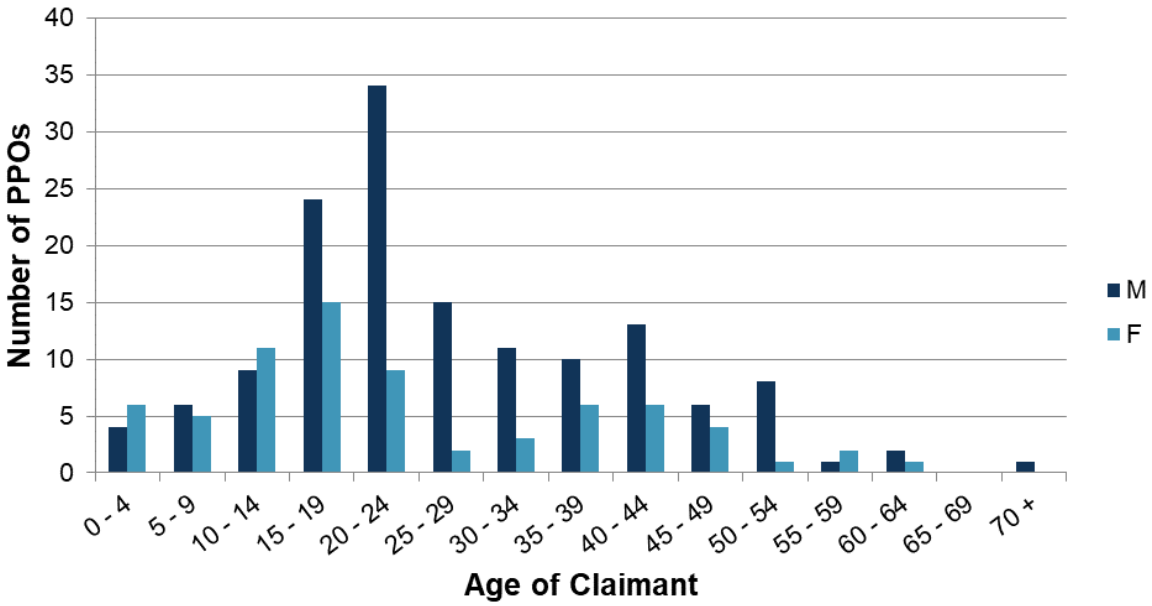

Figure L.3: Number of Motor (MIB) PPO claims, by age of claimant at accident date and by gender of claimant

L.2 Age of claimant at settlement date and gender of claimant

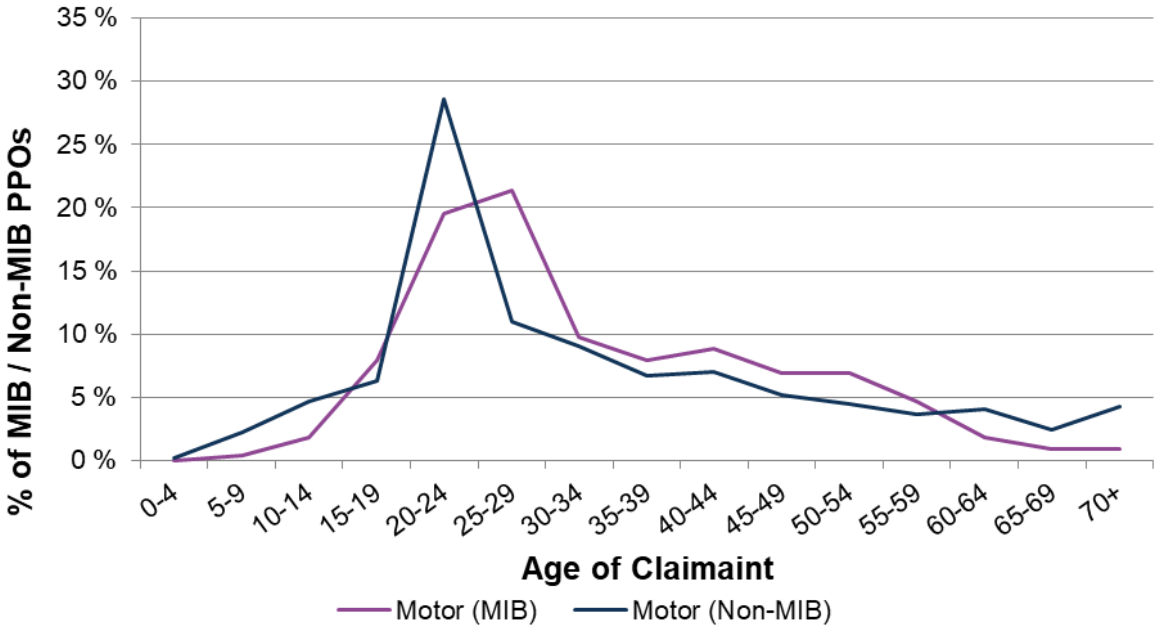

Figure L.4: Distribution of the number of Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, by age of claimant at settlement date

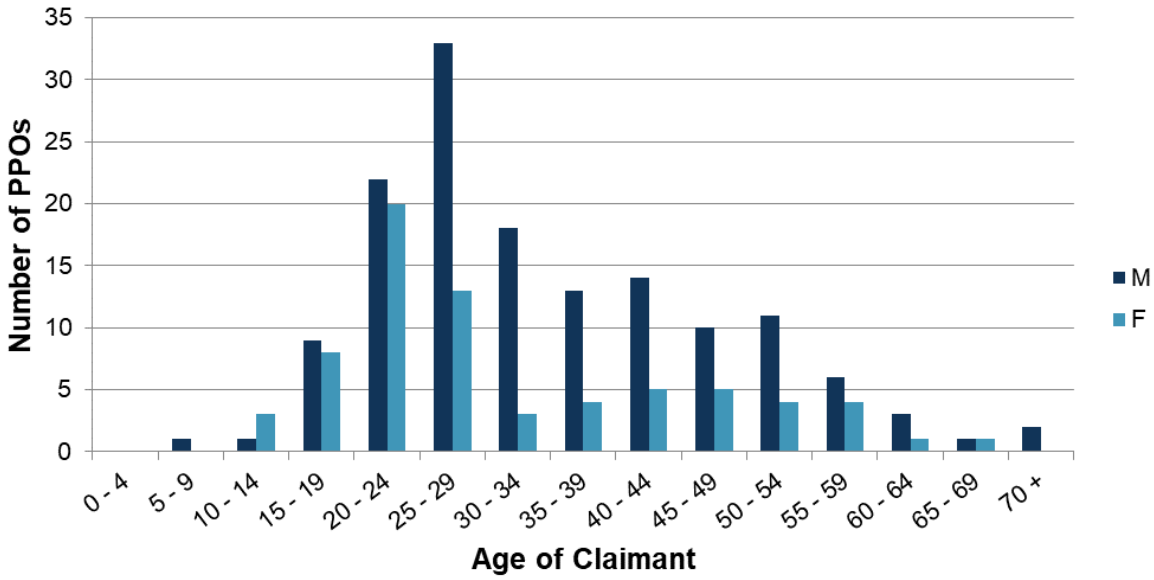

Figure L.5: Number of Motor (MIB) PPO claims, by age of claimant at settlement date and by gender of claimant

L.3 Delay to settlement

The delay to settlement is calculated as the time elapsed between the accident date and PPO settlement date, rounded to the nearest whole year.

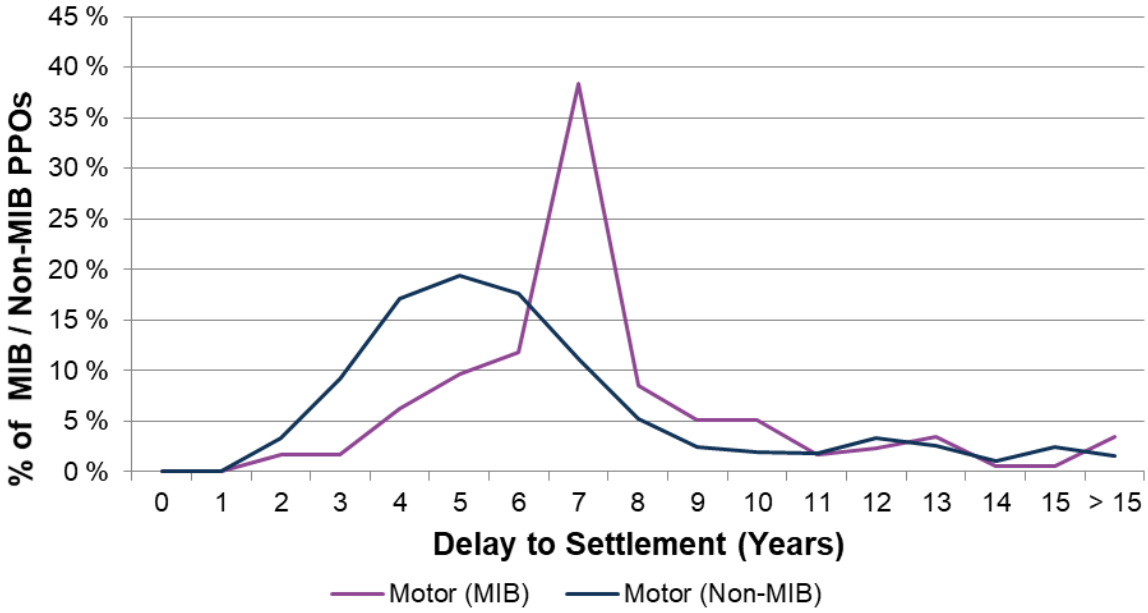

Figure L.6: Distribution of the delay to settlement for Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

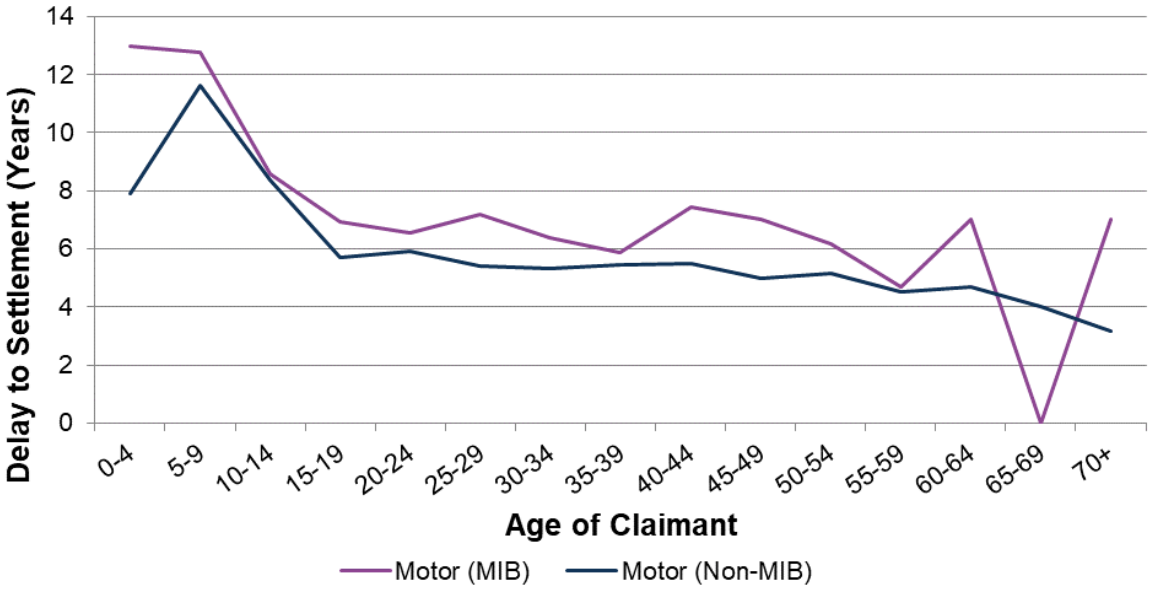

Figure L.7: Distribution of the delay to settlement for Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, by age of claimant at accident date, for claims settled since 2009

L.4 Life expectancy of claimant at settlement date

The term "life expectancy" in this document is defined as the future life expectancy at the time of settlement, as per the quantitative industry survey responses. It is not clear whether the data collected represents the claimant experts' views, the defendant experts' views, internal views, or a combination of these.

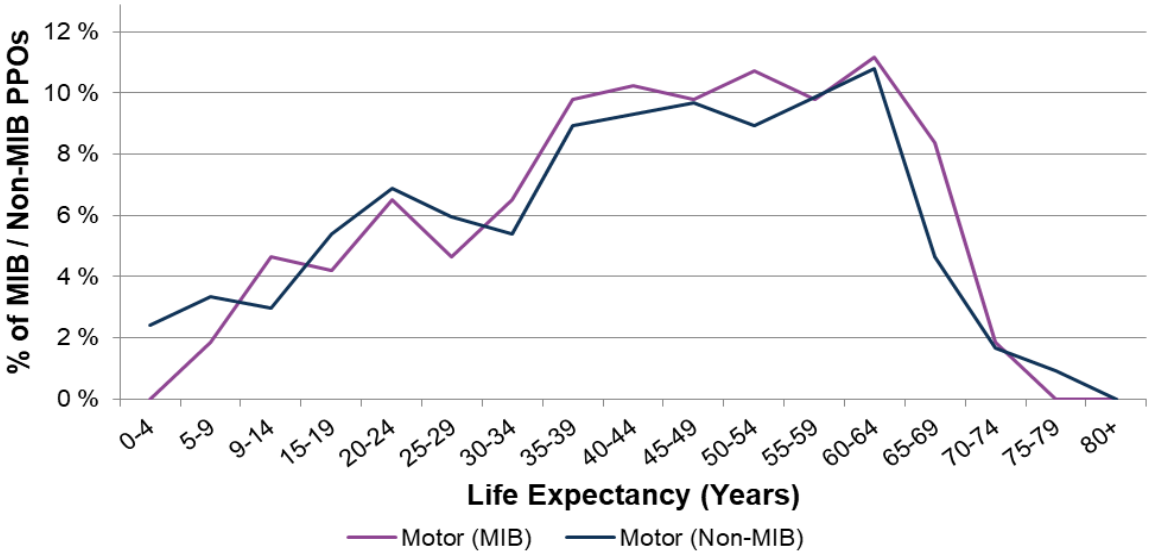

Figure L.8: Distribution of the life expectancy of claimant at settlement date, for Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

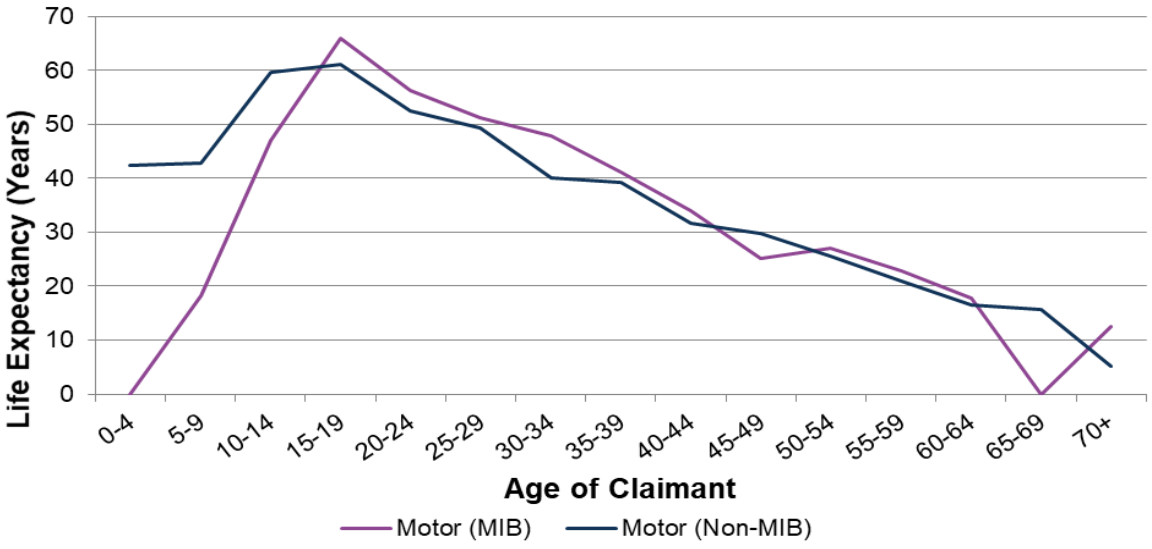

Figure L.9: Distribution of the life expectancy of claimant at settlement date, for Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, by age of claimant at settlement date, for claims settled since 2009

L.5 Reduction in life expectancy of the claimant

The percentage reduction in life expectancy is defined as:

$$\frac{\text{unimpaired life expectancy - life expectancy as provided by participants}}{\text{unimpaired life expectancy}}$$

where the unimpaired life expectancy is taken from the 2018 ONS United Kingdom mortality tables, and all life expectancies are quoted as at the date of settlement. (Negative percentage reductions in life expectancy may therefore occur if insurers are using more recent (or different) mortality tables.)

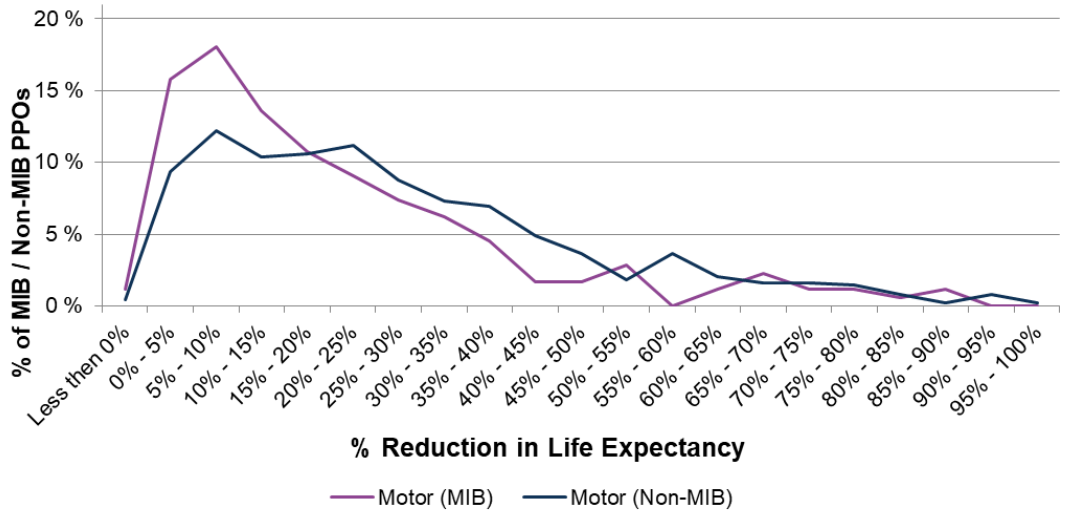

Figure L.10: Distribution of the percentage reduction in life expectancy of a claimant, for Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

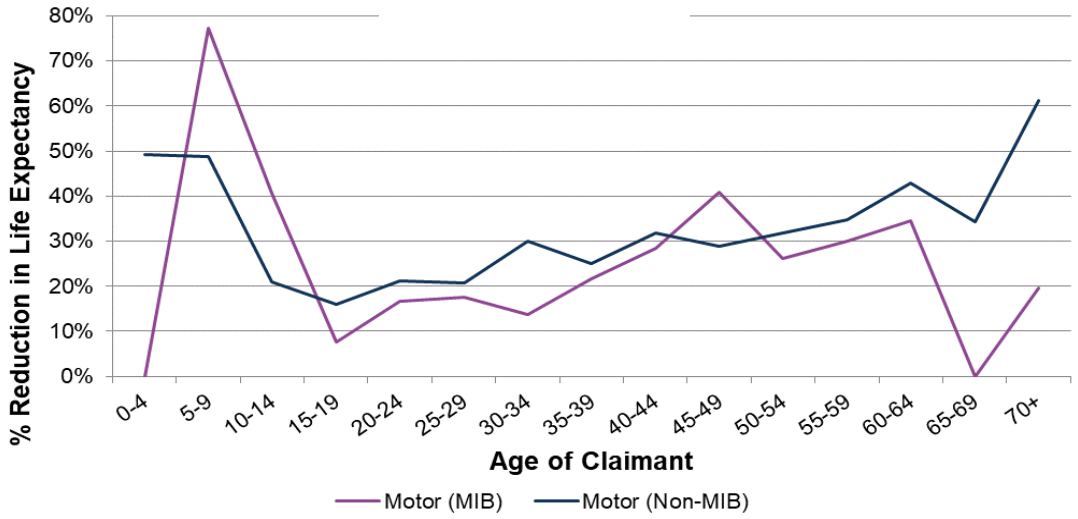

Figure L.11: Distribution of the percentage reduction in life expectancy of a claimant, for Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, by age of claimant at accident date, for claims settled since 2009

Appendix M Indexation of PPO claims

The index used to inflate PPO claim regular payments was originally automatically linked to the Retail Prices Index ("RPI").

However, in 2006, a court case was brought in the form of Thompstone vs Tameside and Glossop Acute Services NHS Trust which questioned this assumption and suggested that the payments for future cost of care would be better linked to wage inflation. The court agreed and the annual inflation increase was linked to the Annual Survey of Hours and Earnings ("ASHE"). The case was appealed and a number of other cases were put on hold pending the outcome. In 2008, the Court of Appeal upheld the ruling that an index other than RPI can be chosen if thought more appropriate. Since then the majority of PPO claims have had inflation linked to ASHE.

ASHE is produced by the Office for National Statistics ("ONS") every November, based on data as at April. It covers a wide range of occupations, though the vast majority of PPO claims so far have, in respect of care costs, been linked to sub-category 6115, relating to care assistants and home carers.

Within a particular job category, the ASHE earnings inflation measures are further split into percentiles. A PPO claim will have the annual inflation linked to a specific percentile, for example to those whose earnings are in the top 10% of earners in the category (i.e. the 90th percentile). There are potential distortions which can impact ASHE, for example a reduction in a certain percentile (showing as negative ASHE inflation in a given year) could have been driven by a large influx of cheap labour, as opposed to a reduction in actual wages.

In this appendix, we provide summary statistics for Motor (non-MIB) PPO claims, Liability PPO claims and Motor (MIB) PPO claims by the following characteristics:

- The index applicable for the primary head of damage of the regular payments
- The head of damage and applicable index for the regular payment streams
- The specific percentiles, where the applicable index for the primary head of damage is ASHE.

In this appendix, we also provide summary statistics for the annual inflation in ASHE 6115 by specific percentile.

M.1 Introductory notes on the summary statistics shown

PPO claims can have different elements included within the regular stream of payments, for example they can include both a Loss of Earnings and a Cost of Care head of damage. These different elements can be linked to different indices.

Figure M.1, Figure M.4 and Figure M.7 show the index applicable for the primary head of damage of the regular payment, where the primary head of damage has been defined as the one for which the associated regular payment amount is the largest.

Figure M.2, Figure M.5 and Figure M.8 show the index applicable for each head of damage payment stream.

Where the applicable index for the primary head of damage is ASHE, Figure M.3, Figure M.6 and Figure M.9 show the proportion of PPO claims linked to specific percentiles, for each settlement year.

M.2 Motor (non-MIB) PPO claims

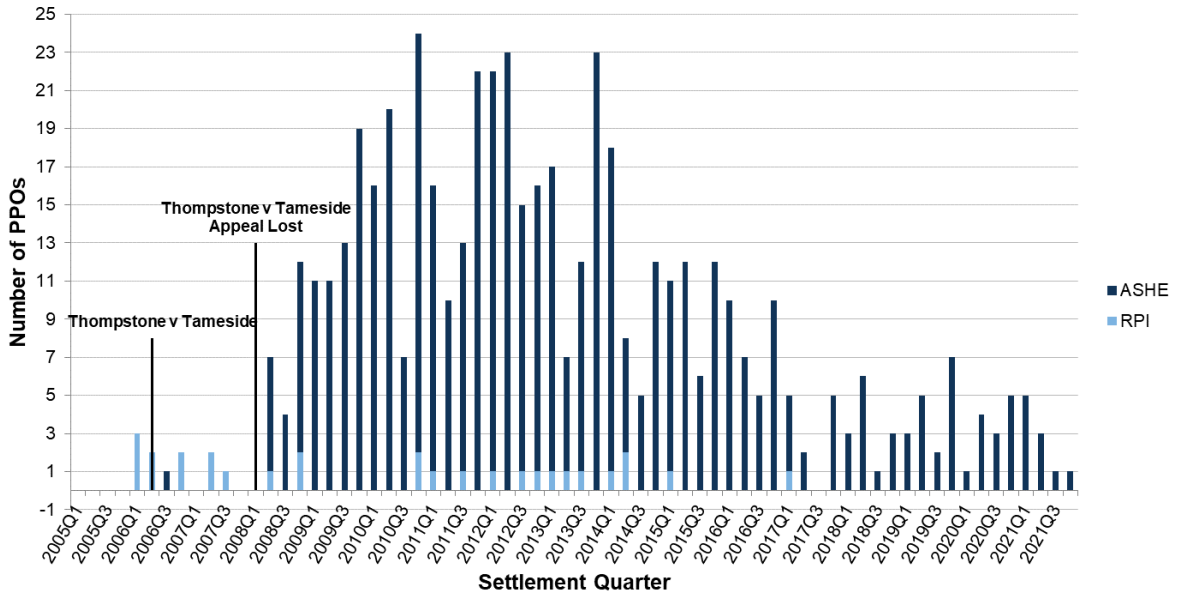

Figure M.1: Number of Motor (non-MIB) PPO claims, by settlement quarter and by the index applicable for the primary head of damage of the regular payments

	ASHE 6115	ASHE Other	RPI	Not Indexed	Other	Total
Care and Case Management	331	16	26	9	1	383
Loss of Earnings	1	2	10	0	0	13
N/A or Missing	30	1	1	1	0	33
Total	**362**	**19**	**37**	**10**	**1**	**429**

Figure M.2: Number of Motor (non-MIB) PPO claim regular payment streams, by head of damage and applicable index

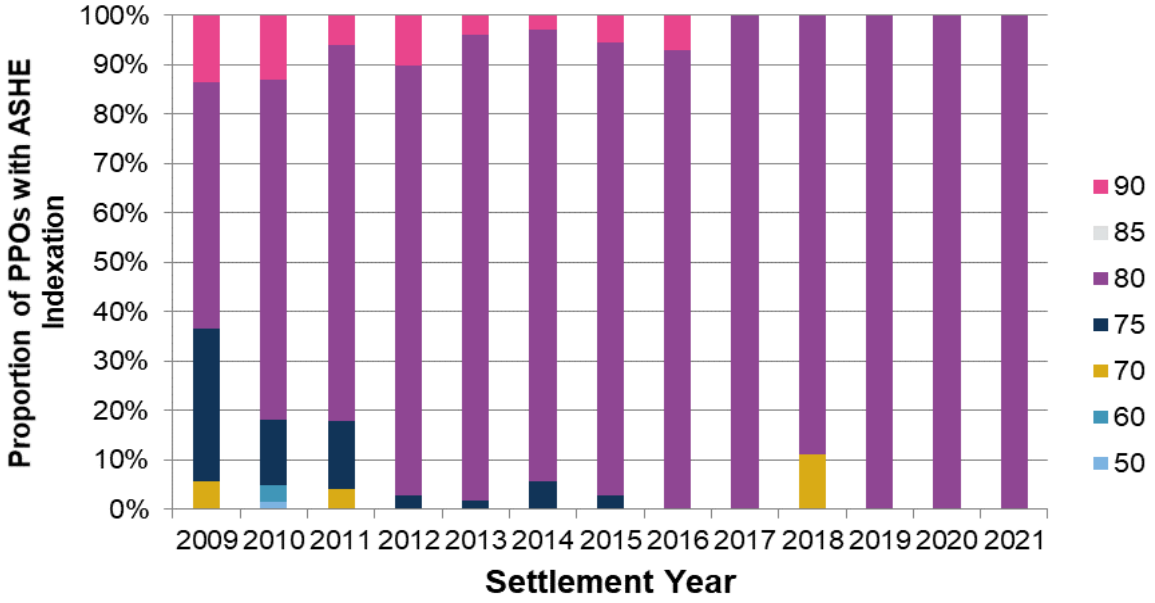

Figure M.3: Where the applicable index for the primary head of damage is ASHE, the proportion of Motor (non-MIB) PPO claims linked to specific percentiles, by settlement year

M.3 Liability PPO claims

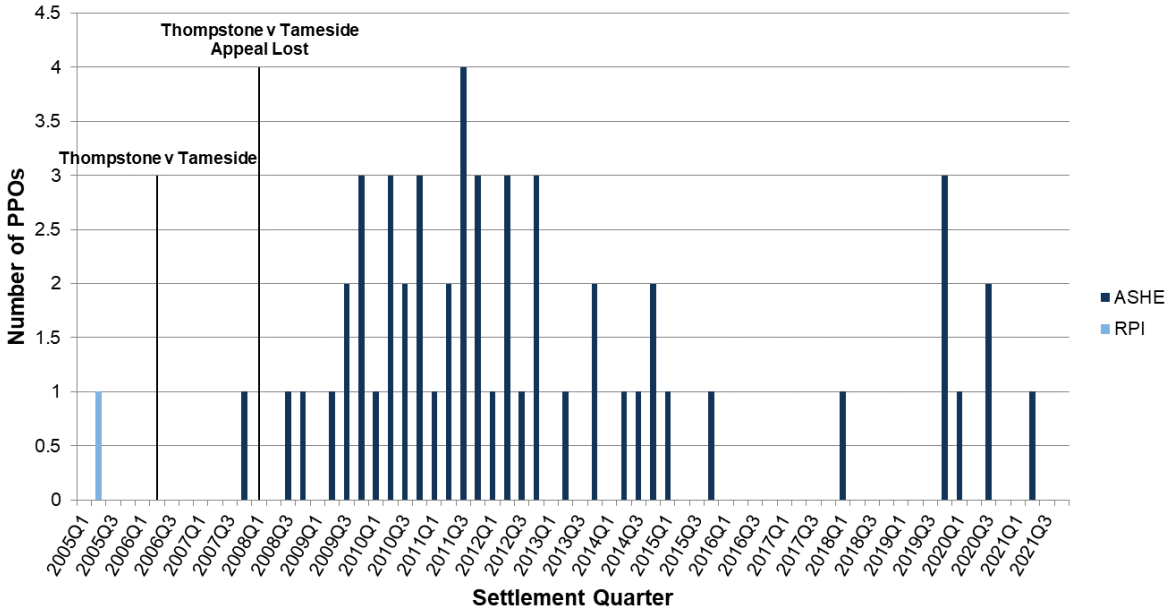

Figure M.4: Number of Liability PPO claims, by settlement quarter and by the index applicable for the primary head of damage of the regular payments

	ASHE 6115	ASHE Other	RPI	Not Indexed	Other	Total
Care and Case Management	25	2	1	0	0	28
Loss of Earnings	1	0	0	0	0	1
N/A or Missing	25	0	0	0	0	25
Total	**51**	**2**	**1**	**0**	**0**	**54**

Figure M.5: Number of Liability PPO claim regular payment streams, by head of damage and applicable index

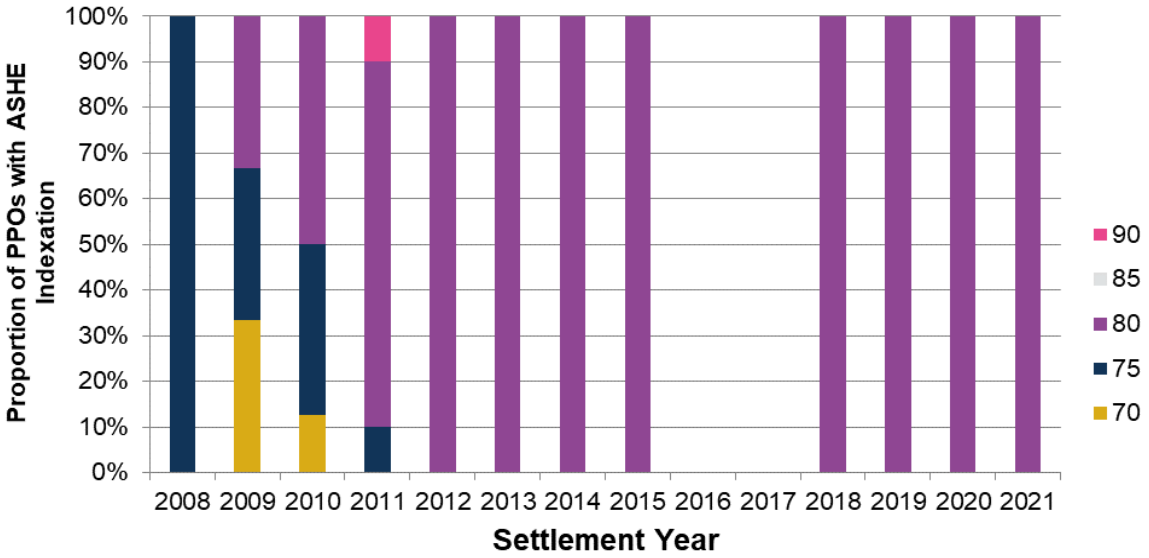

Figure M.6: Where the applicable index for the primary head of damage is ASHE, the proportion of Liability PPO claims linked to specific percentiles, by settlement year

M.4 Motor (MIB) PPO claims

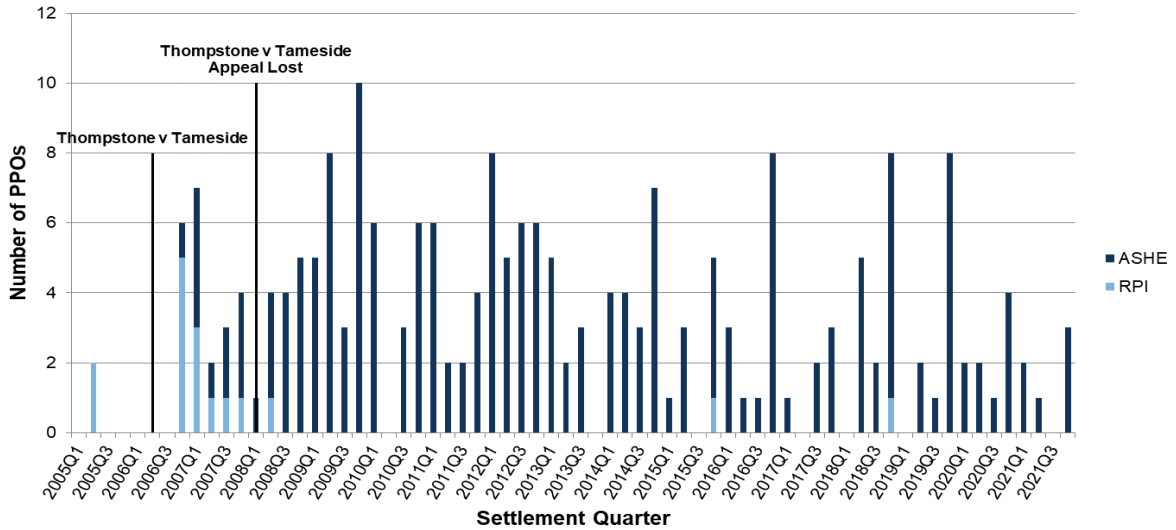

Figure M.7: Number of Motor (MIB) PPO claims, by settlement quarter and by the index applicable for the primary head of damage of the regular payments

	ASHE 6115	ASHE Other	RPI	Not Indexed	Other	Total
Care and Case Management	0	0	0	0	0	0
Loss of Earnings	0	0	0	0	0	0
N/A or Missing	199	0	16	0	0	215
Total	**0**	**199**	**16**	**0**	**0**	**215**

Figure M.8: Number of Motor (MIB) PPO claim regular payment streams, by head of damage and applicable index

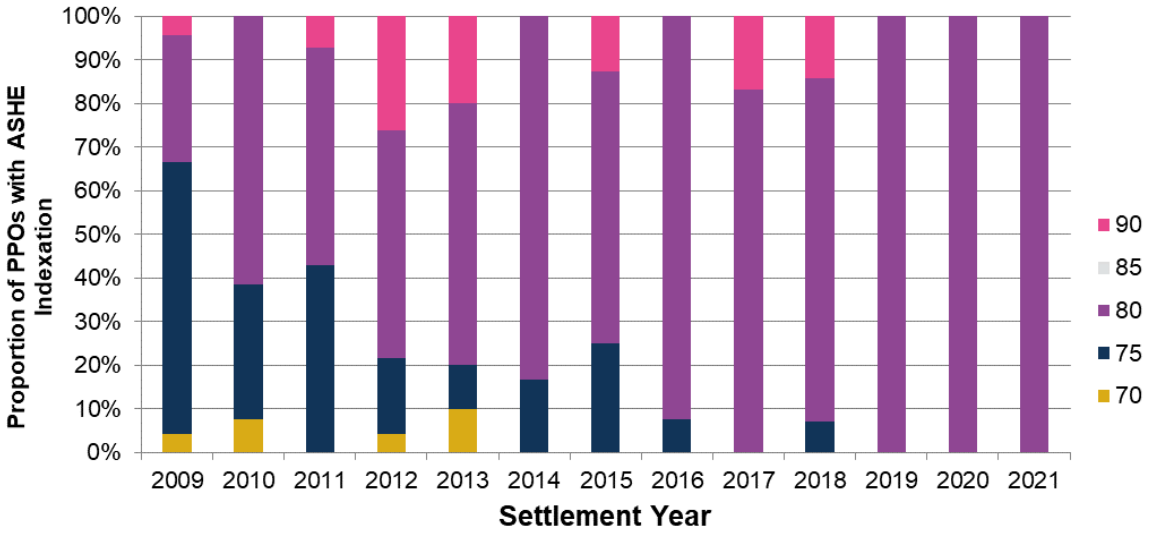

Figure M.9: Where the applicable index for the primary head of damage is ASHE, the proportion of Motor (MIB) PPO claims linked to specific percentiles, by settlement year

M.5 ASHE

Implemented in the 2011 survey, ASHE code 6115 ("Care Assistants and Home Carers") has been split into two new codes: code 6145 ("Care Workers and Home Carers") and code 6146 ("Senior Care Workers"). Even though the ONS has stated that it will continue to publish figures for code 6115, albeit separately to the main tables, "for the foreseeable future", there is an additional complication since the basis of the ASHE code 6115 figures has changed, and so a slight adjustment is required to be made to the figures for 2011 onwards (details are available within the ONS download of ASHE Table 26 which corresponds to SOC 6145 and 6146).

Figure M.10 and Figure M.11 show the annual inflation in ASHE 6115 by specific percentile. These figures are taken from Table 26.5a (Table 14.5a for 2011 and prior), which relates to hourly gross pay. Figure M.12 compares this annual inflation with that observed for Average Weekly Earnings ("AWE"), taken from the "Not Seasonally Adjusted - Index Figures Excluding Bonuses, Including Arrears" section of the "EARN02: Average Weekly Earnings by Sector" ONS publication.

Year	6115 - Care Assistants and Home Carers Inflation Statistics by Percentile									
	10	20	25	30	40	60	70	75	80	90
2008	3.54%	2.44%	2.04%	2.29%	2.71%	2.59%	3.64%	3.80%	**3.27%**	2.64%
2009	2.56%	2.86%	2.93%	3.13%	3.06%	2.28%	2.41%	2.72%	**2.47%**	3.68%
2010	1.00%	1.08%	1.80%	1.88%	1.08%	2.11%	1.18%	0.92%	**0.77%**	0.41%
2011	0.50%	-0.61%	-0.74%	-0.85%	-1.33%	-2.07%	-1.38%	-1.11%	**-1.05%**	-1.07%
2012	1.97%	0.61%	0.44%	0.29%	0.27%	-0.23%	-1.39%	-1.12%	**-0.87%**	-0.42%
2013	1.45%	0.92%	0.29%	0.00%	-0.27%	0.00%	0.22%	0.41%	**0.49%**	0.33%
2014	1.75%	1.97%	2.06%	1.71%	1.76%	0.59%	0.22%	-0.10%	**-0.78%**	-0.58%
2015	3.43%	3.56%	2.31%	2.39%	2.52%	2.11%	2.28%	1.65%	**1.67%**	2.18%
2016	8.60%	5.44%	5.63%	5.62%	4.66%	3.32%	3.39%	3.04%	**3.56%**	2.38%
2017	4.17%	5.30%	5.60%	4.68%	4.21%	3.77%	2.87%	3.14%	**2.51%**	2.96%
2018	4.40%	3.48%	3.54%	3.85%	3.56%	3.63%	3.29%	2.95%	**3.99%**	3.73%
2019	4.85%	5.36%	4.76%	4.54%	4.01%	3.40%	4.24%	4.07%	**3.58%**	3.60%
2020	6.21%	6.27%	5.70%	5.71%	5.73%	6.08%	4.90%	5.42%	**5.31%**	3.18%
2021	2.98%	2.56%	2.97%	2.70%	2.82%	2.16%	2.56%	2.28%	**2.32%**	3.92%

Figure M.10: Annual Inflation in ASHE 6115, by specific percentile and by year (as at April of that year)

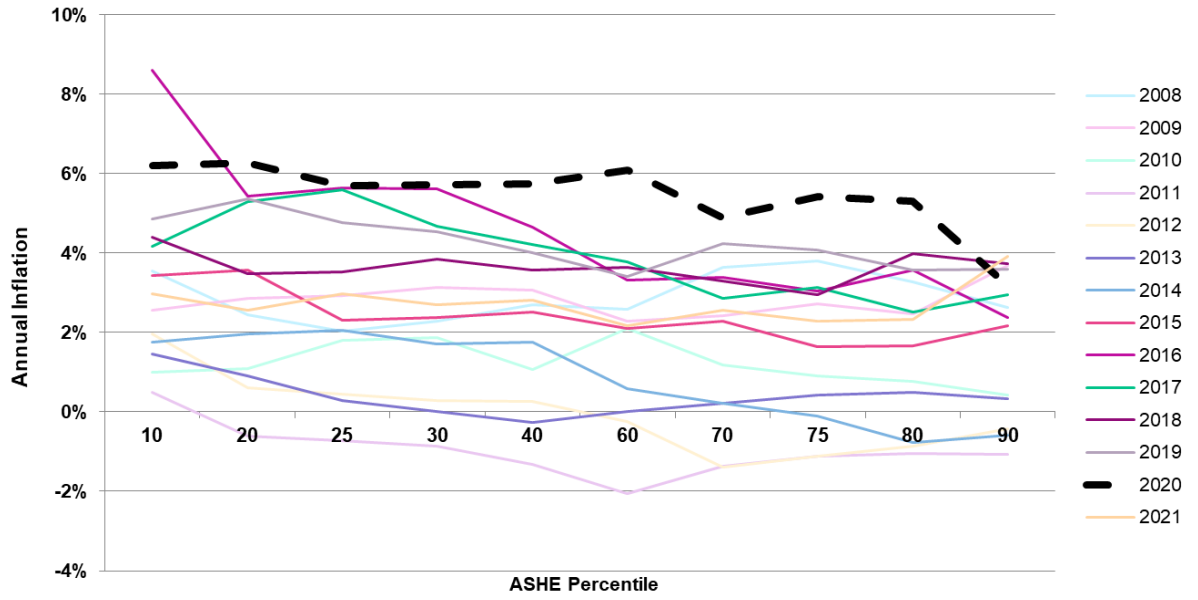

Figure M.11: Annual Inflation in ASHE 6115, by specific percentile and by year (as at April of that year)

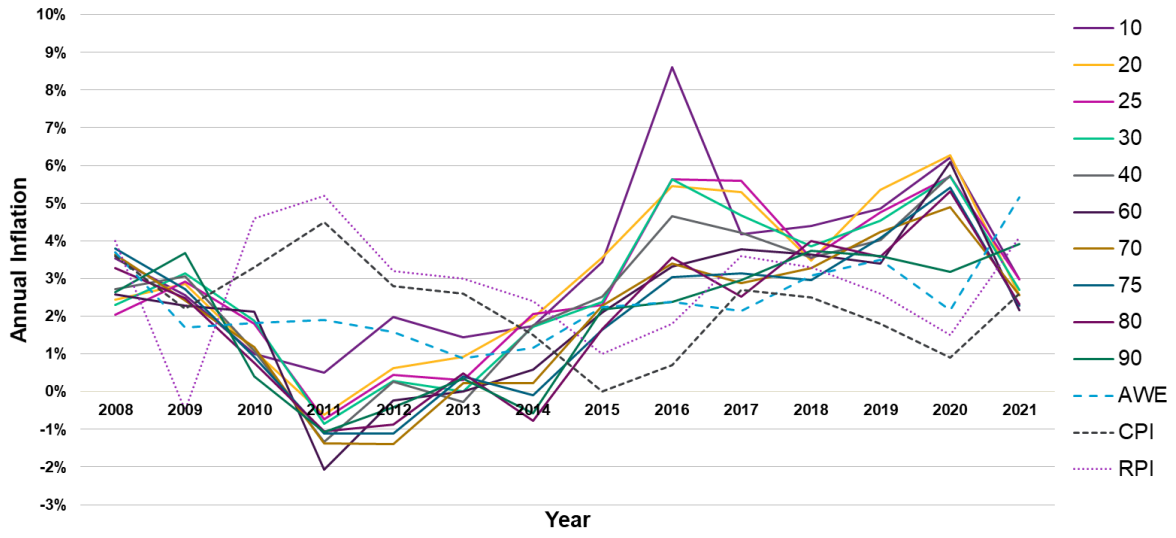

Figure M.12: Annual Inflation in ASHE 6115, by specific percentile and by year (as at April of that year), compared with Average Weekly Earnings, CPI and RPI

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Appendix N Payment components for PPO claims

In this appendix, we provide summary statistics for the lump sum element of PPO claims and for the initial regular payment amount of PPO claims, separately for Motor (non-MIB) PPO claims, Liability PPO claims and Motor (MIB) PPO claims.

The lump sum element in these summary statistics excludes the first regular payment amount for the PPO claim. Unless otherwise stated, all the lump sum amounts are in nominal terms, i.e. at the time of settlement.

For the initial regular payment amount of PPO claims, in cases where one claimant is awarded more than one series of payments (corresponding to different heads of damage), the initial PPO amount is the sum of the payments for all heads of damage. Once again, unless otherwise stated, the initial PPO amounts are in nominal terms, i.e. at the time of settlement, and are before any stepped payments kick in.

We provide summary statistics for the following:

- Distribution of payment components
- Nominal payment components and payment components with inflation removed – Motor (non-MIB) PPO claims only
- Payment components correlations – Motor (non-MIB) PPO claims only.

For the purposes of comparison, we also provide some of the equivalent summary statistics for Motor (non-MIB) non-PPO claims.

N.1 Motor (non-MIB) PPO claims – distribution of payment components

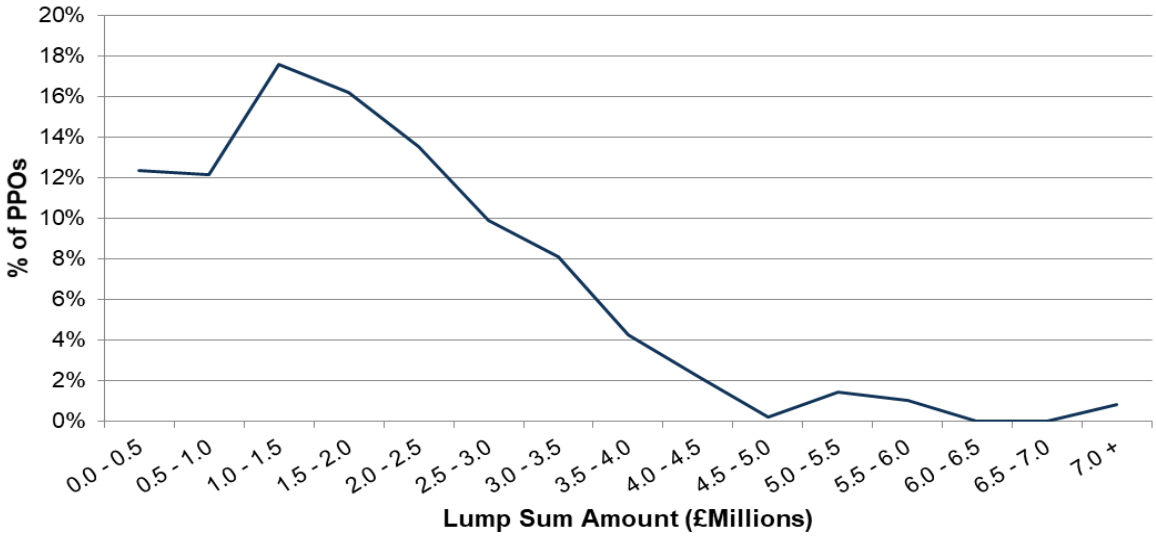

Figure N.1: Distribution of the size of the lump sum element of Motor (non-MIB) PPO claims, for claims settled since 2009

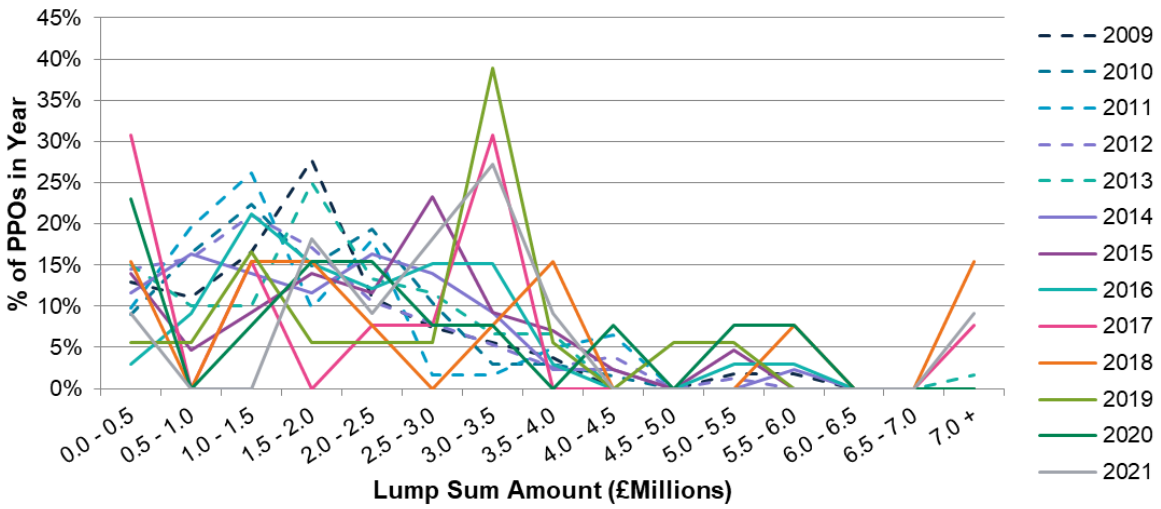

Figure N.2: Distribution of the size of the lump sum element of Motor (non-MIB) PPO claims, by settlement year

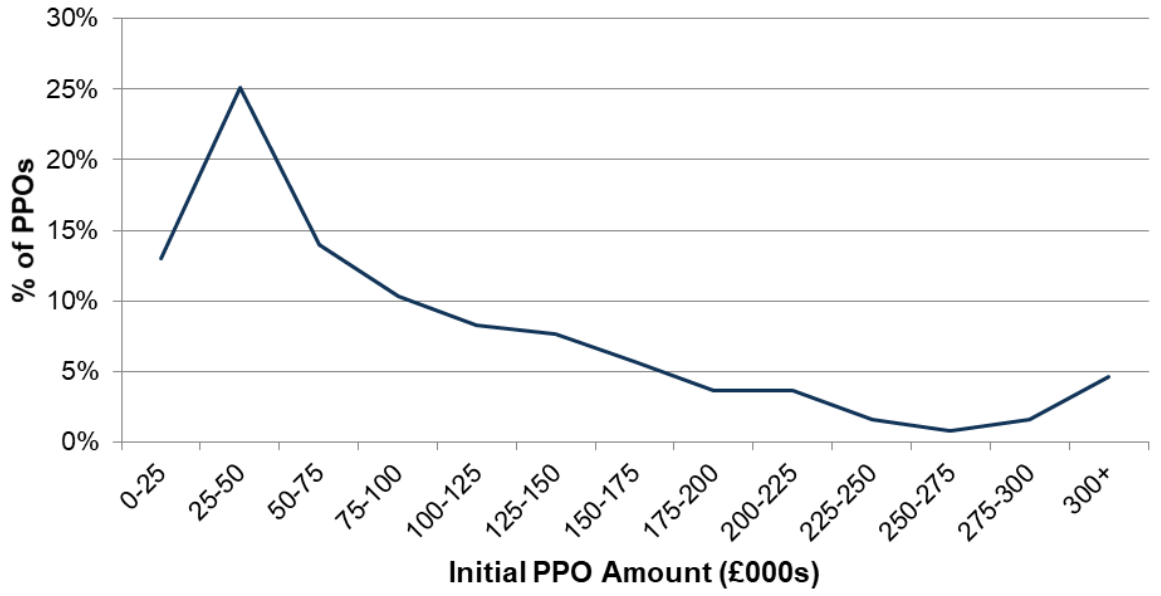

Figure N.3: Distribution of the initial regular payment amount of Motor (non-MIB) PPO claims, for claims settled since 2009

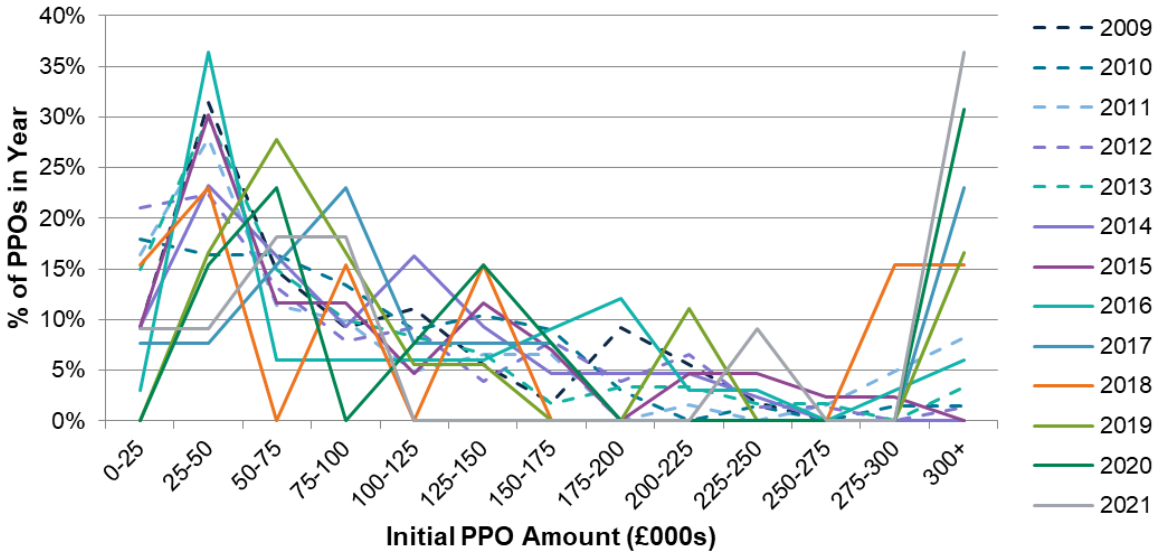

Figure N.4: Distribution of the initial regular payment amount of Motor (non-MIB) PPO claims, by settlement year

N.2 Motor (non-MIB) non-PPO claims – distribution of payment components

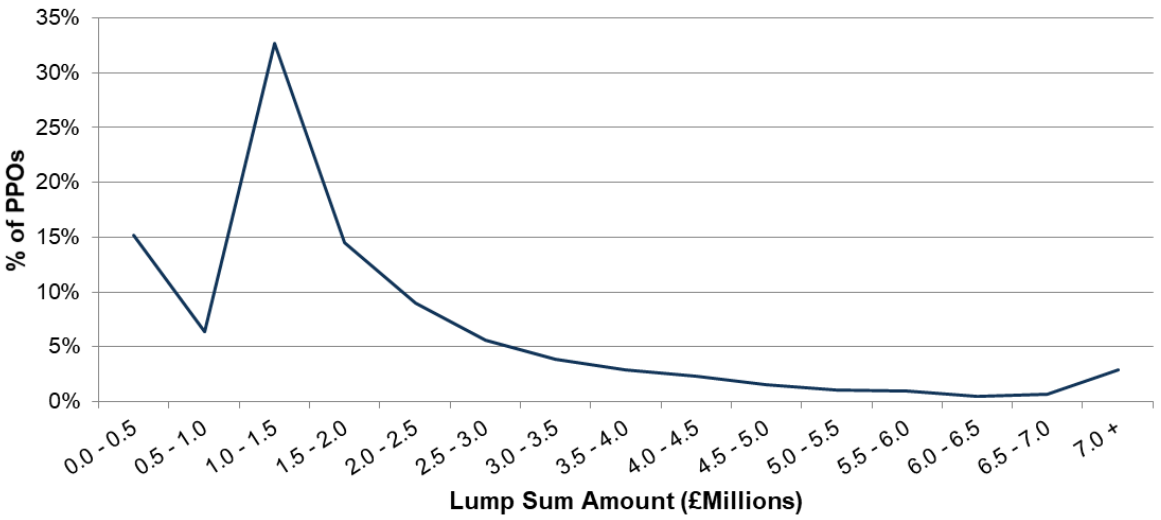

Figure N.5: Distribution of the size of Motor (non-MIB) non-PPO claims, for claims settled since 2009

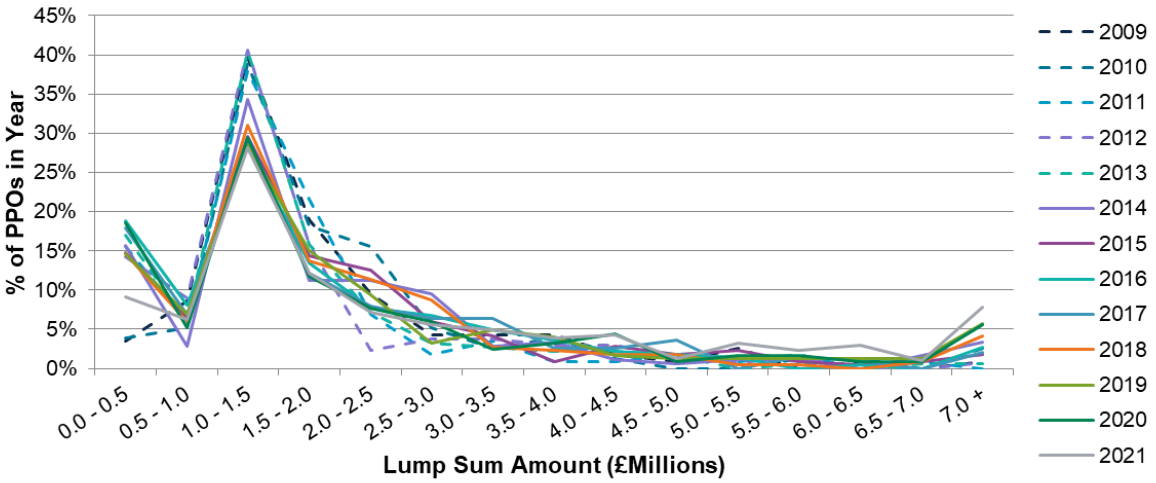

Figure N.6: Distribution of the size of Motor (non-MIB) non-PPO claims, by settlement year

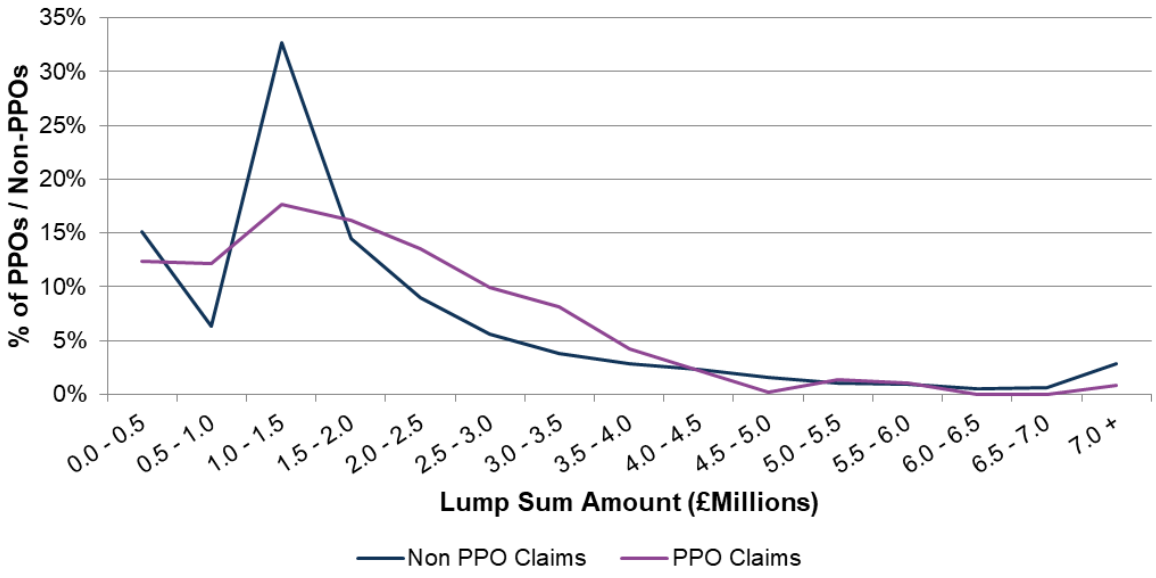

Figure N.7: Distribution of the size of the lump sum element of Motor (non-MIB) PPO claims and the size of Motor (non-MIB) non-PPO claims, for claims settled since 2009

N.3 Motor (non-MIB) PPO claims and non-PPO claims – nominal payment components and payment components with inflation removed

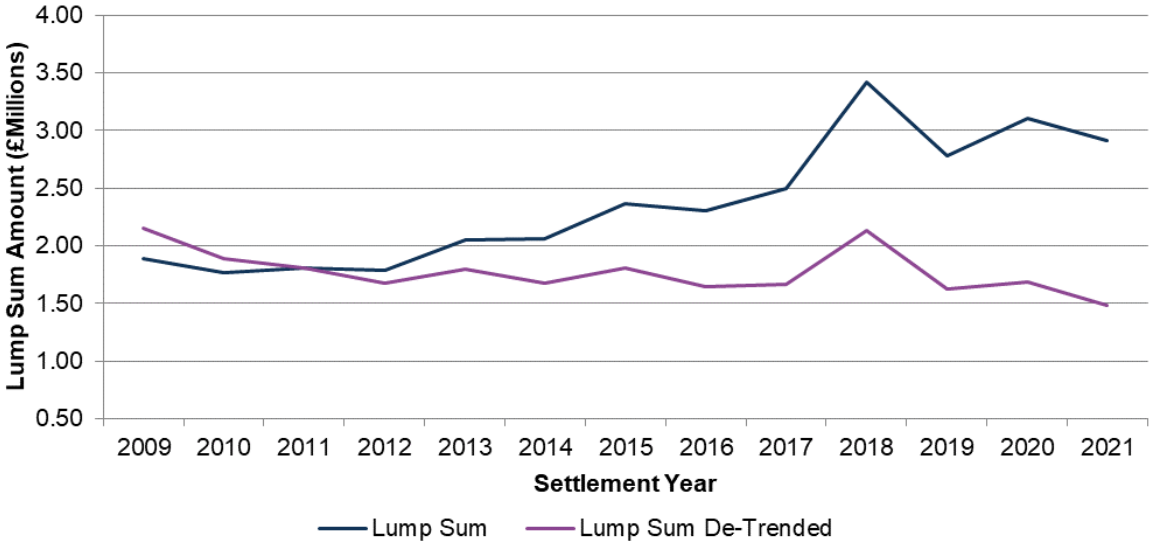

Figure N.8: Average size of the lump sum element of Motor (non-MIB) PPO claims, nominal and with inflation removed (assuming inflation of 7% per annum), by settlement year

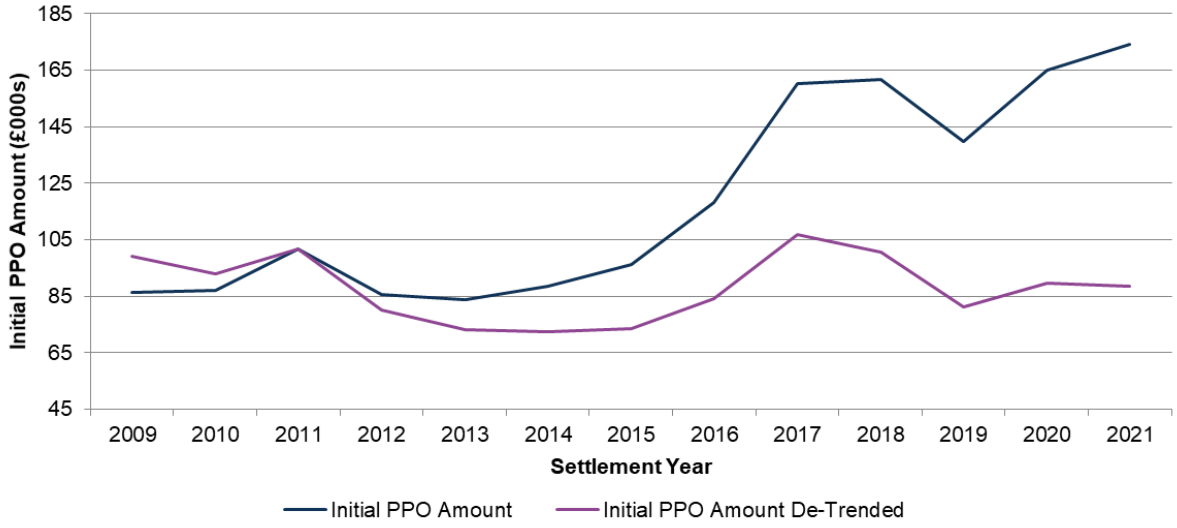

Figure N.9: Average size of the initial regular payment amount of Motor (non-MIB) PPO claims, nominal and with inflation removed (assuming inflation of 7% per annum), by settlement year

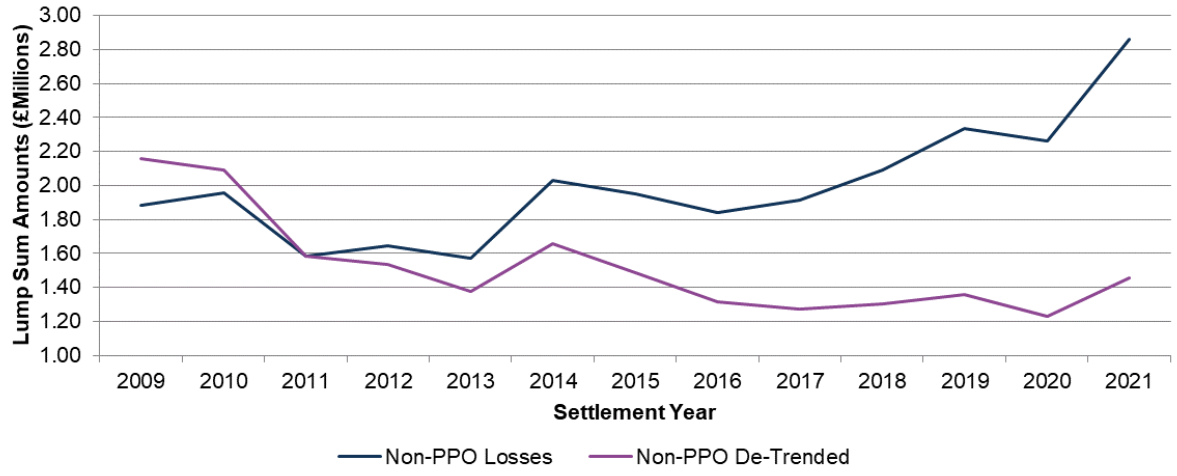

Figure N.10: Average size of Motor (non-MIB) non-PPO claims, nominal and with inflation removed (assuming inflation of 7% per annum), by settlement year

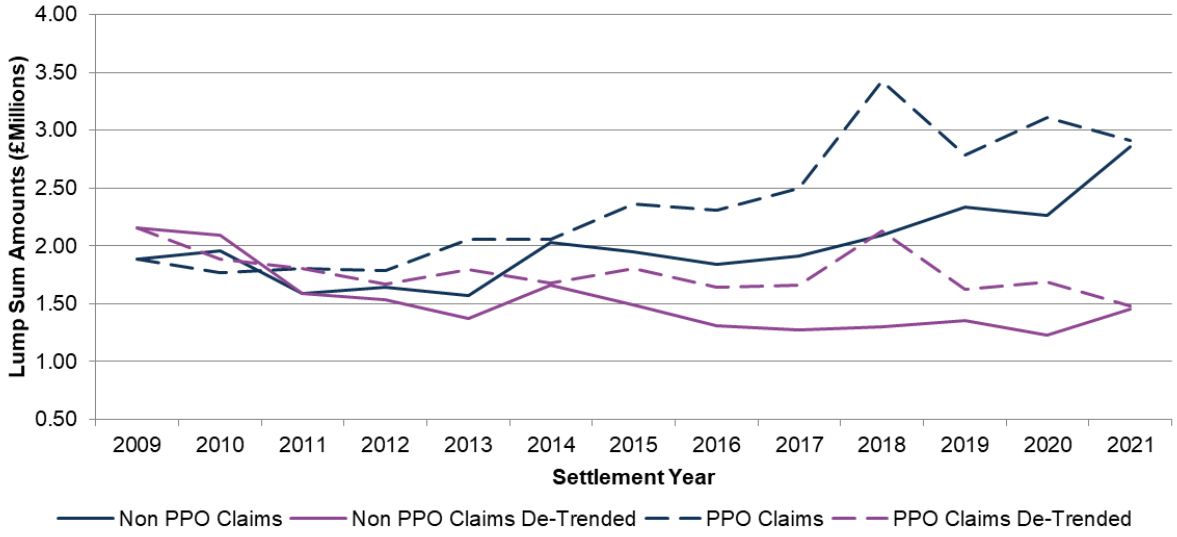

Figure N.11: Average size of the lump sum element of Motor (non-MIB) PPO claims and the size of Motor (non-MIB) non-PPO claims, nominal and with inflation removed (assuming inflation of 7% per annum), by settlement year

N.4 Motor (non-MIB) PPO claims – payment components correlations

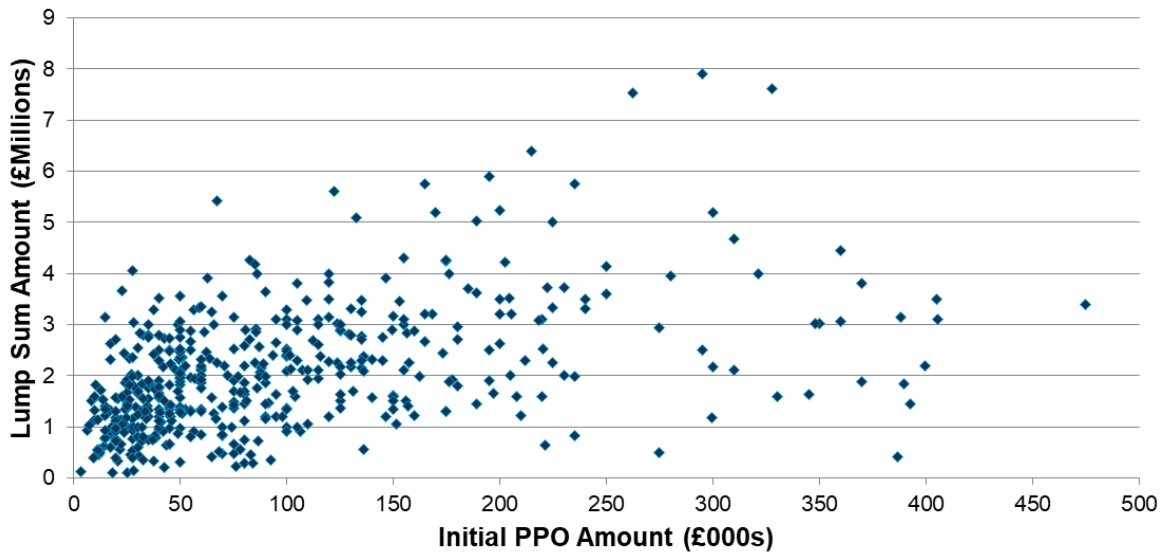

Figure N.12: Scatter graph of the lump sum element and the initial regular payment amount of Motor (non-MIB) PPO claims

For the scatter graph in Figure N.12, the correlation coefficients are:

- Pearson correlation coefficient: 0.48
- Spearman correlation coefficient: 0.53

The coefficients represent the strength and direction of the correlation between the two variables, ranging between -1.00 and +1.00. A larger absolute value represents a stronger relationship in the data, the sign indicating the direction.

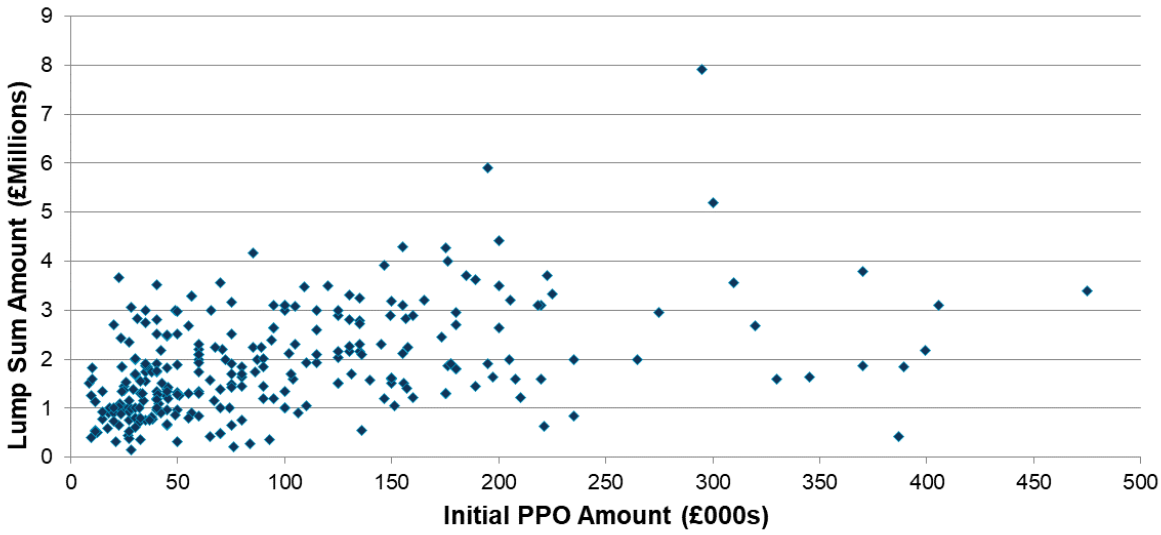

Figure N.13: Scatter graph of the lump sum element and the initial regular payment amount of Motor (non-MIB) PPO claims, for claims settled since 2009

For the scatter graph in Figure N.13, the correlation coefficients are:

- Pearson correlation coefficient: 0.47
- Spearman correlation coefficient: 0.52

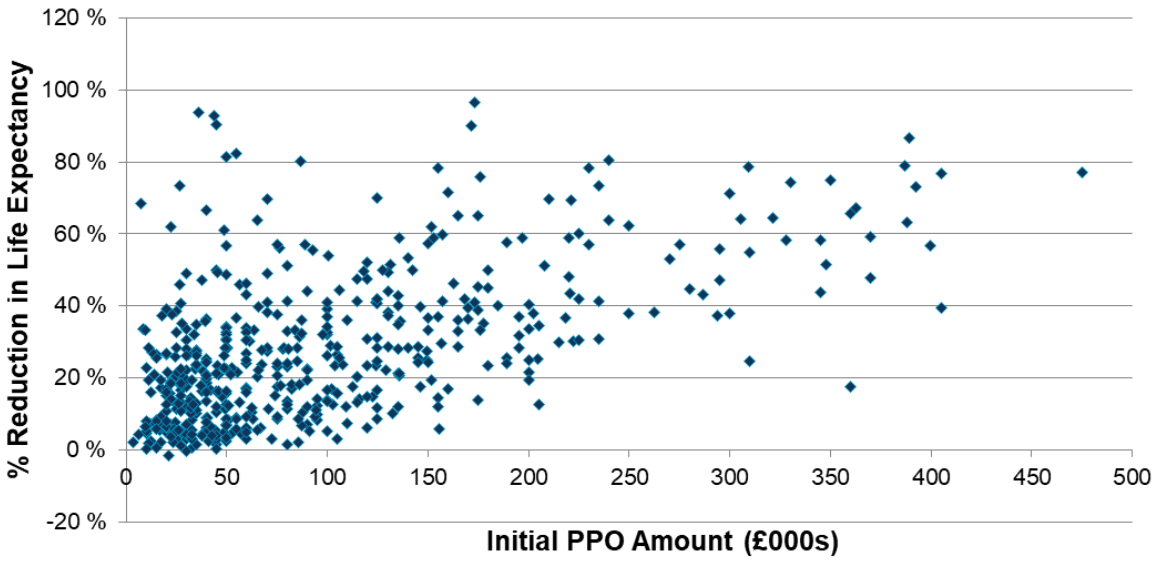

Figure N.14: Scatter graph of the percentage reduction in life expectancy of a claimant and the initial regular payment amount of Motor (non-MIB) PPO claims

For the scatter graph in Figure N.14, the correlation coefficients are:

- Pearson correlation coefficient: 0.55
- Spearman correlation coefficient: 0.55

The term "life expectancy" in this document is defined as the future life expectancy at the time of settlement, as per the quantitative industry survey responses. It is not clear whether the data collected represents the claimant experts' views, the defendant experts' views, internal views, or a combination of these.

The percentage reduction in life expectancy is defined as:

$$\frac{\text{unimpaired life expectancy - life expectancy as provided by participants}}{\text{unimpaired life expectancy}}$$

where the unimpaired life expectancy is taken from the 2018 ONS United Kingdom mortality tables, and all life expectancies are quoted as at the date of settlement. (Negative percentage reductions in life expectancy may therefore occur if insurers are using more recent (or different) mortality tables.)

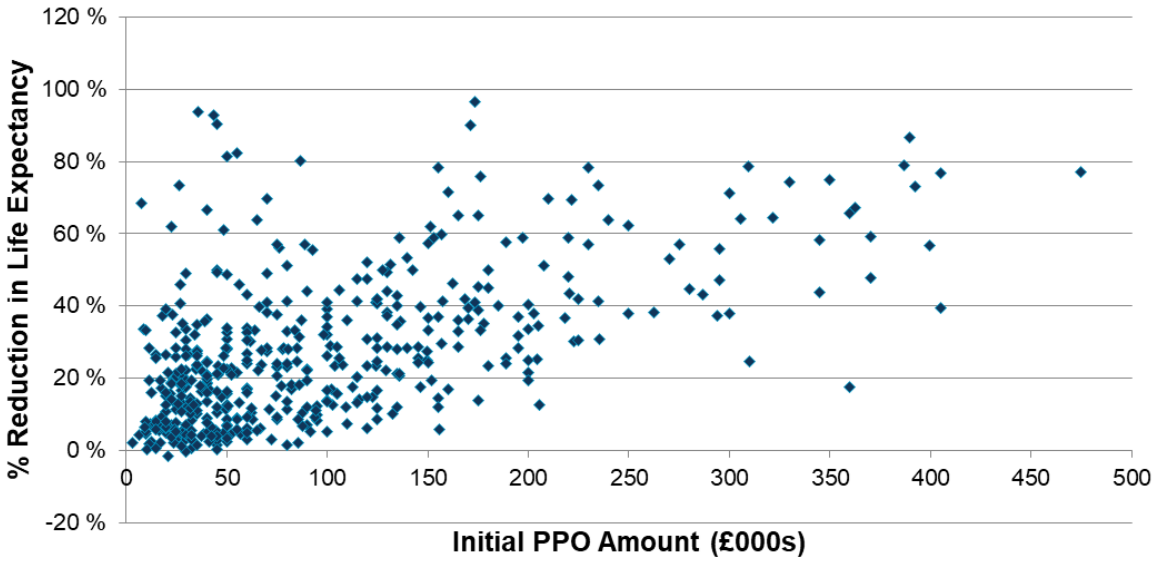

Figure N.15: Scatter graph of the percentage reduction in life expectancy of a claimant and the initial regular payment amount of Motor (non-MIB) PPO claims, for claims settled since 2009

For the scatter graph in Figure N.15, the correlation coefficients are:

- Pearson correlation coefficient: 0.55
- Spearman correlation coefficient: 0.56

N.5 Liability PPO claims – distribution of payment components

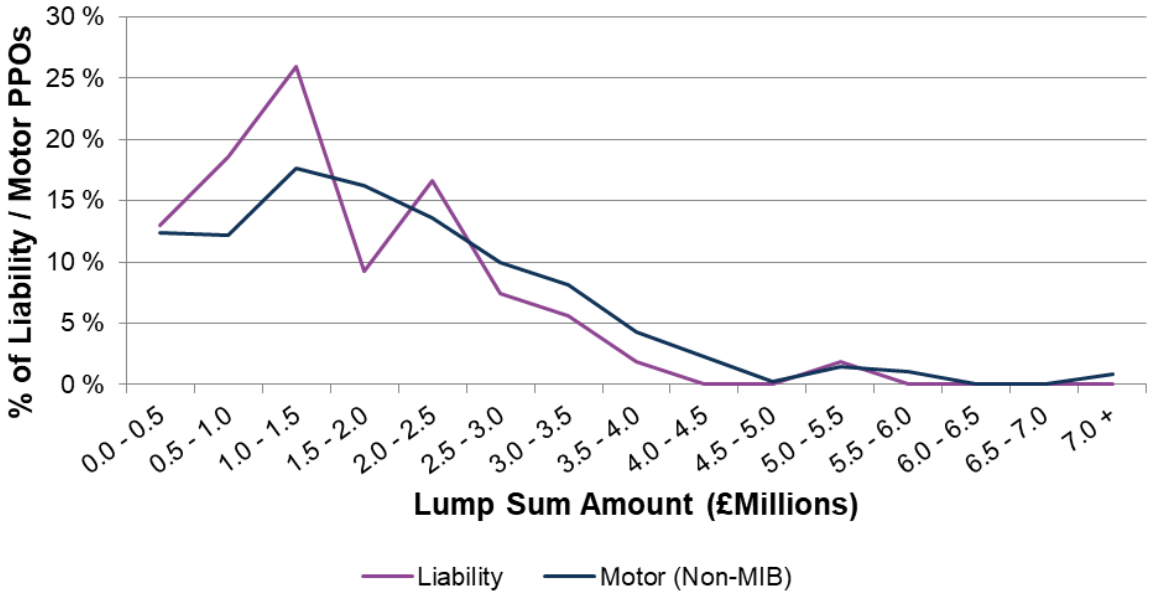

Figure N.16: Distribution of the size of the lump sum element of Liability PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

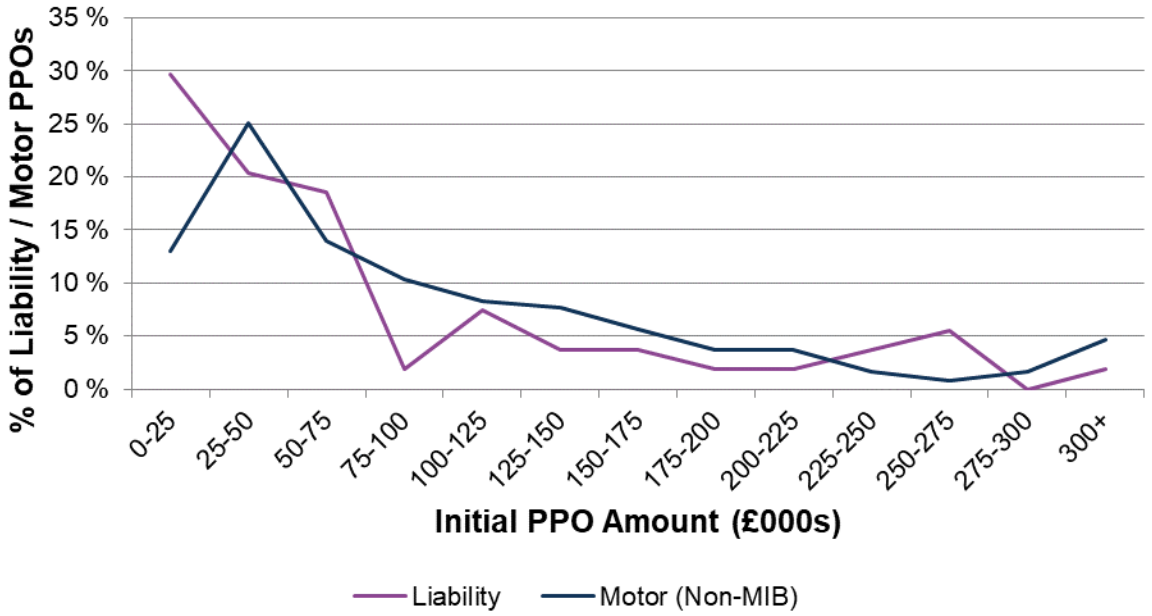

Figure N.17: Distribution of the initial regular payment amount of Liability PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

N.6 Motor (MIB) PPO claims – distribution of payment components

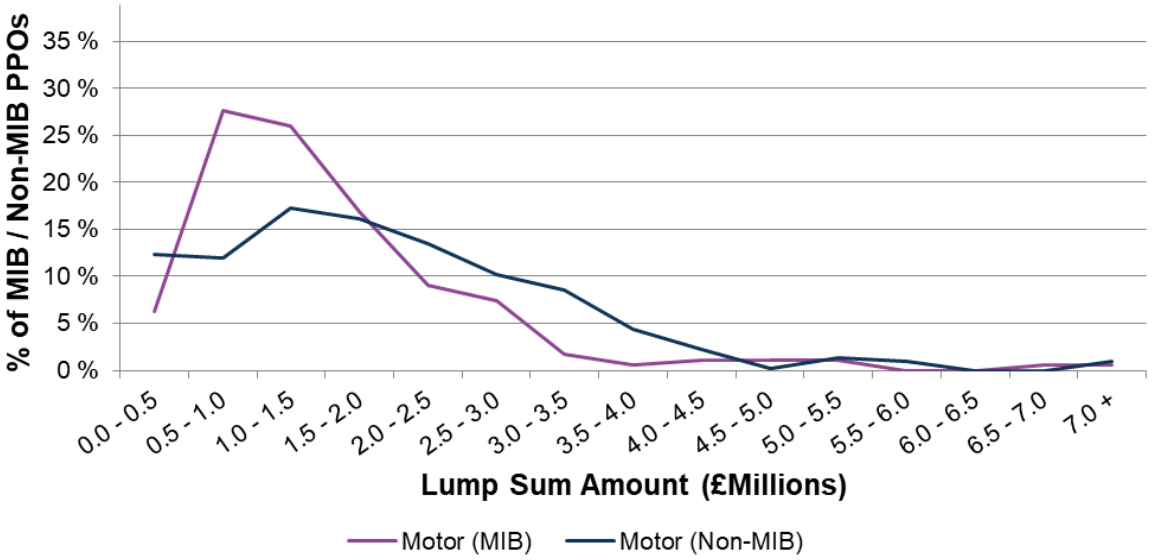

Figure N.18: Distribution of the size of the lump sum element of Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

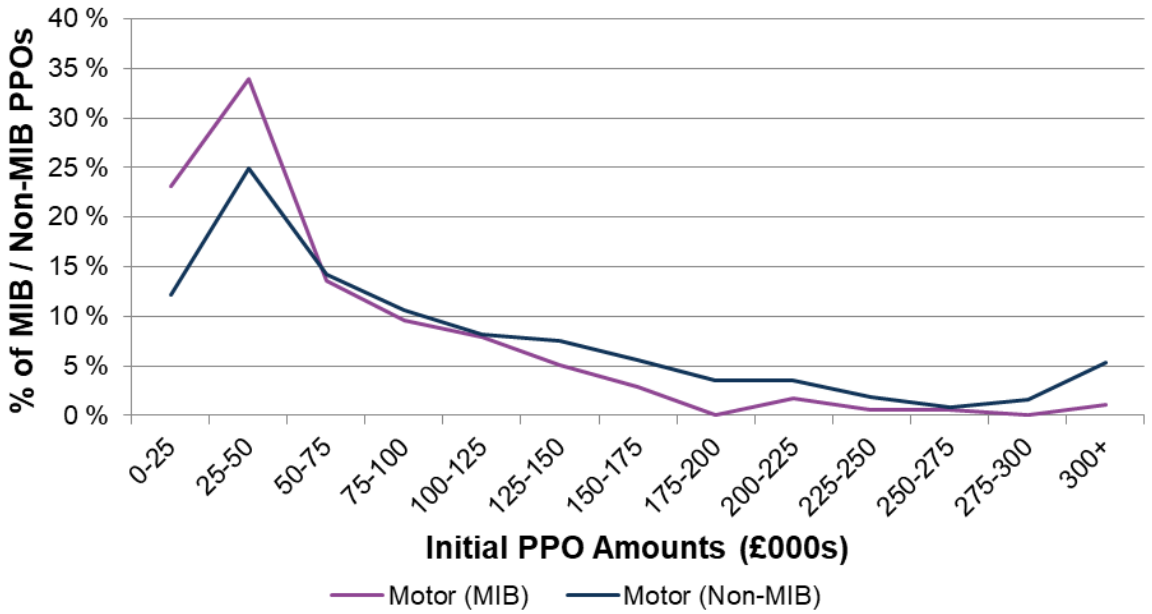

Figure N.19: Distribution of the initial regular payment amount of Motor (MIB) PPO claims and Motor (non-MIB) PPO claims, for claims settled since 2009

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Appendix O Special features of Motor (non-MIB) PPO claims and other statistics

In this appendix, we provide summary statistics on stepped payments, variation orders and indemnity / reverse indemnity guarantees for Motor (non-MIB) PPO claims, together with a small number of other statistics for these PPO claims.

O.1 Definitions

Stepped payments

A PPO claim with stepped payments is one where there is a provision for step changes in the regular payment amount to be made. These step changes will apply at fixed points in time, to situations where a specific change in circumstance has already been foreseen at the time of settlement. For example, there could be a stepped payment for a one-off increase in payments to be made to a claimant whose parents are the primary carers: this would allow for a time when the parents are no longer able to deliver the same standard of care and additional care costs will therefore be incurred.

Whilst the majority of step changes tend to be increases, it should be noted that the step change could be either upward or downward.

Variation orders

A variation order is an allowance for a change in the regular payment amount, usually triggered by a certain event. An example would be the claimant developing additional symptoms in the future, as a result of the original accident.

Variation orders only specify the conditions of the trigger event at the time of settlement and do not specify the amounts that the regular payments will change to.

Indemnity / reverse indemnity guarantees

An indemnity guarantee is a guarantee given by the insurer to pay additional costs in circumstances such as where services provided by the local council are reduced or withdrawn in the future.

A reverse indemnity guarantee covers the opposite situation. For example, where the insurer is able to reduce the size of the annual payments as public provision of care is given to the claimant.

O.2 Proportion of Motor (non-MIB) PPO claims with special features

Figure O.1 shows the proportion of Motor (non-MIB) PPO claims with special features, together with the number of responses received on each special feature. To provide context for the credibility of these summary statistics, there are 539 Motor (non-MIB) PPO claims in the quantitative industry survey.

Feature	Proportion of PPOs	Number of Responses
Stepped Payments	29%	448
Variation Orders	17%	405
Indemnity Guarantees	7%	235
Reverse Indemnity Guarantees	8%	213
Contributory Negligence	18%	152

Figure O.1: Proportion of Motor (non-MIB) PPO claims with special features, together with the number of Motor (non-MIB) PPO claims in the survey with responses received on those special features

O.3 Stepped payments and variation orders by age of claimant at settlement

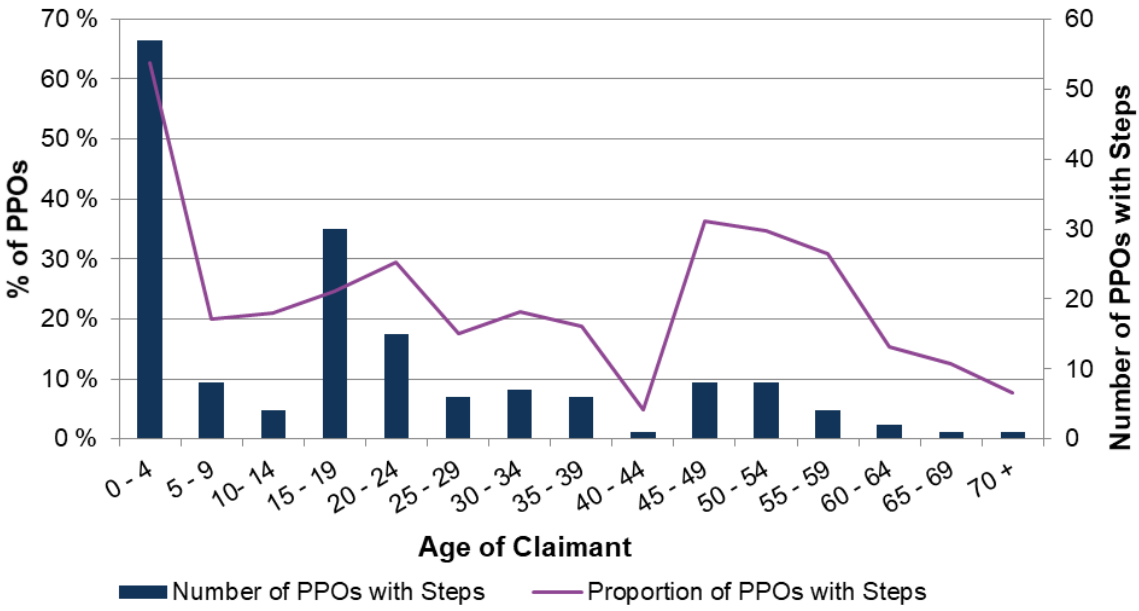

Figure O.2: Number and proportion of Motor (non-MIB) PPO claims with stepped payment agreements, by age of claimant at accident date

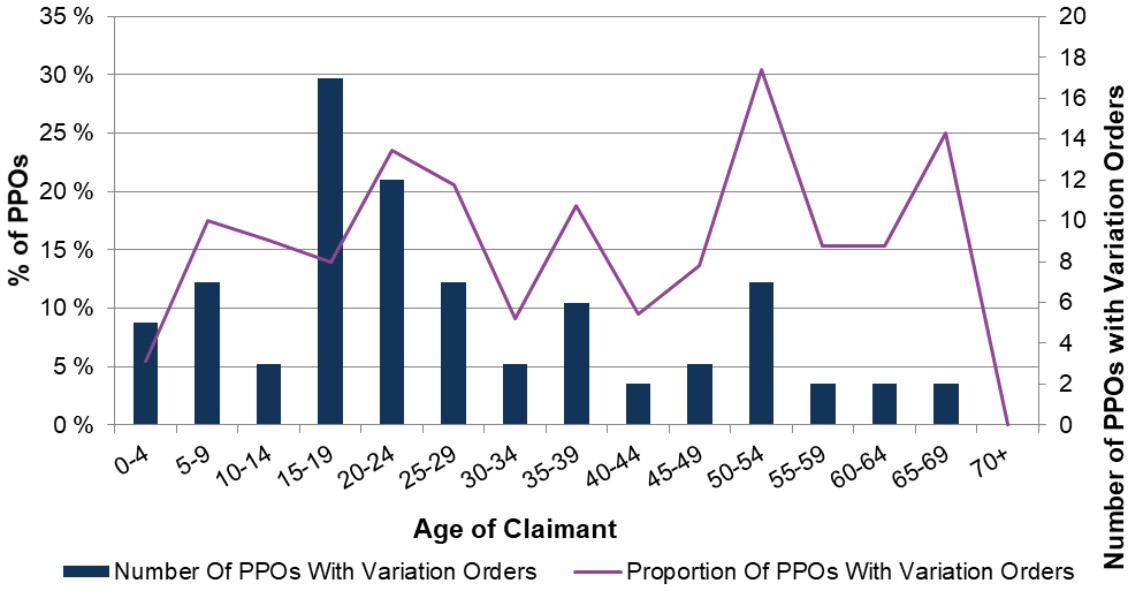

Figure O.3: Number and proportion of Motor (non-MIB) PPO claims with variation order agreements, by age of claimant at accident date

O.4 Stepped payments and variation orders by injury type

In terms of injury type:

- 23% of Motor (non-MIB) PPO claims relating to brain injury have a stepped payment.
- 48% of Motor (non-MIB) PPO claims relating to spinal injury have a stepped payment.

This compares with a general Motor (non-MIB) PPO claim population average of 29%, as shown in Figure O.1.

Again in terms of injury type:

- 11% of Motor (non-MIB) PPO claims relating to brain injury have a variation order.
- 42% of Motor (non-MIB) PPO claims relating to spinal injury have a variation order.

This compares with a general Motor (non-MIB) PPO claim population average of 17%, as shown in Figure O.1.

O.5 Other statistics

In terms of payment frequency:

- 78% of Motor (non-MIB) PPO claims are paid annually.
- 13% of Motor (non-MIB) PPO claims are paid quarterly.

- The remainder (9%) of Motor (non-MIB) PPO claims are paid monthly, bi-monthly, 4-weekly or bi-annually.

In terms of number of claimants:

- 84% of Motor (non-MIB) PPO claims have one PPO claimant.
- 1% of Motor (non-MIB) PPO claims have two PPO claimants.
- The remainder (15%) of Motor (non-MIB) PPO claims did not have this information available.

In terms of the driving force behind the decision for a claim to be settled as a PPO, for Motor (non-MIB) PPO claims:

- In 86% of cases, it was solely the claimant.
- In 13% of cases, it was a mutual decision between claimant and defendant.
- In less than 1% of cases, it was the court.

Appendix P IFoA PPO Working Party injury type and care regime categorisation

The IFoA PPO Working Party, with the help of a number of claims professionals, devised a categorisation of PPO injury types and care regimes, with the intention of this categorisation becoming UK standard practice, to be used by all insurers and reinsurers.

This categorisation was first presented as part of the output of the IFoA PPO Working Party in 2014.

24% of the Motor (non-MIB) PPO claims we received for the 2021 quantitative industry survey, the data for which was taken as at 31 December 2021, had this categorisation attached. Additionally, 19% of the Liability PPO claims we received for the 2021 quantitative industry survey also had this categorisation attached. The equivalent proportions for the 2020 quantitative industry survey (as at 31 December 2020) were 23% and 11% respectively. ***We urge insurers to use this categorisation, and to provide this information to the IFoA PPO Working Party to enable us to better help the market to understand trends and uncertainties relating to PPO claims.***

In this appendix, we reproduce the IFoA PPO Working Party injury type and care regime categorisation, and we provide the following summary statistics for Motor (non-MIB) PPO claims:

- Distribution of PPO claims by injury type categorisation
- Distribution of PPO claims by care regime categorisation
- PPO claim payment components by categorisation
- Life expectancy of the claimant at settlement date by categorisation
- Reduction in life expectancy of the claimant by categorisation.

The summary statistics provided in this appendix are based on only a small subset of data (as noted above, only 24% of the 539 Motor (non-MIB) claims received had the categorisation attached). The small number of claims is likely to have contributed to the volatility in experience in the summary statistics provided in this appendix.

We encourage insurers and reinsurers to use this categorisation – the more PPO claims have this categorisation attached, the more in-depth analysis the IFoA PPO Working Party will be able to provide and the less volatility there will be in the experience summarised.

We also encourage insurers and reinsurers to apply this coding to all large claims. This additional information will give further insight at an industry level into the drivers of the changes in PPO propensity.

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P.1 Injury type and care regime categorisation

Figure P.1 summarises the IFoA PPO Working Party injury type and care regime categorisation.

Injury type	Code	Category	Description
Brain	B1	PVS	Permanent Vegetative State – No purposeful motor or cognitive function. Requires a feeding tube.
	B2	Cannot walk - Fed by others	Does not feed self, must be fed completely (either orally or by a feeding tube)
	B3	Cannot walk - Self feeds	Can feed self with fingers or utensils, with assistance and/or spillage
	B4	Some walking ability	Walks with support, or unsteadily alone at least 10 feet but does not balance well
	B5	Walks well alone	for at least 20 feet, and balances well
	B6	No mobility issues	
Spinal	S1	Tetraplegia Ventilator Dependent	C1-C3
	S2	High level Tetraplegia	C4-C5
	S3	Low level tetraplegia	C6-C7
	S4	High level Paraplegia	Thoracic T1-T12
	S5	Low level paraplegia	Lumbar
Spinal 2	Complete/ incomplete flag	Complete or incomplete selected	
Amputation	A1	Double upper limb	Double upper limb amputation (or loss of use), including bilateral brachial plexus injuries etc
	A2	Leg - above knee	
	A3	Leg - below knee	
	A4	Other Amputation	
Other	O1		
Care regime	**Code**	**Category**	**Description**
	C1	24/7 2 or more care ratio	24 hour care needing two or more carers for all that time
	C2	24/7 1-2 care ratio	24 hour care needing one to two carers for all that time
	C3	24/7 but night sleeper	24 hour care with at least one carer but carers can sleep at night
	C4	9 or more hours duty care a day	
	C5	5 to 8 hours duty care a day	
	C6	0 to 4 hours duty care a day	
	C7	Domestic help only, no personal care	
	C8	No regular care	

Figure P.1: IFoA PPO Working Party injury type and care regime categorisation

P.2 Distribution of PPO claims by injury type categorisation

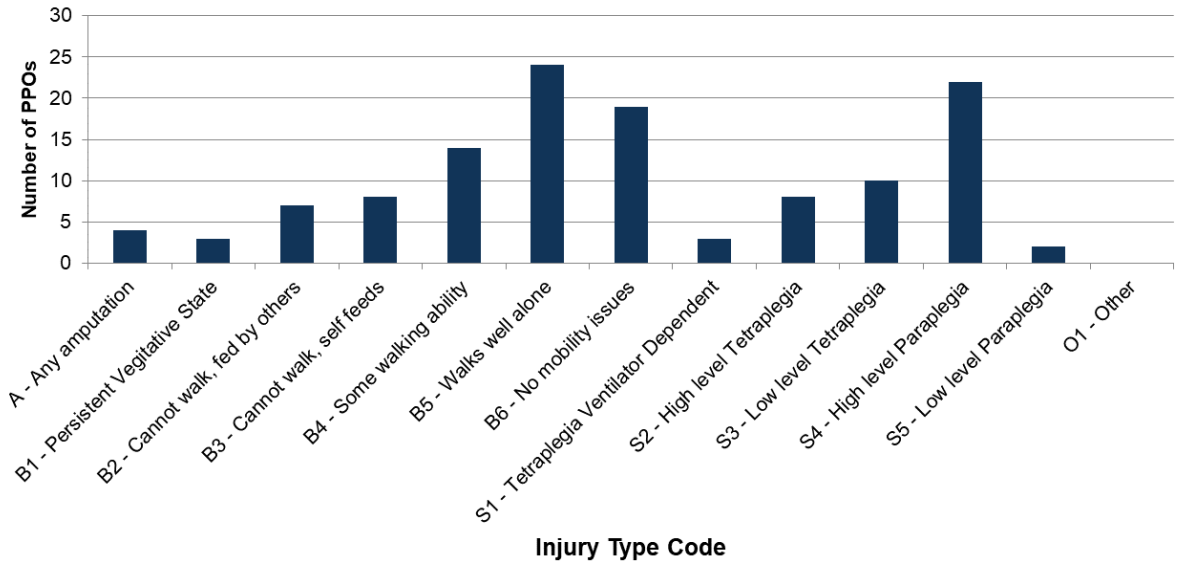

Figure P.2: Number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party injury type categorisation

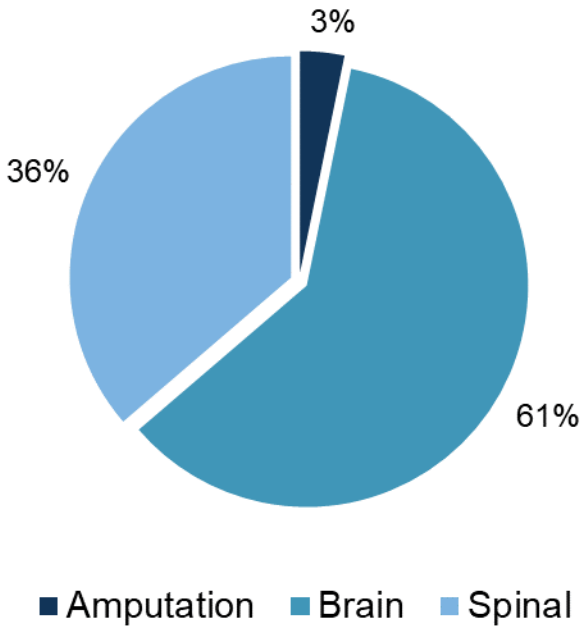

Figure P.3: High-level split of the number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party injury type categorisation

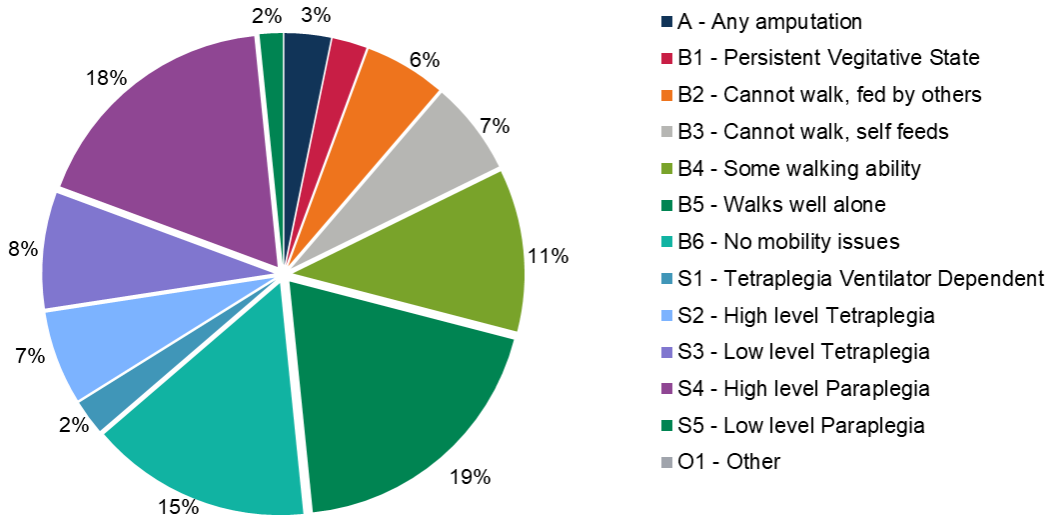

Figure P.4: Detailed split of the number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party injury type categorisation

P.3 Distribution of PPO claims by care regime categorisation

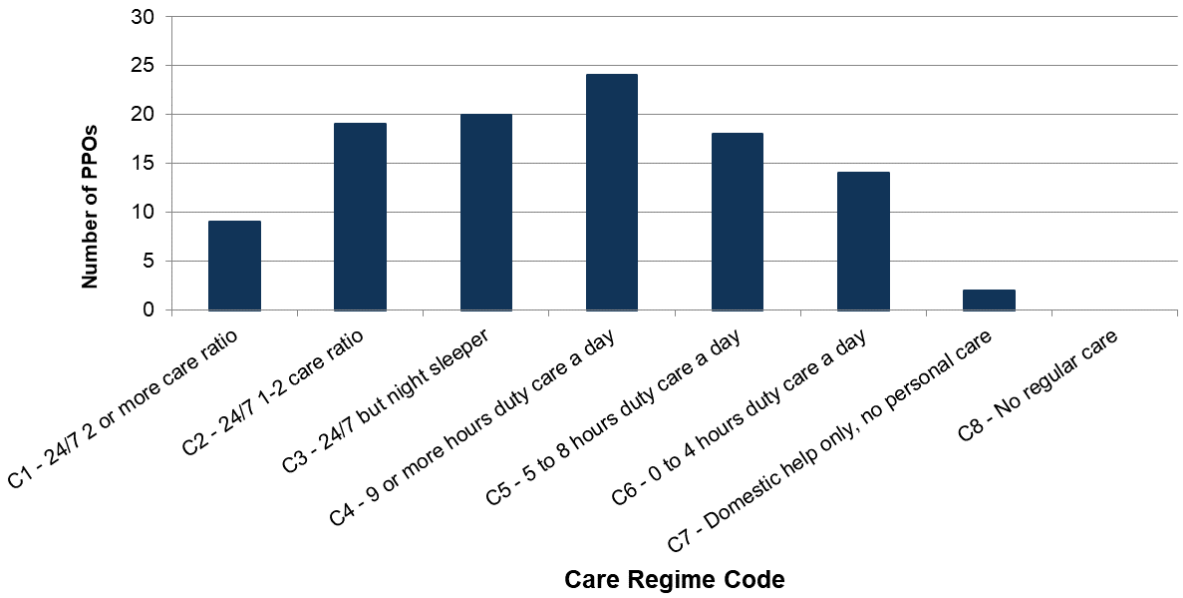

Figure P.5: Number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party care regime categorisation

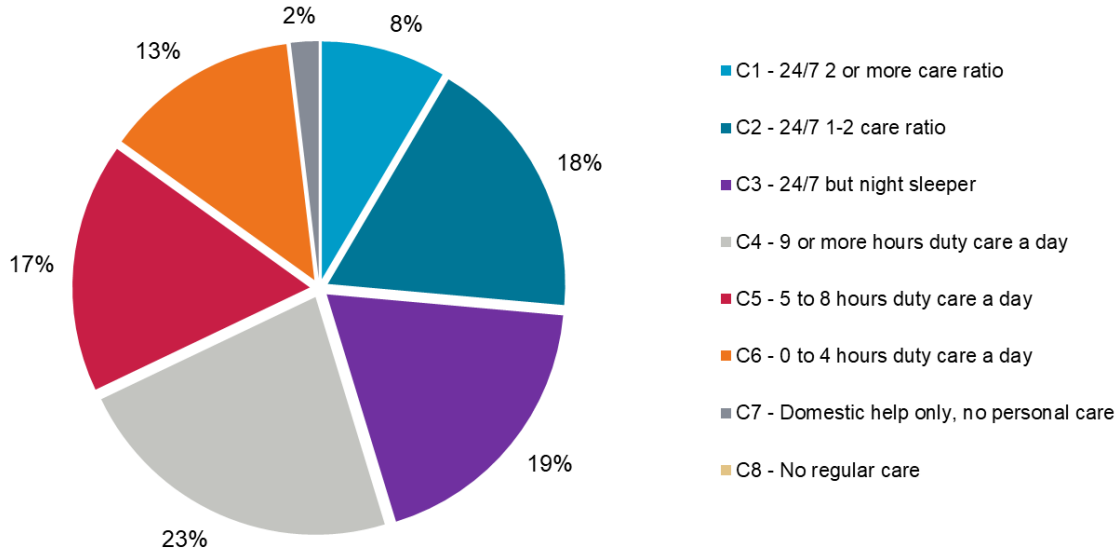

Figure P.6: Detailed split of the number of Motor (non-MIB) PPO claims, by IFoA PPO Working Party care regime categorisation

P.4 PPO claim payment components by categorisation

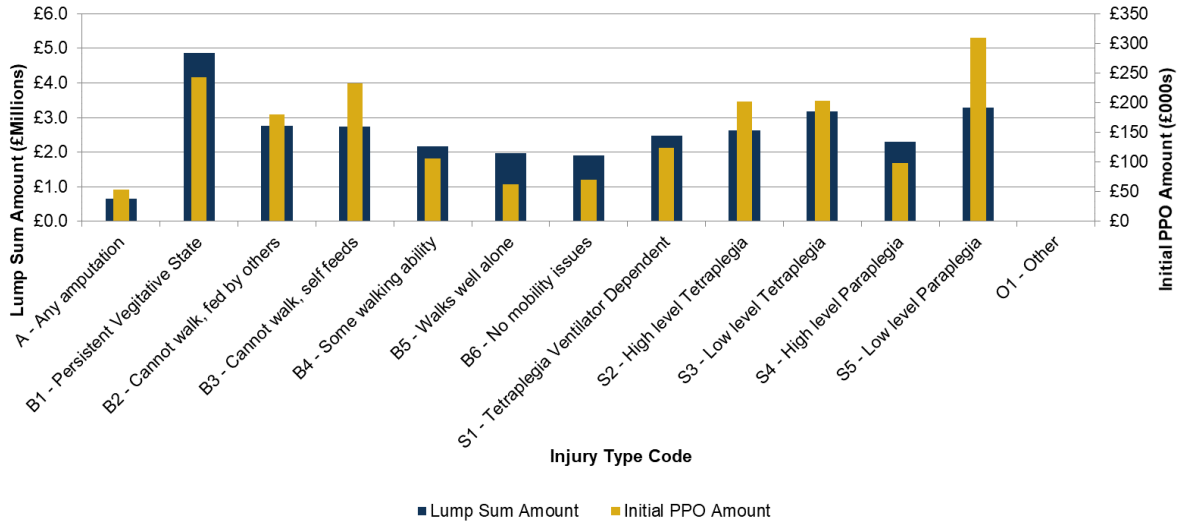

Figure P.7: Average lump sum amount and initial PPO amount (annual payment) for Motor (non-MIB) PPO claims, by IFoA PPO Working Party injury type categorisation

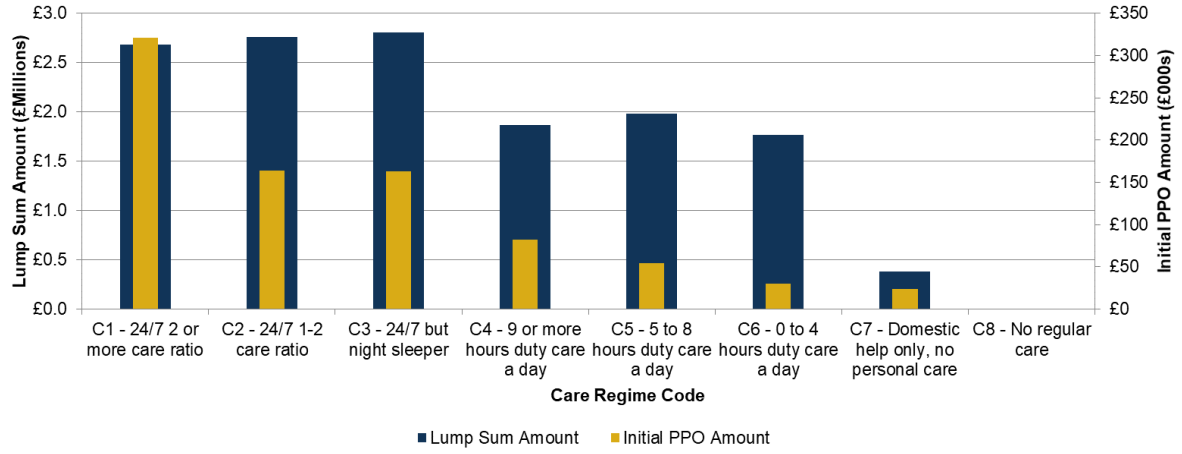

Figure P.8: Average lump sum amount and initial PPO amount (annual payment) for Motor (non-MIB) PPO claims, by IFoA PPO Working Party care regime categorisation

P.5 Life expectancy of the claimant at settlement date by categorisation

The term "life expectancy" in this document is defined as the future life expectancy at the time of settlement, as per the quantitative industry survey responses. It is not clear whether the data collected represents the claimant experts' views, the defendant experts' views, internal views, or a combination of these.

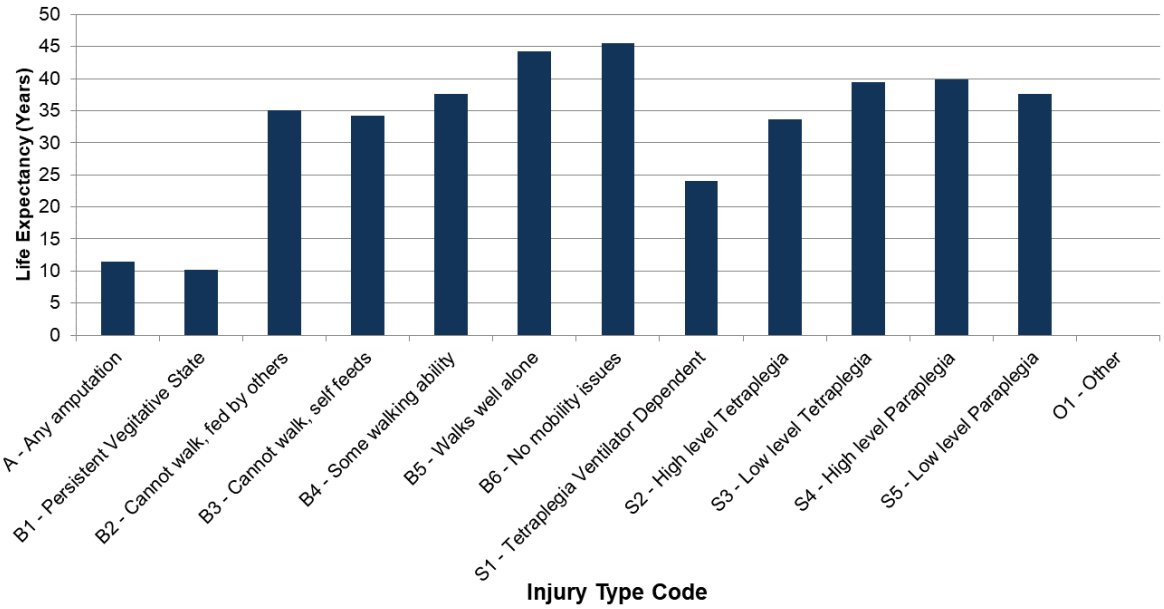

Figure P.9: Life expectancy of the claimant at settlement date for Motor (non-MIB) PPO claims, by IFoA PPO Working Party injury type categorisation

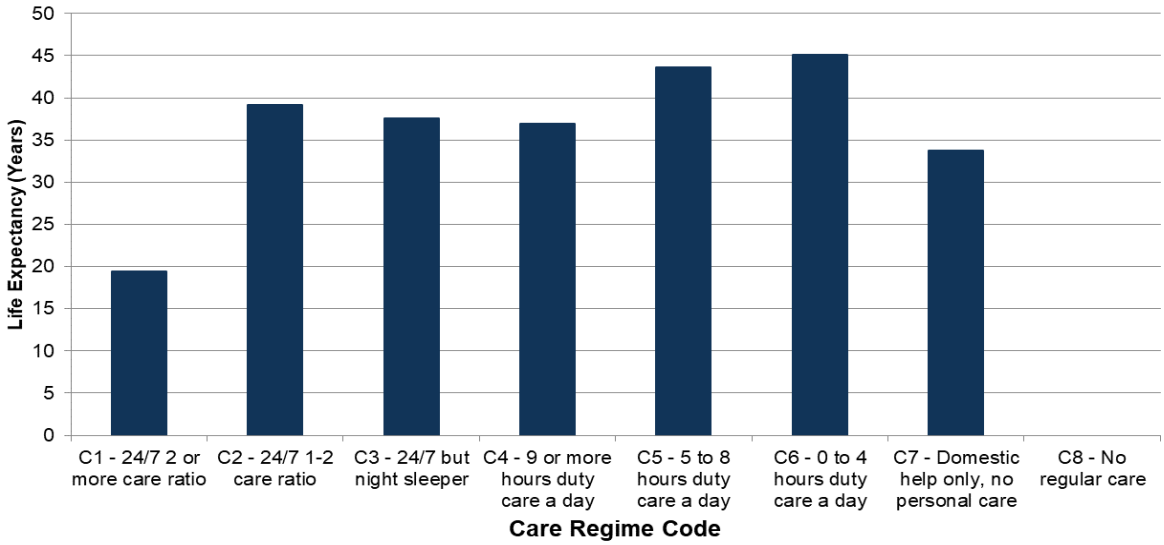

Figure P.10: Life expectancy of the claimant at settlement date for Motor (non-MIB) PPO claims, by IFoA PPO Working Party care regime categorisation

P.6 Reduction in life expectancy of the claimant by categorisation

The percentage reduction in life expectancy is defined as:

$$\frac{\text{unimpaired life expectancy - life expectancy as provided by participants}}{\text{unimpaired life expectancy}}$$

where the unimpaired life expectancy is taken from the 2018 ONS United Kingdom mortality tables, and all life expectancies are quoted as at the date of settlement. (Negative percentage reductions in life expectancy may therefore occur if insurers are using more recent (or different) mortality tables.)

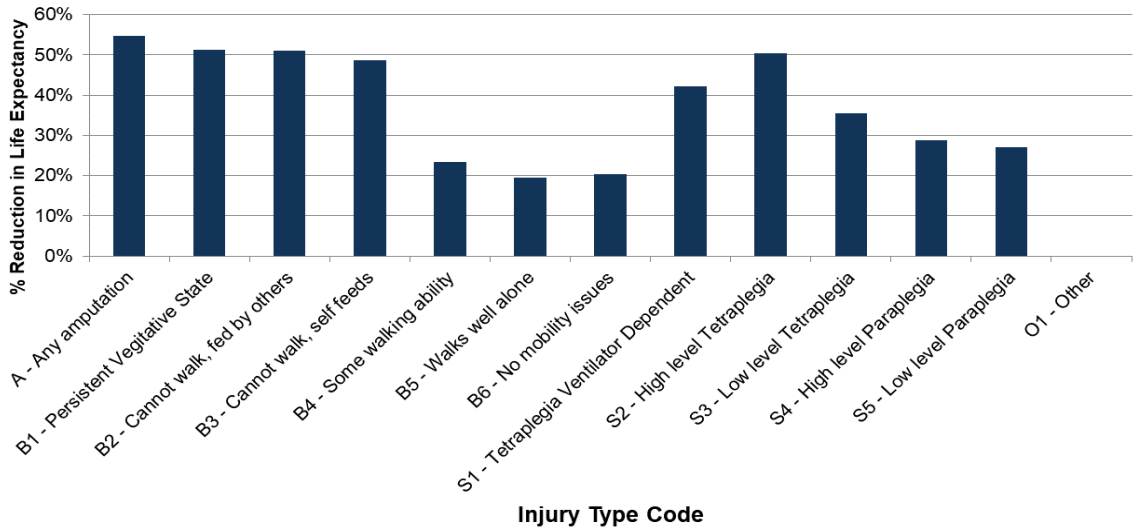

Figure P.11: Percentage reduction in life expectancy of a claimant for Motor (non-MIB) PPO claims, by IFoA PPO Working Party injury type categorisation

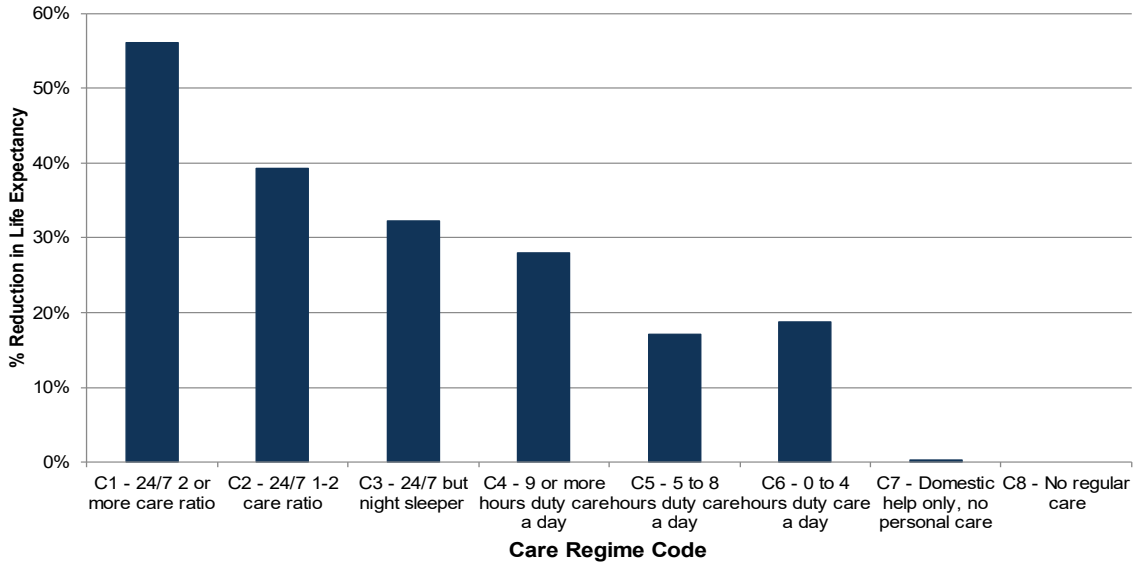

Figure P.12: Percentage reduction in life expectancy of a claimant for Motor (non-MIB) PPO claims, by IFoA PPO Working Party care regime categorisation

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Appendix Q Nature of injury

In this appendix, we provide high-level summary statistics on the nature of injury for Motor (non-MIB) PPO claims, Liability PPO claims and Motor (MIB) PPO claims.

Where claimants suffered multiple injuries, the summary statistics represent the primary injury.

We also provide summary statistics on the nature of injury for Motor (non-MIB) PPO claims by the following characteristics:

- Age of claimant at accident date
- Delay to settlement
- Life expectancy of claimant at settlement date
- Reduction in life expectancy of the claimant
- Payment components.

Q.1 Motor (non-MIB) PPO claims – nature of injury

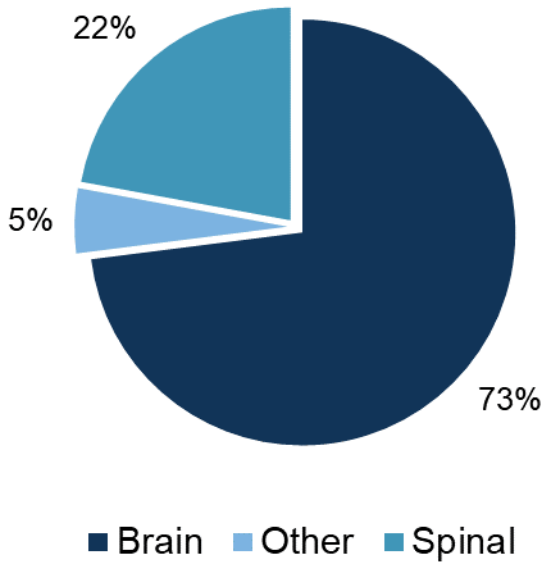

Figure Q.1: Split of the number of Motor (non-MIB) PPO claims, by nature of injury

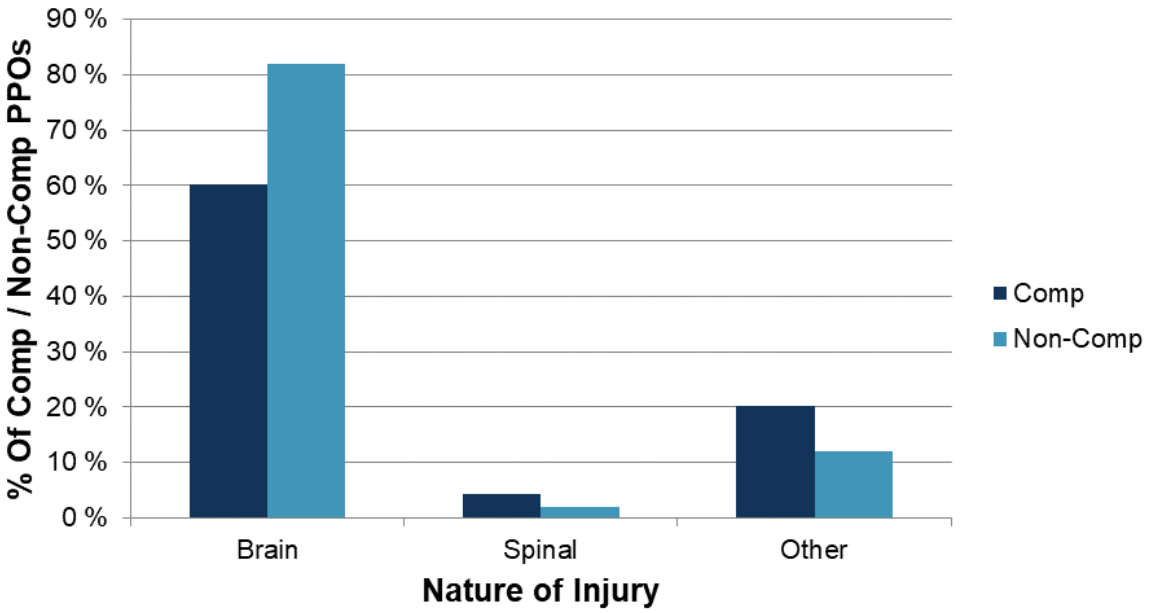

Figure Q.2: Distribution of Motor (non-MIB) PPO claims, for Private Motor, by nature of injury and by cover type

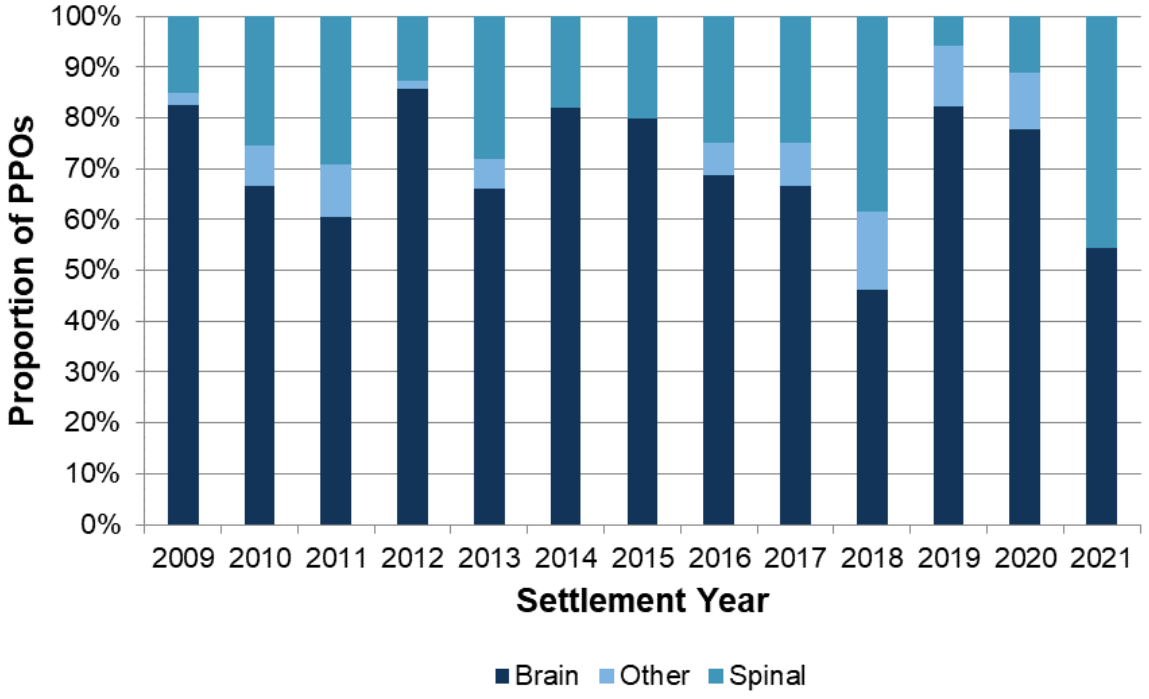

Figure Q.3: Proportion of Motor (non-MIB) PPO claims, by settlement year and by nature of injury

Q.2 Motor (non-MIB) PPO claims – age of claimant at accident date

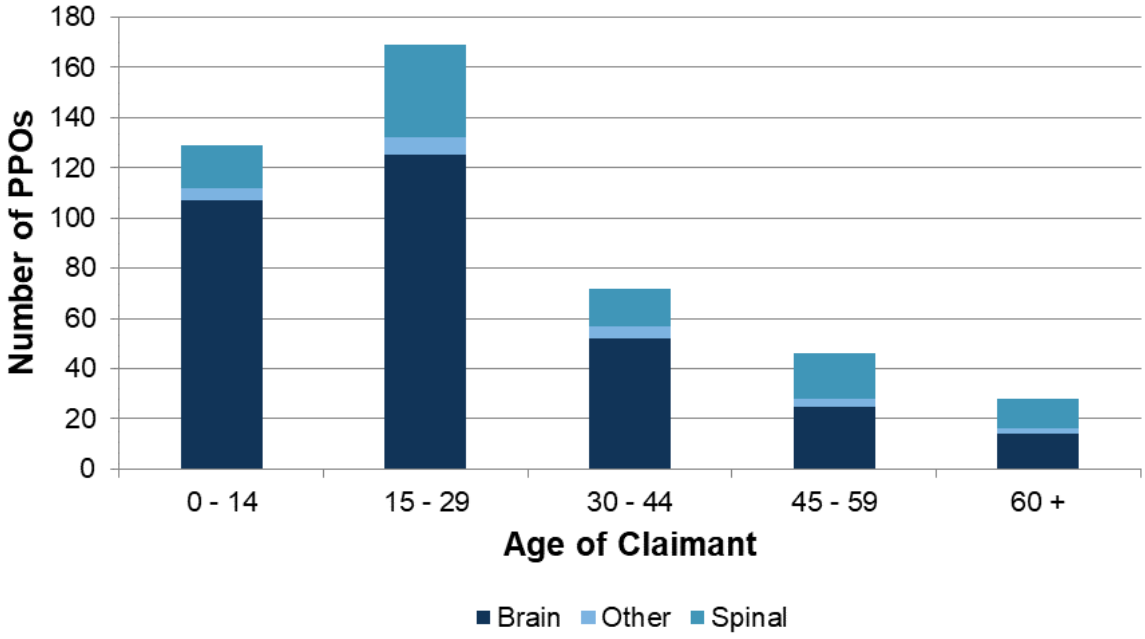

Figure Q.4: Number of Motor (non-MIB) PPO claims, by age of claimant at accident date and by nature of injury

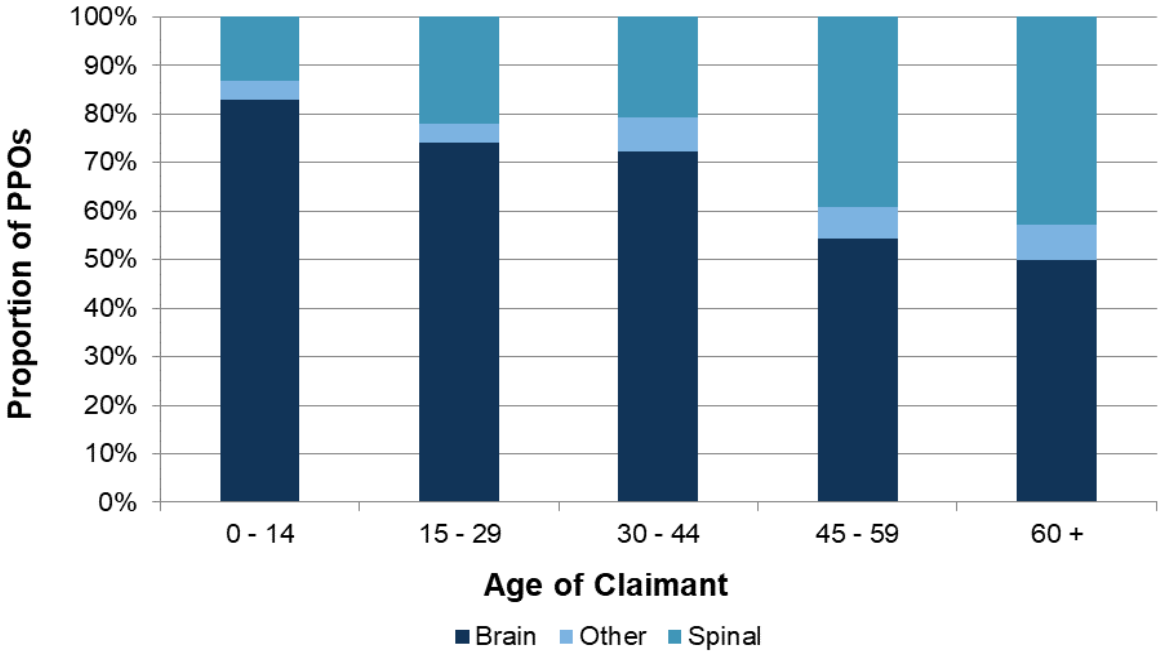

Figure Q.5: Proportion of Motor (non-MIB) PPO claims, by age of claimant at accident date and by nature of injury

Q.3 Motor (non-MIB) PPO claims – delay to settlement

The delay to settlement is calculated as the time elapsed between the accident date and PPO settlement date, rounded to the nearest whole year.

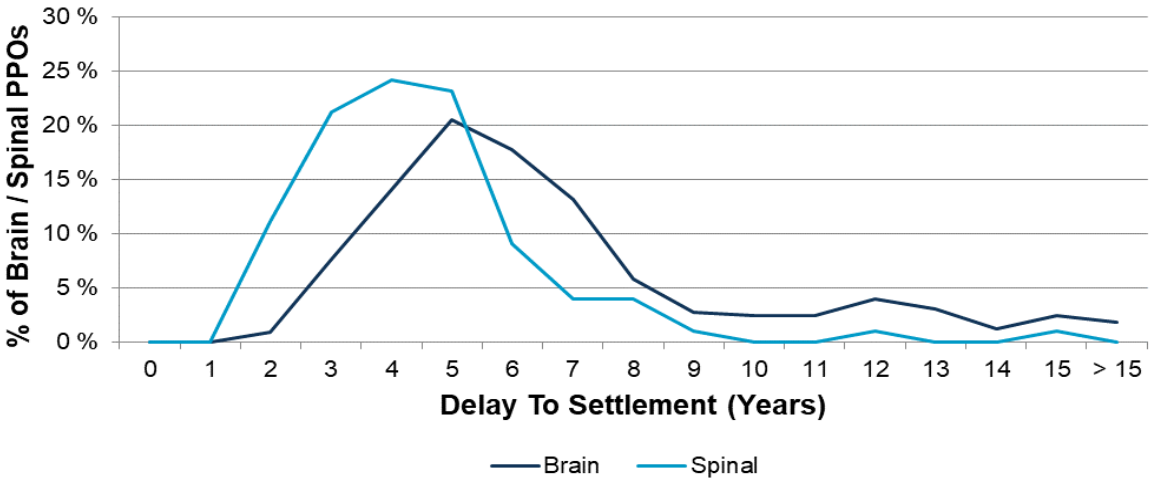

Figure Q.6: Distribution of the delay to settlement for Motor (non-MIB) PPO claims, by nature of injury

Q.4 Motor (non-MIB) PPO claims – life expectancy of claimant at settlement date

The term "life expectancy" in this document is defined as the future life expectancy at the time of settlement, as per the quantitative industry survey responses. It is not clear whether the data collected represents the claimant experts' views, the defendant experts' views, internal views, or a combination of these.

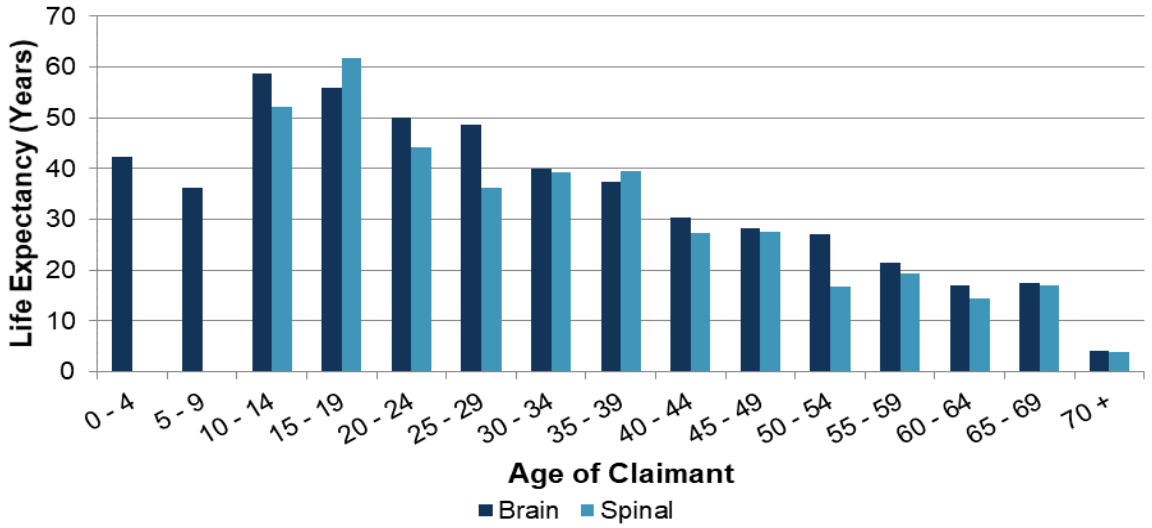

Figure Q.7: Distribution of the life expectancy of claimant at settlement date, for Motor (non-MIB) PPO claims, by age of claimant at settlement date and by nature of injury

Q.5 Motor (non-MIB) PPO claims – reduction in life expectancy of the claimant

The percentage reduction in life expectancy is defined as:

$$\frac{\text{unimpaired life expectancy - life expectancy as provided by participants}}{\text{unimpaired life expectancy}}$$

where the unimpaired life expectancy is taken from the 2018 ONS United Kingdom mortality tables, and all life expectancies are quoted as at the date of settlement. (Negative percentage reductions in life expectancy may therefore occur if insurers are using more recent (or different) mortality tables.)

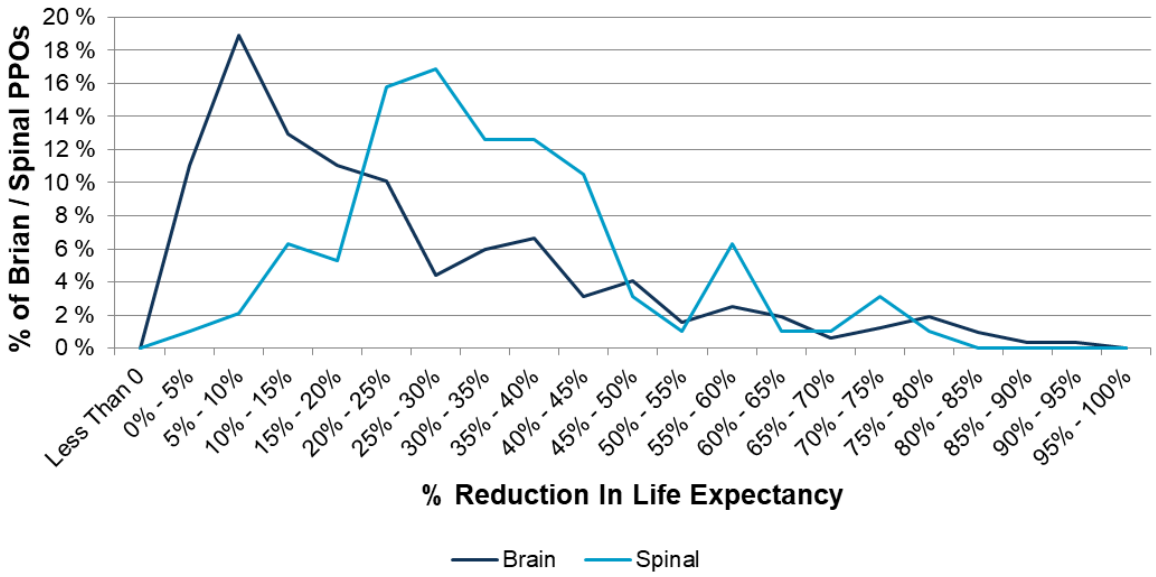

Figure Q.8: Distribution of the percentage reduction in life expectancy of a claimant, for Motor (non-MIB) PPO claims, by nature of injury

Q.6 Motor (non-MIB) PPO claims – payment components

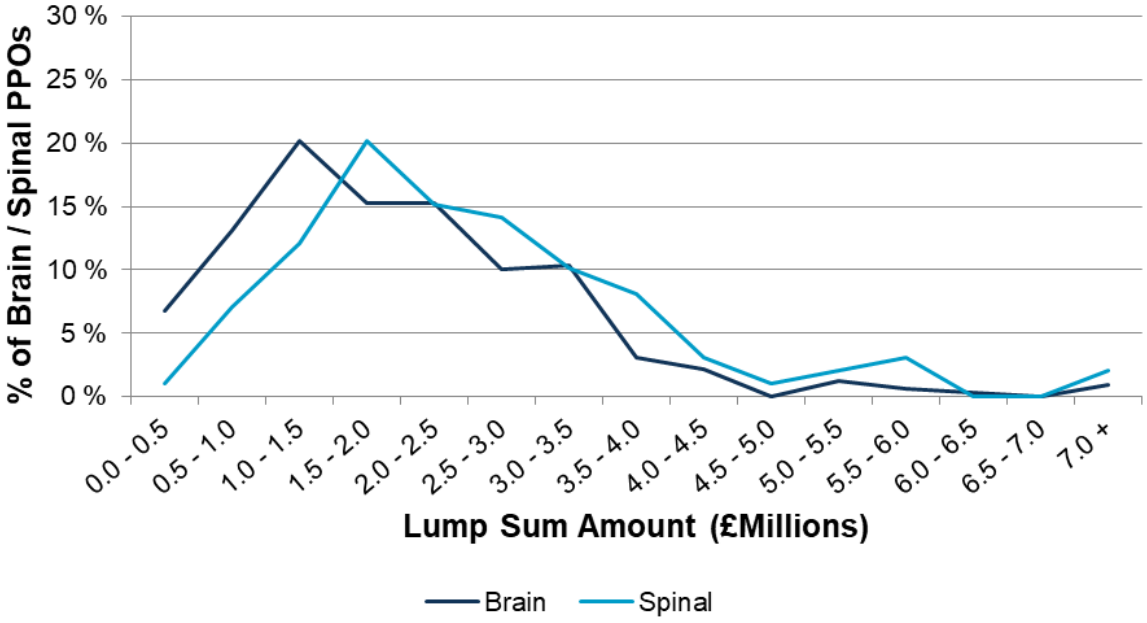

Figure Q.9: Distribution of the size of the lump sum element of Motor (non-MIB) PPO claims, by nature of injury

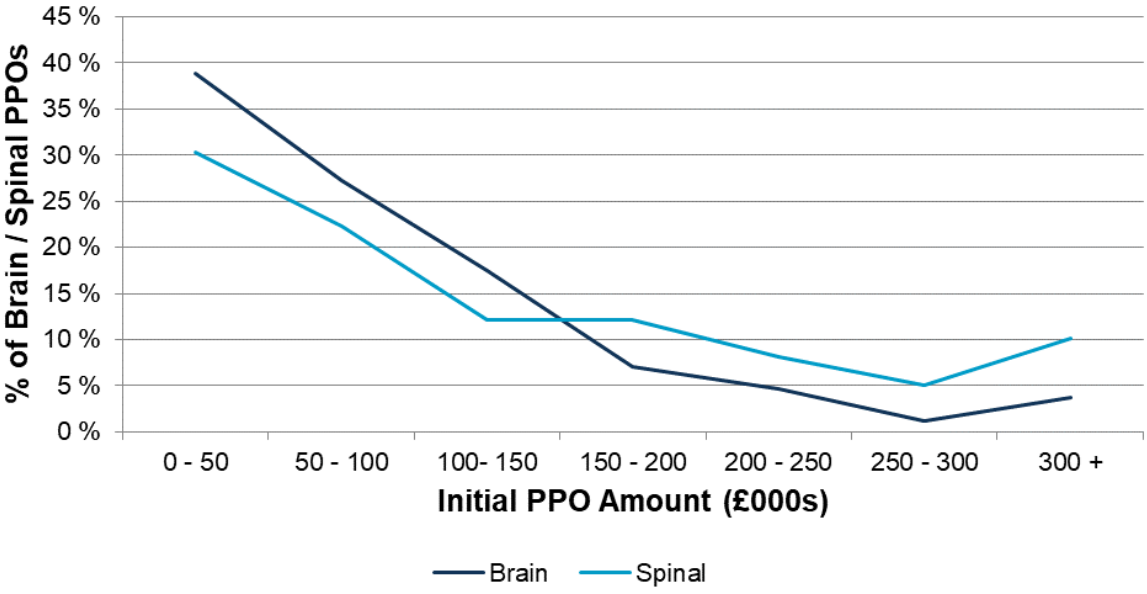

Figure Q.10: Distribution of the initial regular payment amount of Motor (non-MIB) PPO claims, by nature of injury

Q.7 Liability PPO claims – nature of injury

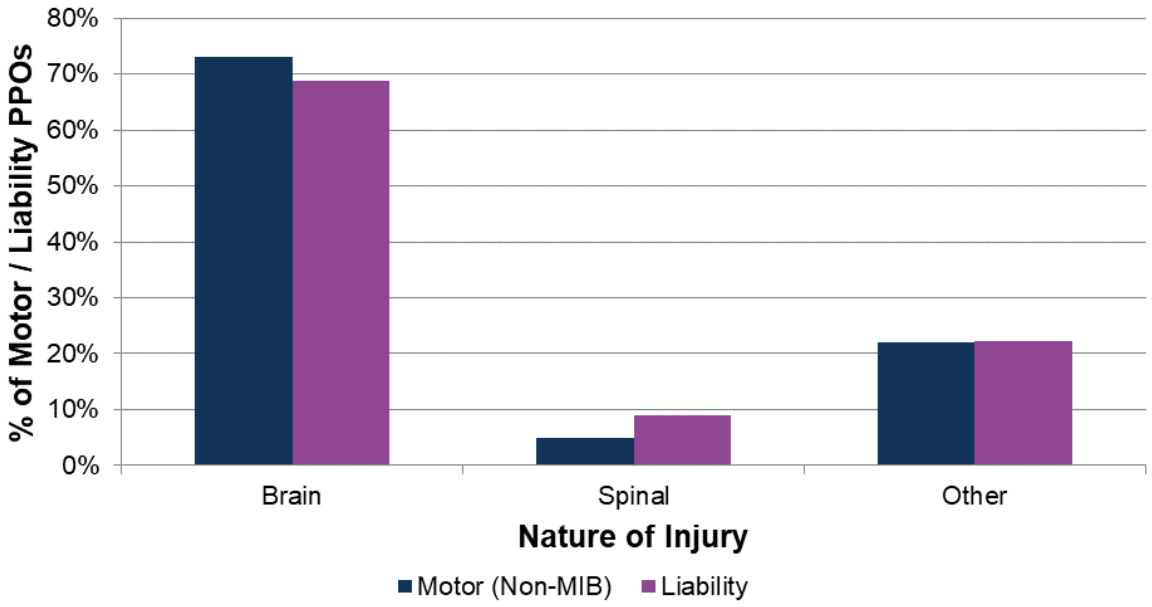

Figure Q.11: Distribution of Motor (non-MIB) PPO claims and Liability PPO claims, by nature of injury

Q.8 Motor (MIB) PPO claims – nature of injury

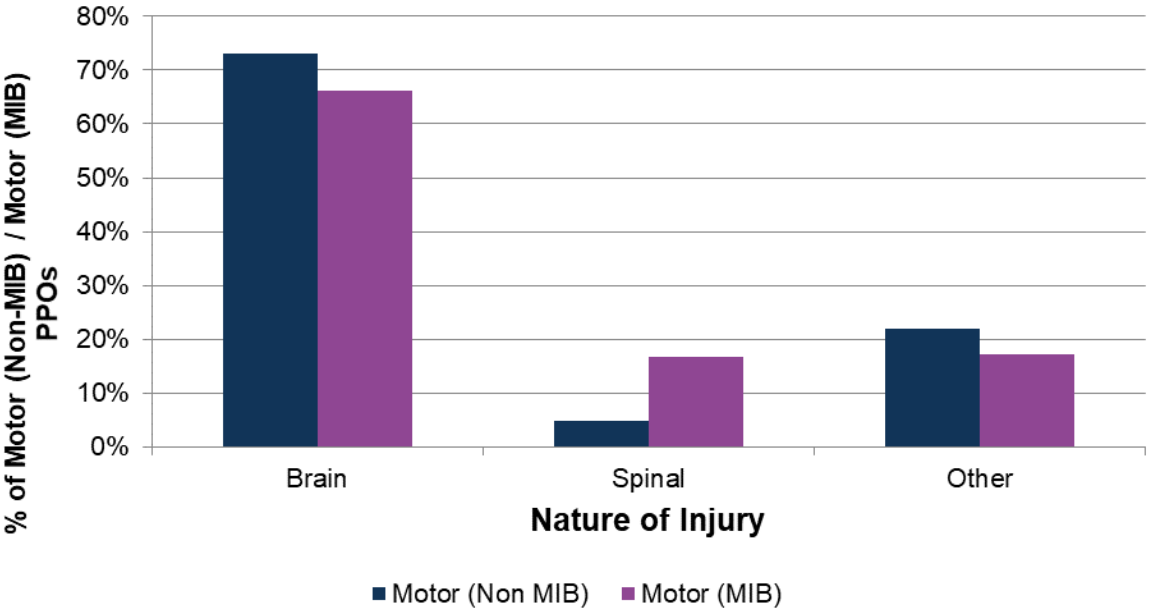

Figure Q.12: Distribution of Motor (non-MIB) PPO claims and Motor (MIB) PPO claims, by nature of injury

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Appendix R Mortality of PPO claimants

In this appendix, we provide the following summary statistics in relation to the mortality of PPO claimants:

- Number of deaths for PPO claimants
- Actual versus expected number of deaths
- Comparison of PPO claimant mortality rates assumed by insurers to those for unimpaired lives
- PPO claimant mortality multipliers and the equivalent reduction in life expectancy figures
- PPO claimant life expectancy, experience analysis and assumed
- Assumed PPO claimant life expectancy / reduction in life expectancy by insurer.

To increase the sample size, we have considered all PPO claims in this analysis, i.e. Motor (non-MIB) PPO claims, Liability PPO claims and Motor (MIB) PPO claims combined.

We note, however, that there remains very limited data on which to base any firm conclusions.

We also note that there is an inherent bias in any such analysis, in that we will not observe people living much longer than expectations for a very long time to come, which is more likely to overstate mortality than to understate mortality.

We therefore stress caution in using the results of the analysis presented in this appendix.

In considering unimpaired mortality within the analysis in this appendix, we have used the most recent two-way ONS forecast projections (National Life Tables, United Kingdom 2018) rather than the ONS mortality rates that underlie the Ogden tables (eighth edition).

R.1 Number of deaths for PPO claimants

Figures R.1 and R.2 show the “initial exposure” and number of deaths by age group for male and female claimants respectively.

The “initial exposure” is a measure of the total number of years of exposure for PPO claims in the quantitative industry survey, taken as the number of years from settlement date to 31 December 2021 or date of death if applicable.

The “initial exposure” has been taken from the settlement date of the PPO, as we only receive data for claimants who survive to settlement of the claim, and do not receive information on claimants who die before a settlement.

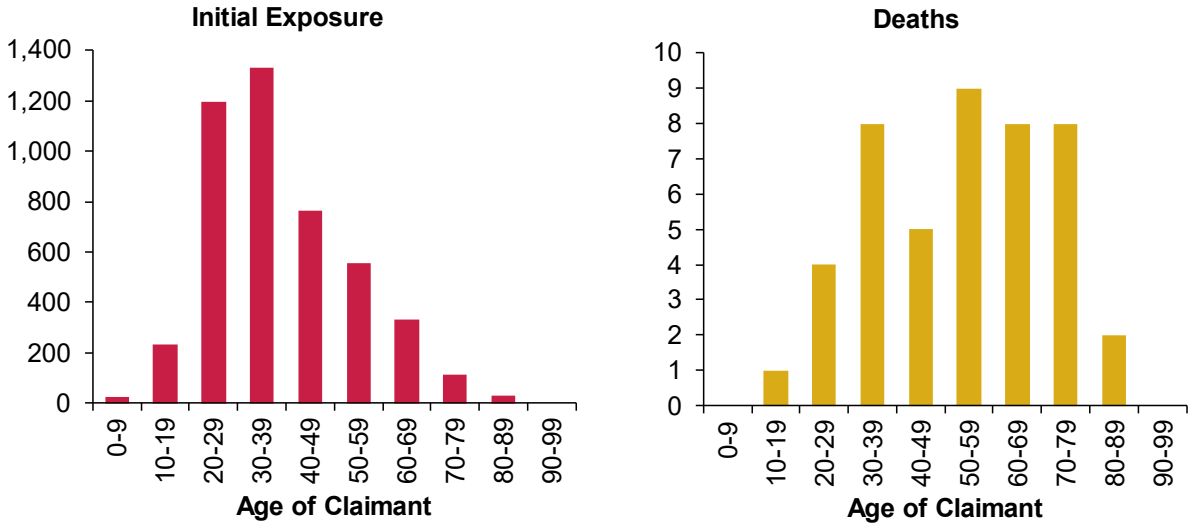

Figure R.1: Number of years of exposure for PPO claims and number of deaths, for male PPO claimants, by age of claimant at settlement date

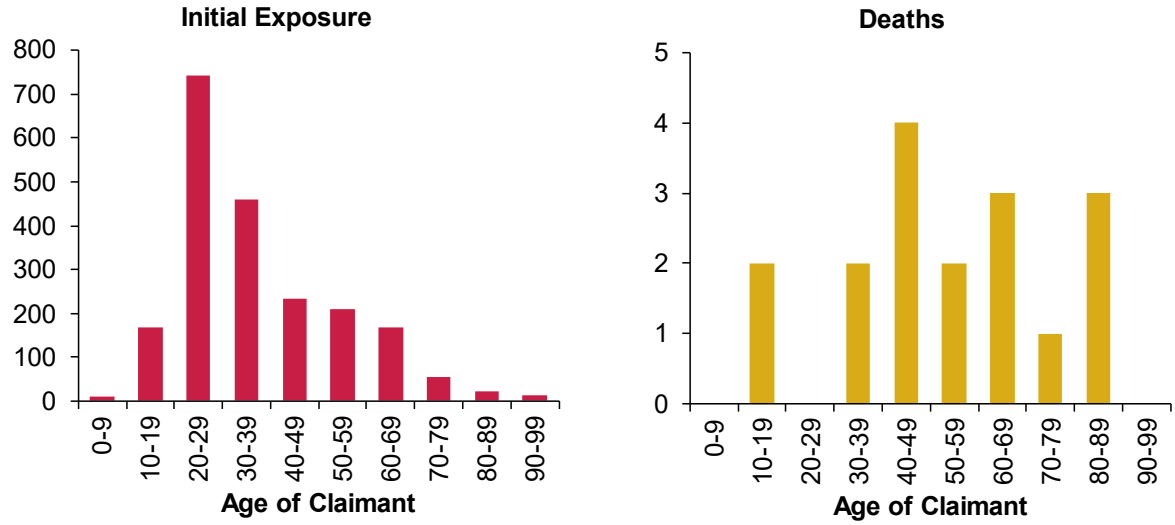

Figure R.2: Number of years of exposure for PPO claims and number of deaths, for female PPO claimants, by age of claimant at settlement date

Figure R.3 shows the number of PPO claims where the claimant has died by:

- The number of years since settlement date that the claimant died.
- The number of years between accident date and settlement date.
- The number of years between the accident date and death.

Number of years	Years since settlement	Delay to settlement	Years since accident
0	3	0	0
1	7	0	0
2	9	8	0
3	7	10	2
4	3	8	3
5	6	6	2
>5	27	30	55
Total	**62**	**62**	**62**

Figure R.3: Number of deaths for PPO claimants, by various measures of the number of years

R.2 Actual versus expected number of deaths

Given the serious nature of injuries which give rise to a PPO award, we would expect the life expectancy of PPO claimants to be impaired. The analysis set out below aims to test this hypothesis and to give an indication of the extent to which these lives are impaired.

We have calculated the multiplicative adjustment to the ONS mortality rates (its most recent forecast projections, as described above), for individuals in the quantitative industry survey, which would be required to produce the number of deaths observed over the period.

We have assumed that the ratio of actual to expected death rates fits to a Poisson distribution, parameterised based on the actual exposed to risk (the "initial exposure", as described above) and the mortality rates from the ONS tables. By using this method we have produced confidence levels around the median result.

The analysis is subject to a number of significant simplifications and assumptions, for example:

- We have assumed that the cohort is homogeneous in terms of life expectancy. We know that is very unlikely to be the case, as some claimants are likely to have a very different prognosis to others as a result of their particular injuries (without taking into account differences in lifestyles). For example, those with serious brain injury will be likely to have lower life expectancies, often significantly so, than those with moderate brain injury.

- We have assumed that it is appropriate to apply a single multiplier to the q_xs (the probability of an individual aged exactly x years will die within the next year). In fact, we do not know the shape of the mortality curve for these impaired lives; indeed the shape may well be different for different injury types. One particular impact of this may be that it is not appropriate to apply the same multiplier as derived from observing the data at this relatively early stage of the experience to future mortality rates, the reason being that, for these kinds of injuries, mortality (relative to unimpaired mortality rates) is often higher in the early years after the accident.

In addition, the analysis was conducted on a small sample of claims over a short time period (2005 to 2021), and as such cannot be considered to be particularly credible. Therefore, there is some uncertainty surrounding the results – one additional or one fewer death would have a material impact on these figures. (Similar analyses that pension funds may conduct are likely to have significantly narrower confidence intervals as pension funds typically have much greater sample sizes.)

Figure R.4 shows the output of the analysis. The median result suggests that:

- PPO claimants are likely to have a higher mortality rate than the general population as defined by the ONS mortality rates (its most recent forecast projections, as described above), at least initially.
- The mortality rate for male PPO claimants is 2.9 times that of the general population.
    - When split by nature of injury, Brain has a multiplier of 2.1, Spinal has a multiplier of 2.4 with Other injuries showing a multiplier of 5.6.
- The mortality rate for female PPO claimants is 2.0 times that of the general population.
    - When split by nature of injury, Brain has a multiplier of 1.7, Spinal has a multiplier of 3.0 with Other injuries showing a multiplier of 2.0.
- When the results are shown by gender of PPO claimant and nature of injury, the volume of data in each cohort is very small and so these results should be treated with particular caution.

The model has output confidence intervals around the median figures, although it should be noted that we would expect the actual confidence intervals to be even broader than those shown in Figure R.4 due to elements of model error as described above.

Percentiles	Male	Female
5th	372%	298%
25th	322%	236%
50th	**291%**	**200%**
75th	263%	170%
90th	240%	147%
95th	228%	134%

Figure R.4: Median and percentile values for the required adjustment to ONS mortality rates which would be required to produce the number of PPO claimant deaths observed over the period

Figure R.5 shows the observed (i.e. actual) number of deaths by claimant age band (at settlement date) against those that would have been expected for the survey sample using unimpaired mortality rates based on the ONS mortality rates (its most recent forecast projections, as described above).

Figure R.6 shows the observed (i.e. actual) number of deaths by calendar year against those that would have been expected for the survey sample using unimpaired mortality rates based on the ONS mortality rates (its most recent forecast projections, as detailed in Appendix R to this report).

In total there have been 62 observed deaths since settlement, against an expected number of 24.0 deaths assuming unimpaired mortality, representing a multiplier of 2.6 (for male and female PPO claimants combined).

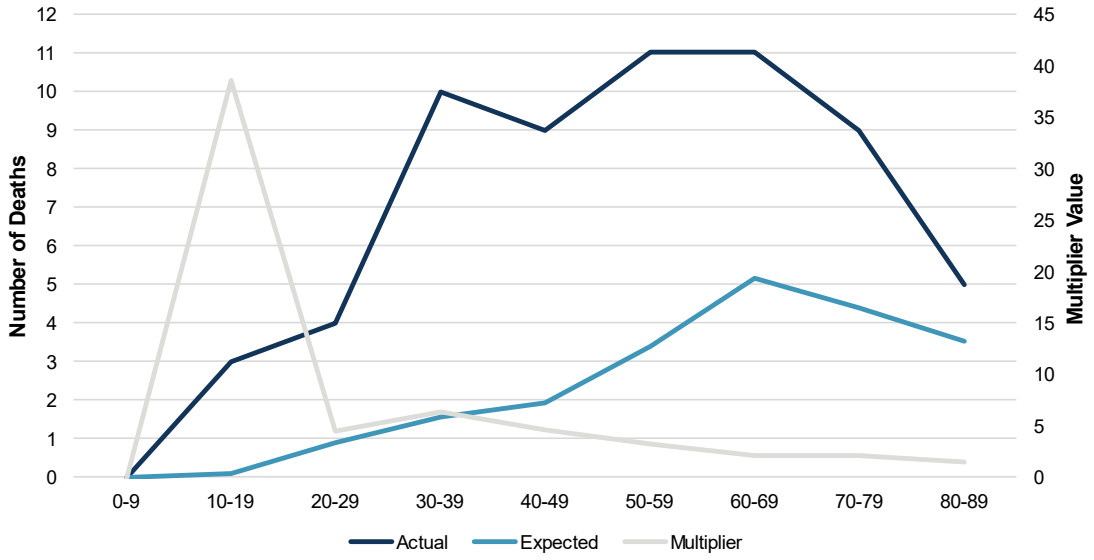

Figure R.5: Actual number of PPO claimant deaths, expected number of PPO claimant deaths assuming unimpaired mortality, and the multiplier (actual / expected), by age of claimant at settlement date

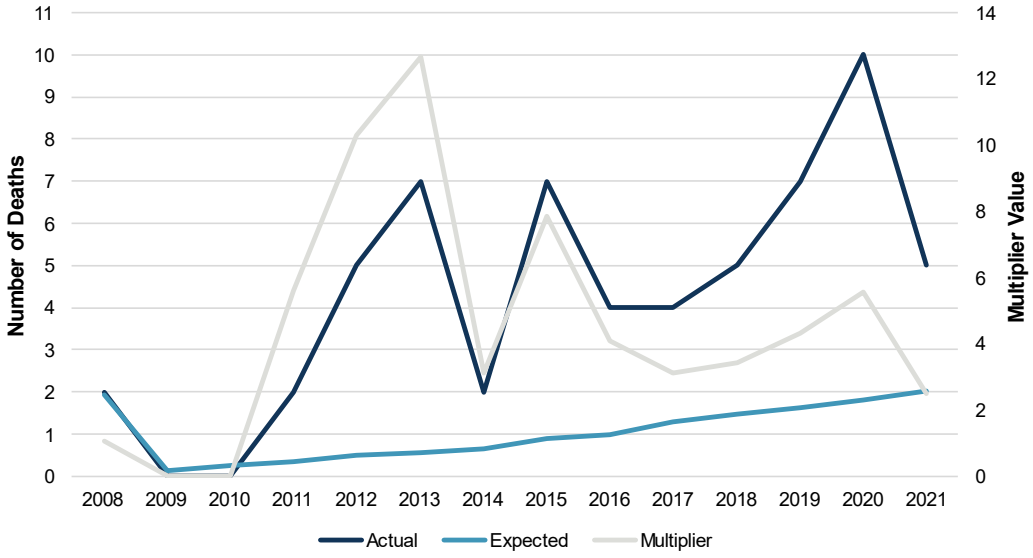

Figure R.6: Actual number of PPO claimant deaths, expected number of PPO claimant deaths assuming unimpaired mortality, and the multiplier (actual / expected), by calendar year

We encourage readers to place a limited degree of reliance on these estimates and to reference other indicators and data sources to support any assumptions they are using for their own purposes. To reiterate; we advise readers to treat these results with caution due to:

- The small sample size.
- The simplifying assumptions which have been made in the model (homogeneity of underlying mortality in the cohort and the appropriateness of a single multiplier).
- The mortality experience only being considered for those individuals who survive beyond the period it takes for their PPO claim to settle.

R.3 Comparison of PPO claimant mortality rates assumed by insurers to those for unimpaired lives

By assuming that the shape of the mortality curve is the same for unimpaired and impaired lives, we have converted the impaired life expectancies provided by insurers in the survey to be expressed as a mortality multiplier relative to the ONS mortality rates (its most recent forecast projections, as described above). A value of 100% is representative of life expectancy (or mortality rate) equal to that for an unimpaired life (according to the ONS mortality rates).

These results consider the range of estimates for individual claimants and hence the range of percentiles is considerably wider than the previous analysis.

Figure R.7 shows the output of the analysis. The median result suggests that:

- Insurers assume that PPO claimants are likely to have a higher mortality rate than the general population as defined by the ONS mortality rates (its most recent forecast projections, as described above).
- Insurers assume that the mortality rate for male PPO claimants is 3.4 times that of the general population.
- Insurers assume that the mortality rate for female PPO claimants is 3.2 times that of the general population.
- Insurers' assumptions around increased mortality for PPO claimants are higher than the observed increased mortality for PPO claimants for the 50th percentile and higher percentiles, and lower than the observed increased mortality for lower percentiles, as summarised in Figure R.4.

Percentiles	Male	Female
5th	2862%	6334%
25th	651%	715%
50th	**338%**	**323%**
75th	197%	166%
90th	141%	122%
95th	130%	103%

Figure R.7: Median and percentile values for the required adjustment to ONS mortality rates which would be required to match insurers' expectations of PPO claimant mortality

Figure R.8 shows the distribution of these mortality multipliers. It should be noted that this distribution is highly skewed, with, for example, over 7% of male PPO claimants and 10% of female PPO claimants having assumed mortality rates of more than 22 times the unimpaired rate.

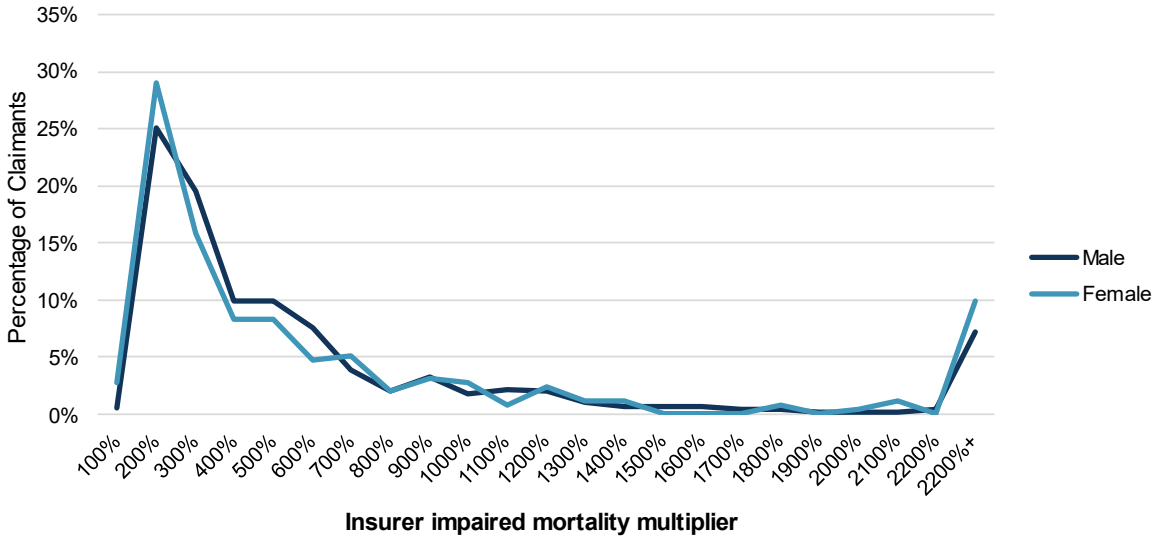

Figure R.8: Distribution of insurers' mortality multipliers (insurers' expectations of PPO claimant mortality relative to unimpaired lives), by gender of claimant

R.4 PPO claimant mortality multipliers and the equivalent reduction in life expectancy figures

Figure R.9 tabulates how the below mortality multipliers translate to the percentage reduction in life expectancy measure for sample male and female lives aged 20, 40, and 60 years in 2020.

	Male			Female		
	Age			Age		
Multiplier	20	40	60	20	40	60
200%	12%	17%	24%	10%	15%	21%
300%	19%	26%	37%	16%	23%	33%
400%	25%	33%	46%	21%	29%	41%
500%	29%	39%	52%	25%	34%	47%
750%	37%	48%	63%	31%	42%	57%
1000%	42%	54%	69%	36%	48%	64%
1500%	50%	63%	77%	43%	56%	72%
2000%	55%	68%	82%	48%	62%	77%

Figure R.9: Percentage reduction in life expectancy for sample lives implied by the PPO claimant mortality multipliers

R.5 PPO claimant life expectancy, experience analysis and assumed

The results from the mortality analysis can also be expressed in terms of future life expectancy (in years). This is summarised in Figure R.10:

- The green dots show the ONS unimpaired life expectancy for a 35 year old male (48.8 years) and a 35 year old female (52.0 years).
- The dark blue bars and stalks show the 5th to 25th (stalk), 25th to 50th (bar), 50th to 75th (bar) and 75th to 95th (stalk) percentiles of the experience analysis (i.e. based on the analysis of the number of deaths in the industry survey). This applies the mortality multipliers in Figure R.4 to a 35 year old claimant.
- The light blue bars and stalks show the 5th to 25th (stalk), 25th to 50th (bar), 50th to 75th (bar) and 75th to 95th (stalk) percentiles of the insurer analysis (i.e. based on the insurer assumptions of life expectancy in the industry survey). This applies the mortality multipliers in Figure R.7 to a 35 year old claimant.

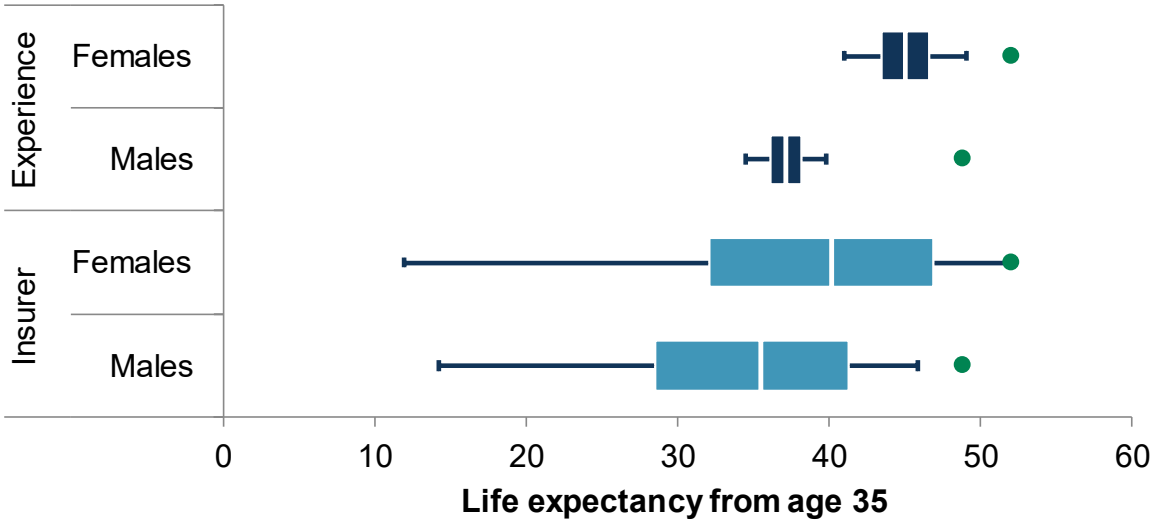

Figure R.10: Comparison of PPO claimant life expectancy: unimpaired lives, experience analysis and insurer assumptions

Figure R.10 shows the much larger ranges of values around the insurer assumptions of life expectancy in the market compared to the experience analysis. This is to be expected due to the lack of homogeneity in the underlying mortality of PPO claimants and also the inconsistent approaches taken to estimating the mortality on a case by case basis (in the case of the insurers) and by estimating the mortality on the entire cohort of PPO claims (experience analysis).

It is also worth reiterating that our analysis assumes it is appropriate to apply a single multiplier to the q_xs. However it is not unreasonable to presume that for brain and spinal injuries, mortality will be higher in the early years after the injury has occurred. Consequently, as the analysis in most cases only covers an early stage of development since the accidents occurred, these results may be overstated. However, there is an average delay before settlement for these claims of six years, which would mitigate this effect to some extent.

R.6 Assumed PPO claimant life expectancy / reduction in life expectancy by insurer

Figure R.11 shows the cumulative distribution of the percentage reduction in life expectancy assumed by each insurer. A couple of insurers have been excluded for data reasons, and the data is presented as a range across those insurers included in the analysis.

As elsewhere in this report, the percentage reduction in life expectancy is defined as:

$$\frac{\text{unimpaired life expectancy - life expectancy as provided by participants}}{\text{unimpaired life expectancy}}$$

where all life expectancies are quoted as at the date of settlement.

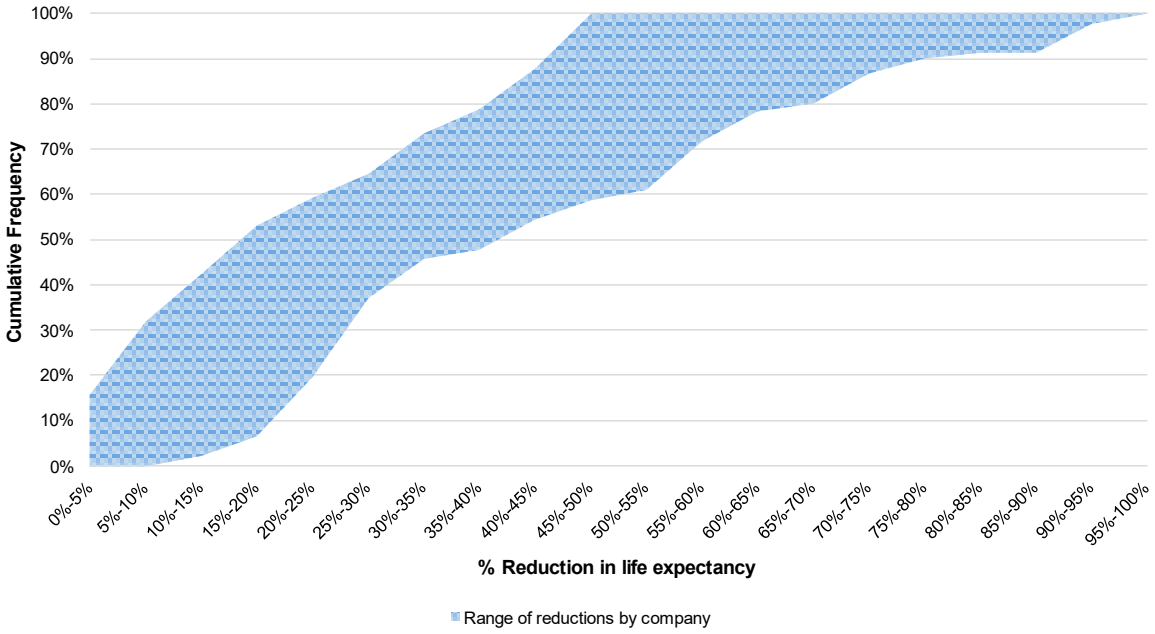

Figure R.11: Cumulative distribution of the percentage reduction in life expectancy assumed by different insurers

It can be seen that there are significant differences in the life expectancy distributions from insurer to insurer. Some of the observed difference could be explained by differences in the nature of the claimants to each insurer because, as discussed above, individual claimants exhibit large differences in their impairment. Additionally, the relatively small sample size of PPO claims, and the accompanying volatility, could cause significant differences to be observed across insurers.

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Appendix S Reserves for Motor (non-MIB) PPO claims

In this appendix, we provide the following summary statistics in relation to the size of reserves for Motor (non-MIB) PPO claims:

- Impact of real discount rate assumption on reserves for PPO claims and total cost of PPO claims
- Comparison of total cost of PPO claims to insurers' Ogden-equivalent lump sum estimate
- Comparison of reserves for PPO claims to insurers' estimates of reserves
- Lump sum element of PPO claims as a proportion of total cost of PPO claims
- Reserves for PPO claims by class of business
- Reserves for PPO claims by nature of injury
- Scatter plots of reserves for PPO claims against a number of factors.

In order to consider the size of reserves on a consistent basis, we have estimated the total cost and outstanding reserve for each of the Motor (non-MIB) PPO claims in the quantitative industry survey on a cashflow basis, using the same methodology and assumptions for all claims (including stochastic mortality). However, the parameters used (such as life expectancy from settlement) were taken from individual participating insurer estimates.

We have estimated the total cost and outstanding reserve for each of the Motor (non-MIB) PPO claims using discount rate assumptions ranging from -2% per annum to +2.5% per annum, discounting to 31 December 2021.

In deriving these estimates, we have made no allowance for some factors that will affect the size of a claim, such as variation orders and indemnity / reverse indemnity guarantees. We have, however, allowed for factors such as stepped payments, where that information has been provided.

The estimates in this appendix are shown gross of reinsurance.

S.1 Impact of real discount rate assumption on reserves for PPO claims and total cost of PPO claims

Figure S.1 compares our estimate of outstanding reserves for Motor (non-MIB) PPO claims (i.e. PPO claims in payment), as at 31 December 2021, using discount rate assumptions ranging from -2% per annum to +2.5% per annum, to an estimate at the prevailing Ogden discount rate of -0.25% per annum.

Figure S.2 shows the same information for the total cost of PPO claims (from ground up), as at 31 December 2021.

Figure S.3 shows the same information for the total cost of PPO claims, as at the PPO settlement date.

Real Discount Rate	Reserve Multiple
-2.00%	1.52
-1.00%	1.19
-0.75%	1.12
-0.25%	1.00
0.00%	0.95
1.00%	0.77
2.00%	0.64
2.50%	0.59

Figure S.1: Reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at various real discount rates, estimated by the IFoA PPO Working Party, expressed as a multiple of the reserve estimated at a -0.25% per annum real discount rate

Real Discount Rate	Total Cost Multiple
-2.00%	1.26
-1.00%	1.09
-0.75%	1.06
-0.25%	1.00
0.00%	0.97
1.00%	0.89
2.00%	0.82
2.50%	0.79

Figure S.2: Total cost (from ground up) for Motor (non-MIB) PPO claims, as at 31 December 2021, at various real discount rates, estimated by the IFoA PPO Working Party, expressed as a multiple of the total cost estimated at a -0.25% per annum real discount rate

Real Discount Rate	Total Cost Multiple
-2.00%	1.26
-1.00%	1.09
-0.75%	1.06
-0.25%	1.00
0.00%	0.97
1.00%	0.89
2.00%	0.82
2.50%	0.80

Figure S.3: Total cost (from ground up) for Motor (non-MIB) PPO claims, as at settlement date, at various real discount rates, estimated by the IFoA PPO Working Party, expressed as a multiple of the total cost estimated at a -0.25% per annum real discount rate

S.2 Comparison of total cost of PPO claims to insurers' Ogden-equivalent lump sum estimate

Figures S.4 to S.7 compare our estimate of the total cost of Motor (non-MIB) PPO claims (i.e. PPO claims in payment) (from ground up) to the estimated cost if they were to settle as a lump sum (under a +2.5% per annum Ogden real discount rate). The Ogden-equivalent lump sum estimates were provided by the participating insurers.

- Figure S.4 shows this comparison at a real discount rate of +2% per annum for valuing the PPO claims, as at 31 December 2021.
- Figure S.5 shows this comparison at a real discount rate of +2% per annum for valuing the PPO claims, as at settlement date.
- Figure S.6 shows this comparison at a real discount rate of 0% per annum for valuing the PPO claims, as at 31 December 2021.
- Figure S.7 shows this comparison at a real discount rate of 0% per annum for valuing the PPO claims, as at settlement date.

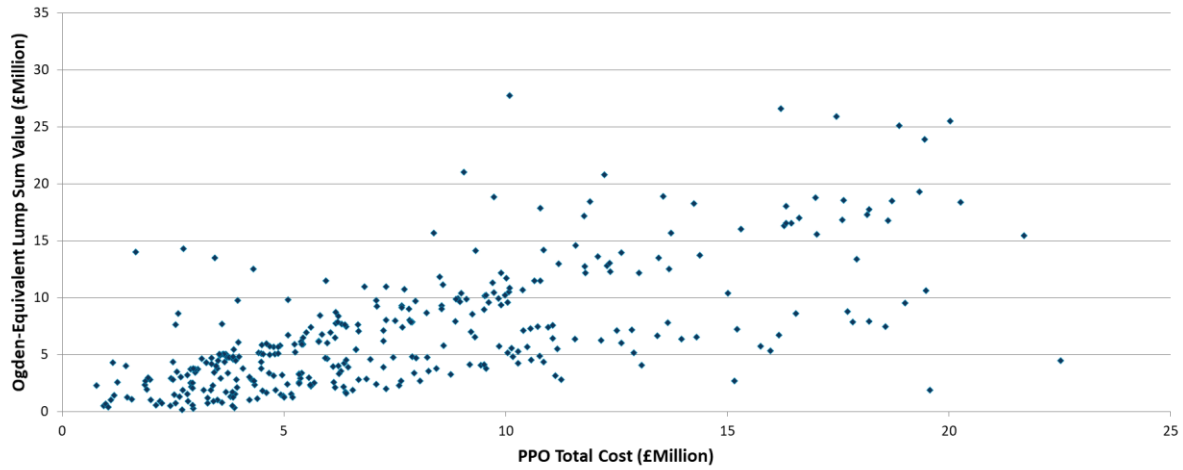


Figure S.4: Total cost (from ground up) for Motor (non-MIB) PPO claims, as at 31 December 2021, at a +2% per annum real discount rate, estimated by the IFoA PPO Working Party, compared to the Ogden-equivalent lump sum value, estimated by participating insurers

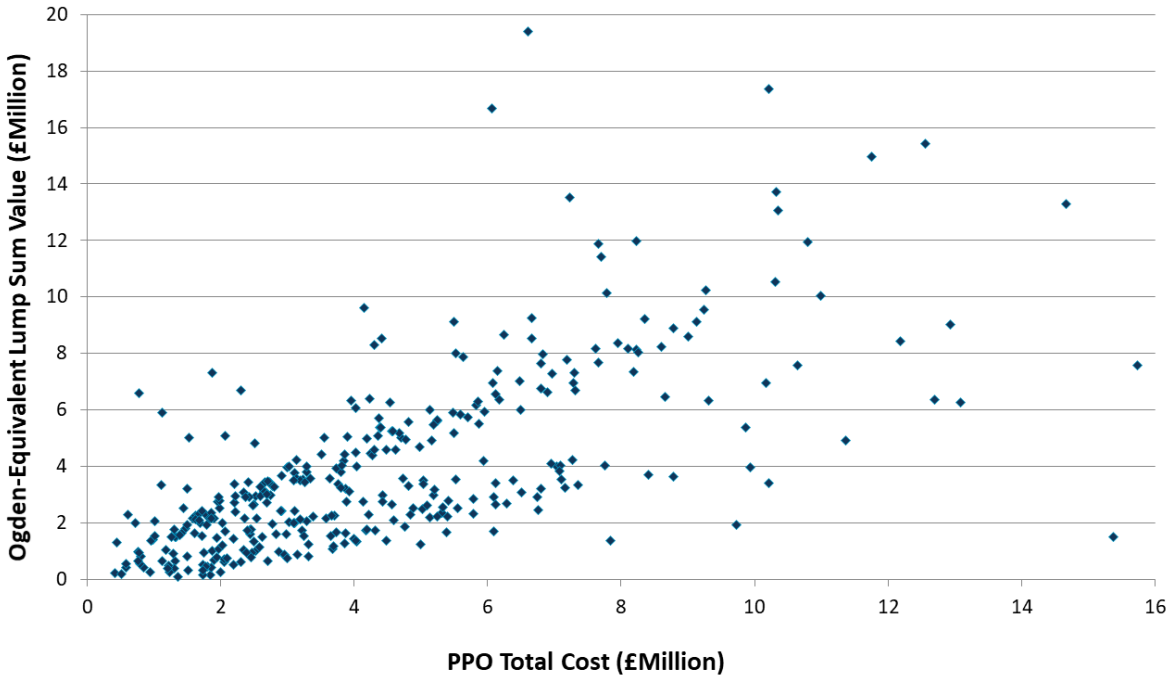


Figure S.5: Total cost (from ground up) for Motor (non-MIB) PPO claims, as at settlement date, at a +2% per annum real discount rate, estimated by the IFoA PPO Working Party, compared to the Ogden-equivalent lump sum value, estimated by participating insurers

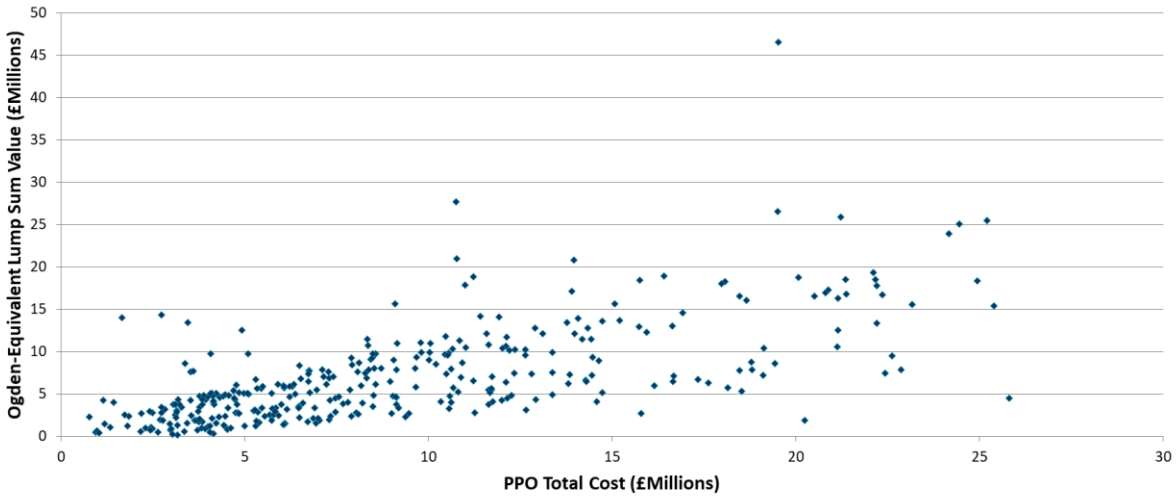


Figure S.6: Total cost (from ground up) for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, compared to the Ogden-equivalent lump sum value, estimated by participating insurers

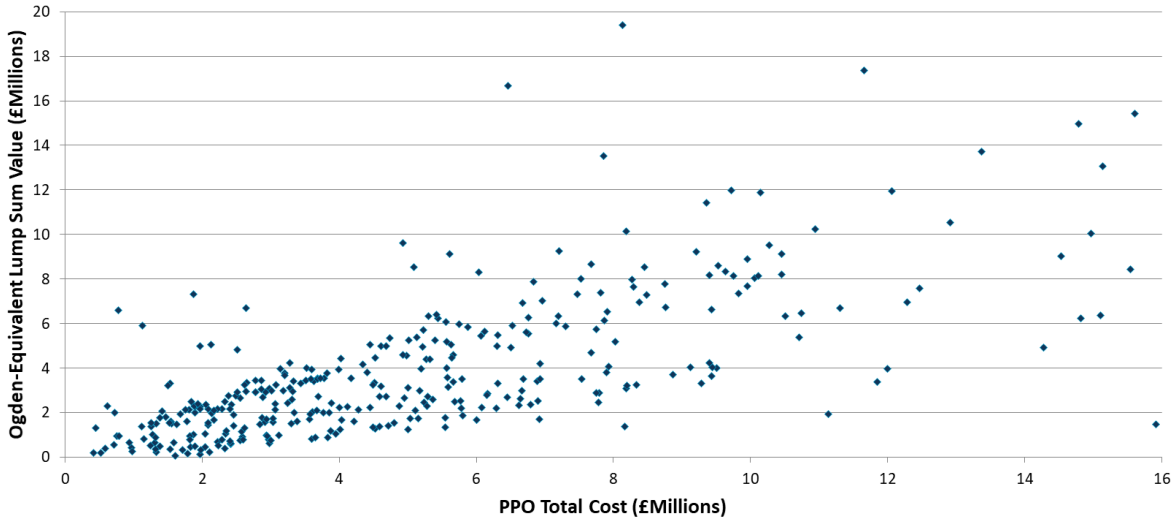


Figure S.7: Total cost (from ground up) for Motor (non-MIB) PPO claims, as at settlement date, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, compared to the Ogden-equivalent lump sum value, estimated by participating insurers

S.3 Comparison of reserves for PPO claims to insurers' estimates of reserves

Figures S.8 and S.9 compare our estimate of outstanding reserves for Motor (non-MIB) PPO claims (i.e. PPO claims in payment), as at 31 December 2021 to the reserve estimates provided by the participating insurers.

- Figure S.8 shows this comparison at a real discount rate of +2% per annum for valuing the PPO claims within our estimate.
- Figure S.9 shows this comparison at a real discount rate of 0% per annum for valuing the PPO claims within our estimate.

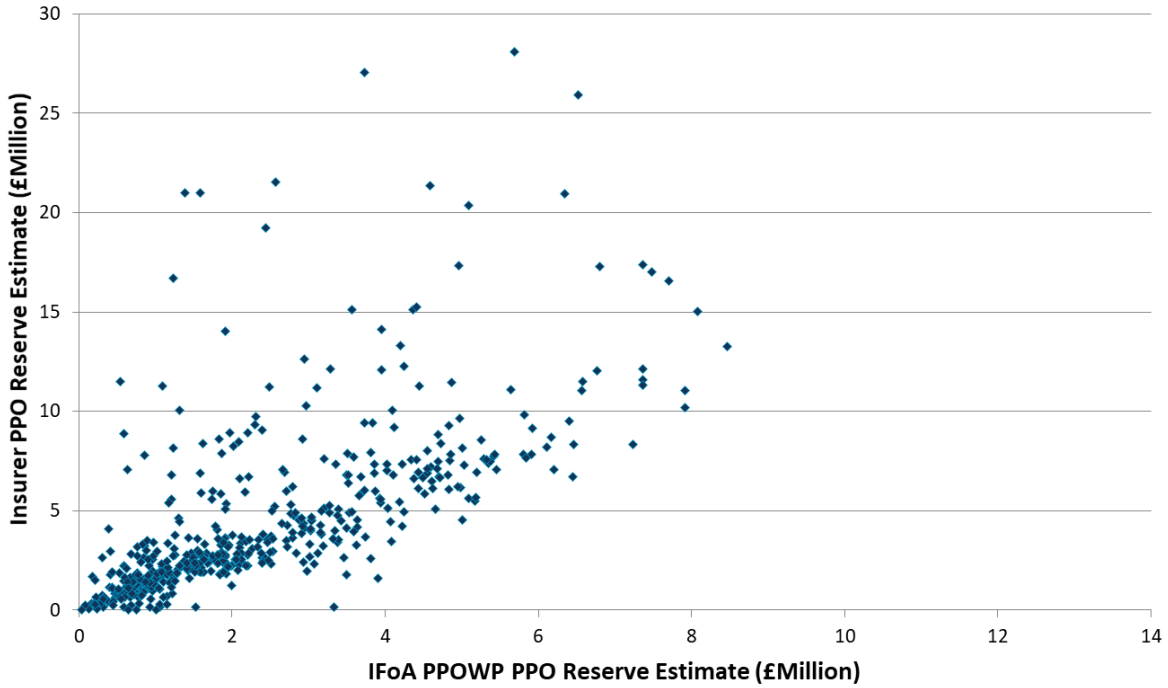


Figure S.8: Reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a +2% per annum real discount rate, estimated by the IFoA PPO Working Party, compared to the reserve estimates of participating insurers

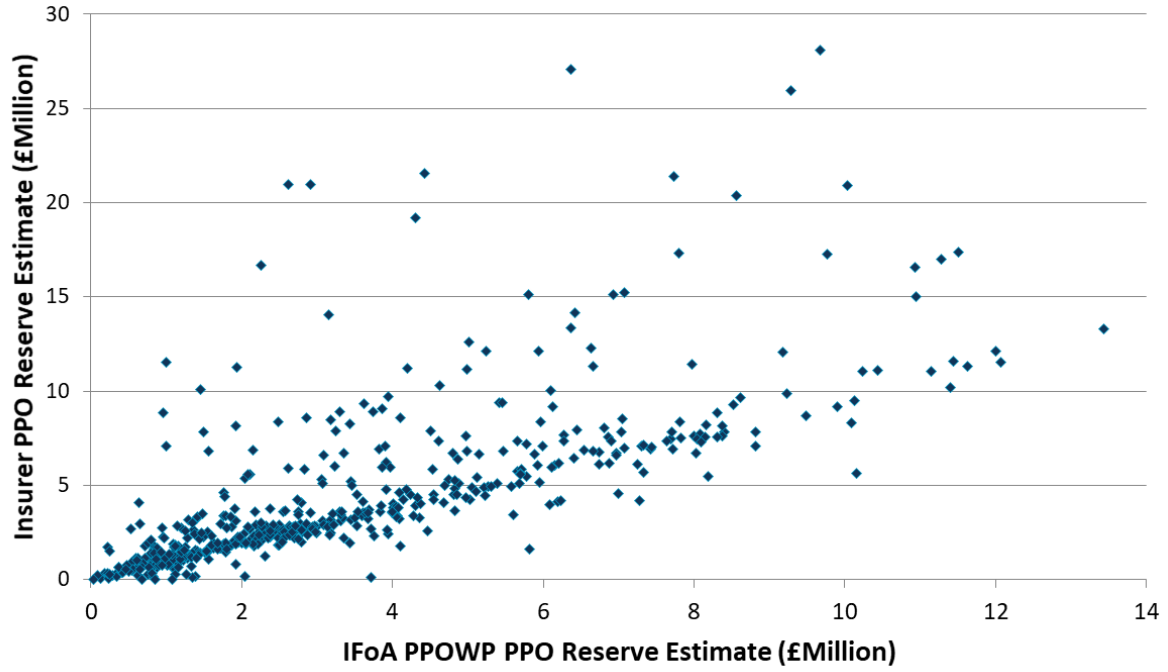


Figure S.9: Reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, compared to the reserve estimates of participating insurers

S.4 Lump sum element of PPO claims as a proportion of total cost of PPO claims

Figures S.10 to S.13 show the lump sum element of PPO claims as a proportion of our estimate of the total cost of Motor (non-MIB) PPO claims (i.e. PPO claims in payment) (from ground up).

- Figure S.10 shows this comparison at a real discount rate of +2% per annum for valuing the PPO claims, as at 31 December 2021.
- Figure S.11 shows this comparison at a real discount rate of +2% per annum for valuing the PPO claims, as at settlement date.
- Figure S.12 shows this comparison at a real discount rate of 0% per annum for valuing the PPO claims, as at 31 December 2021.
- Figure S.13 shows this comparison at a real discount rate of 0% per annum for valuing the PPO claims, as at settlement date.

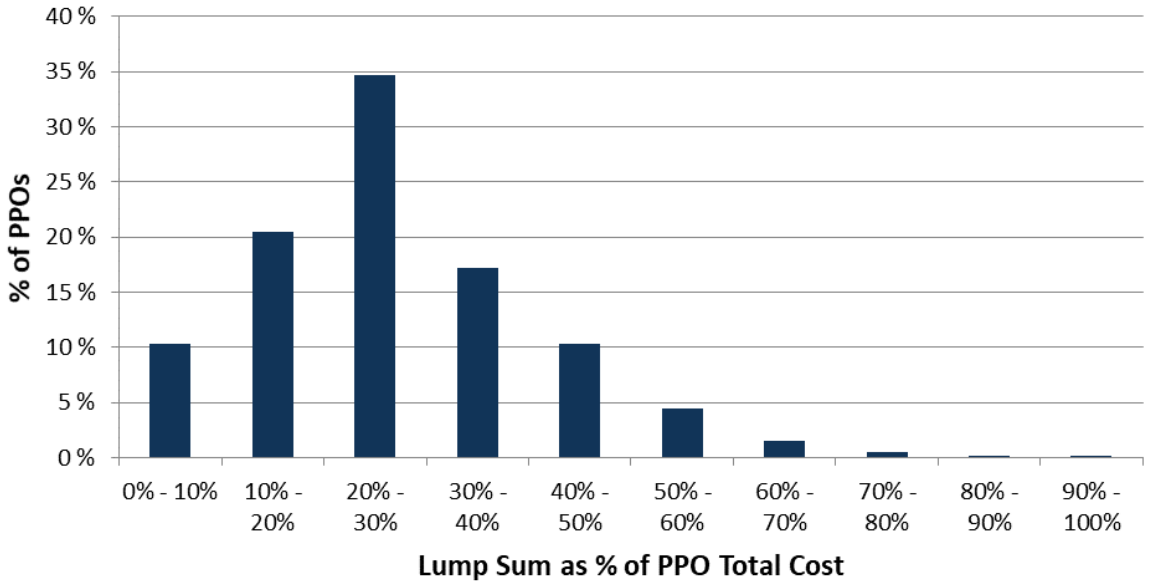


Figure S.10: Distribution of the (nominal) lump sum element of PPO claims as a proportion of the total cost (from ground up) for Motor (non-MIB) PPO claims, as at 31 December 2021, at a +2% per annum real discount rate, estimated by the IFoA PPO Working Party

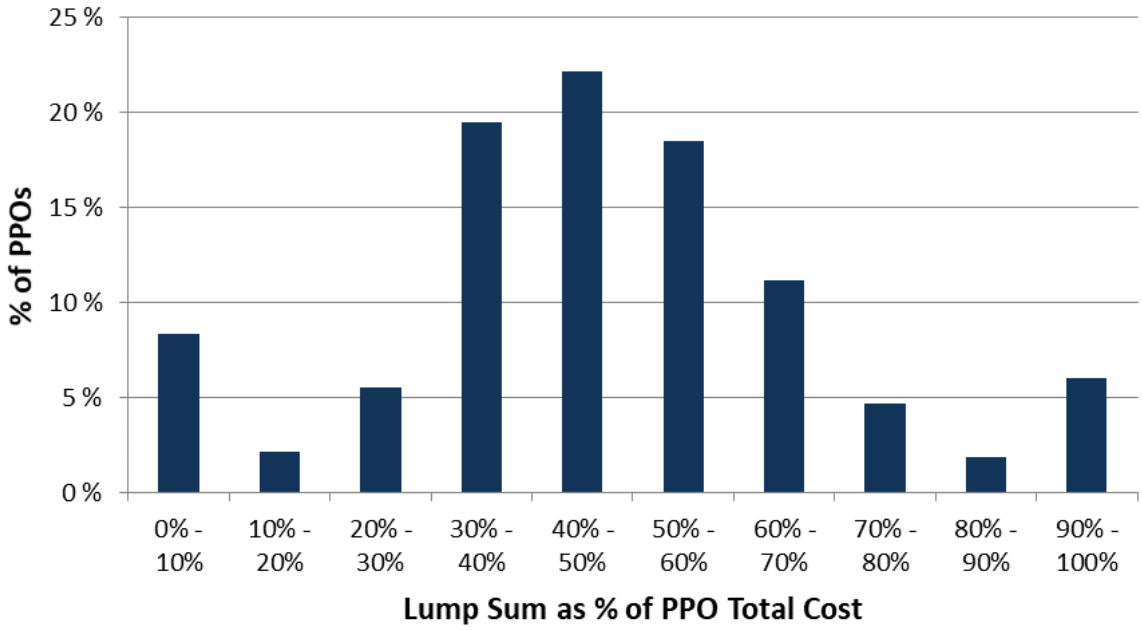


Figure S.11: Distribution of the (nominal) lump sum element of PPO claims as a proportion of the total cost (from ground up) for Motor (non-MIB) PPO claims, as at settlement date, at a +2% per annum real discount rate, estimated by the IFoA PPO Working Party

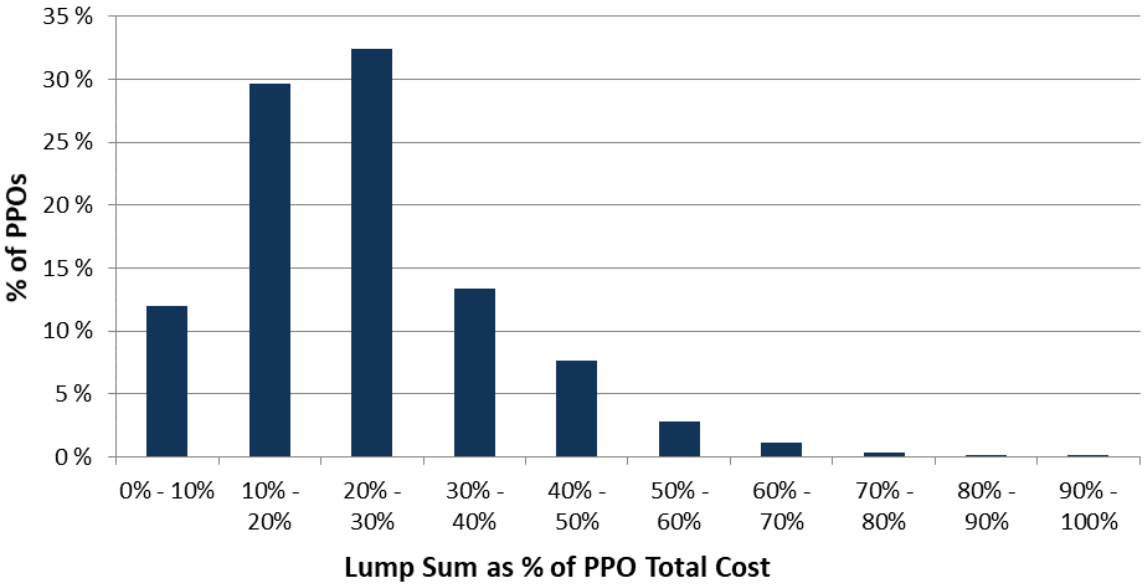


Figure S.12: Distribution of the (nominal) lump sum element of PPO claims as a proportion of the total cost (from ground up) for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party

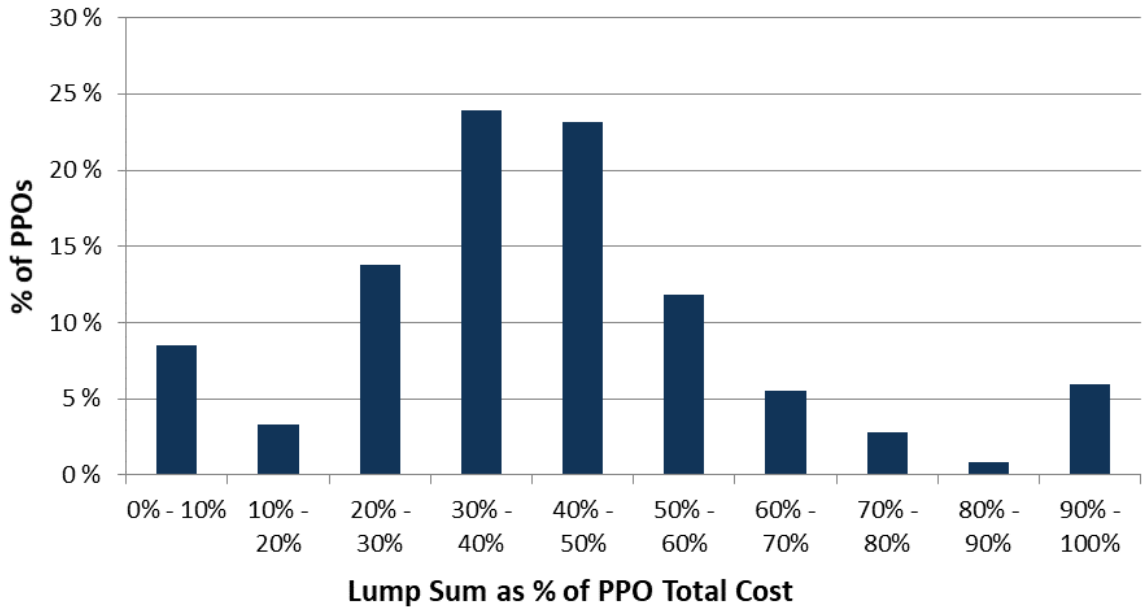


Figure S.13: Distribution of the (nominal) lump sum element of PPO claims as a proportion of the total cost (from ground up) for Motor (non-MIB) PPO claims, as at settlement date, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party

S.5 Reserves for PPO claims by class of business

Figure S.14 shows the distribution of our estimate of outstanding reserves for Motor (non-MIB) PPO claims (i.e. PPO claims in payment) at a real discount rate of 0% per annum for valuing the PPO claims, as at 31 December 2021, by class of business.

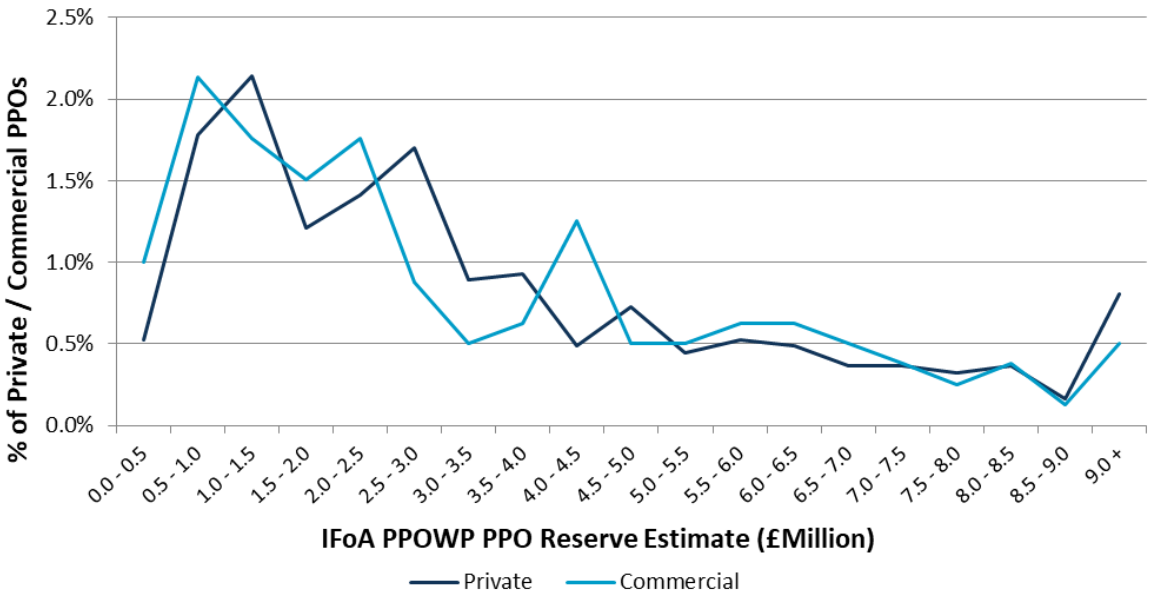


Figure S.14: Distribution of the reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, by class of business

S.6 Reserves for PPO claims by nature of injury

Figure S.15 shows the distribution of our estimate of outstanding reserves for Motor (non-MIB) PPO claims (i.e. PPO claims in payment) at a real discount rate of 0% per annum for valuing the PPO claims, as at 31 December 2021, by the nature of injury.

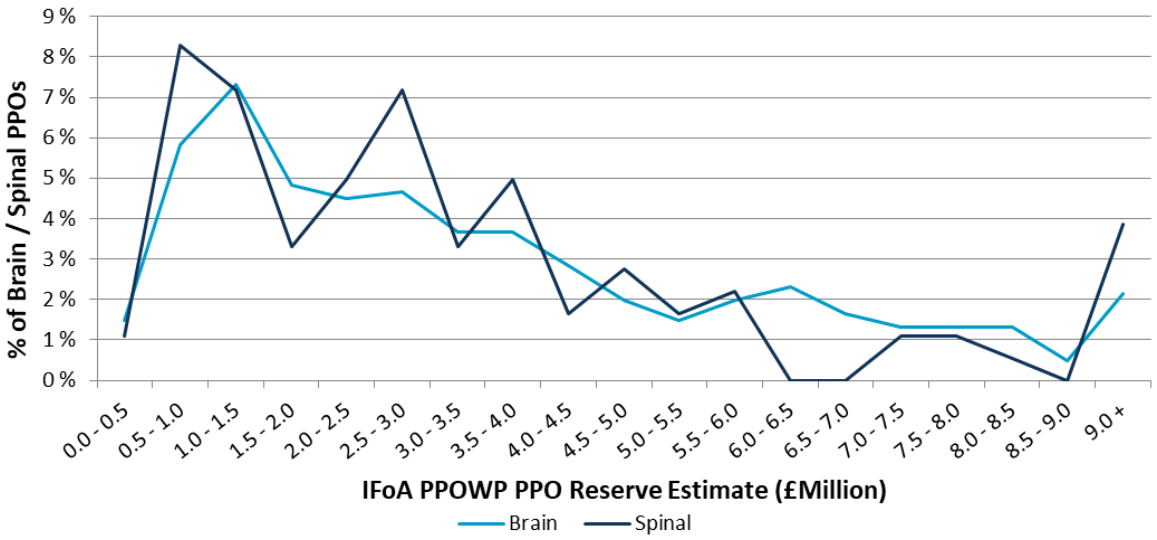


Figure S.15: Distribution of the reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, by nature of injury

S.7 Scatter plots of reserves for PPO claims against a number of factors

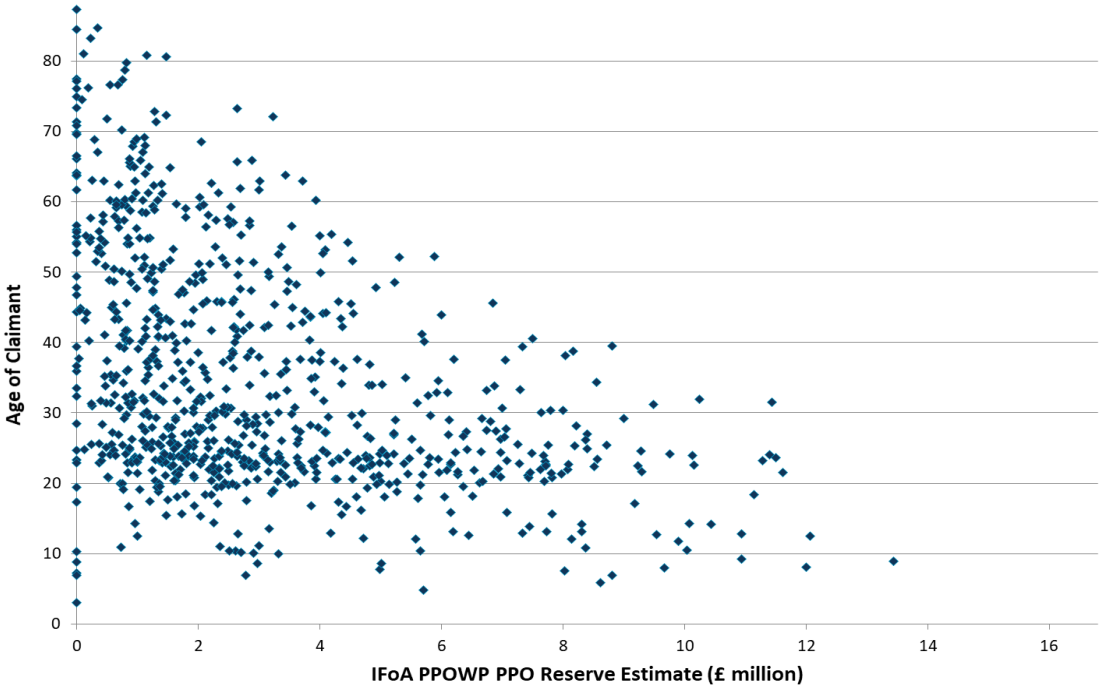


Figure S.16: Scatter plot of reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, against the age of claimant at settlement date

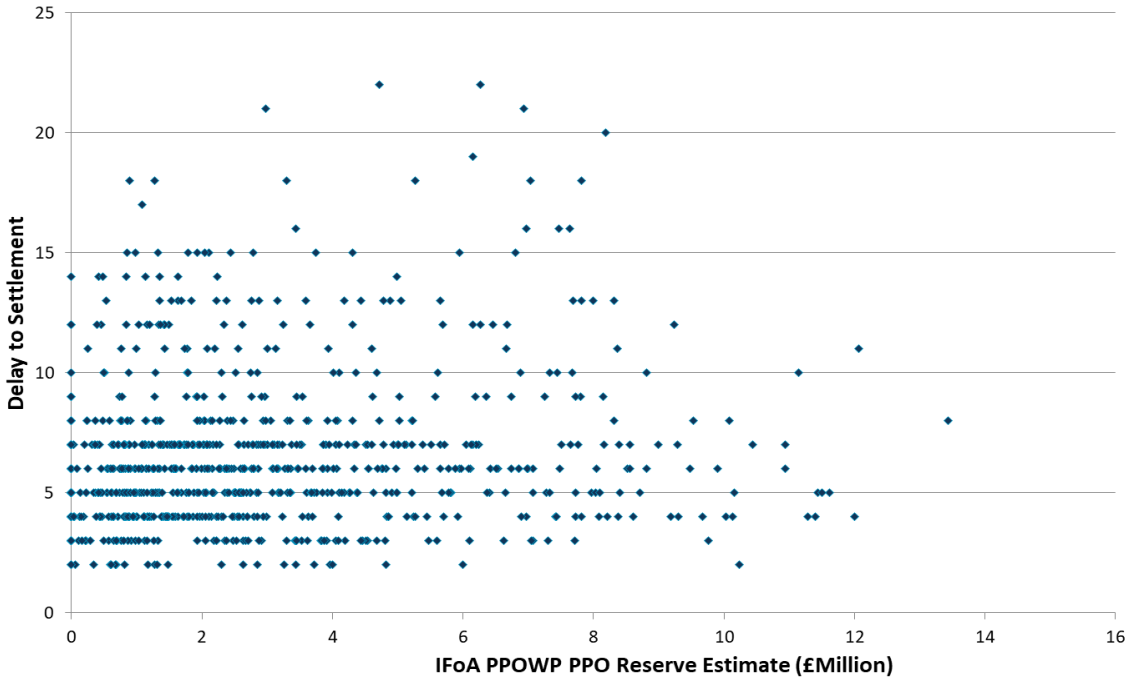


Figure S.17: Scatter plot of reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, against the delay to settlement

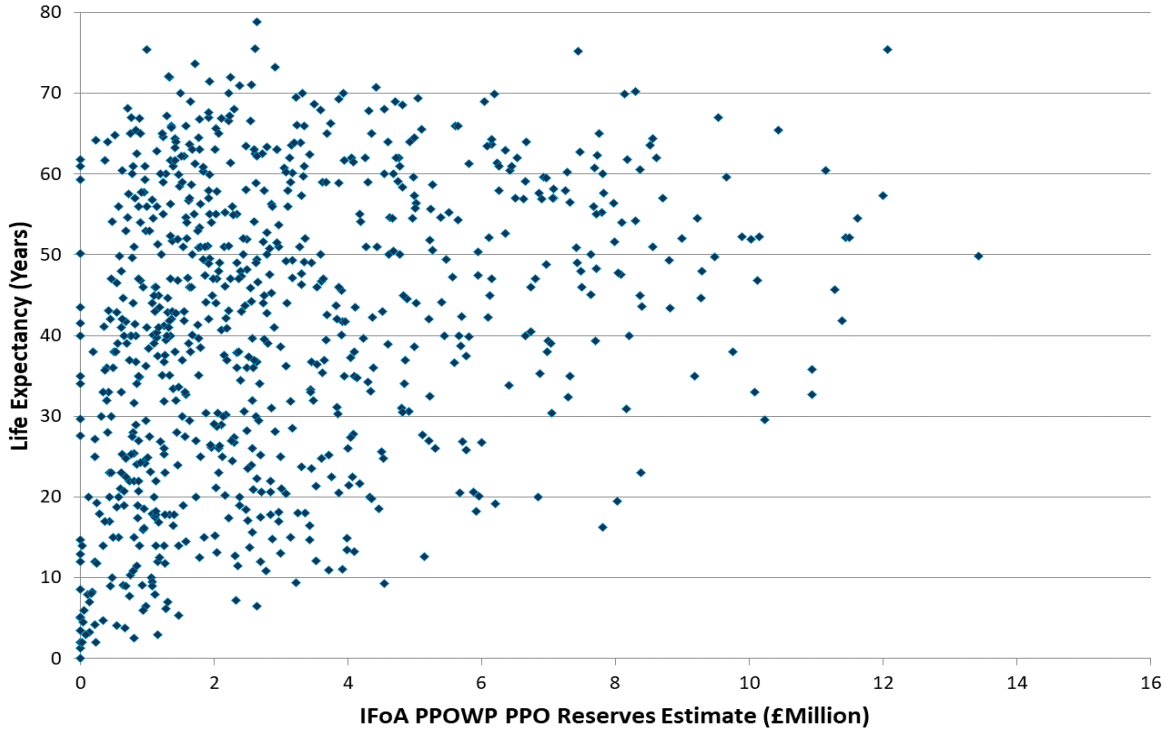


Figure S.18: Scatter plot of reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, against the life expectancy of the claimant at settlement date

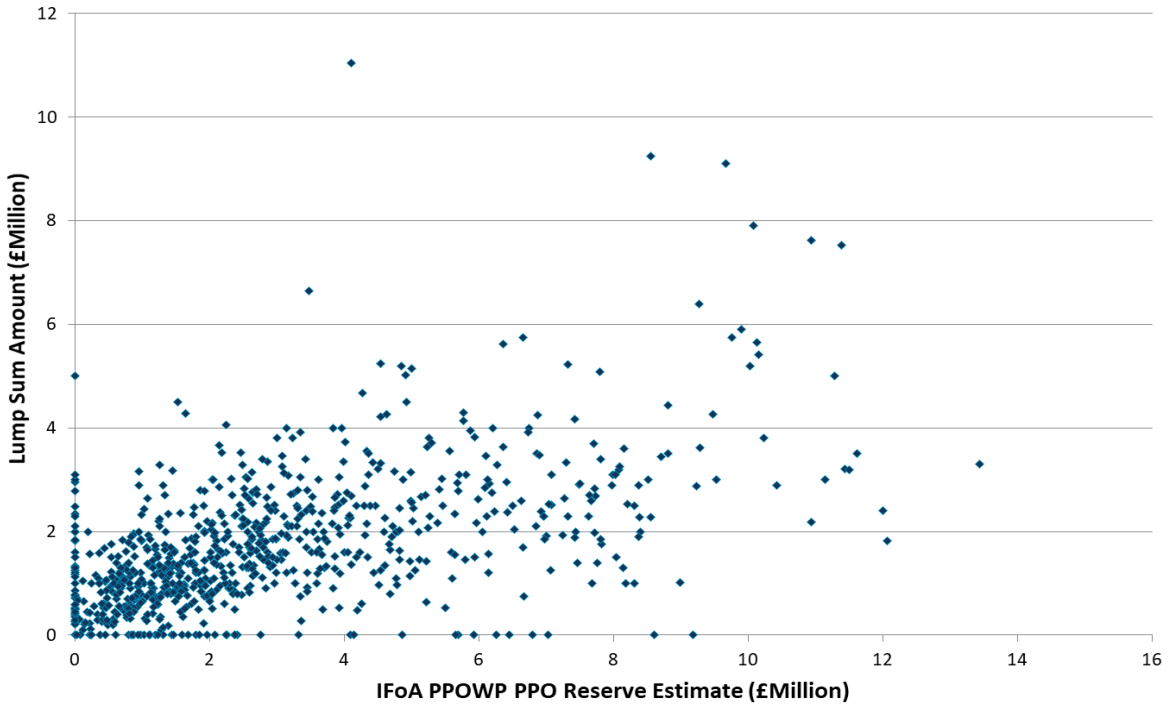


Figure S.19: Scatter plot of reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, against the lump sum element of the PPO claim

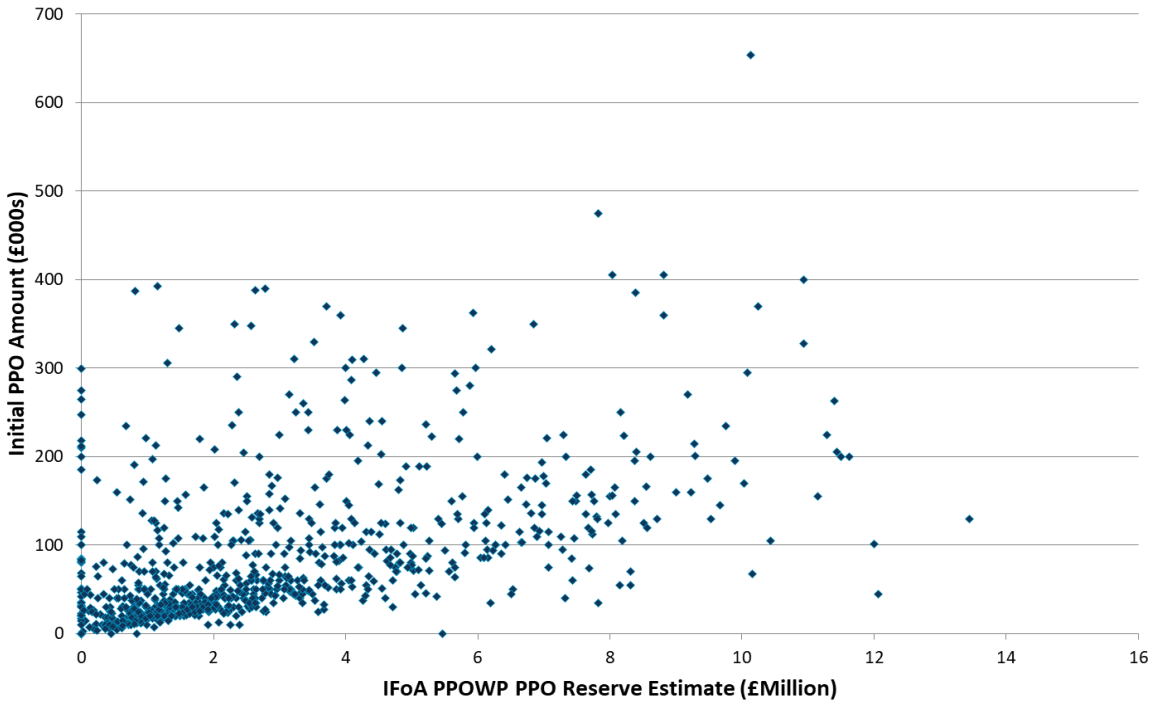


Figure S.20: Scatter plot of reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, against the initial regular payment amount of the PPO claim

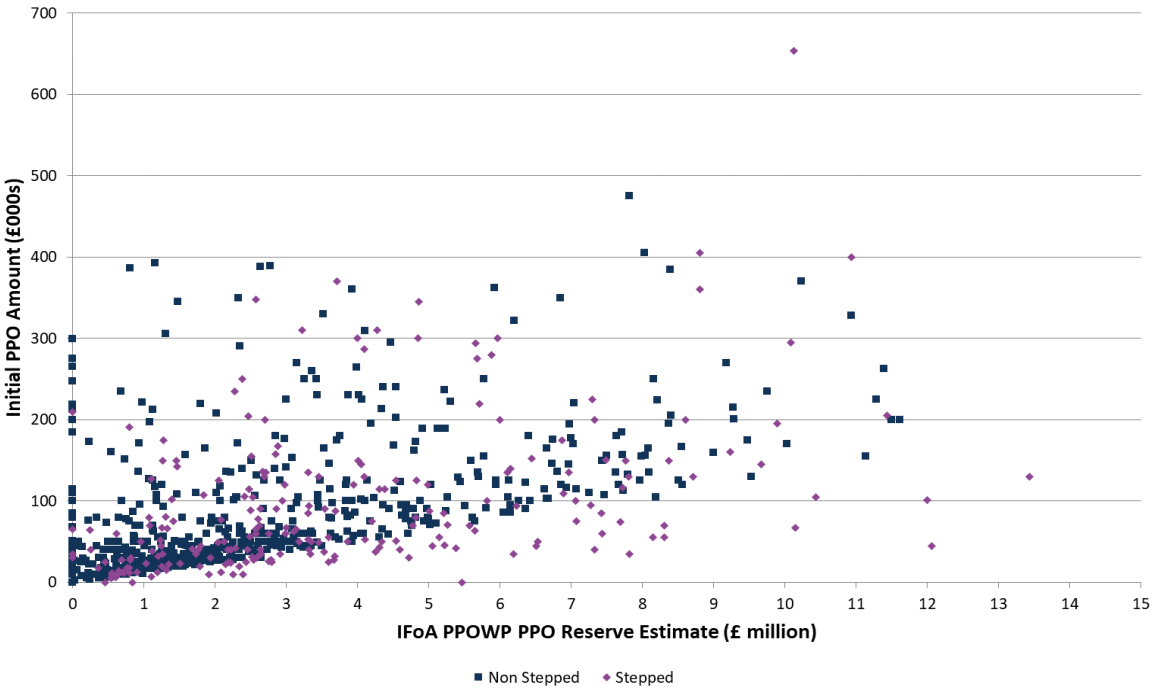


Figure S.21: Scatter plot of reserves for Motor (non-MIB) PPO claims, as at 31 December 2021, at a 0% per annum real discount rate, estimated by the IFoA PPO Working Party, against the initial regular payment amount of the PPO claim, by whether the PPO claim has stepped payments

S.8 Development of PPO reserves over time

Figure S.22 shows the cumulative development by settlement year of the total Motor (non-MIB) PPO reserve across all participating insurers, shown at real discount rates ranging from -2.0% to +2.5%.

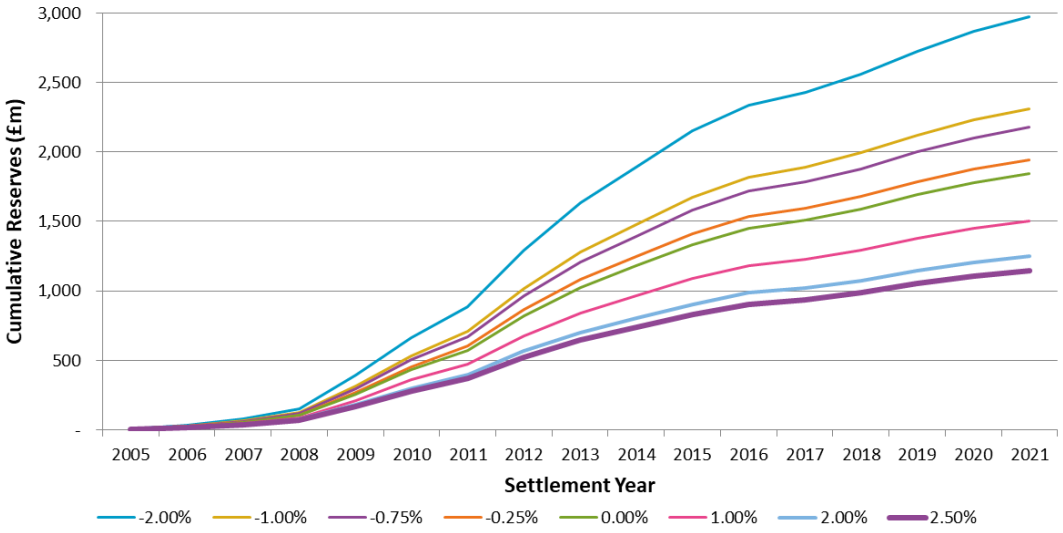


Figure S.22: Cumulative development of Motor (non-MIB) PPO reserve, shown at real discount rates ranging from -2.0% to +2.5%

Appendix T Detail around the responses to the 2022 qualitative industry survey

In this appendix, we provide more detail around the responses to the 2022 qualitative industry survey.

10 insurers and 5 reinsurers were interviewed for the qualitative industry survey, the responses having been collected between January 2022 and March 2022 inclusive. The companies which have agreed to be acknowledged for their participation in this survey are listed in the Introduction to this report, although please note that the list does not include all participants.

It is worth noting that, very occasionally, some of the survey questions were unanswered by some participants. This was occasionally through choice, but more commonly as the interviewee did not know the answer or could not readily obtain the information.

T.1 Level of concern about PPO claims

We asked how concerned companies and their Boards were about PPO claims on a scale of 1 to 5, with 5 being the most concerned.

Figure T.1 shows the responses for participating insurers last year (as at winter 2020-2021) and this year (as at winter 2021-2022), with the size of the bubble (the area) representing the number of insurers that gave a particular response. Figure T.2 shows the same metric but for the Boards of participating insurers. The average level of concern for insurers was 2.8, and 2.8 for their Boards.

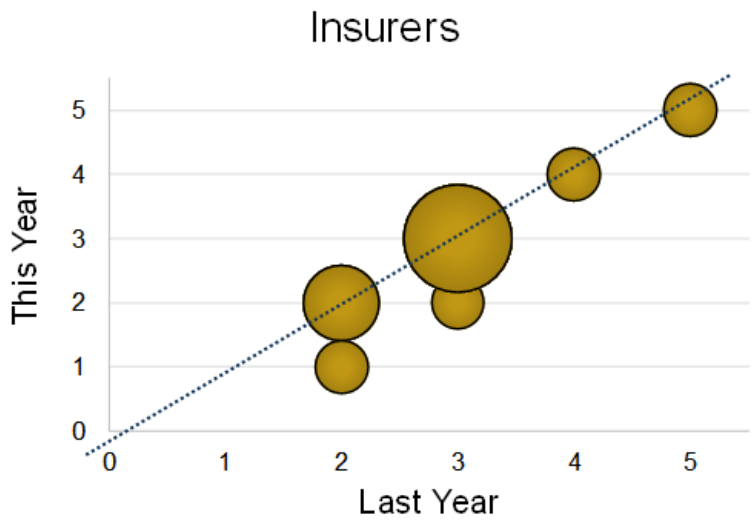


Figure T.1: Level of concern about PPO claims for participating insurers, as at winter 2020-2021 (last year) and as at winter 2021-2022 (this year) (scale of 1 to 5, with 5 being most concerned)

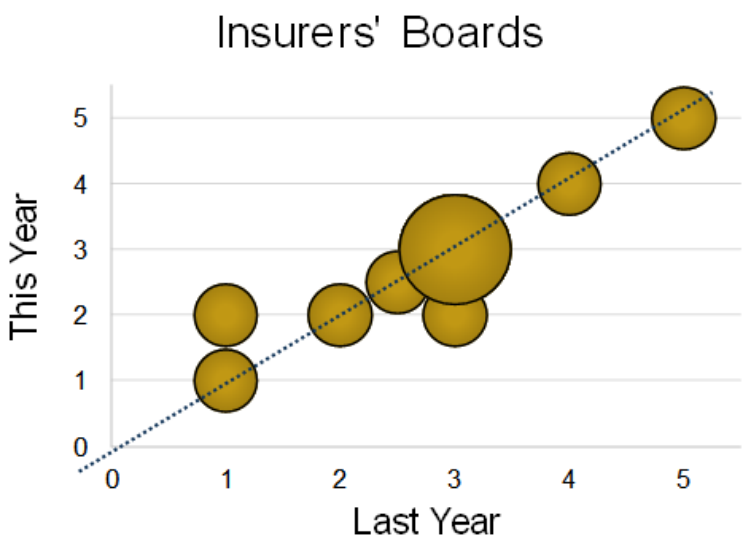


Figure T.2: Level of concern about PPO claims for participating insurers' Boards, as at winter 2020-2021 (last year) and as at winter 2021-2022 (this year) (scale of 1 to 5, with 5 being most concerned)

The overall level of concern for participating reinsurers had not changed significantly between last year and this year, with an average increase of less than one point. The average level of concern for reinsurers was 3.4, and 3.0 for their Boards.

For over half of participating insurers and reinsurers (10 out of 15), the level of concern about PPO claims had not changed across the year. Reasons given for this included the uncertainty around PPO propensity following the Ogden discount rate change remaining high, concerns around investment and return on assets and the impact that PPOs have on reserves and capital.

Two participants reported an increase in the level of concern about PPO claims. The reasons given included continued economic uncertainty driven by the coronavirus pandemic (COVID-19), as well as inflationary pressures and low investment returns.

The remaining three participants reported a decrease in the level of concern about PPO claims, the reasons given included reduced uncertainty regarding PPO propensity due to first data points with the new Ogden discount rate, PPO propensity being low, and the impact of PPOs being low currently.

The majority of participating insurers and reinsurers (11 out of 15) reported their Boards having the same level concern this year as last year. Reasons given for this included a lower impact of PPOs following the Ogden discount rate change, concerns around investment and return on assets and the impact that PPOs have on reserves and capital.

Two participants reported their Boards having a decreased level of concern compared with last year, attributing this to the Ogden discount rate reduction and subsequent fall in PPO propensity, and there being larger current issues to them than PPOs.

The remaining two participants reported their Boards having an increased level of concern compared with last year. Reasons given for this included concerns regarding the punitive impact of PPOs on Solvency 2 risk margins, and concerns over investments.

T.2 Reserving for PPO claims

We asked a number of questions about the reserving of settled PPO claims and future PPO claims, and the economic assumptions used to value PPO claims. We also asked about the treatment of variation orders and indemnity / reverse indemnity guarantees, bad debt provisions and the discount rate used for non-PPO reserves.

Reserving for settled PPO claims

Figure T.3 shows the reserving approach to mortality used by participating insurers for settled PPO claims: 100% of the insurers who responded used a probabilistic approach with none using an annuity certain method.

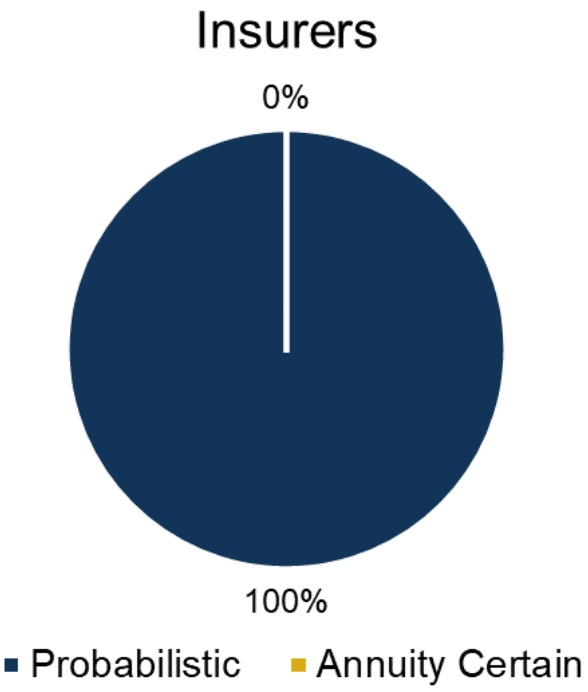


Figure T.3: Reserving approach for settled PPO claims for participating insurers, as at winter 2021-2022

Figure T.4 shows the reserving approach to mortality used by participating reinsurers for settled PPO claims: 3 out of 4 reinsurers used a probabilistic approach.

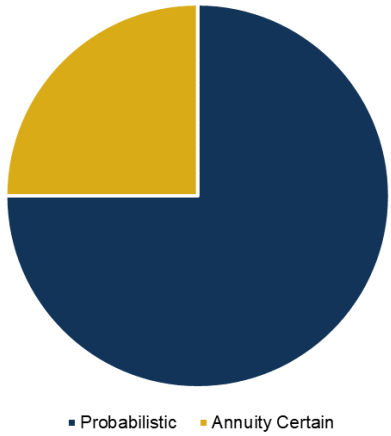


Figure T.4: Reserving approach for settled PPO claims for participating reinsurers, as at winter 2021-2022

The majority of those asked based their life expectancy on an average between their own medical expert's view and the view from the claimant's team.

In order to scale these standard life tables to correspond to claimants' impaired life expectancy, 7 insurers and 2 reinsurers used an age adjustment (where they considered the claimant had the mortality experience of someone "y"-years older than them) and two insurers and two reinsurers used a multiplicative adjustment (where they assumed that the claimant had a mortality experience "z" times more than the life tables suggest). Figure T.5 summarises these responses.

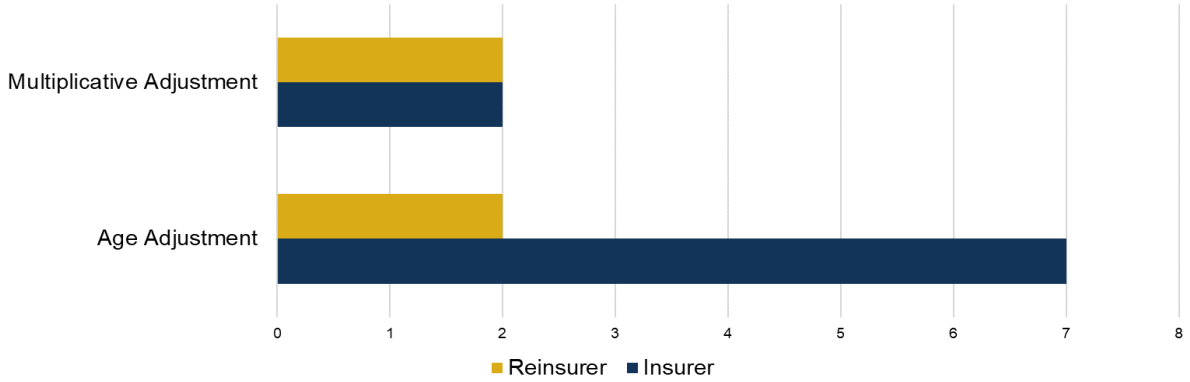


Figure T.5: Approach to scaling life tables for participating insurers and reinsurers, as at winter 2021-2022

Identification of future PPO claims (currently large open claims and pure IBNR)

All 10 participating insurers and 3 out of 5 reinsurers said that they monitored open large claims and assessed the possibility of them settling as a PPO rather than a traditional large claim settlement. In

the majority of cases, this was done by the claims team using a combination of factors such as the size of a claim and various claimant characteristics.

The majority of the participating insurers and reinsurers monitored the accuracy of past predictions. There were mixed experiences in terms of whether predictions had been too light or too prudent, although on the whole past predictions appear to have been fairly accurate.

In terms of identifying potential PPO claims, not all participants monitored all claims: some participants only looked at a certain number by injury outstanding estimate; others only looked at open claims above £1 million; and others did analyse every claim separately. The most common approach was to split claims into bands by large claim threshold and to assign probabilities of settling as a PPO to each of these bands. Some insurers used a formal scoring matrix or mechanism to systematically determine the probability of a claim settling as a PPO based on a number of its features, whereas others used subjective views based on the claim characteristics. Frequent indicators used included injury type (particularly mental capacity), age, annual care cost and the share of contributory negligence, as well as information on how the settlement process was progressing.

Reserving for future PPO claims (currently large open claims)

Figure T.6 shows the reserving approach used by participating insurers for future PPO claims in relation to claims that have already been identified as large claims: although a variety of approaches are used, these have reduced in number compared with last year.

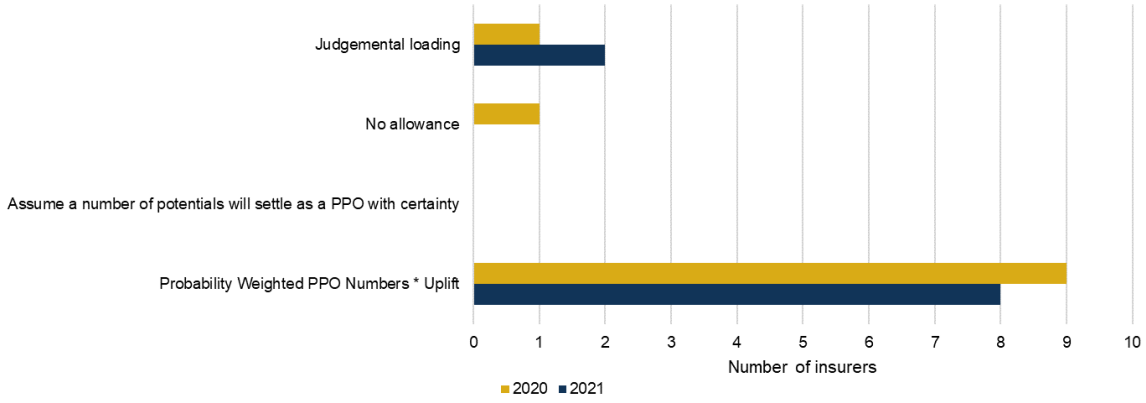


Figure T.6: Reserving approach for future PPO claims on existing large claims for participating insurers, as at winter 2020-2021 (2020) and as at winter 2021-2022 (2021)

Eight insurers used a probability weighting of the claims identified as having potential to settle as a PPO. All of these used a method that probability-weighted the potential PPO costs derived from a cashflow projection of each identified large claim.

Reserving for future PPO claims (pure IBNR)

Most of the participating insurers reserved for future pure IBNR PPO claims within the reserving approaches discussed above and shown in Figure T.6.

For the remaining participating insurers, Figure T.7 shows the reserving approach used for future pure IBNR PPO claims: the majority of those insurers considering pure IBNR added a proportional loading to the PPO reserves.

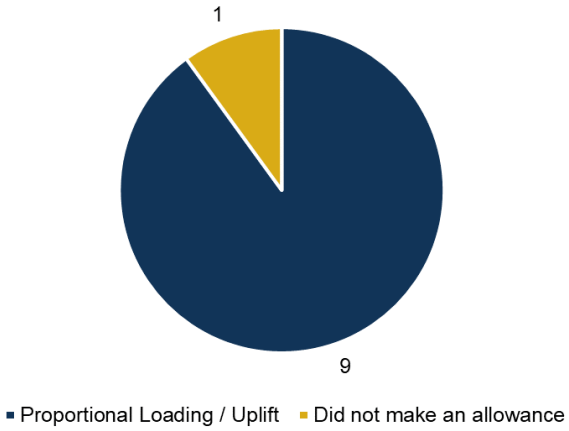


Figure T.7: Reserving approach for future IBNR PPO claims for participating insurers, as at winter 2021-2022

All of the participating reinsurers established their own reserves for future PPO claims, using standard reserving methods.

Discounting future PPO claims – to which date

Figure T.8 shows the date to which participating insurers discount future PPO claims: over half of participating insurers (7) discount future PPO claims to valuation date with the remainder of respondents (3) discounting to future expected settlement date.

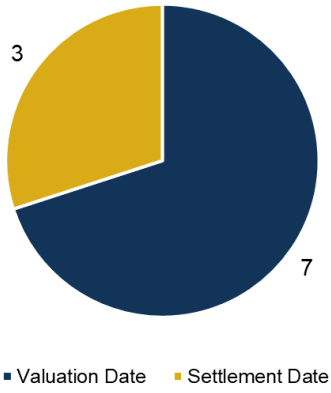


Figure T.8: Date to which participating insurers discount future PPO claims, as at winter 2021-2022

Discounting PPO claims – real discount rate and underlying economic assumptions for reporting under current UK GAAP / IFRS

In valuing PPO claims for reserving purposes, all participating insurers discounted their PPO cashflows. However, the real discount rate (considering both the inflation of payments and discounting in respect of investment returns) has continued to vary significantly by insurer. This is not unexpected, as the real discount rate is a function of two components, both of which will vary by insurer: there are likely to be differences in proportions of PPO claims linked to various indices and differences in investment strategies.

Figure T.9 shows the real discount rates used by participating insurers rounded to the nearest 0.5%, both this year (winter 2021-2022, displayed as 2021) and last year (winter 2020-2021, displayed as 2020). For those using a fixed real discount rate, the most commonly used real discount rates were 0% and -0.5% per annum, with three insures using a real discount rate of 0%, and three insurers using a slightly negative real discount rate. The range of real discount rates used was between -2.5% per annum and 0% per annum, and the distribution has remained broadly the same since our previous survey.

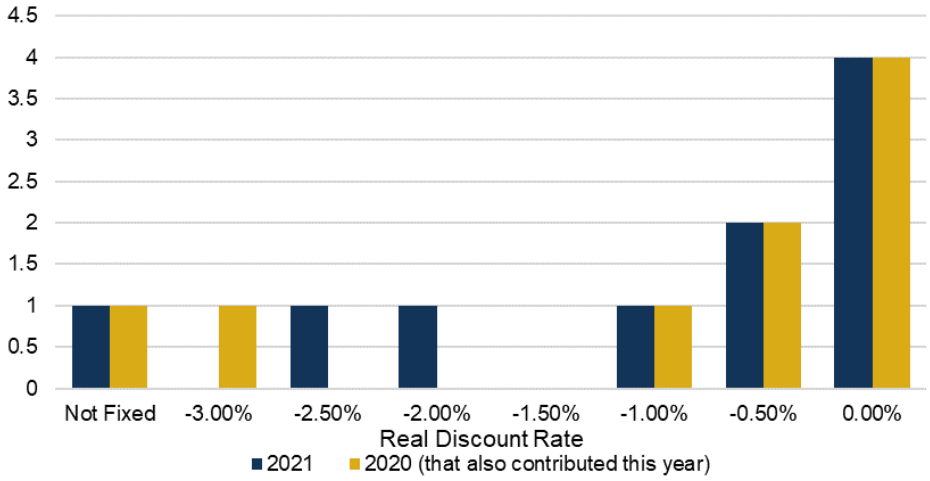


Figure T.9: Real discount rate used by participating insurers to value PPO claims under current UK GAAP / IFRS, as at winter 2020-2021 and as at winter 2021-2022

Many participating insurers stated that they set their ASHE inflation assumption and investment return assumption explicitly, but then check that the implied resulting real discount rate was appropriate.

Figure T.10 shows the ASHE (or payment) inflation rate assumption underlying the real discount rates used by participating insurers, both this year (winter 2021-2022, displayed as 2021) and last year (winter 2020-2021, displayed as 2020). For those using a fixed assumption, the range of ASHE inflation rates used was between +3.0% per annum and +4.0% per annum, with a similar distribution to last year. In setting this assumption, most participating insurers relied on published research and past ASHE data.

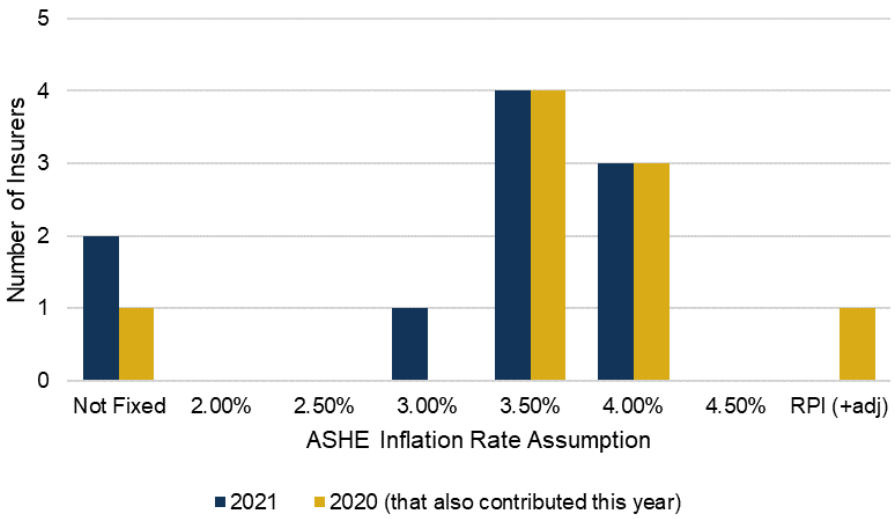


Figure T.10: ASHE inflation rate used by participating insurers to value PPO claims under current UK GAAP / IFRS, as at winter 2020-2021 and as at winter 2021-2022

Figure T.11 shows the investment return assumption underlying the real discount rates used by participating insurers, both this year (winter 2021-2022, displayed as 2021) and last year (winter 2020-2021, displayed as 2020). For those using a fixed assumption, the range of investment returns used was between +2.5% per annum and +4.0% per annum, with the distribution reducing in spread compared with last year. In setting this assumption, participating insurers made reference to a rate in line with the yields on actual assets held, expected long term returns, group policies, a risk-free rate, and gilts, although many insurers relied on the assumption that expected investment returns will equal ASHE (or payment) inflation in the long term.

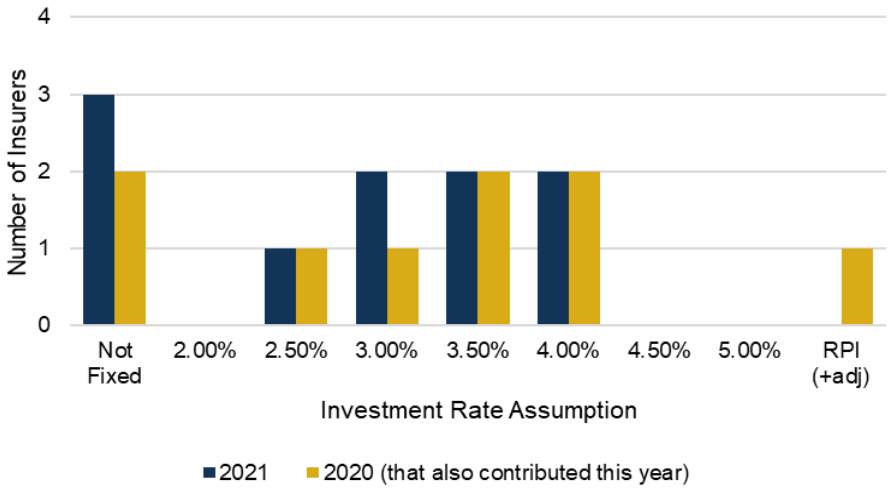


Figure T.11: Investment return used by participating insurers to value PPO claims under current UK GAAP / IFRS, as at winter 2020-2021 and as at winter 2021-2022

Discounting PPO claims – reporting under current Solvency II

Under Solvency II, as the investment return assumption is prescribed by EIOPA, it is the choice of the ASHE (or payment) inflation rate that will determine the real discount rate used.

Figure T.12 shows the ASHE (or payment) inflation rate assumption underlying the real discount rates used by participating insurers under Solvency II, both this year (winter 2021-2022, displayed as 2021) and last year (winter 2020-2021, displayed as 2020).

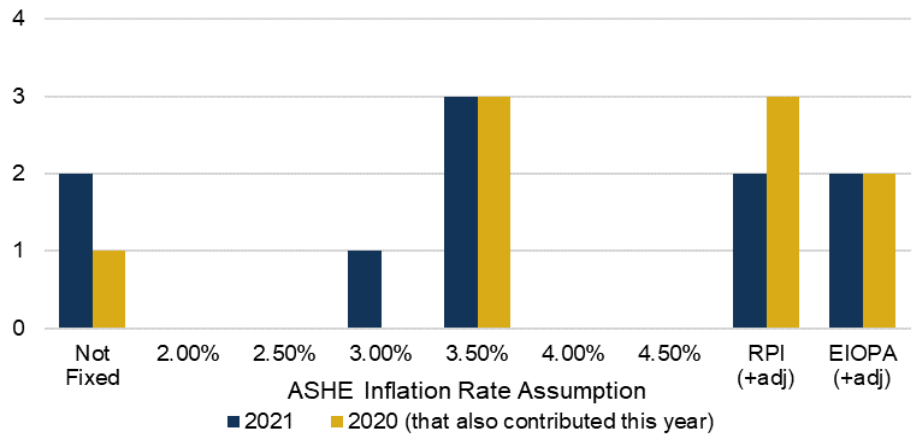


Figure T.12: ASHE inflation rate used by participating insurers to value PPO claims under Solvency II, as at winter 2019-2020 and as at winter 2020-2021

Around half of participating insurers used the same ASHE inflation rate assumption for Solvency II as they assume in their UK GAAP / IFRS accounts, with three insurers maintaining a 0% per annum real discount rate by setting the ASHE assumption to equal the EIOPA investment return assumption. Of the other approaches used by participating insurers, responses included using RPI and using market-implied risk-free yields.

None of the participating insurers had any transitional arrangements in place.

Most of the participating insurers that responded had considered using a matching adjustment or volatility adjustor, although only four of them had actually implemented a volatility adjustor.

None of the participating reinsurers used a matching adjustment or volatility adjustor.

Variation orders, indemnity guarantees and reverse indemnity guarantees

Two participating insurers did not consider making an allowance within their reserves for the impact of variation orders or indemnity / reverse indemnity guarantees coming into force, and instead valued PPO claims based on the current payment schedule alone.

Of the remaining eight, three participating insurers allowed for variation orders or indemnity / reverse indemnity guarantees coming into force after considering them.

One of the reinsurers considered variation orders or indemnity / reverse indemnity guarantees, however none allowed for them.

This finding is unsurprising, given that very few variation orders or indemnity / reverse indemnity guarantees have been triggered to date.

Bad debt

Most participating insurers and reinsurers did not include a bad debt provision for PPO claims under current UK GAAP / IFRS (only 2 out of 10 participating insurers and none of the participating reinsurers included a provision). All participating insurers including a bad debt provision under Solvency II.

Reserve uncertainty

All participating insurers and reinsurers estimate reserve uncertainty for PPOs either stochastically or though scenario testing.

For those participants able to provide an estimate, the coefficient of variation on a gross of reinsurance basis ranged from 21% to 100% (26% to 100% net of reinsurance), depending on whether it was settled PPOs, potential PPOs or pure IBNR PPOs being considered. When considering just settled PPOs, the majority of the gross of reinsurance coefficients of variation provided were between 20% and 45%.

PPO risk margin

For those participating insurers that calculated (or could estimate) a PPO risk margin, the distribution of the (approximate) risk margin as a proportion of best estimate is shown in Figure T.13, with responses ranging between 5% and 65%.

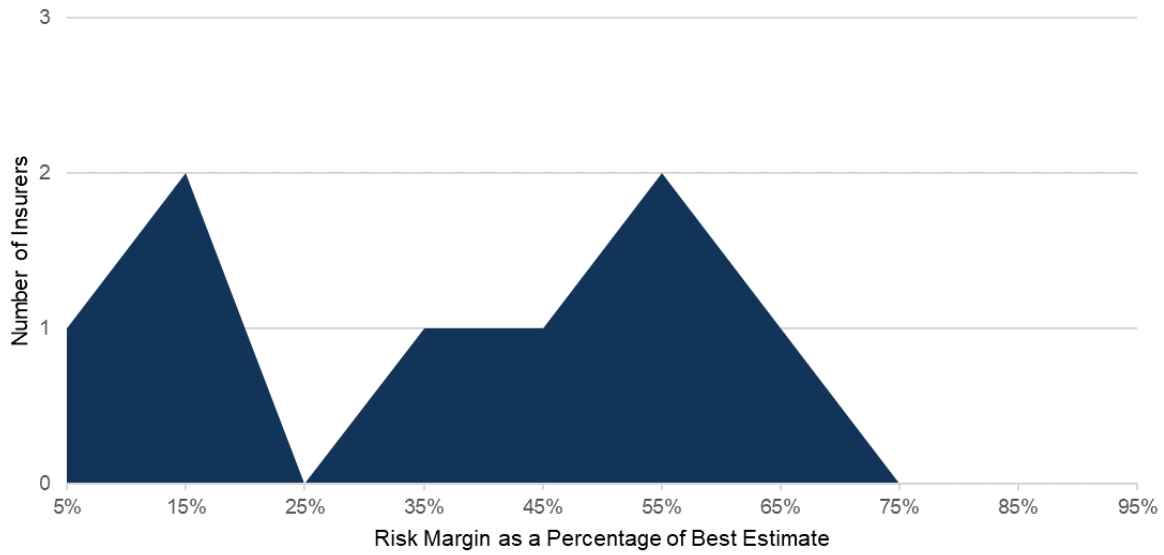


Figure T.13: Approximate risk margin as a proportion of best estimate for PPO claims as estimated by participating insurers, as at winter 2021-2022

T.3 Treatment of PPO claims within capital modelling

We asked how companies treat PPO claims in the SCR, and about any observed differences between the Pillar I and Pillar II capital requirements for PPO claims.

Treatment of PPO claims in the SCR

Figure T.14 shows the approaches used by participating insurers and reinsurers to allow for PPO claims in the SCR calculation, both this year (winter 2021-2022, displayed as 2021) and last year (winter 2020-2021 displayed as 2020): the majority of participating insurers and reinsurers used an internal model or partial internal model to allow for PPO claims in the SCR calculation (eight out of ten participating insurers and four out of five participating reinsurers).

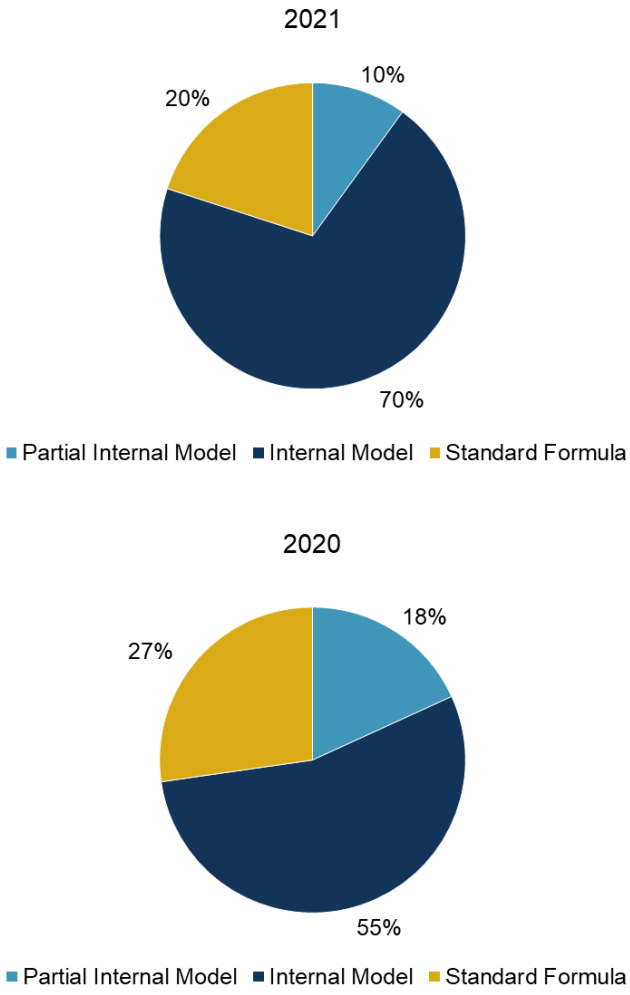


Figure T.14: Approaches used by participating insurers and reinsurers to allow for PPO claims in the SCR calculation, as at winter 2020-2021 and as at winter 2021-2022

Stochastic model for PPO claims

Of those participating insurers using an internal model or partial internal model, the majority had an explicit stochastic PPO model, although how these models calculated the capital uplift required for PPO claims and fed into the overall models varied greatly – the PPO models generally allowed for uncertainty in mortality, life expectancy, nominal discount rate, the number of large claims, reinsurance recoveries, payment escalation and PPO propensity. Of those participating insurers that did not have a separate PPO model, PPO claims were allowed for implicitly, for example within Motor third party liability underwriting and reserve risks.

Of those participating reinsurers using an internal model or partial internal model, none had an explicit stochastic PPO model.

Differences between Pillar I and Pillar II

In terms of the allowance for PPO claims under Pillar I (which considers the 1/200 level over a one year time horizon) and for the Own Risk and Solvency Assessment ("ORSA") under Pillar II (which considers the volatility of the run off to ultimate), most participating insurers and reinsurers for which this work has been finalised for PPO claims noted a lower or equal capital requirement for Pillar I vs Pillar II: four said that the one year measure of risk was between 30% and 45% of the ultimate measure of risk; three said the one year measure was between 75% and 100% of the ultimate measure, and for the remaining insurers a comparison could not be made.

Three insurers said that they had different bases for evaluating economic and regulatory capital: two insurers used the standard formula for PPOs in evaluating their SCR but used an internal model for PPOs in evaluating their economic capital, and one insurer used a different volatility adjustment for economic and regulatory capital.

T.4 Treatment of PPO claims within pricing

We asked how companies allowed for PPO claims in the pricing of contracts, and whether the impact of the cost of capital was taken into account when pricing.

While all participating insurers allow for the cost of PPO claims within their pricing, only half of the ten participating insurers apply an explicit load or margin to their prices to cover the cost of PPO claims. The other half of participating insurers allow for PPO claims within a large loss component, and therefore PPO claims are included in their prices implicitly. For those with an explicit allowance, the methodologies utilised include:

- A frequency / severity method to produce a projected pay-out and reported loss pattern.
- An uplift to lump sum settlements applied to the loss ratio pricing load.

Three of the participating insurers explicitly allow for the cost of capital for PPO claims when pricing, with seven saying it was an implicit assumption.

All of the participating reinsurers explicitly allow for PPO claims in the pricing of their contracts.

T.5 The impact of PPO claims on reinsurance purchase and availability

We asked a number of questions about the reinsurance programmes purchased by participating insurers and offered by participating reinsurers, specifically in the context of PPO-related issues.

Reinsurance in the market

Figure T.15 shows the starting retention on the excess of loss reinsurance programmes purchased by participating insurers for Motor business: the retained risk ranges from £1 million to over £10 million. Only one participating insurer had explicitly changed their reinsurance programme as a result of PPO claims, stating that they have capitalisation clauses that would not exist otherwise.

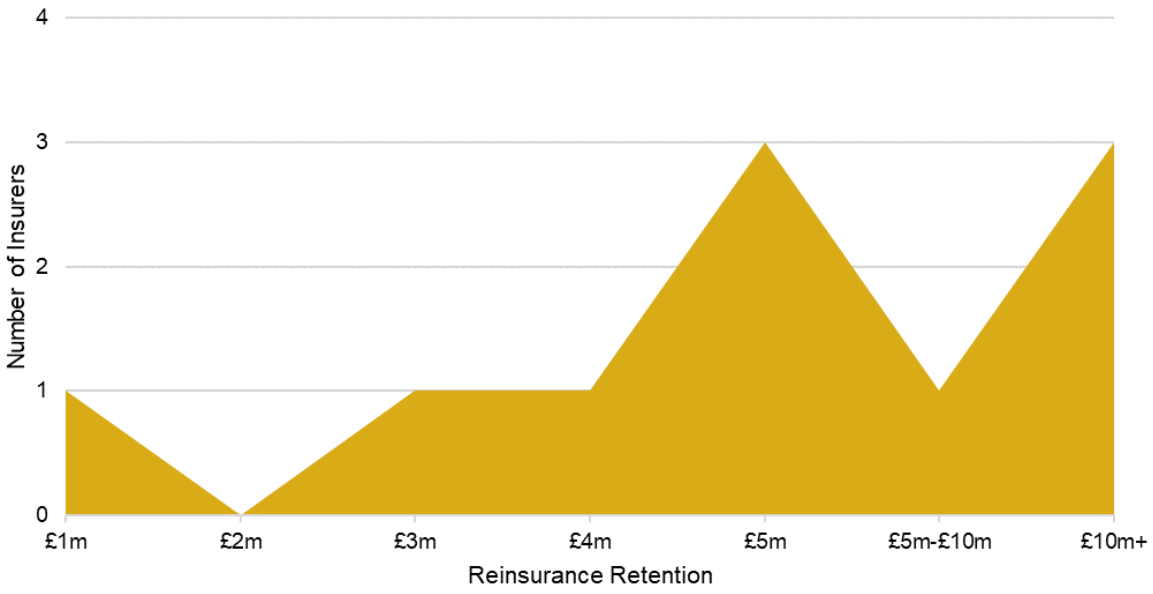


Figure T.15: Starting retention on excess of loss reinsurance programmes purchased by participating insurers, as at winter 2021-2022

Allowing for the cost of capital

Most participating insurers (8 out of 10) considered the impact of the cost of capital due to PPO claims when purchasing reinsurance, albeit not all of these did so explicitly for PPO claims.

Reinsurance availability and capitalisation clauses

Of the five participating reinsurers:

- The reinsurance offerings for all had changed as a result of PPO claims.
- Two reinsurers insisted on capitalisation clauses while three used them on a case-by-case basis.
- Two reinsurers said that the majority of its PPO business was written through capitalisation clauses.
- All reinsurers insisted upon an indexation clause in their reinsurance contracts.

A reason given by one participating reinsurer for offering / requiring capitalisation clauses was to reduce the capital issues that are associated with PPOs.

To date, two of the participating reinsurers has reached the point of capitalisation on one (or more) of their PPO claims.

From the perspective of the participating insurers, only 3 out of 10 insurers had a capitalisation clause on their reinsurance contracts. Where capitalisation clauses were present, these were only on a proportion of the portfolio, and in some instances the presence of these clauses varied by layer. Of those participating insurers without a capitalisation clause, the clear majority stated that they were keen to avoid them.

T.6 Alternative risk transfer for PPO claims

We asked whether companies would consider transferring the risk associated with PPO claims, and the hurdles they may have encountered.

Of the participating insurers, all respondents would consider transferring the risk associated with PPO claims if the right option arose. The most significant hurdles in constructing a transaction were a perceived high price of such risk transfer solutions, and the lack of a solution that matched to ASHE inflation. Opinion was split on whether the risk transfer market is growing or stagnant. 4 insurers thought it is currently stagnant, 2 thought it is currently growing, and 2 felt that there is potential to grow.

T.7 Investment strategy in relation to PPO exposures

We asked companies whether their investment strategies had changed as a result of PPO claims, whether they have any assets ring-fenced for PPO claims, and what their biggest investment issues related to PPO claims were.

Figure T.16 shows the proportion of participating insurers for which the investment strategy had changed as a result of PPO claims: 5 of the 10 participating insurers had changed their investment strategy as a result of PPO claims, with two of these changes coming in the last year. Two participating insurers review their asset / liability matching position regularly, adapting for PPO claims implicitly but without explicitly changing investment strategy as such. Two of the participating reinsurers had changed their investment strategy.

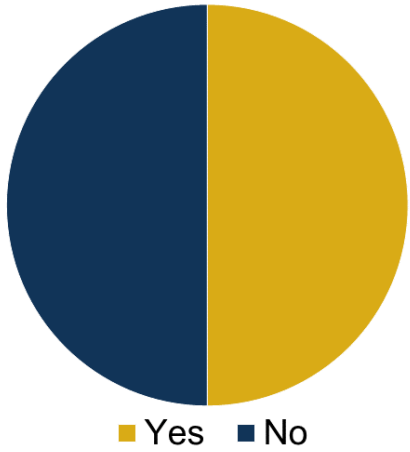


Figure T.16: Whether the investment strategy had changed as a result of PPO claims for participating insurers, as at winter 2021-2022

Only three participating insurers held ring-fenced assets specifically for PPO liabilities, although a number of other insurers held long duration assets to cover all longer-term liabilities. Just one of the participating reinsurers held ring-fenced assets specifically for PPO liabilities.

Among the investment issues highlighted by participating insurers and reinsurers were finding assets to match the long durations associated with PPO claims and finding assets that track a similar index to ASHE.

T.8 Discounting non-PPO claims – discount rate assumed within the Actuarial Best Estimate

Nine of the participating insurers valued non-PPO claims within the Actuarial Best Estimate reserves on an Ogden -0.25% per annum basis (i.e. the prevailing discount rate), with the remaining two assuming a more negative rate in anticipation of a reduction in the Ogden rate in 2024.

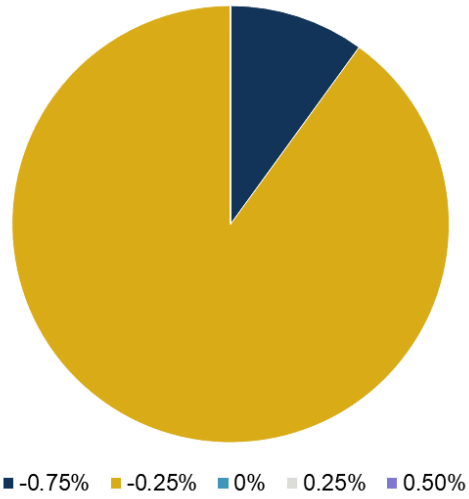


Figure T.17: Discount rate assumed within the Actuarial Best Estimate for non-PPO claims by participating insurers, as at winter 2021-22

T.9 PPO propensity – reduction assumed within the Actuarial Best Estimate and scenario tests

Participating insurers were asked what percentage change in PPO propensity they had assumed as part of their Actuarial Best Estimate calculations. 10 participants responded to this question, with a wide range of responses from no reduction to an 80% reduction. The results are shown in Figure T.18.

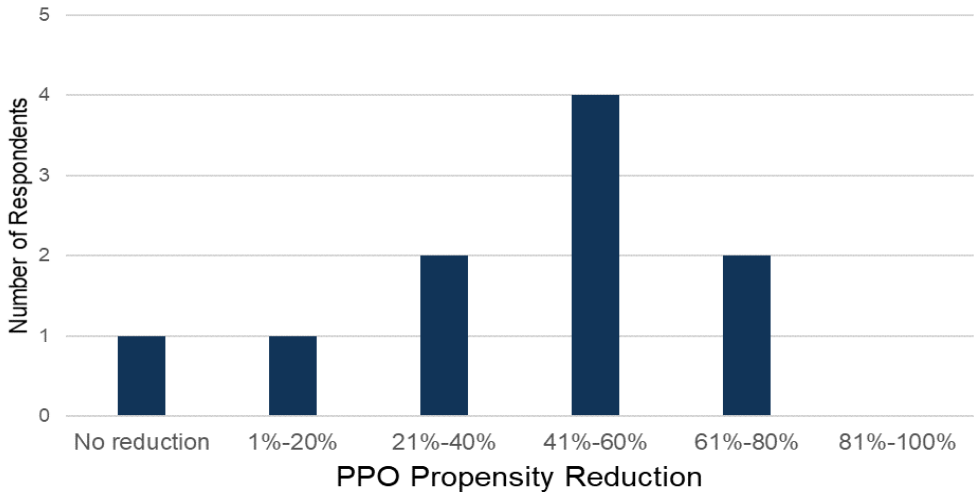


Figure T.18: Reduction in PPO propensity assumed within the Actuarial Best Estimate by participating insurers, as winter 2021-2022

Participating insurers were asked what their previous assumed reductions in PPO propensity would have been, from scenario analyses, had the Ogden discount rate fallen to between 1.0% and -1.5% per annum. Generally, the lower the discount rate, the larger the percentage decrease in PPO propensity participating insurers expected. However, some participating insurers expected the same reduction in propensity across multiple scenarios. 5 participants responded to this question, the results of which are shown in Figure T.19.

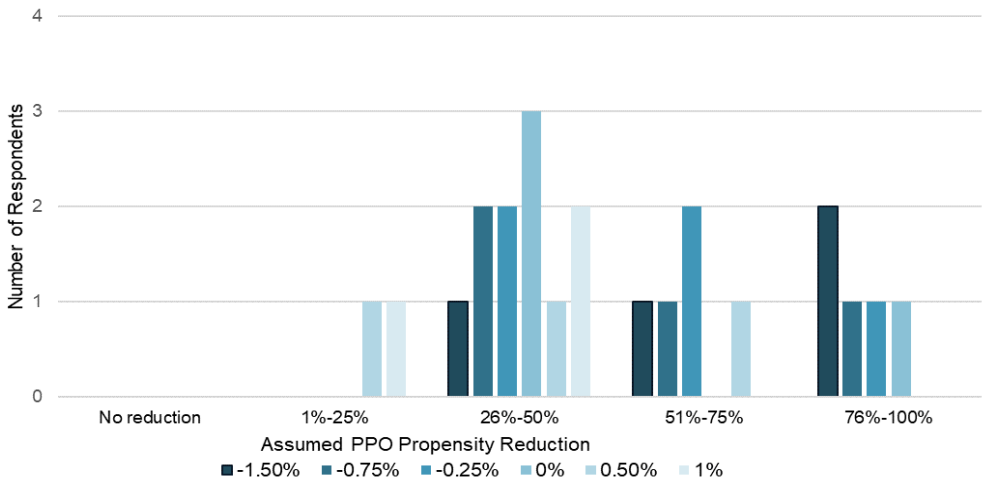


Figure T.19: Reduction in PPO propensity assumed for different discount rate scenarios by participating insurers, as at winter 2021-2022

T.10 Reserve margins for further reductions in the Ogden discount rate

In terms of additional reserve margins for further reductions in the Ogden discount rate, this was often as part of a general margin, with no participants holding an explicit margin for this anymore.

T.11 Claims experience

Participating insurers were asked if they had seen any changes in the speed of settlement of claims or in claimant / lawyer behaviour.

Seven insurers said that they had noticed a slowing down of claim settlements since 23 March 2020 when lockdown restrictions were put in place owing to COVID-19 by the UK Government, with the remaining three insurers saying that they saw no difference. Operational disruption during lockdown seems to have been driving these delays, such as court closures and delayed medical reports.

All but three insurers noted that they did not have a material backlog of open claims.

Regarding whether respondents had seen any significant change in claimant and claimant lawyer behaviour during the period of lockdown restrictions, just one insurer said that claimants were more inclined to take a lump sum settlement.

T.12 ASHE Survey

In response to changes in the economic environment, in particular regarding the growing concern around inflationary pressures and the impact on insurance losses, the PPO Working Party conducted a separate survey in 2022 to focus on inflation and ASHE assumptions.

11 insurers and 2 reinsurers responded to this survey, with responses having been collected between August 2022 and October 2022 inclusive. Given the changes and continued uncertainty in the economic outlook during and after this period, it may be that contributors would have given different responses, if they were answering the same questions in the current economic climate.

When asked what their views on the level of ASHE were on a short term (generally 1-2 years), medium term (2-5 years) and long term (5+ years) there tended to a forecast of reducing over time, with the average short, medium and long term views at 4.6%, 3.8% and 3.2% respectively. The range of responses was also greater in the shorter and medium term, highlighting the uncertainty within the economic outlook during those timeframes. The majority of responses for a long term view on ASHE were between 3.0% and 3.5% which is consistent with responses from our qualitative survey in recent years. Figure T.20 outlines the distribution of responses.

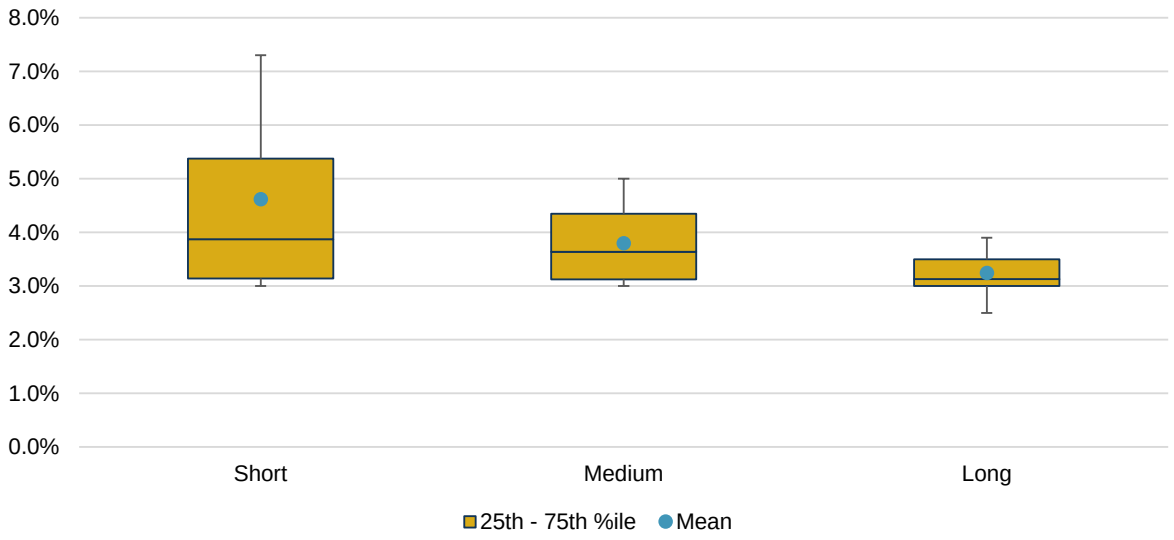


Figure T.20: Views on the ASHE assumption in short, medium and long term

Figure T.21 shows the approaches used to set the ASHE assumption. 77% of contributors are using forecasts of another economic index as a starting point (with RPI / CPI being the most commonly used) and making an adjustment for the assumed gap between these indices and ASHE. The remaining 23% based their ASHE assumption on explicit analysis of the historical index. Some noted that different approaches were taking depending on the reporting bases and time horizon. 69% of the participants validated the appropriateness of these approaches using back-testing.

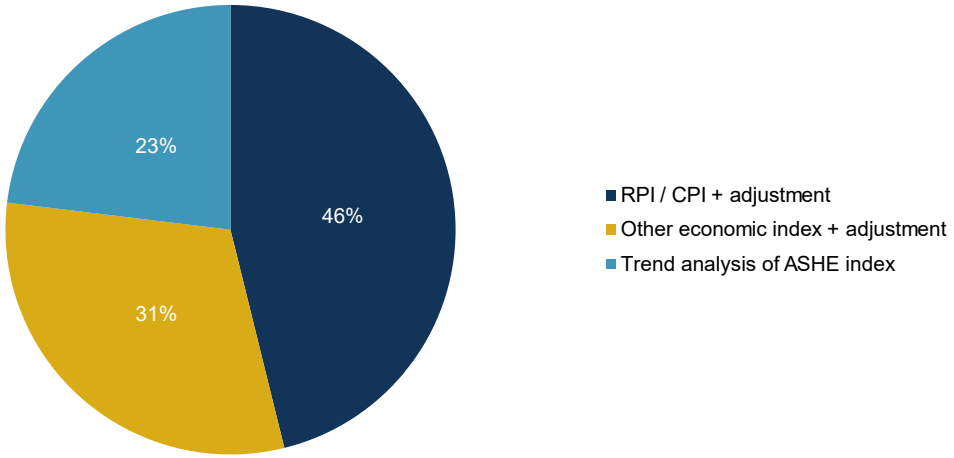


Figure T.21: Approach used to set ASHE assumption

Within the last few years there have been several large market events that have had economic impacts (namely Brexit, COVID-19 and the current inflationary environment driven by, among other things, the conflict between Russia and Ukraine). We asked participants whether changes had been made to their ASHE assumptions in light of each of these events. Just under half of respondents had made a change because of each / any of these events, although a further 15% had considered these, even if they had not made a change explicitly linked to the individual events. It is worth noting that many of the participants that answered that they did not change or consider these factors had plans to revisit these assumptions within the 6 months following the survey.

Figure T.22 shows the approach to allowing for volatility within the ASHE assumption within their capital models. 85% did make some allowance, with just over half of these doing so using their Economic Scenario Generator ("ESG"), either by linking their ASHE assumption to an existing output from the ESG with a fixed adjustment, or otherwise. The remaining participants who allowed for volatility did so by using stress or scenario tests.

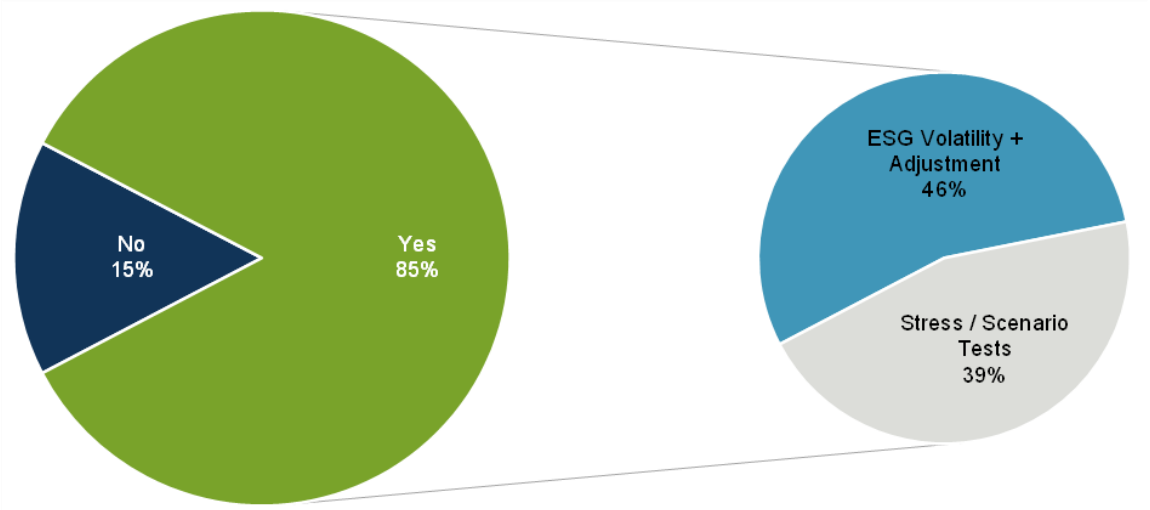


Figure T.22: Approach to modelling volatility around ASHE assumption

Figure T.23 shows the real long term discount rate assumed by respondents which considers both the view of future inflation as well as the investment returns that can be achieved. No participants assumed a positive real discount rate, with the majority assuming a rate of between -0.5% and 0% (inclusive). This is a slightly more negative shift in the distribution when compared with the same question asked in the qualitative survey between January 2022 and March 2022 (Figure T.9) indicating a slightly more pessimistic view in the long term economic outlook although it is worth noting that participants between the two surveys are not necessarily consistent.

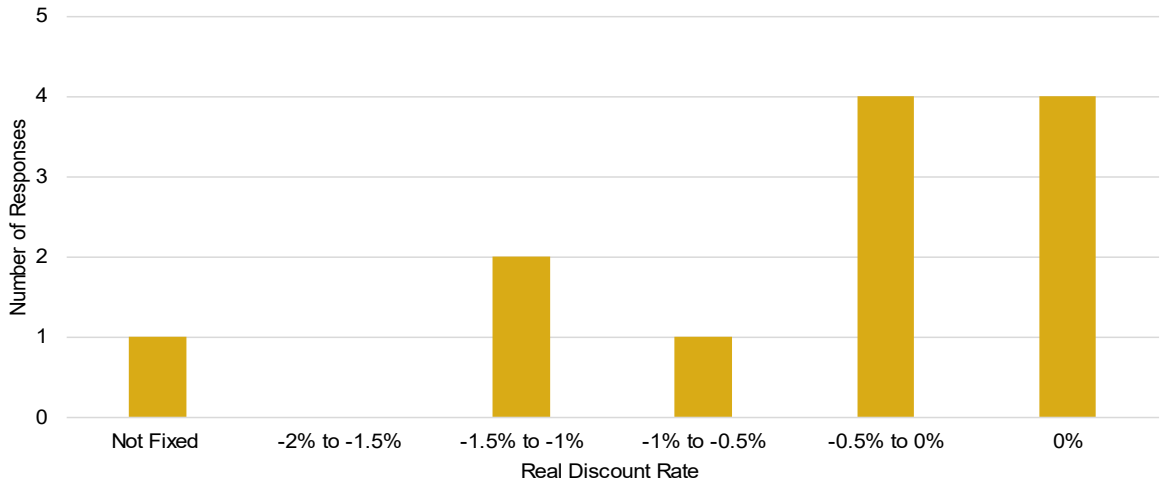
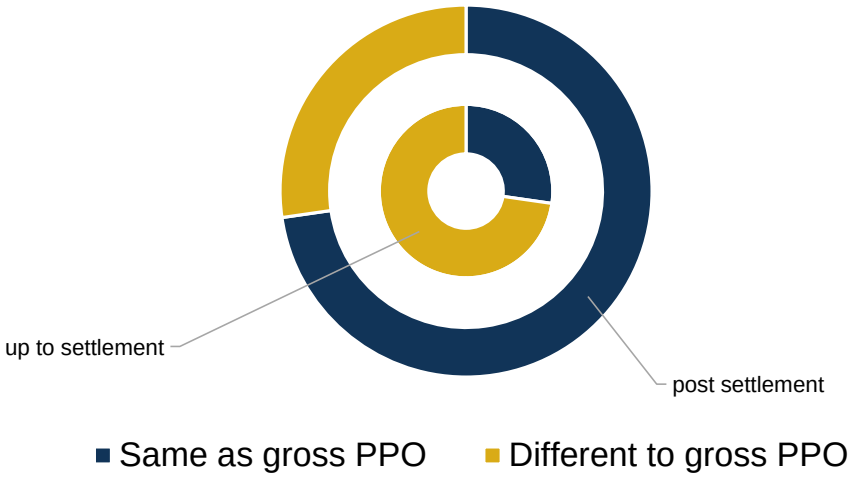


Figure T.23: Real discount rate used by participants

Within reinsurance programmes there is often a disparity in the indexation terms compared with that used for the gross PPO claim. We asked participants what the approach and index used for their reinsurance programme and whether this was different in the periods up to and post settlement. Figure T.24 shows the results, with around half of participants noting that the index used was different in the period up to settlement compared with post settlement of the PPO. In the period up to settlement the most common method was to index using a different index than that used for the gross PPO, which was typically the Average Weekly Earnings KA5H ("AWE") index. In the period post commencement of the PPO, the index attached to most reinsurance programmes was in line with that used for the gross PPO (i.e. 80th percentile of the ASHE 6115 index).



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Appendix V Acknowledgements

The IFoA PPO Working Party would like to thank all of the members of the working party past and present for their work and contributions to this report and other workstreams. Particular thanks goes to the following individuals:

Chris Francis (Industry Survey Lead),
Justin Thomas (Chair of the IFoA PPO Working Party at the time of publication).

The IFoA PPO Working Party would also like to thank the companies for which the above individuals work, for allowing them to provide such valuable input. Particular thanks must go to WTW, whose consultants performed the analysis of the data for the quantitative industry survey and undertook the qualitative industry survey.

The IFoA PPO Working Party would also like to thank the following individuals for their assistance in producing this paper:

Dom Adams