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## Update from the Third Party Working Party

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This handout supports the research effort of the Institute and Faculty of Actuaries Third Party Working Party and is not written advice directed at the particular facts and circumstances of any given situation and/or data.

The materials contained in this presentation pack and any oral representation of it by the working party are explicitly outside the scope of the TAS.



# Third Party Working Party

- Tenth iteration of the Institute and Faculty of Actuaries Third Party Working Party (TPWP), which investigates motor claims (injury and property damage).
- Scope focussed on private car comprehensive (PCC) and includes accidental damage analysis for the second year.
- Data representing earned premium for accident year 2018 of £9.0 billion for private car comprehensive.
- This pack contains this year's research to be presented at the GIRO conference in September 2019.



# Acknowledgements

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Allianz  
Aviva  
AXA  
Co-op Insurance  
Covea  
Direct Line Group  
Esure  
NFU Mutual  
LV=  
RSA  
Tesco Underwriting



# Market statistics

## Notes on data

- The collection of contributing insurers has changed materially over the years. Relative to last year's study this year's includes additional data from some contributors (generally relating to more accounts) and, in some cases, less data from other contributors.
- In addition, in each year it is common for a number of insurers to make relatively subtle changes to their definitions of claim statistics. In the aggregate, these lead to distortions when comparing the market studies between different years.
- Not all contributors are able to supply data to support every claim statistic in each study. There are generally (but not always) improvements in the availability of data from year to year, and as such, the results of the most recent study will be based upon data from an increased proportion of the contributor companies (and not just new contributors). Again, this introduces a material distortion into any analysis which attempts to compare the results across different studies.
- It is reasonably common for insurers to restate the claims statistics of prior accident years (and prior periods of development), particularly in the case where portfolios (including movements on prior year liabilities) have been acquired or disposed of by the contributor(s) in question. Other reasons for such changes can be changes in the availability of granular data pertaining to (potentially large) segments of portfolios (such as in the case where data is provided by bordereaux rather than being integrated in insurer administration systems) or in some cases changes in the mapping of data to classes.
- **For this reason, we would recommend that if the user of the research wishes to understand how trends have evolved over time, then they should focus on looking at trends by accident year within the latest study, rather than attempting to compare the results across studies. This is particularly true this year where there has been more movement in the data between studies than in previous years.**
- Likewise we do not consider statistically valid any back engineering of individual contributors' contributions.



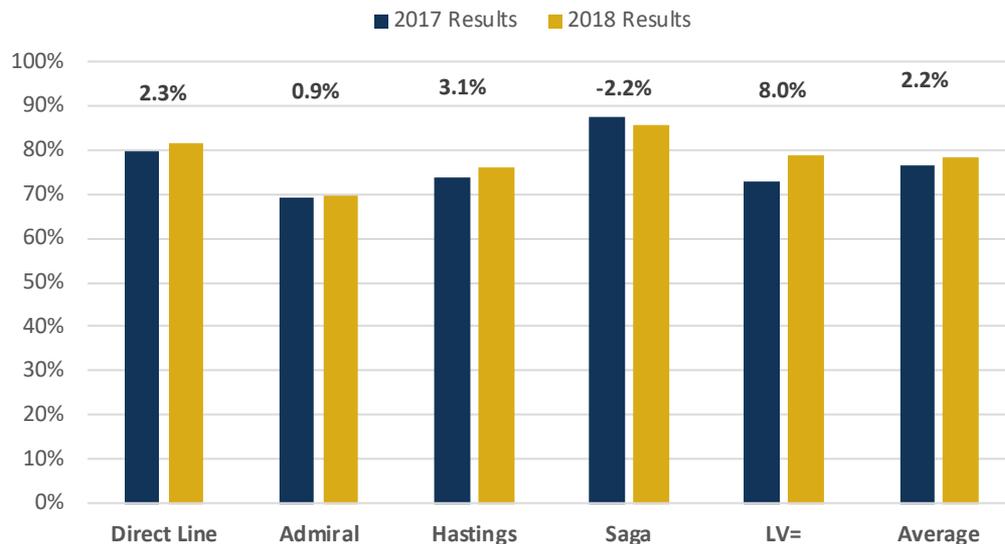


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- 4. Market Statistics: Capped TPI**
- 5. Market Statistics: Excess TPI**
- 6. Conclusions**
- 7. Appendix**

# Market Environment

## Company Results

UK Motor Accident Year Loss Ratio Performance 2017 to 2018



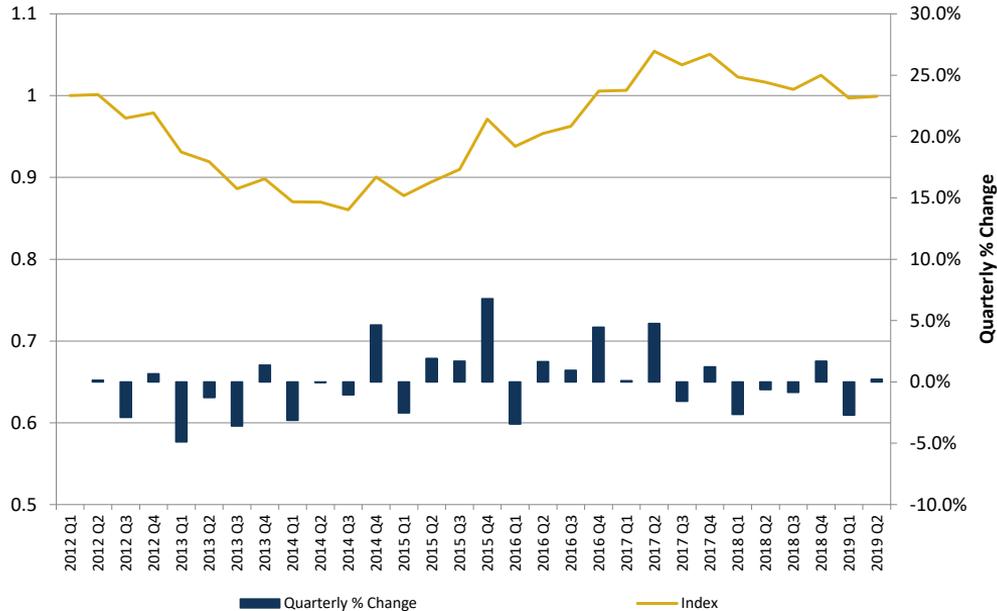
- Where 2017 accident year saw an improvement in loss ratio for most insurers, in 2018 accident year loss ratios generally deteriorated.
- The ABI Premium Tracker shows premiums increased by 2.7% for the 2018 accident year and so the deterioration in loss ratio is driven by claims inflation.

- Note : Loss ratios derived from published company accounts and exclude prior year movements. Results for some companies include Commercial Motor and Other Personal Lines products.

# Market environment

## Premium Rates

ABI Premium Tracker (exc IPT)



- ABI Premium Tracker (excluding IPT) showed strong increase in premium from £359 in 2014 Q3 to £440 in 2017 Q2, an increase of 8% per annum.
- Premiums have fallen to £417 at 2019 Q2 a reduction of 3% per annum from 2017 Q2.
- Average premium rates in 2019 Q2 are the same as in 2012 Q1.



# Market Environment

## Insurer Commentary

### 2018 – Profitable year

Net Combined Ratio (NCR) was **94.8%** in 2018, the **best result** since 1985 when EY analysis began  
...**only the third time** since EY records began the industry has had a **NCR below 100 for two years running**  
...greater than anticipated reserve **releases from Ogden** and the benefits of **premium strengthening in 2017**  
Source: EY annual UK motor results June 2019

Earnings benefited from **significant reserve releases**, reflecting expectations of an **increase in the Ogden discount rate**  
Source: Fitch Ratings UK Non-Life dashboard – 2018 results

### H1 2019 – Generally good despite Ogden dominating much of the commentary

“good result...  
**£15.9m charge due to the change in the Ogden personal injury discount rate.**”  
Source: Direct Line H1 2019 report

“£2.2m higher Motor profit (**despite £33m adverse Ogden impact**) reflecting continued positive back year development.”  
Source: Admiral H1 2019 results

“Like other insurers, **Zurich is disappointed by the Government’s failure to change the Ogden discount rate to a balanced level.** However, the Company does not expect this to have a material adverse impact on its business and these results take the revised rate into account.”  
Source: Zurich UK H1 2019 results

Ogden...  
“At December 2018, balance sheet reserves were calculated using a rate of 0.00%. This has **resulted in a strengthening of claims reserves of £45 million.**”  
Source: Aviva H1 2019 results

Profit up due to one-off Ogden impact...  
“held firm on our reserving assumptions in anticipation of the Ogden rate change and as a result have **now realised the one-off benefit following the decision by the Lord Chancellor to set this at -0.25%.**”  
Source: Ageas H1 2019 results

“**Price hardening expected** in Personal Motor following **lower-than-expected change** in Ogden rate, while Commercial Motor rates expected to increase.”  
Source: AXA H1 2019 results - appendices



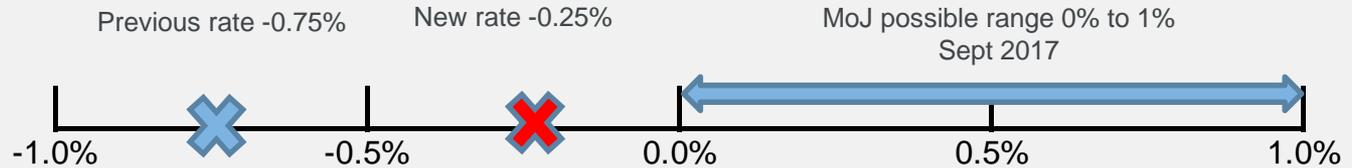
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# Market Environment

Ogden

July 2019

New rate announced.  
Effective from Aug 2019



## Why -0.25%?

### GAD advice

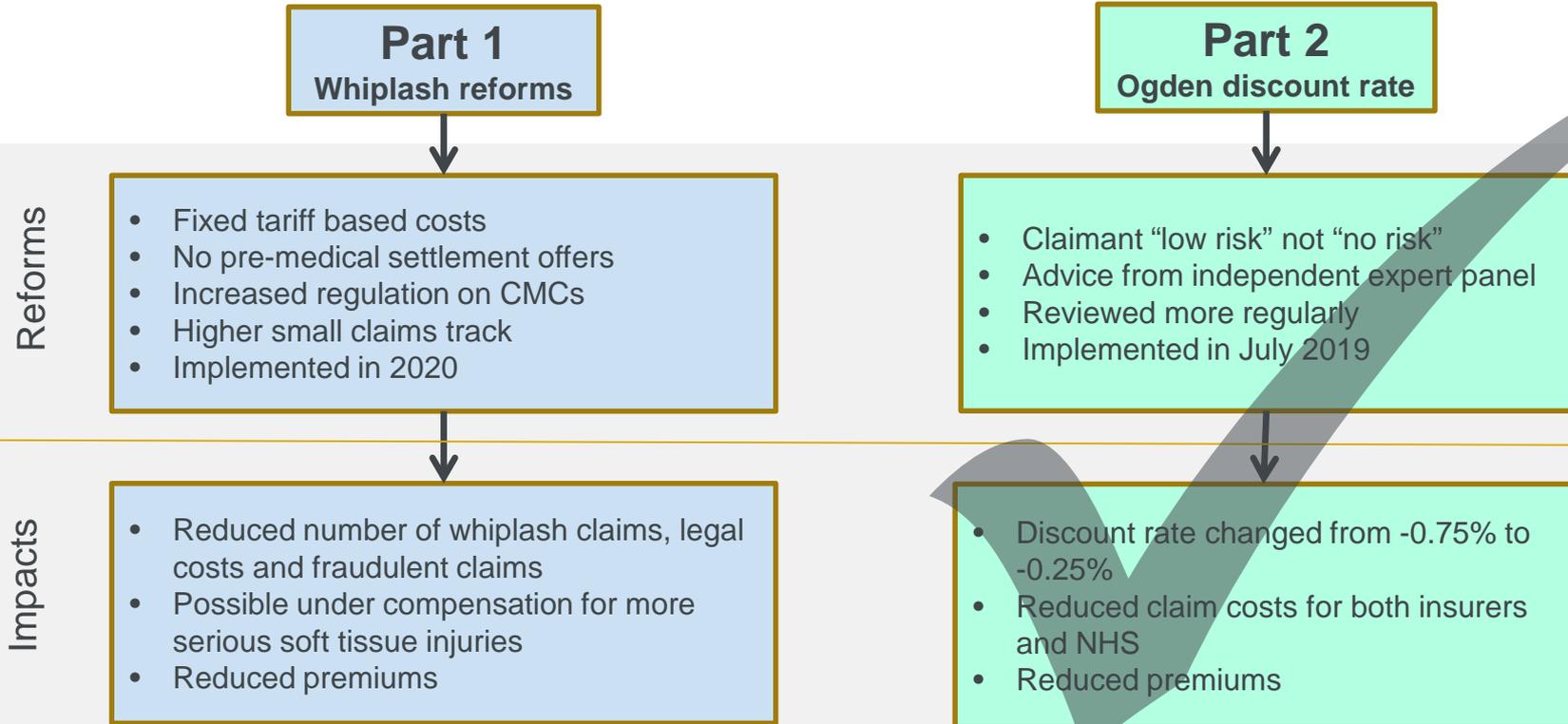
- **Implied best estimate +0.25%**
- Assumed investment return 1.75% higher than previous assumption
- Allowance now for tax and expenses 0.75%
- Therefore, 1% higher than previous Ogden rate
- This assumes claimants settle in current investment environment
- Possible rate could be 0.5% higher assuming claims settle evenly over next 5 years

### Chancellor chosen rate

- **-0.25% due to prudence applied**
- Results in 66% of claimants expecting to receive 100% of compensation from 50% using GAD rate
- Again, this doesn't consider projections that future investment returns may increase
- Doesn't consider that PPOs are a viable alternative for claimants wanting virtually a risk-free option
- Will be reviewed within 5 years

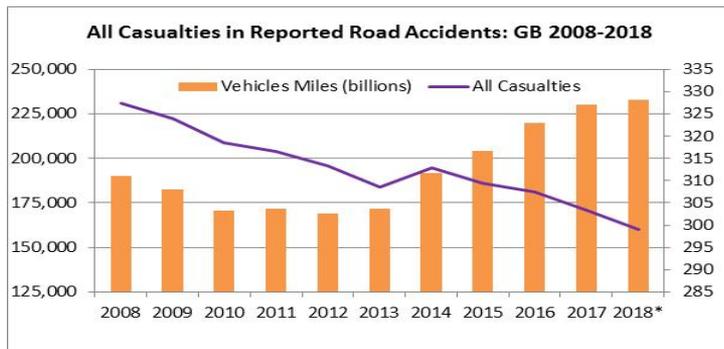
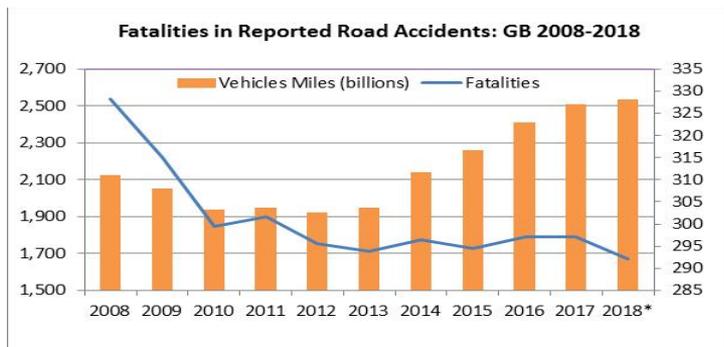
# Market Environment

## Civil Liability Act



# Market Environment

## Casualty and Mileage Statistics



\* 2018 data was only available to September and has been projected to give the full-year figures.

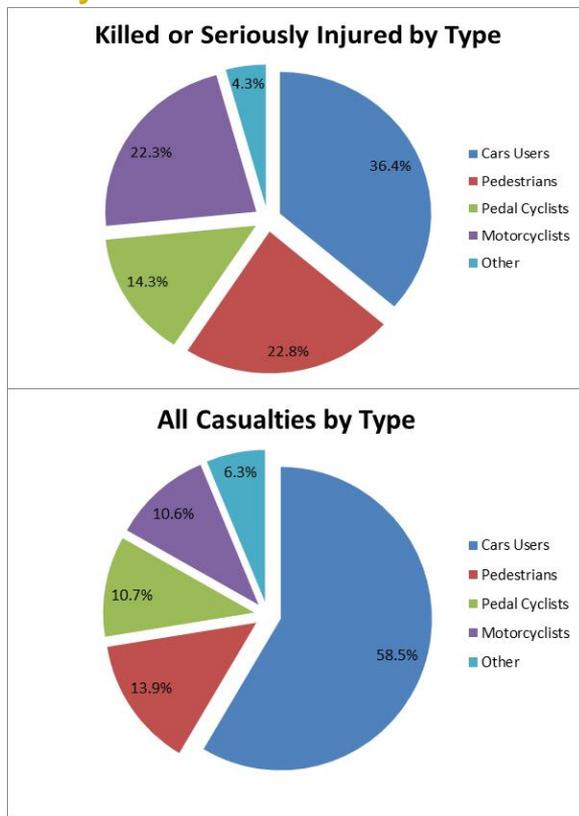
- Road deaths are projected to decrease by 6.7% in 2018 to lowest level since records began (1926).
- The number of fatalities per billion Vehicle Miles has fallen from 8.2 in 2008 to 5.6 in 2013 and 5.1 in 2018.
- Total casualties in 2018 are projected to be 5% lower than in 2017 and the lowest level on record.
- The number of casualties per billion Vehicle Miles has fallen by 34% from 2008 to 2018.



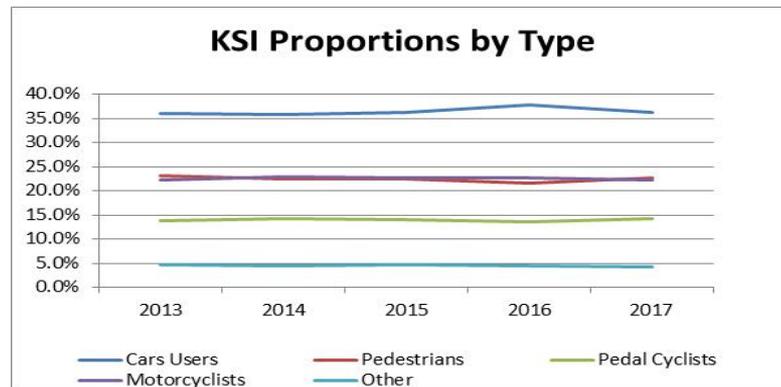
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# Market Environment

## Fatality Statistics



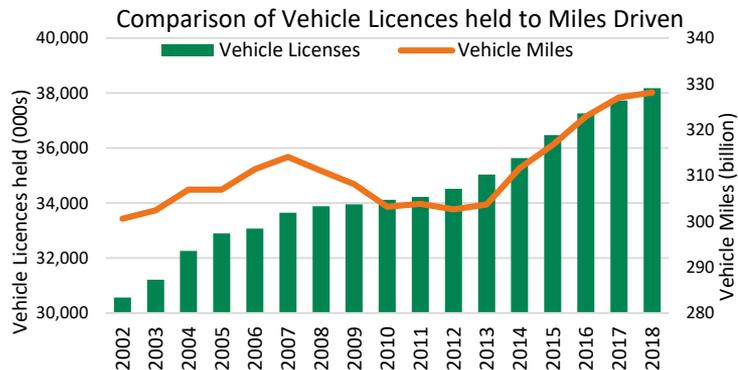
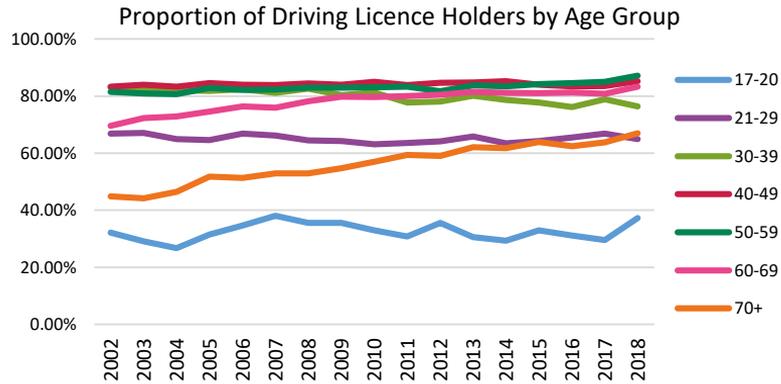
- Car users made up 58% of casualties in the last year but only 36% of those killed or seriously injured (KSI).
- Motorcyclists appear to have the highest propensity for accidents to lead to death or serious injury, making up 22% of all KSIs, whilst only comprising 11% of all casualties.
- The proportion of KSI by type has remained relatively stable since 2013.
- The proportion of total casualties that are killed or seriously injured has increased from 13% in 2013 up to 16% in 2017.



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# Market environment

## Changing driving habits

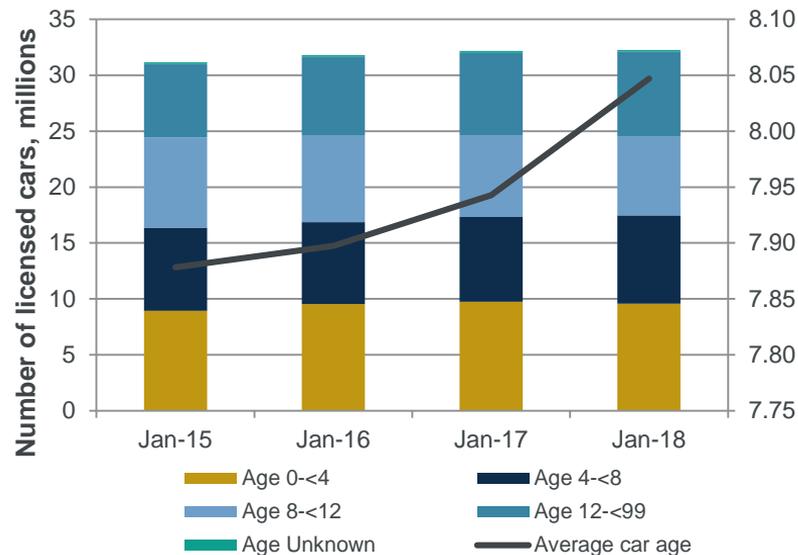
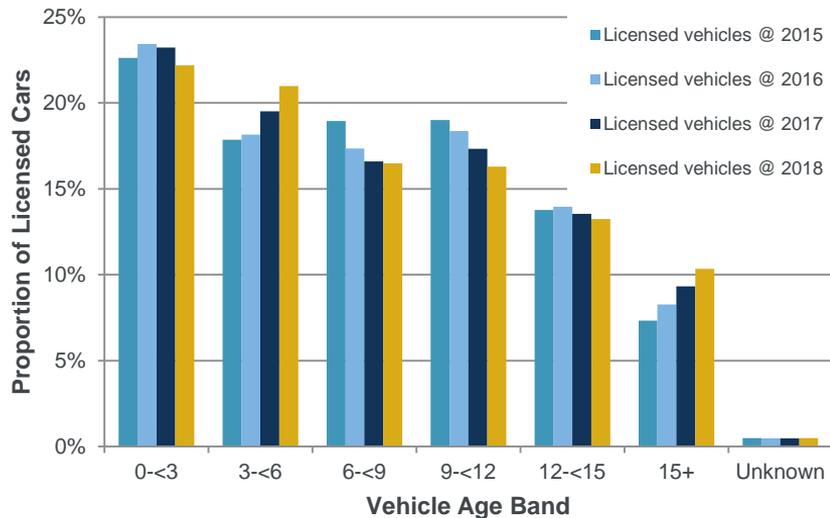


- National Travel Survey data was used to provide a view of the trends in the proportion of driving licences held over the period 2002-2018
- Ages 30-39 have seen the largest fall in proportion of licences held.
- The proportion of those over 70 with a licence has increased from 44.8% to 66.9% over the period.
- 17-20 year olds with a licence has increased sharply between 2017 and 2018 from 29.6% to 37.3%.
- The average car annual mileage has fallen by 2.6% between 2017 and 2018.
- In total, the number of car licences held in Great Britain has increased by over 22% since 2002 whilst the total number of miles driven by car has only increased by 6.3%.



# Market environment

## Car park



- Average licenced vehicle age continues to increase, driven by the 15+ years band

# Market Environment

## Impact of Brexit on Motor Insurance

### FINANCIAL IMPACT



PPOs

# BREXIT

### MARKET IMPACT

No. of UK Motor Insurers

Delays in  
Legislative Reforms



### REGULATORY IMPACT



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# Market Statistics: AD

## Advanced driving assistance systems (ADAS)



72% of new cars are available with a self-activating safety system



52% of new cars are available with overtaking sensors



52% of new cars are available with adaptive cruise control



74 % of new cars are available with autonomous emergency braking

### Projections

- According to SMMT, in the period 2019-2030 ADAS technology will prevent 3,900 deaths and avoid 47,000 serious accidents in the UK.
- Allied Market Research stated that the global ADAS market was valued at \$39.6 billion in 2018, and is projected to reach \$189.1 billion by 2026.
- The proportion of the cars on UK roads that have ADAS fitted is increasing – Thatcham Research expects 40% of cars to have this in 2020.

- ADAS technology has been pushing the cost of repairs up. The most recent survey done by What Car? (March 2018) reveals that:
  - Prices reached as high as £1,459 for an Adaptive cruise control sensor on an Audi Q5.
  - £1,629 for a distance sensor on a Volkswagen Touareg.
  - £2,024 for a forward collision mitigation unit on a Mitsubishi Outlander.
  - Cost for windscreen-mounted ADAS calibration spanned up to £700.
- Thatcham Research calls for manufacturers to engage with the repair industry to halt spiralling costs, as the cost of replacing some parts has increased by more than 120%.
- It also suggested that ADAS technology is particularly impacting windscreen replacement, potentially increasing costs by 123% on a Ford Focus and 78% on a Volkswagen Golf.

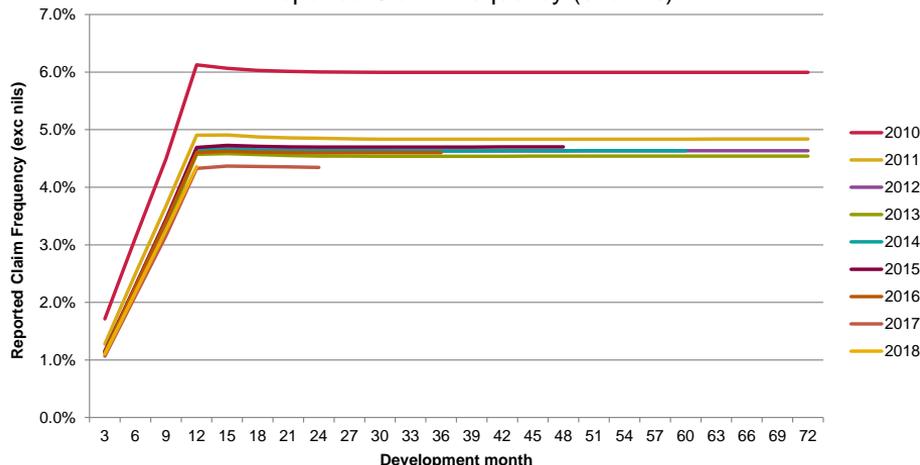


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# Market Statistics: AD

## Frequency and Severity

**Private Car Comp - AD**  
Reported Claim Frequency (exc nils)

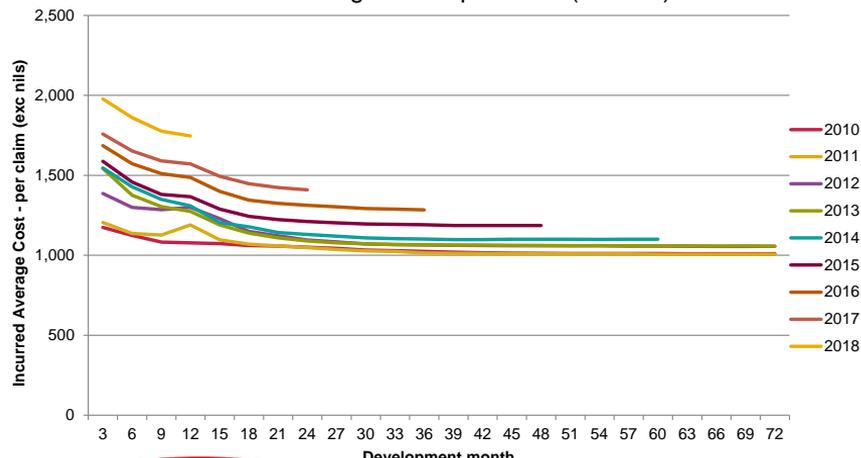


Annual Percentage Change

17-18: 0.7% 16-17: -5.5% 15-16: -2% 14-15: 1.5% 13-14: 2.1% 12-13: -2% 11-12: -4.2% 10-11: -19.3%

Frequency reductions  
cease in 2018

**Private Car Comp - AD**  
Incurred Average Cost - per claim (exc nils)



Annual Percentage Change

17-18: 11.2% 16-17: 7.4% 15-16: 7.8% 14-15: 7.8% 13-14: 3.9% 12-13: 0.1% 11-12: 5.1% 10-11: -0.3%

Severity inflation remains high  
at 11.2% p.a. in 2018



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# Market Statistics: AD

## Projected AD Results

Projected Ultimate AD Results for Private Car Comprehensive

Accident Period	Earned Exposure  (millions of vehicle years)	Ultimate AD Claim Frequency  (Non-nil claims per million vehicle years)	Ultimate AD Gross Claim Severity  (£)	Ultimate AD Recovery Rate  (%)	Ultimate AD Net Claim Severity  (£)	Ultimate AD Net Burning Cost  (£)	Year-on-Year Change in Frequency  (% pa)	Year-on-Year Change in AD Gross Severity  (% pa)	Year-on-Year Change in AD Recovery Rate  (% pa)	Year-on-Year Change in AD Net Severity  (% pa)	Year-on-Year Change in AD Net Burning Cost  (% pa)
2008	14.4	65,659	1,504	37.7%	937	61.5	-14.5%	1.4%	-0.9%	1.9%	-12.8%
2009	17.5	65,534	1,593	38.5%	979	64.2	-0.2%	6.0%	2.3%	4.5%	4.3%
2010	17.7	60,052	1,670	39.9%	1,004	60.3	-8.4%	4.8%	3.5%	2.5%	-6.1%
2011	18.2	48,439	1,701	41.2%	1,000	48.4	-19.3%	1.9%	3.3%	-0.4%	-19.6%
2012	18.9	46,436	1,800	41.6%	1,051	48.8	-4.1%	5.8%	1.0%	5.1%	0.7%
2013	19.1	45,456	1,819	42.4%	1,048	47.6	-2.1%	1.0%	1.8%	-0.3%	-2.4%
2014	19.3	46,436	1,907	42.8%	1,090	50.6	2.2%	4.9%	1.1%	4.0%	6.3%
2015	19.8	47,166	2,048	42.5%	1,177	55.5	1.6%	7.4%	-0.7%	7.9%	9.6%
2016	20.8	46,179	2,268	43.7%	1,278	59.0	-2.1%	10.8%	2.6%	8.6%	6.3%
2017	21.4	43,602	2,462	44.5%	1,365	59.5	-5.6%	8.5%	2.0%	6.8%	0.9%
2018	21.9	43,826	2,702	43.6%	1,524	66.8	0.5%	9.8%	-2.1%	11.6%	12.2%
Average (2011 to 2018)							-1.4%	6.8%	0.8%	6.2%	4.7%
Average (2013 to 2018)							-0.7%	8.2%	0.6%	7.8%	7.0%
Average (2015 to 2018)							-2.4%	9.7%	0.8%	9.0%	6.4%

AD costs are £19 per policy higher in 2018 than 2013, an increase of 40%.

Severity inflation averages 9% over the last three years



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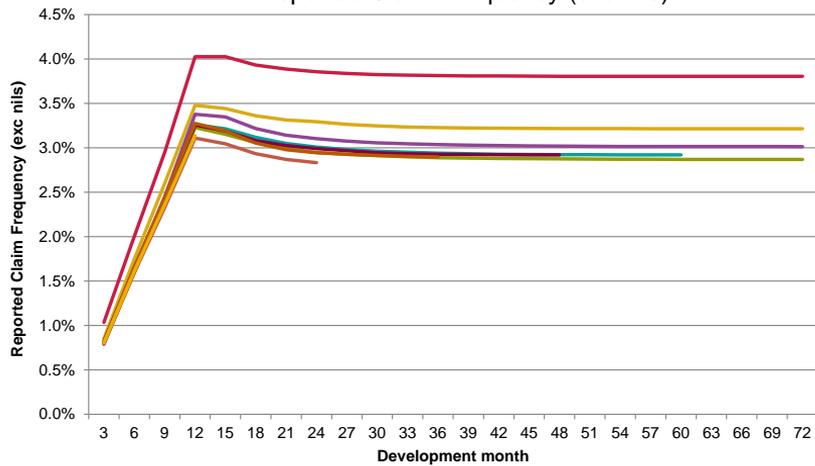


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# Market statistics: TPPD

## Frequency and Severity

**Private Car Comp - TPPD**  
Reported Claim Frequency (exc nils)

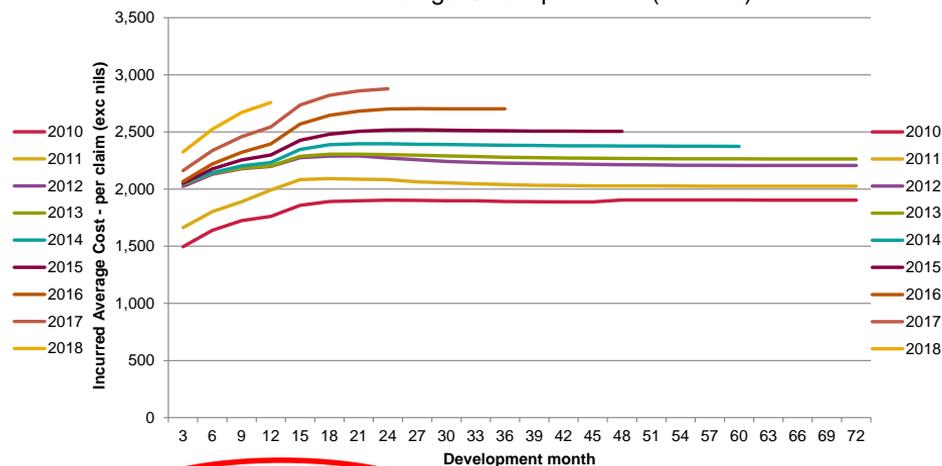


Annual Percentage Change

17-18: 1% 16-17: -3.8% 15-16: -1.1% 14-15: -0.1% 13-14: 1.7% 12-13: -4.8% 11-12: -6.3% 10-11: -15.5%

As with AD, frequency has slightly increased in 2018.

**Private Car Comp - TPPD**  
Incurred Average Cost - per claim (exc nils)



Annual Percentage Change

17-18: 8.4% 16-17: 6.5% 15-16: 7.6% 14-15: 5.4% 13-14: 4.8% 12-13: 2.6% 11-12: 8.9% 10-11: 6.2%

Severity inflation remains high at 8.4% p.a. in 2018.



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# Market statistics: TPPD

## Projected TPPD Results

Projected Ultimate TPPD Results for Private Car Comprehensive

Accident Period	Earned Exposure  (millions of vehicle years)	Ultimate TPPD Claim Frequency  (Non-nil claims per million vehicle years)	Ultimate TPPD Claim Severity (£)	Ultimate TPPD Burning Cost (£)	Year-on-Year Change in Frequency (% pa)	Year-on-Year Change in Severity (% pa)	Year-on-Year Change in Burning Cost (% pa)
2008	14.6	43,422	1,735	75.3	-4.3%	9.4%	4.6%
2009	17.7	42,564	1,854	78.9	-2.0%	6.9%	4.8%
2010	17.9	39,234	1,919	75.3	-7.8%	3.5%	-4.6%
2011	18.4	32,696	2,029	66.3	-16.7%	5.7%	-11.9%
2012	19.5	30,059	2,205	66.3	-8.1%	8.7%	-0.1%
2013	19.6	28,637	2,262	64.8	-4.7%	2.6%	-2.3%
2014	19.9	29,135	2,373	69.1	1.7%	4.9%	6.7%
2015	20.5	29,104	2,500	72.8	-0.1%	5.3%	5.2%
2016	21.3	28,807	2,691	77.5	-1.0%	7.6%	6.5%
2017	21.8	27,709	2,865	79.4	-3.8%	6.5%	2.4%
2018	22.2	27,939	3,092	86.4	0.8%	7.9%	8.8%
<b>Average (2011 to 2018)</b>					-2.2%	6.2%	3.8%
<b>Average (2013 to 2018)</b>					-0.5%	6.4%	5.9%
<b>Average (2015 to 2018)</b>					-1.4%	7.3%	5.9%

TPPD costs are £22 per policy higher in 2018 than 2013, an increase of 33%.

Over the last 11 years TPPD severity inflation has ranged from 2.6% to 9.4% and averaged 6.3%



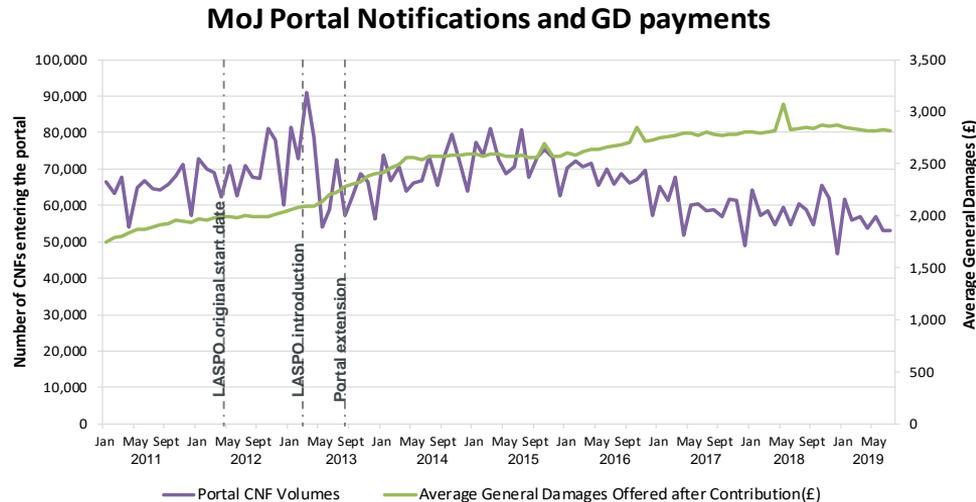


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# Market Statistics: Capped TPI

## MoJ Portal Notifications and GD payments

- The number of claims reported through the portal has been reducing since mid-2015, possibly due to past and proposed reforms.
- The pace of the reduction has slowed considerably in the last year. The level of notifications in the first half of 2019 was 2.7% lower than the first half of 2018. In 2017 the level of notifications was 10.7% lower than in 2016.
- General Damages payments appeared to have stabilised. Past increases have been in line with changes in the JC guidelines (see table). A new JCG edition may be due later this year.



Source: <https://www.claimsportal.org.uk/media/2974/rta-dashboard.xlsx>

JCB Edition	Month Published	Average Uplift
8 <sup>th</sup>	Sep 2006	5.2%
9 <sup>th</sup>	Sep 2008	9.6%
10 <sup>th</sup>	Sep 2010	2.8%
11 <sup>th</sup>	Sep 2012	9.0%
LASPO	Apr 2013	10.0%
12 <sup>th</sup>	Sep 2013	2.3%
13 <sup>th</sup>	Sep 2015	4.7%
14 <sup>th</sup>	Sep 2017	4.8%

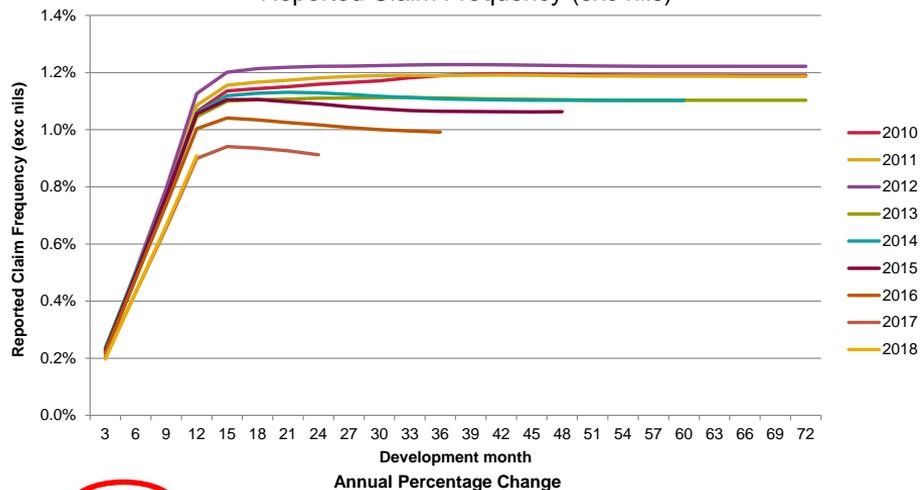


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# Market Statistics: Capped TPI

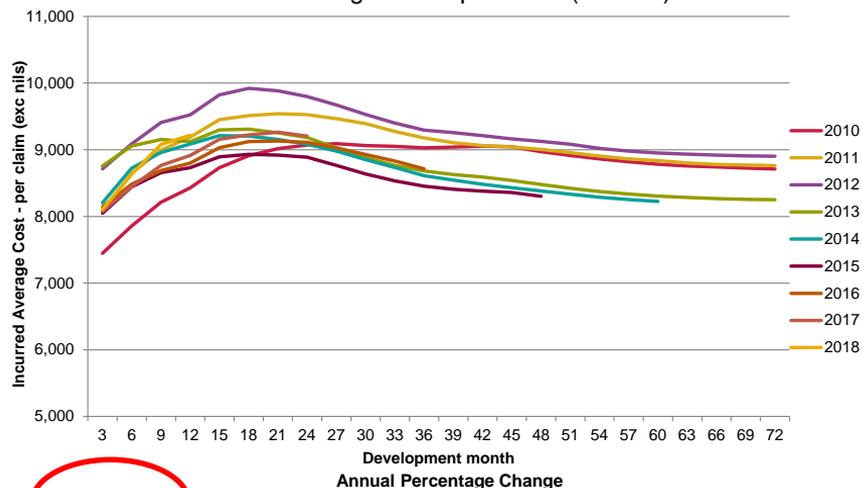
## Frequency and Severity

**Private Car Comp - TPI Capped**  
Reported Claim Frequency (exc nils)



Reductions in frequency observed from 2012 through to 2017 have stalled in 2018.

**Private Car Comp - TPI Capped**  
Incurred Average Cost - per claim (exc nils)



Severity inflation highest it's been for a number of years at 3.4%.



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# Market Statistics: Capped TPI

## Projected Capped TPI Results - Methodology

- As with previous iterations of the TPWP we have analysed Capped TPI in five bands. However at this review we have changed the level of indexation applied to the bands. We have used an indexation of 1% p.a. which is the average incurred severity inflation observed from 2013 to 2018 (previously 7% p.a. was assumed). The exception is for the 100k limit which is still indexed at 7% p.a. The bands are defined as below in 2010 accident year years and indexed at 1% p.a.
  - £0 to £1k (*£1.1k in 2018 accident year*)
  - £1k to £10k (*£11k in 2018 accident year*)
  - £10k to £20k (*£22k in 2018 accident year*)
  - £20k to £50k (*£54k in 2018 accident year*)
  - £50k to £100k (*£172k in 2018 accident year*)
- We have maintained the same band definitions as previously for Excess TPI.



# Market Statistics: Capped TPI

## Projected Capped TPI Results - Methodology

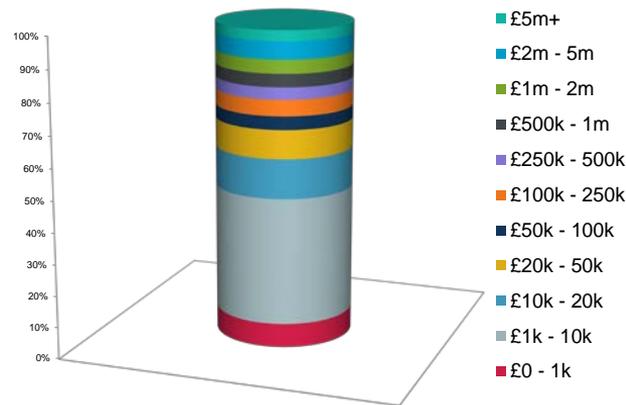
- When presenting results of a layered analysis, there is a choice in how to partition the claim amounts:
  - Type 1: In which claims that exhaust the width of a particular layer contribute an amount equal to the layer's width
  - Type 2: In which claims that exhaust the width of a particular layer are removed from that layer, and the full claim amounts “from ground up” (“FGU”) are allocated to the next layer up



# Market Statistics: Capped TPI

## Projected Capped TPI Results - Methodology

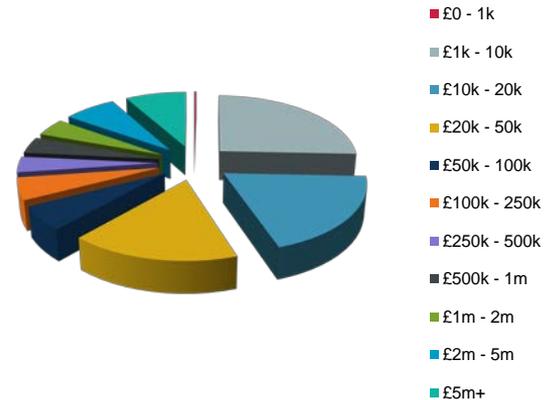
- Using the Type 1 definition, a claim of £15,000 from accident year 2010 contributes:
  - £1k to Layer 1 (0 – £1k)
  - £9k to Layer 2 (£1k – £10k)
  - £5k to Layer 3 (£10k – £20k)
  - £0 to all other layers
- The chart shows the projected total TPI burning cost split by layer using Type 1 definition.
- In this presentation, any charts which use this definition will be accompanied with a version of this graphic. Shading represents the portion(s) of the claim that is relevant to the given statistic.



# Market Statistics: Capped TPI

## Projected Capped TPI Results - Methodology

- Using the Type 2 definition, a claim of £15,000 from accident year 2010 contributes:
  - £15k to Layer 3 (£10k – £20k)
  - £0 to all other layers
- The chart shows the projected total TPI burning cost split by layer using Type 2 definition.
- In this presentation, any charts which use this definition will be accompanied with a version of this graphic. Shading represents the portion(s) of the claim that is relevant to the given statistic.



# Market Statistics: Capped TPI

## Projected Capped TPI Results

Projected Ultimate Capped TPI Results for Private Car Comprehensive

Accident Period	Earned Exposure  (millions of vehicle years)	Ultimate Capped TPI Claim Frequency  (Non-nil claims per million vehicle years)	Ultimate Capped TPI Claim Severity  (£)	Ultimate Capped TPI Burning Cost  (£)	Year-on-Year Change in Frequency  (% pa)	Year-on-Year Change in Severity  (% pa)	Year-on-Year Change in Burning Cost  (% pa)
2009	8.9	12,699	8,501	108.0	5.9%	11.7%	18.3%
2010	9.5	12,660	8,371	106.0	-0.3%	-1.5%	-1.8%
2011	10.4	12,830	8,442	108.3	1.3%	0.9%	2.2%
2012	11.4	13,175	8,735	115.1	2.7%	3.5%	6.2%
2013	13.8	11,460	8,088	92.7	-13.0%	-7.4%	-19.5%
2014	16.2	11,306	7,999	90.4	-1.3%	-1.1%	-2.4%
2015	16.8	10,851	7,923	86.0	-4.0%	-1.0%	-4.9%
2016	17.8	10,206	8,094	82.6	-5.9%	2.2%	-3.9%
2017	18.3	9,125	8,230	75.1	-10.6%	1.7%	-9.1%
2018	18.8	9,317	8,631	80.4	2.1%	4.9%	7.1%
Average (2011 to 2018)					-4.5%	0.3%	-4.2%
Average (2013 to 2018)					-4.1%	1.3%	-2.8%
Average (2015 to 2018)					-5.0%	2.9%	-2.2%

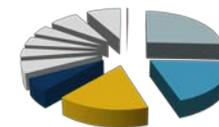
While cost of Capped TPI per policy has increased in 2018 it is still £35 less than in 2012.

2018 has seen increases in both frequency and severity.



# Market Statistics: Capped TPI

## Projected Capped TPI Results



Private Car Comprehensive Capped TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 1% pa)

Accident Year	£0 - 1k	£1k - 10k	£10k - 20k	£20k - 50k	£50k to £100k	< 100k
<b>Frequency exc Nils (claims per million policy years)</b>						
2009	1,323	8,204	2,126	855	112	12,619
2010	1,320	8,376	2,021	771	103	12,591
2011	1,546	8,278	2,042	781	116	12,764
2012	1,651	8,342	2,136	850	128	13,107
2013	1,175	7,989	1,589	543	101	11,397
2014	1,121	8,073	1,494	454	99	11,242
2015	1,060	7,899	1,332	405	96	10,793
2016	1,100	7,358	1,222	373	93	10,147
2017	1,054	6,566	1,027	330	93	9,071
2018	1,056	6,704	1,052	345	101	9,258

The £50k to £100k band has seen smaller reductions in frequency from 2013 to 2017 than lower bands.

Private Car Comprehensive Capped TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 1% pa)

Accident Year	£0 - 1k	£1k - 10k	£10k - 20k	£20k - 50k	£50k to £100k
<b>Change in Frequency exc Nils</b>					
2009	-20.8%	6.1%	20.4%	29.8%	29.5%
2010	-0.2%	2.1%	-4.9%	-9.8%	-7.8%
2011	17.1%	-1.2%	1.0%	1.3%	13.1%
2012	6.8%	0.8%	4.6%	8.7%	10.4%
2013	-28.9%	-4.2%	-25.6%	-36.1%	-21.7%
2014	-4.5%	1.0%	-6.0%	-16.4%	-1.5%
2015	-5.5%	-2.2%	-10.9%	-10.7%	-2.7%
2016	3.8%	-6.8%	-8.2%	-8.0%	-3.0%
2017	-4.2%	-10.8%	-15.9%	-11.6%	0.0%
2018	0.2%	2.1%	2.4%	4.5%	8.4%

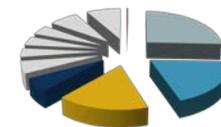
Higher bands have seen a larger frequency increase which is driving the severity inflation observed.



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# Market Statistics: Capped TPI

## Projected Capped TPI Results



Private Car Comprehensive Capped TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 1% pa)

Accident Year	£0 - 1k	£1k - 10k	£10k - 20k	£20k - 50k	£50k to £100k	< 100k
<b>Average Cost (£)</b>						
2009	264	4,853	13,635	28,031	65,762	7,960
2010	305	5,002	13,745	28,597	67,896	7,872
2011	342	5,029	13,846	28,998	70,061	7,932
2012	358	5,112	14,040	29,357	71,883	8,194
2013	443	4,834	14,083	29,287	75,147	7,457
2014	445	4,822	14,158	29,793	79,955	7,297
2015	481	4,846	14,210	30,165	80,789	7,202
2016	490	4,924	14,312	30,608	86,082	7,265
2017	475	4,959	14,413	30,867	89,525	7,321
2018	524	5,039	14,632	31,942	93,916	7,588

Severity inflation in the middle bands has been reasonably consistent around 1% to 2% post LASPO.

Private Car Comprehensive Capped TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 1% pa)

Accident Year	£0 - 1k	£1k - 10k	£10k - 20k	£20k - 50k	£50k to £100k
<b>Change in Average Cost</b>					
2009	-70.0%	-0.8%	6.3%	5.7%	24.5%
2010	15.7%	3.1%	0.8%	2.0%	3.2%
2011	12.0%	0.5%	0.7%	1.4%	3.2%
2012	4.8%	1.6%	1.4%	1.2%	2.6%
2013	23.6%	-5.4%	0.3%	-0.2%	4.5%
2014	0.6%	-0.3%	0.5%	1.7%	6.4%
2015	8.0%	0.5%	0.4%	1.2%	1.0%
2016	2.0%	1.6%	0.7%	1.5%	6.6%
2017	-3.1%	0.7%	0.7%	0.8%	4.0%
2018	10.2%	1.6%	1.5%	3.5%	4.9%

The £50k to £100k band has seen consistently higher inflation.





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# Market Statistics: Excess TPI

## Projected Excess TPI Results - Methodology

- We have maintained the same band definitions as previously for Excess TPI. The bands are defined as below in 2010 accident year years and indexed at 7% p.a.
  - £100 to £250k (*£430k in 2018 accident year*)
  - £250k to £500k (*£859k in 2018 accident year*)
  - £500k to £1m (*£1.7m in 2018 accident year*)
  - £1m to £2m (*£3.4m in 2018 accident year*)
  - £2m to £5m (*£8.6m in 2018 accident year*)
  - >£5m
- Projections undertaken by layer with companies grouped into three levels of case reserving strength.
- Open claims data at an Ogden -0.75% basis and hence results presented assuming future claim settlements are at Ogden -0.75%.
- The development profile is based on data up to Feb 2017. All data after this point is excluded from the assumed development (i.e. it is assumed that the development profile by layer pre Ogden still applies). This development profile is applied to the latest incurred position.
- For the > £5m layer there is a significant distortion from the change in Ogden rate and so chain-ladder models are no longer appropriate.
- Therefore the total TPI Excess has been projected in total by group.
- The >£5m layer is then calculated as the difference between the total and the sum of the other layers.



# Market Statistics: Excess TPI

## Projected Excess TPI Results

Projected Ultimate Excess TPI Results for Private Car Comprehensive

Accident Period	Earned Exposure  (millions of vehicle years)	Ultimate Excess TPI Claim Frequency  (Non-nil claims per million vehicle years)	Ultimate Excess TPI Claim Severity  (£)	Ultimate Excess TPI Burning Cost  (£)	Year-on-Year Change in Frequency  (% pa)	Year-on-Year Change in Severity  (% pa)	Year-on-Year Change in Burning Cost  (% pa)
2009	8.9	80	511,601	41.1	-4.4%	47.8%	41.3%
2010	9.5	69	515,100	35.3	-14.7%	0.7%	-14.1%
2011	10.4	66	519,379	34.3	-3.6%	0.8%	-2.8%
2012	11.4	67	553,829	37.1	1.4%	6.6%	8.2%
2013	13.8	63	675,130	42.4	-6.3%	21.9%	14.2%
2014	16.2	64	873,963	56.0	2.0%	29.5%	32.0%
2015	16.8	59	843,246	49.6	-8.3%	-3.5%	-11.5%
2016	17.8	59	977,707	57.9	0.7%	15.9%	16.8%
2017	18.3	54	1,108,194	59.9	-8.7%	13.3%	3.5%
2018	18.8	59	1,083,837	64.2	9.5%	-2.2%	7.1%
Average (2011 to 2018)					-1.6%	11.1%	9.3%
Average (2013 to 2018)					-1.2%	9.9%	8.6%
Average (2015 to 2018)					0.2%	8.7%	9.0%

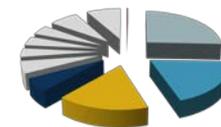
Frequency of large claims is up in 2018 compared to 2017 and is in line with 2015 and 2016. The long-term reduction in large claim frequency is consistent with the road casualty data.

Year-on-year severity is volatile but the averages are in the range 8% to 11% p.a. Some of this will be due to the change in Ogden rate.

- The uncertainty in projections of these claims is exacerbated by the changes in the Ogden discount rate and their impact on development trends, claims costs and settlement speeds.



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# Market Statistics: Excess TPI

## Projected Excess TPI Results

Private Car Comprehensive Excess TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 7% pa)

Accident Year	£100k - 250k	£250k - 500k	£500k - 1m	£1m - 2m	£2m to 5m	> £5m
<b>Frequency exc Nils (finishing in layer) (claims per million policy years)</b>						
2009	44.2	19.0	7.8	3.6	3.7	2.1
2010	42.6	12.2	6.4	2.6	3.2	1.6
2011	39.6	12.5	6.6	4.4	1.7	1.3
2012	40.2	13.2	6.3	3.5	2.9	1.0
2013	37.8	12.4	5.3	3.3	2.4	1.7
2014	35.5	13.4	6.5	3.6	2.8	2.4
2015	34.0	11.6	5.5	3.1	2.8	1.7
2016	33.9	12.7	4.8	2.7	3.1	1.9
2017	30.0	11.4	4.7	3.3	2.7	2.1
2018	34.0	12.0	5.4	3.5	2.3	2.0
<b>Average Cost (£)</b>						
2009	143,410	324,719	678,859	1,314,430	2,853,848	7,287,396
2010	155,611	339,911	680,861	1,396,776	2,821,424	9,146,511
2011	163,012	360,569	708,935	1,460,029	3,888,190	9,948,729
2012	173,851	384,917	755,609	1,643,634	3,380,915	12,630,409
2013	185,728	413,024	783,208	1,542,485	3,572,102	11,600,587
2014	201,099	456,680	862,065	1,882,489	3,998,074	11,651,640
2015	209,579	488,762	921,131	1,966,774	4,366,437	12,415,307
2016	220,857	525,414	992,248	2,201,599	4,484,209	14,384,747
2017	240,424	573,688	1,015,614	2,289,878	4,973,404	14,217,614
2018	257,124	597,546	1,126,054	2,419,817	4,666,223	16,421,515
<b>Burning Cost (£)</b>						
2009	6.3	6.2	5.3	4.7	10.6	15.6
2010	6.6	4.2	4.4	3.7	8.9	14.4
2011	6.4	4.5	4.7	6.5	6.7	12.6
2012	7.0	5.1	4.7	5.8	9.7	12.5
2013	7.0	5.1	4.1	5.0	8.6	20.3
2014	7.1	6.1	5.6	6.9	11.1	27.7
2015	7.1	5.7	5.0	6.1	12.2	21.6
2016	7.5	6.7	4.8	5.9	14.0	27.8
2017	7.2	6.6	4.7	7.5	13.2	29.4
2018	8.7	7.2	6.1	8.5	10.7	33.2

- Claims >£5m make up a significant part of the total TPI Excess cost. However, given the changes to the Ogden discount rate the level of uncertainty in results for the highest layers is even higher than would usually be the case.





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# Conclusions

Accident Year	Burning Cost (£)				
	AD	TPD	Capped TPI	Excess TPI*	Total AD + TP
2009	64	79	108	41	292
2010	60	75	106	35	277
2011	48	66	108	34	257
2012	49	66	115	37	267
2013	48	65	93	42	248
2014	51	69	90	56	266
2015	55	73	86	50	264
2016	59	78	83	58	277
2017	60	79	75	60	274
2018	67	86	80	64	298

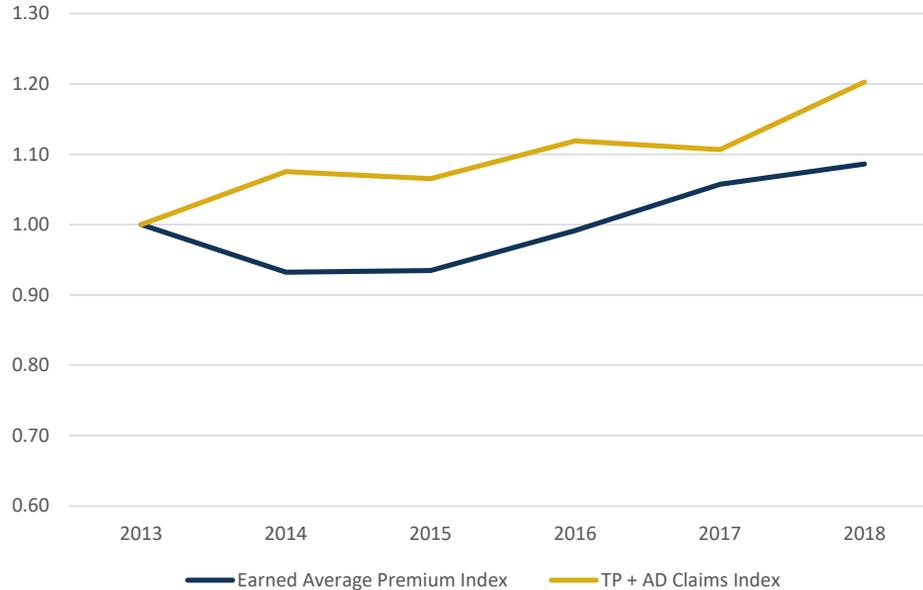
\*Note – Excess TPI burning cost assumes future claims settle at Ogden -0.75%.

- The Total AD + TP burning cost is estimated to be reasonably flat from 2014 to 2017. Average premium trends in this period showed significant increases.
- In 2018 all claim types have seen increases in burning cost with no frequency reductions to offset severity inflation.
- Overall burning cost is estimated to be 9% higher in 2018 than 2017 which is driving the higher 2018 accident year UK Motor Insurer loss ratios shown earlier.



# Conclusions

Premium vs Claims



- Since 2013 claims cost (AD + TP) has increased by 20% whereas earned average premium has only increase by 10%.
- However, since 2015 average premiums have increased by 16% and claims by 13%.

# Questions

# Comments

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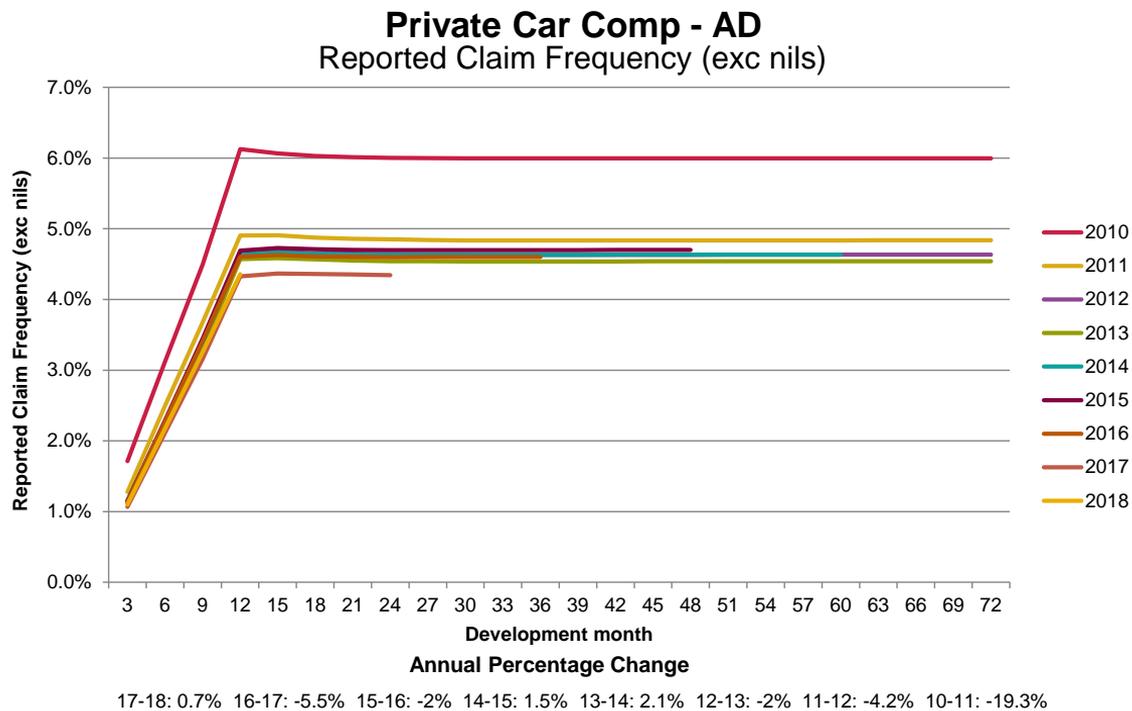




- 1. Market Environment**
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- 3. Market Statistics: TPD**
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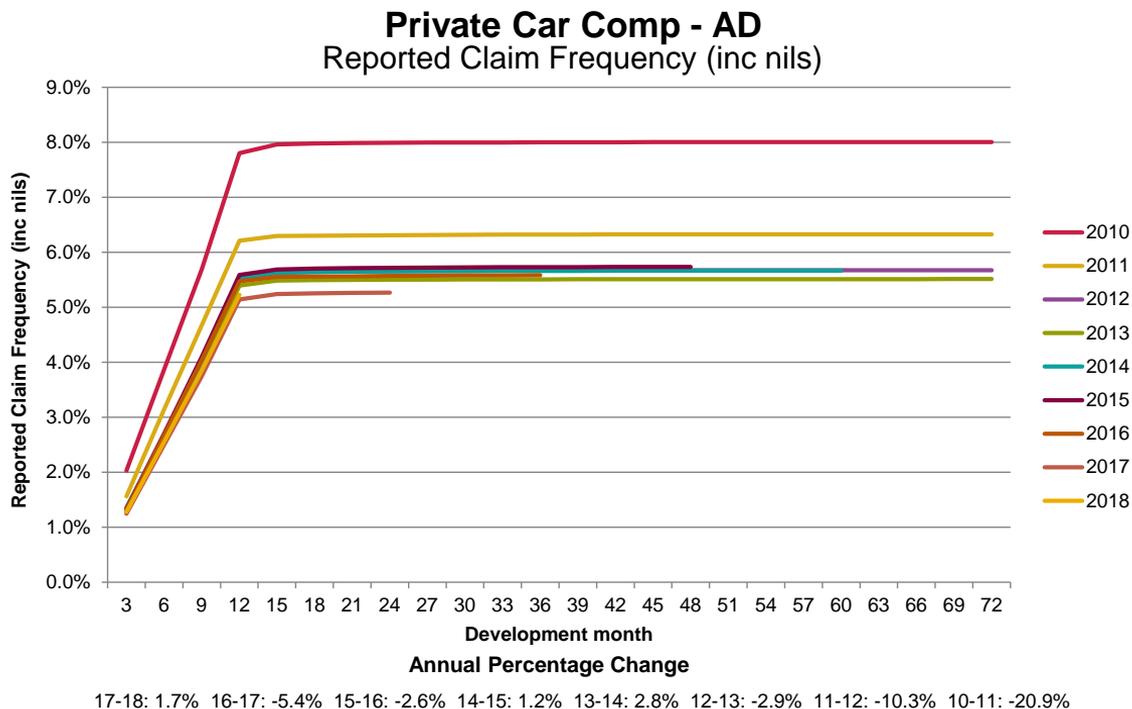
# Appendix - AD

## Claim frequency (excluding nils)



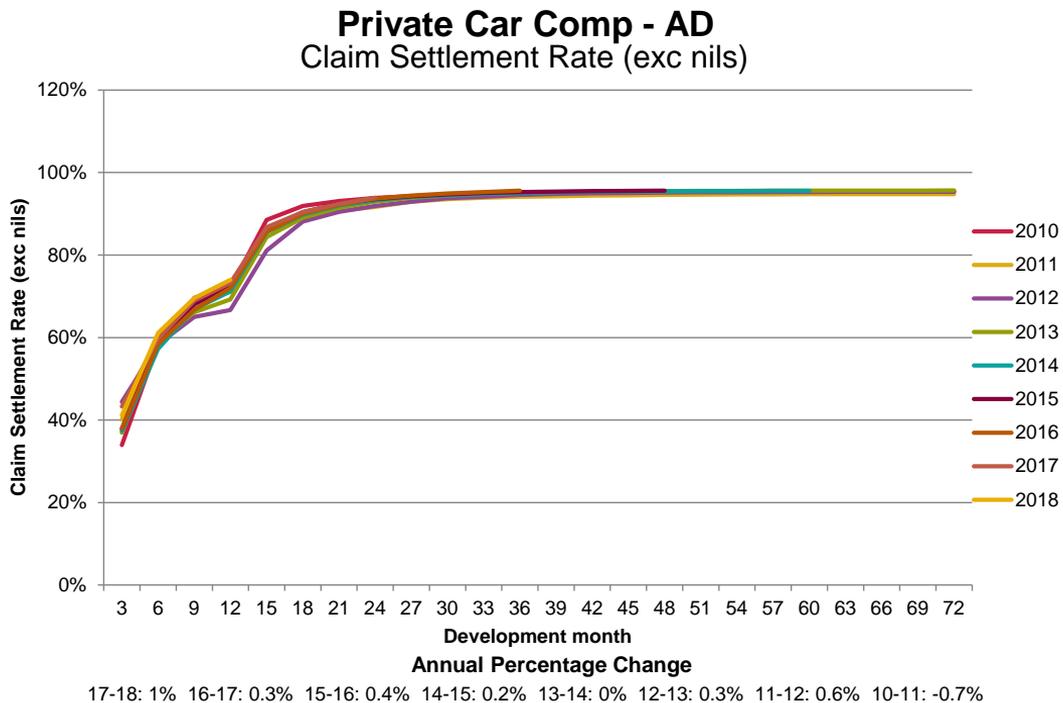
# Appendix - AD

## Claim frequency (including nils)



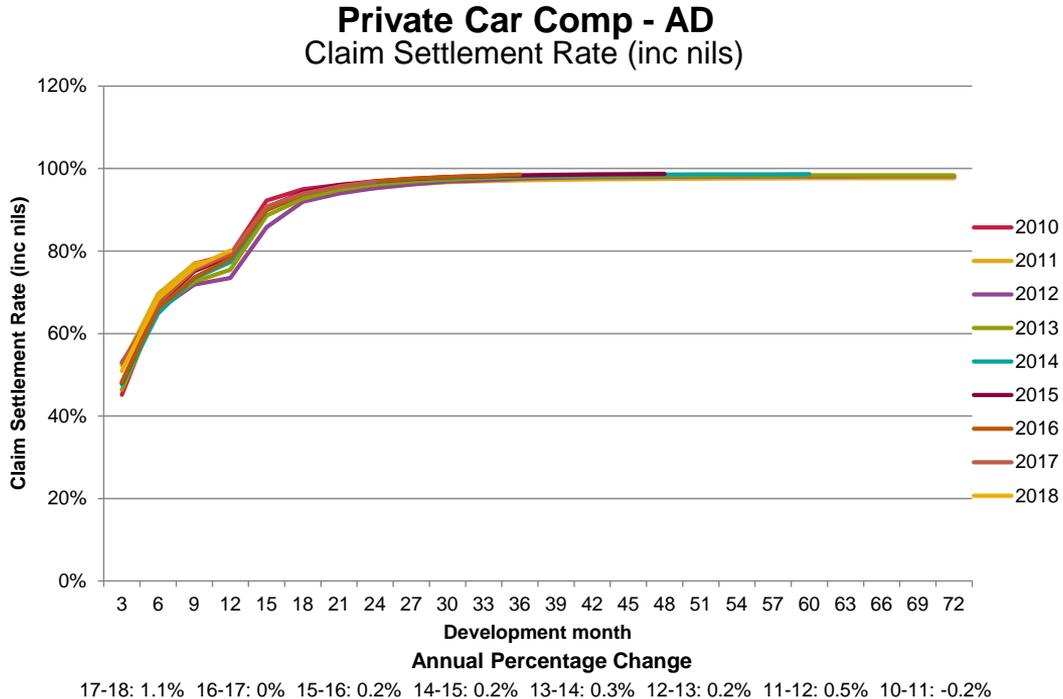
# Appendix - AD

## Settlement Rate (excluding nils)



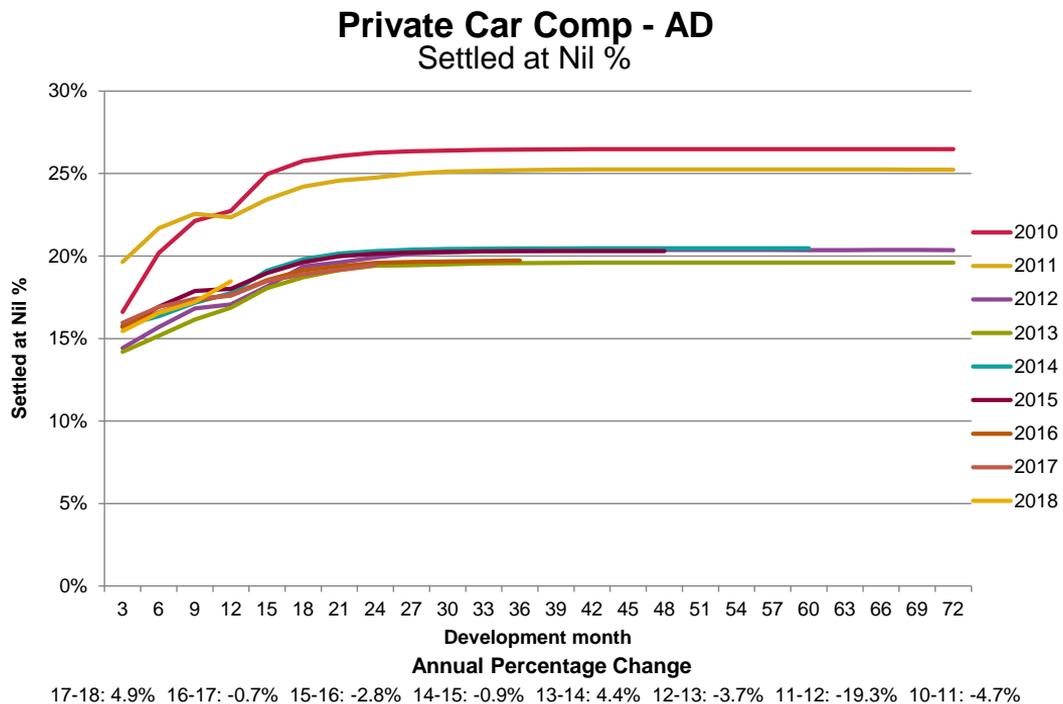
# Appendix - AD

## Settlement Rate (including nils)



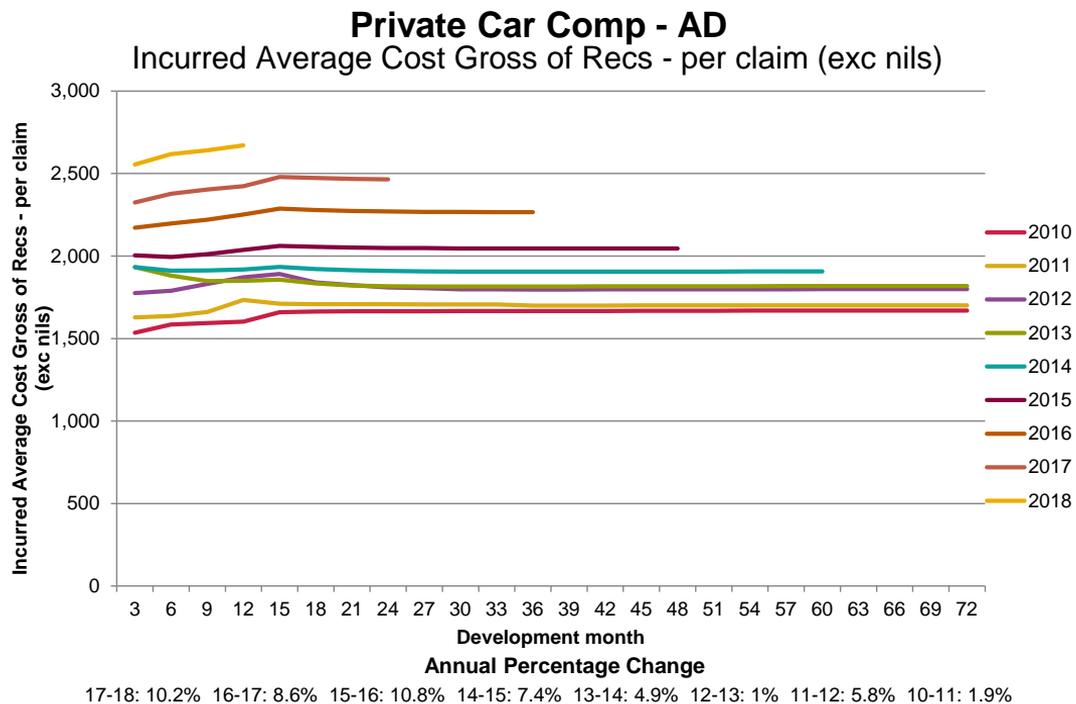
# Appendix - AD

## Settled at Nil %



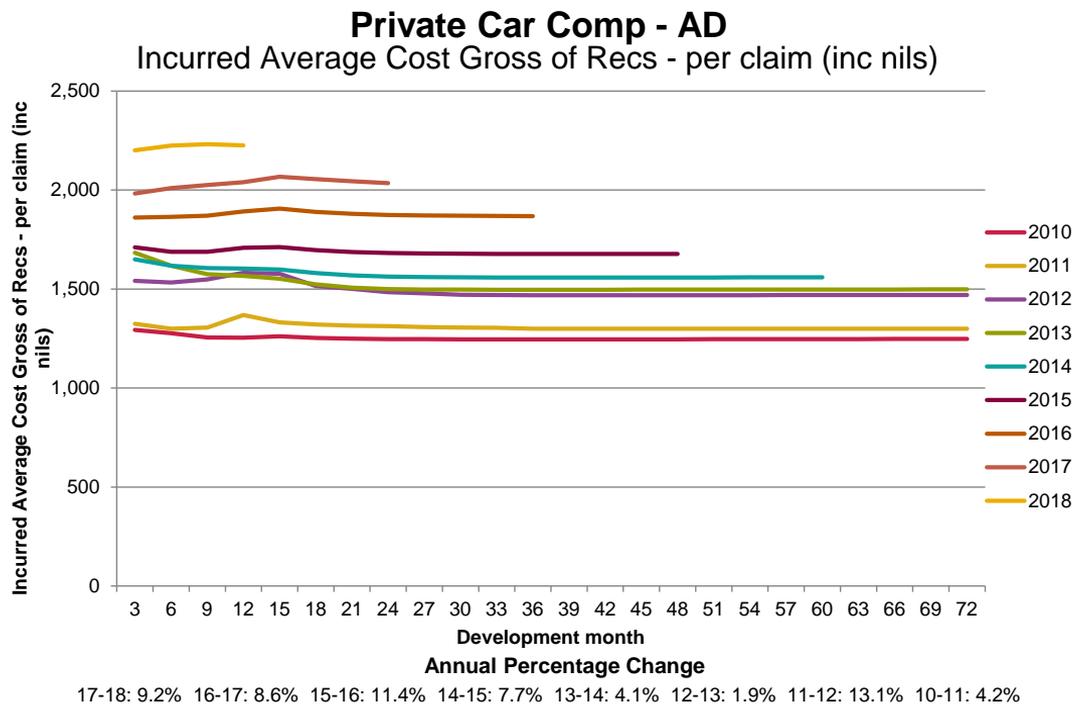
# Appendix - AD

## Incurred Average Cost Gross of Recs (excluding nils)



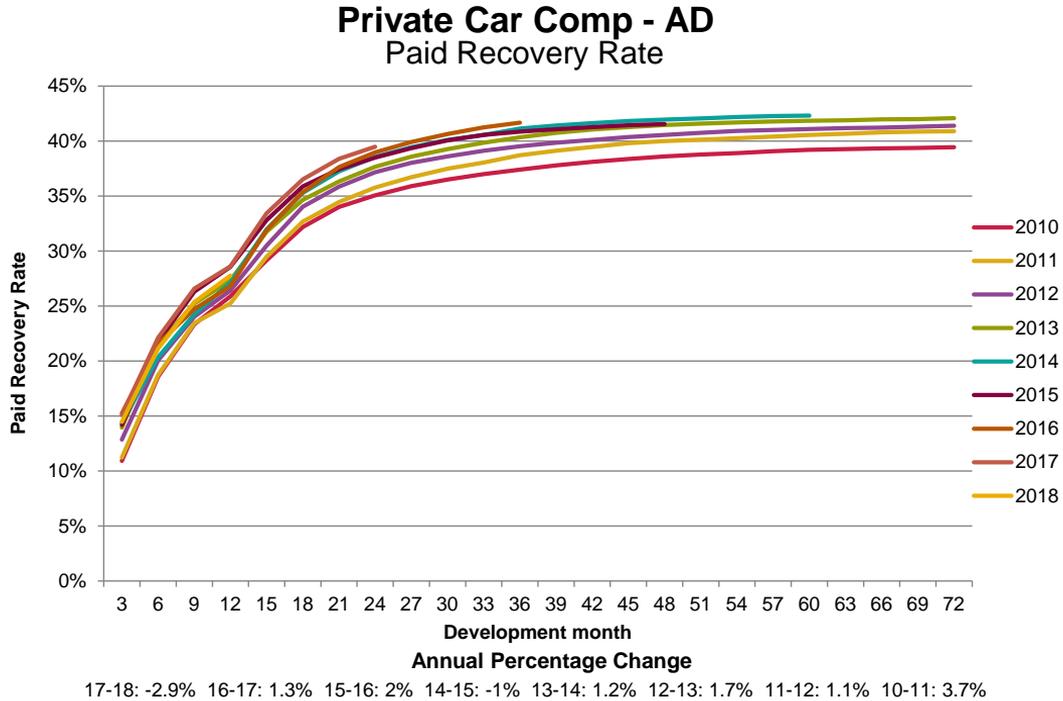
# Appendix - AD

## Incurred Average Cost Gross of Recs (including nils)



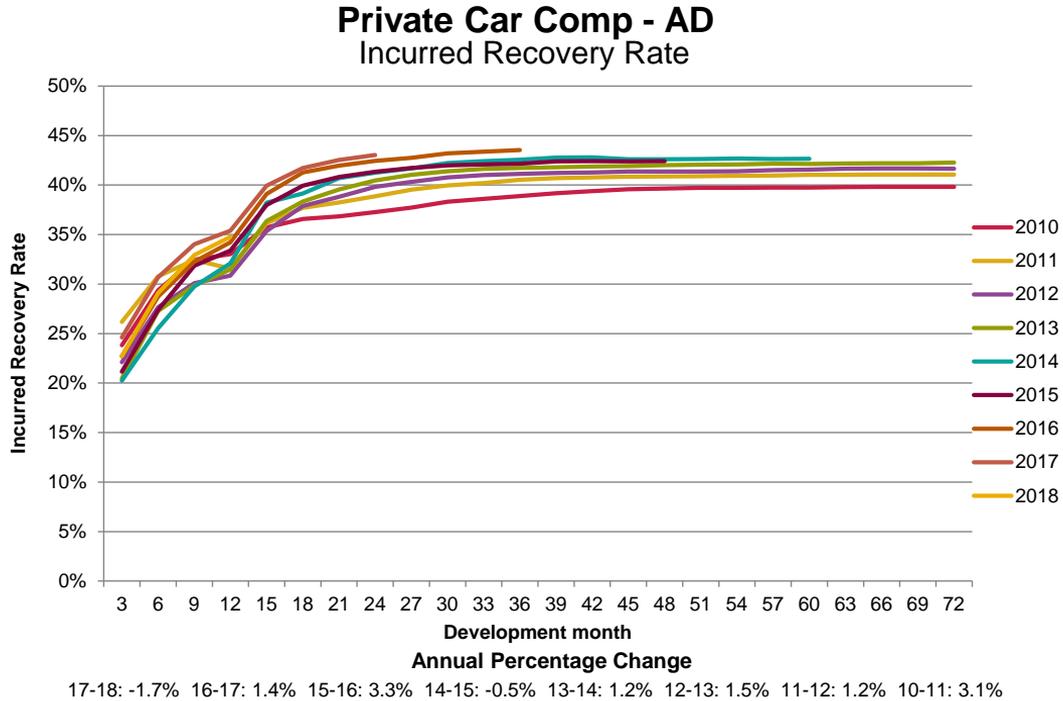
# Appendix - AD

## Paid Recovery Rate



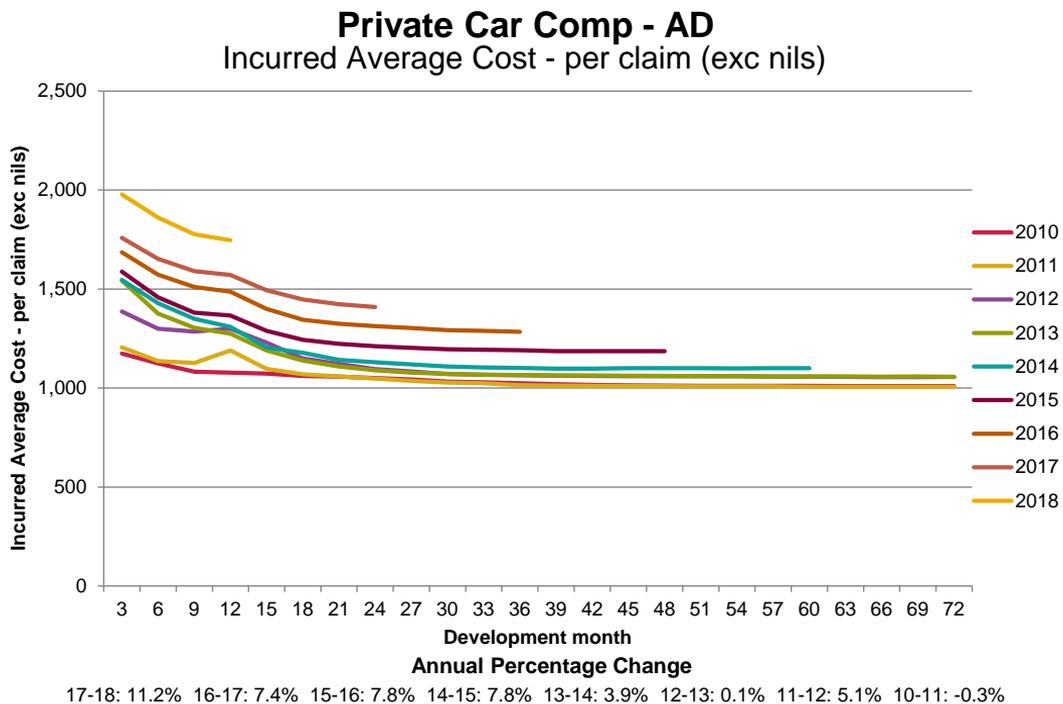
# Appendix - AD

## Incurred Recovery Rate



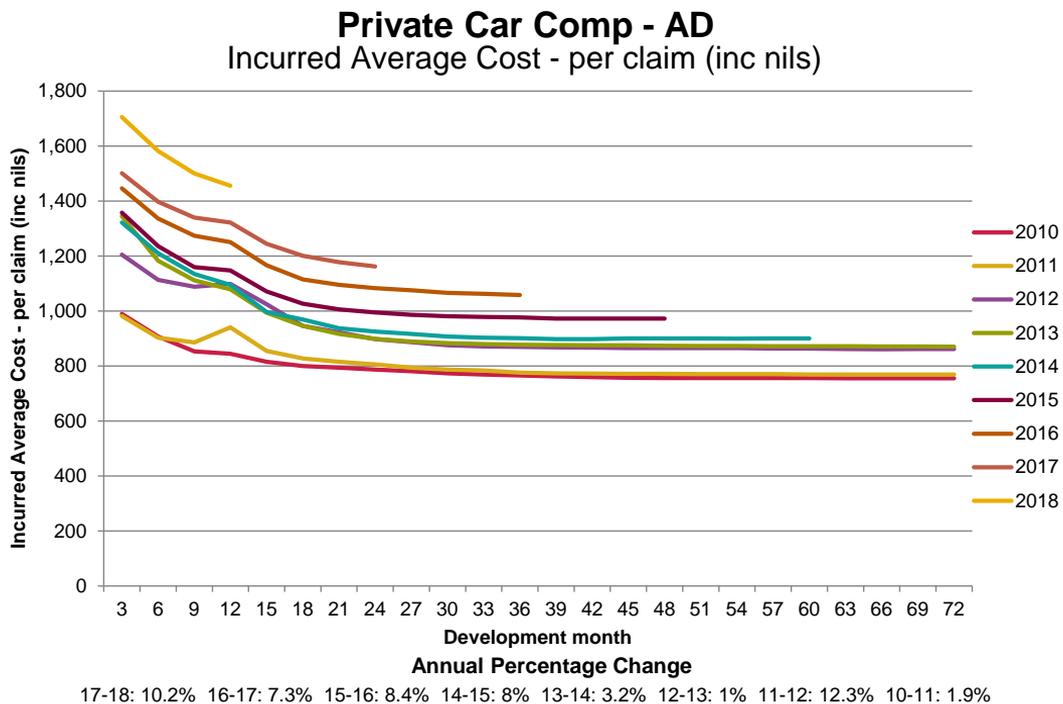
# Appendix - AD

## Incurred Average Cost Net of Recs (excluding nils)



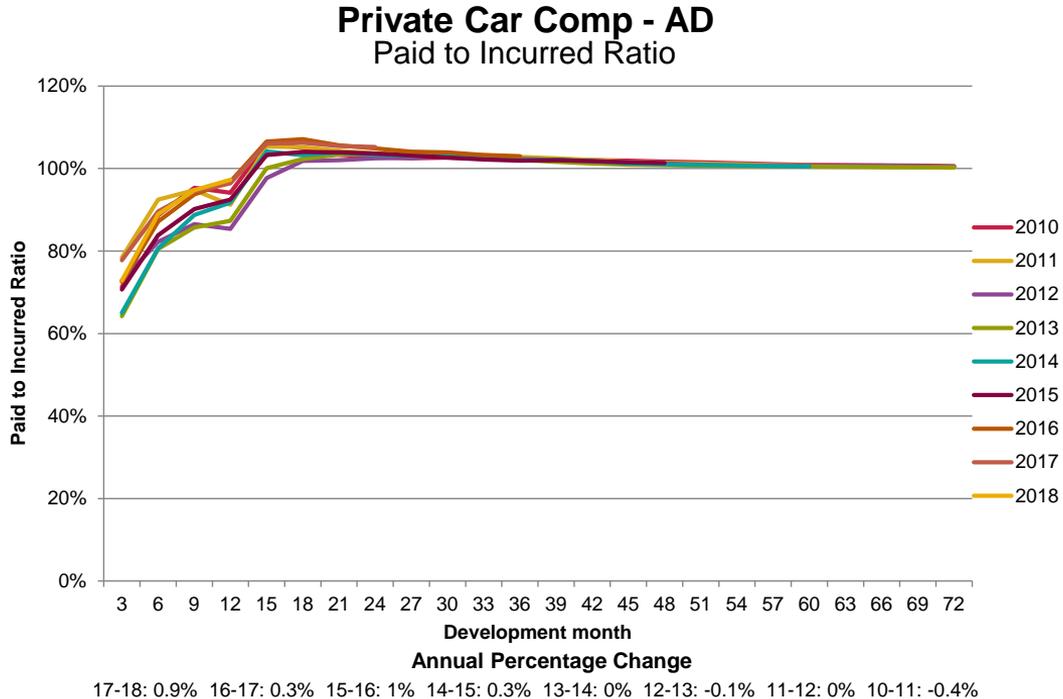
# Appendix - AD

## Incurred Average Cost Net of Recs (including nils)



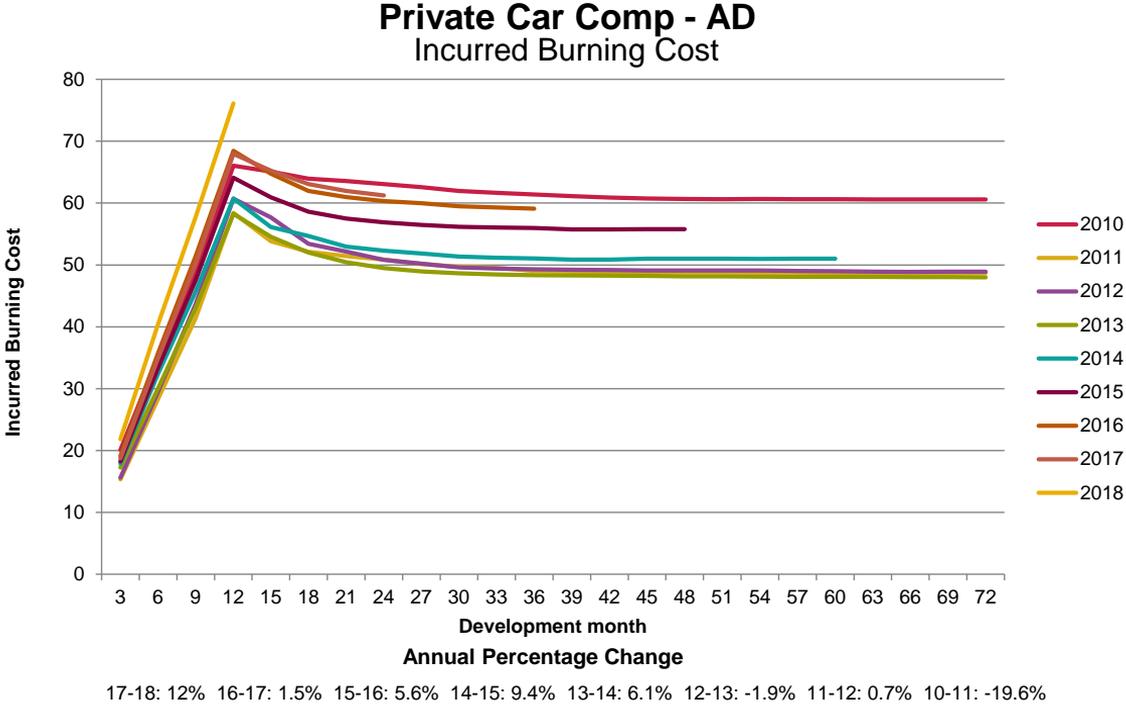
# Appendix - AD

## Paid to Incurred Ratio Net of Recs



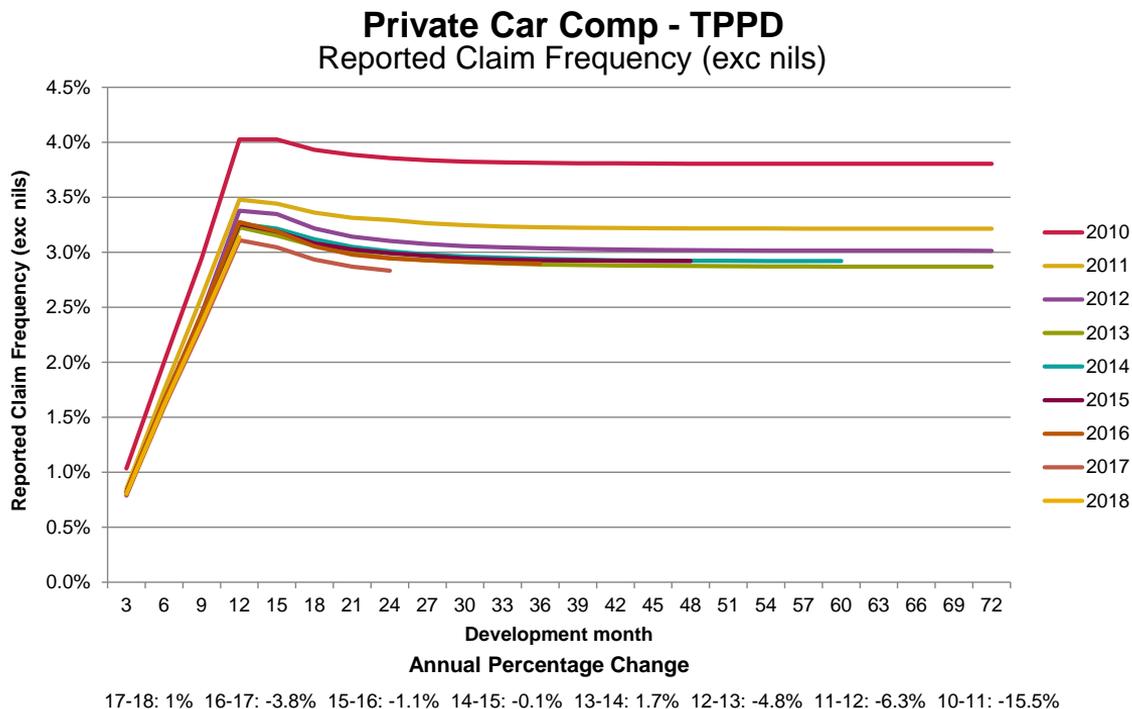
# Appendix - AD

## Incurred Burning Cost



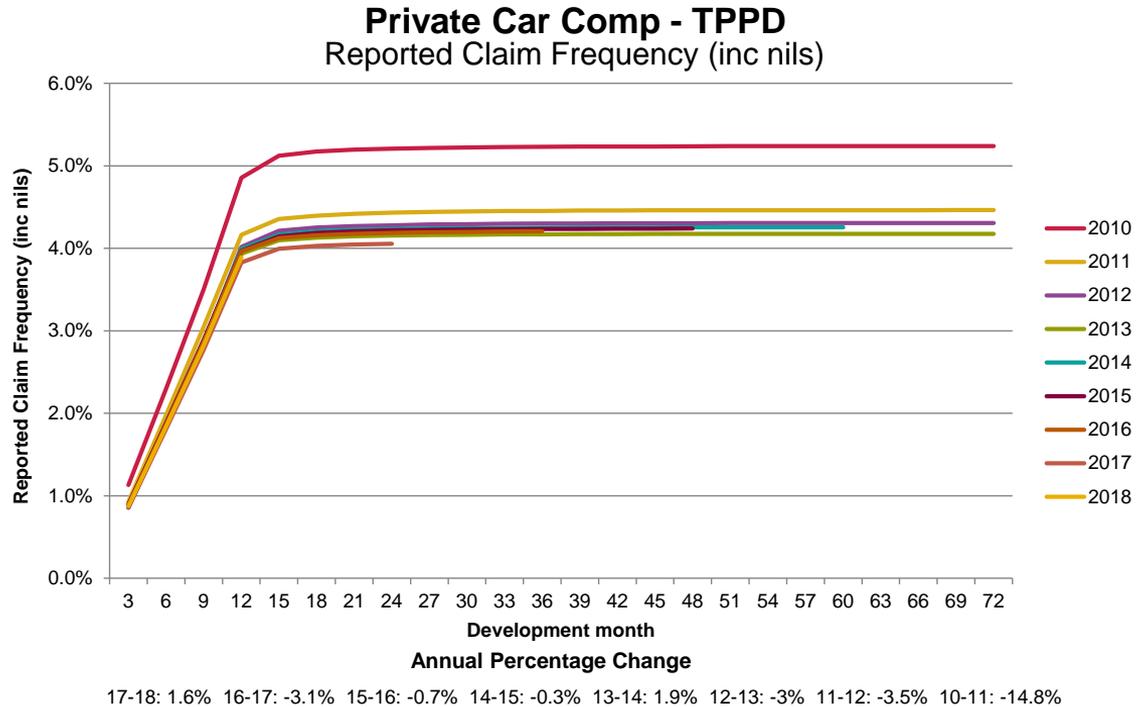
# Appendix - TPPD

## Claim frequency (excluding nils)



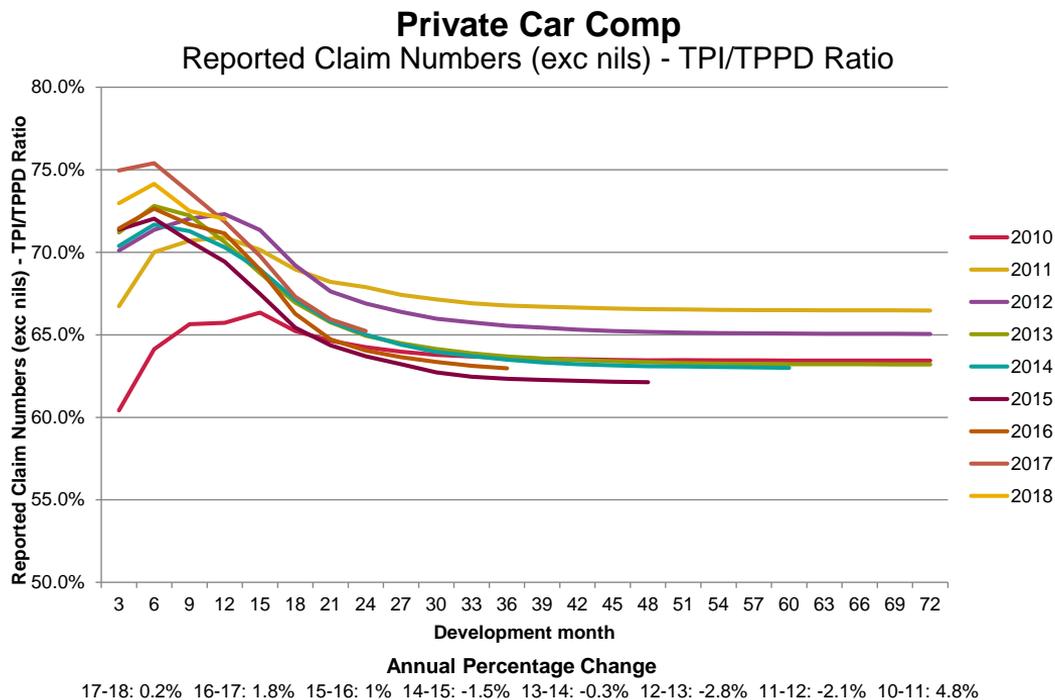
# Appendix - TPPD

## Claim frequency (including nils)



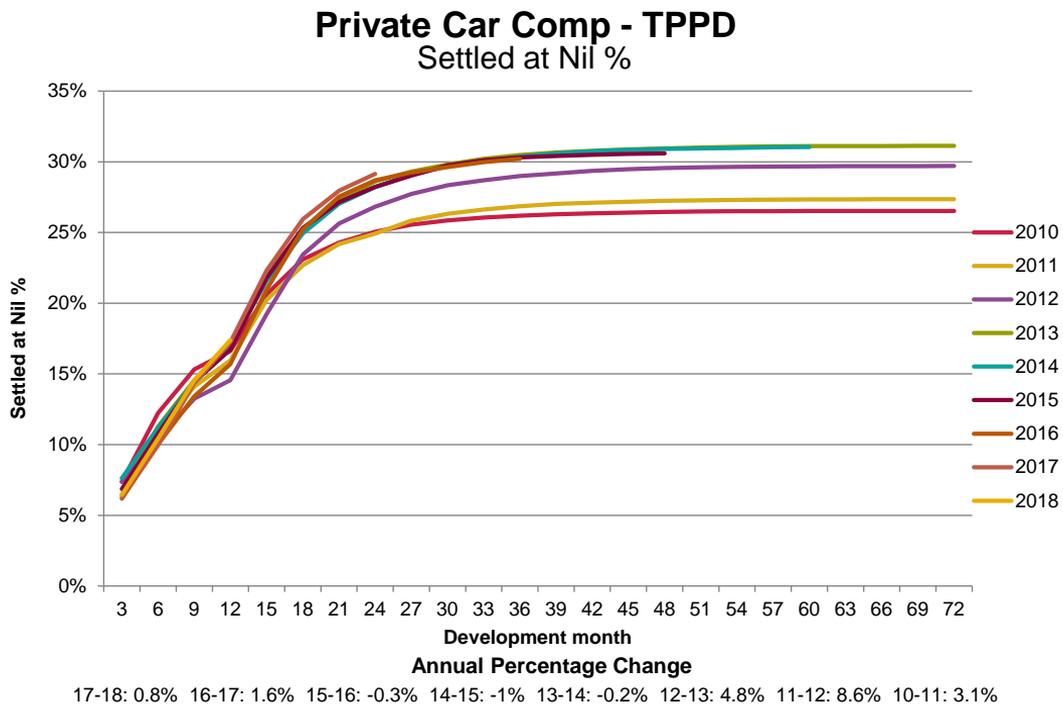
# Appendix - TPPD

## Ratio of TPPD to AD claim numbers (excluding nils)



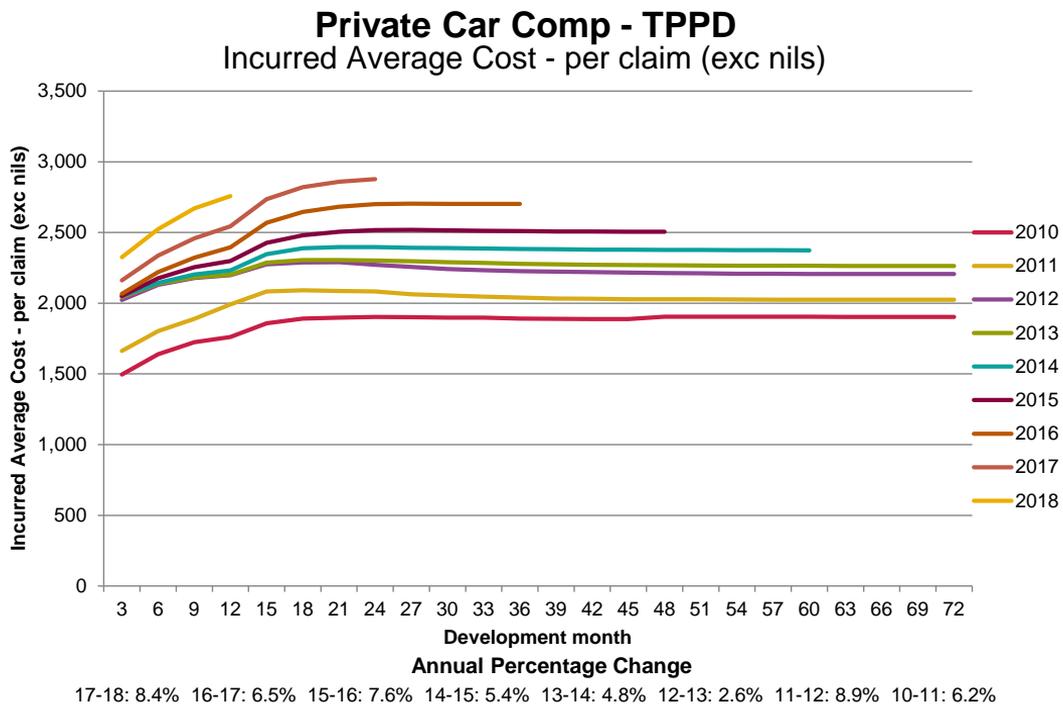
# Appendix - TPPD

## Settled at Nil %



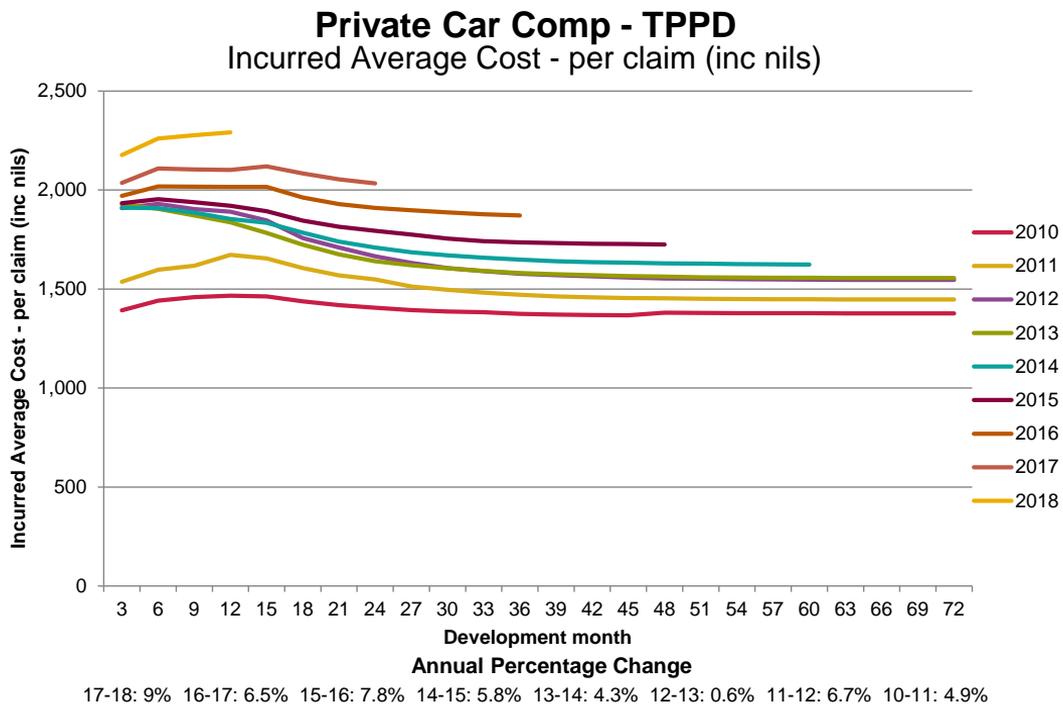
# Appendix - TPPD

## Incurred average Cost (excluding nils)



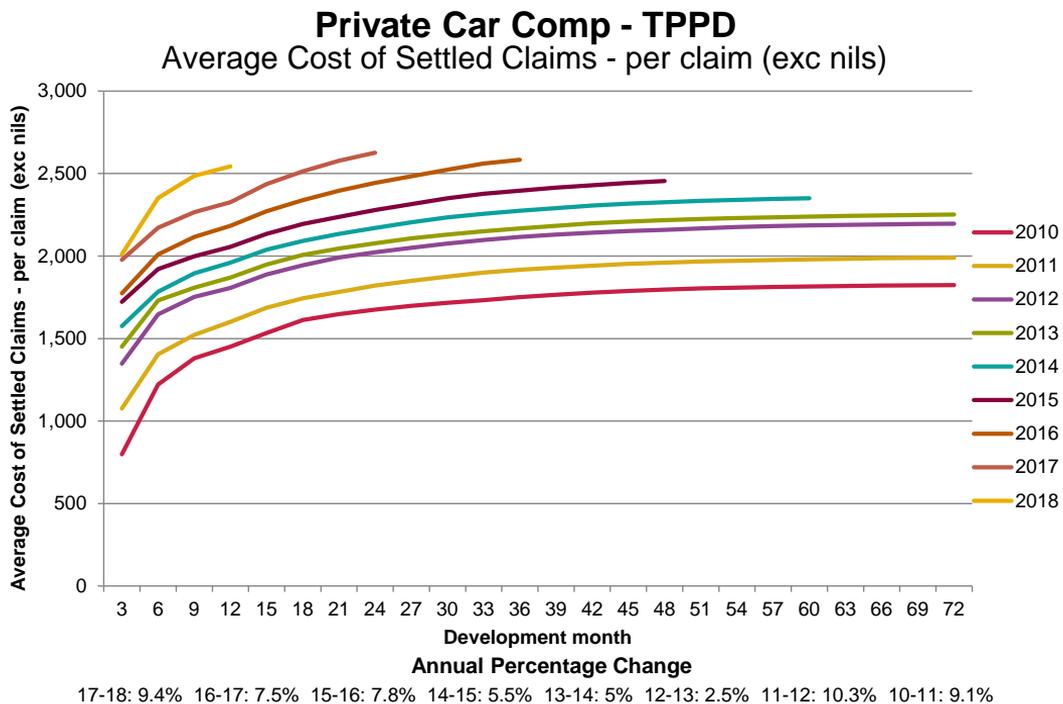
# Appendix - TPPD

## Incurred average Cost (excluding nils)



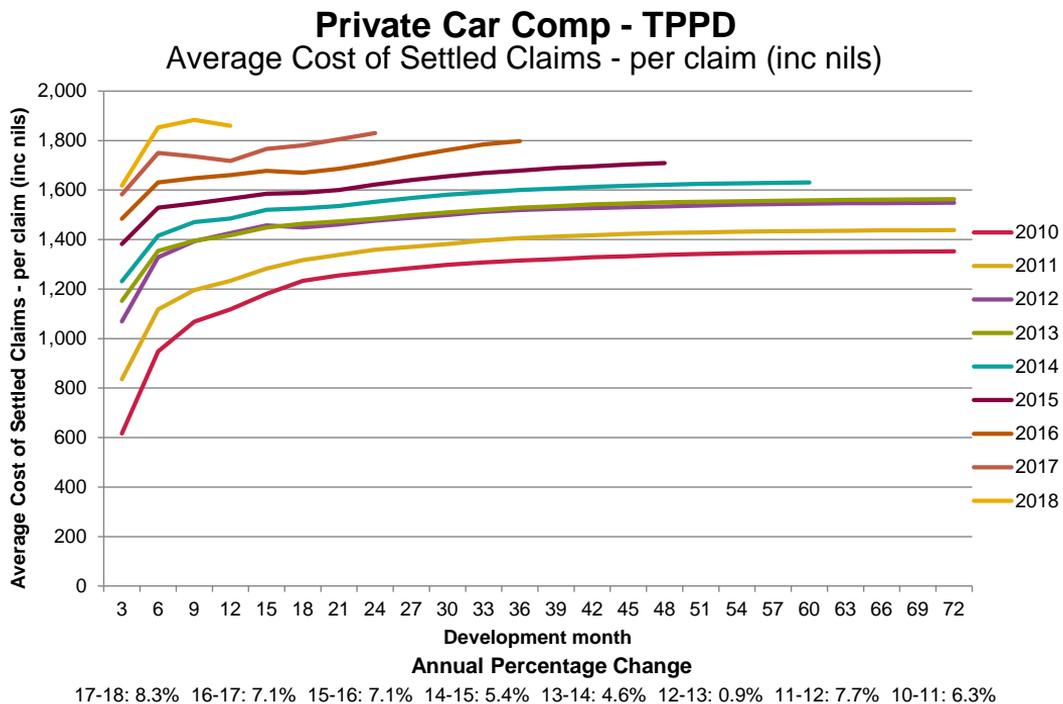
# Appendix - TPPD

## Settled average Cost (excluding nils)



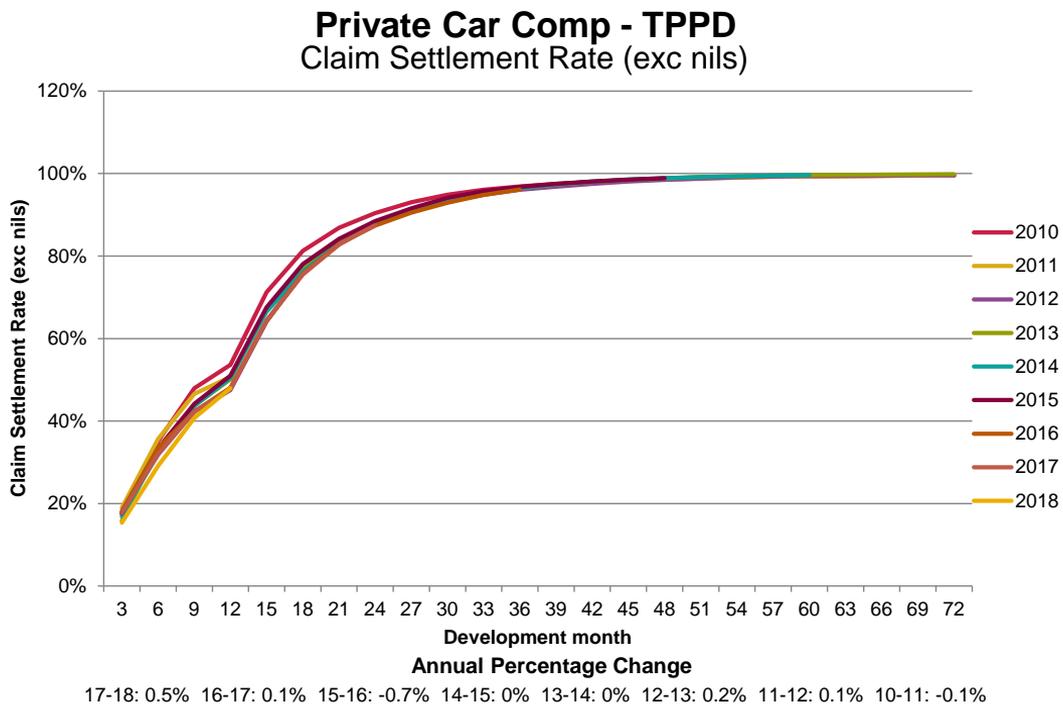
# Appendix - TPPD

## Settled average Cost (including nils)



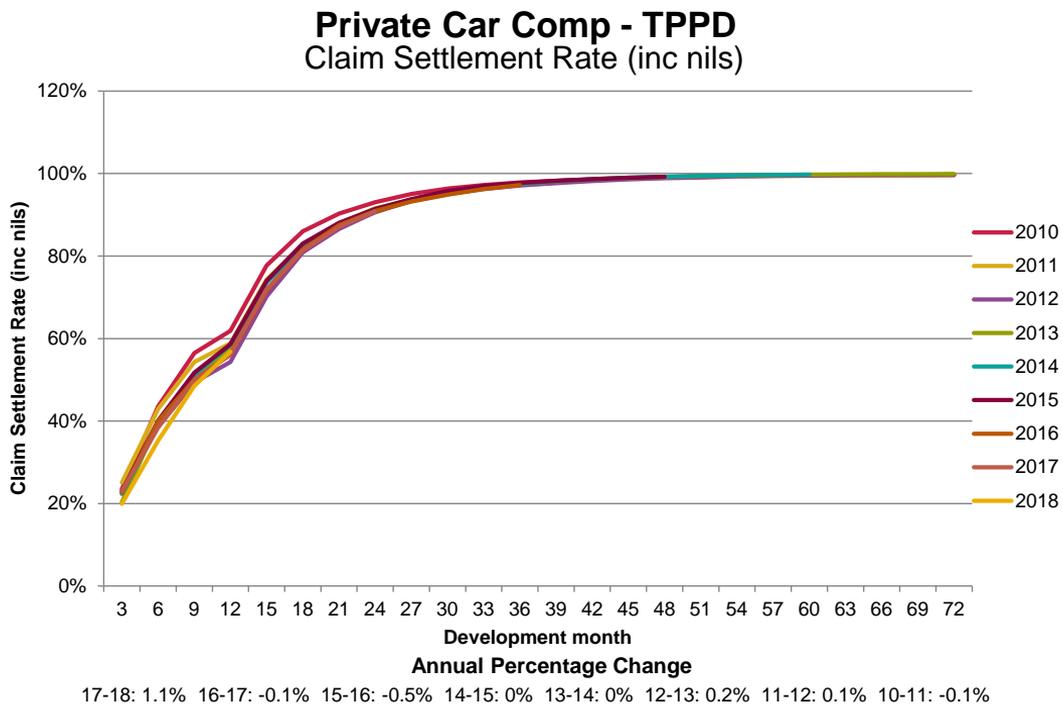
# Appendix - TPPD

## Settlement Rate (excluding nils)



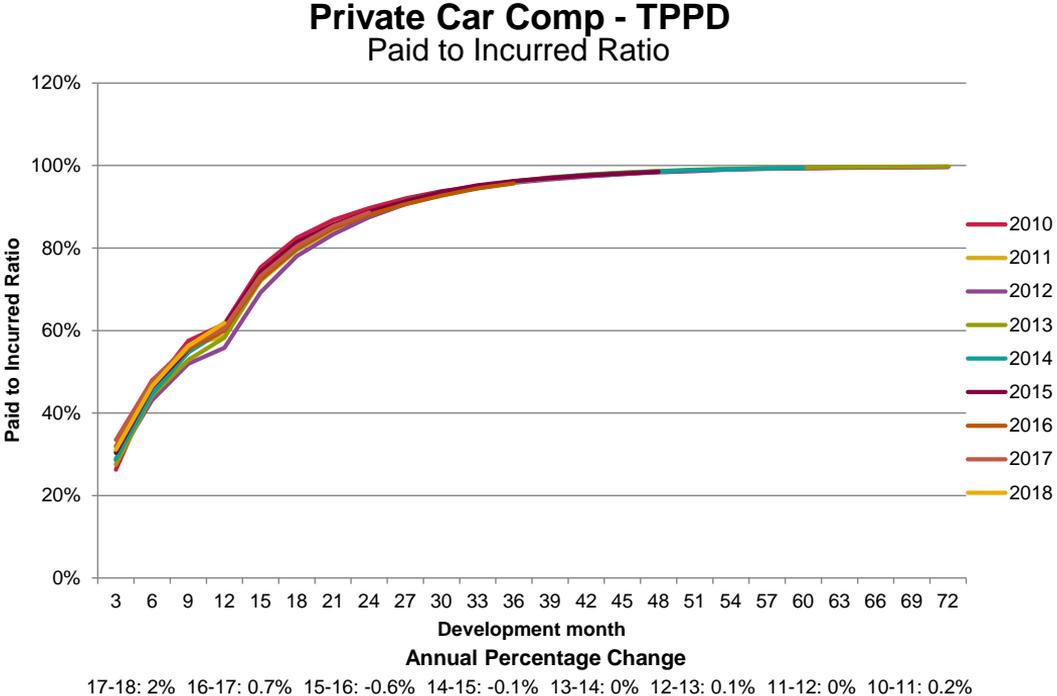
# Appendix - TPPD

## Settlement Rate (including nils)



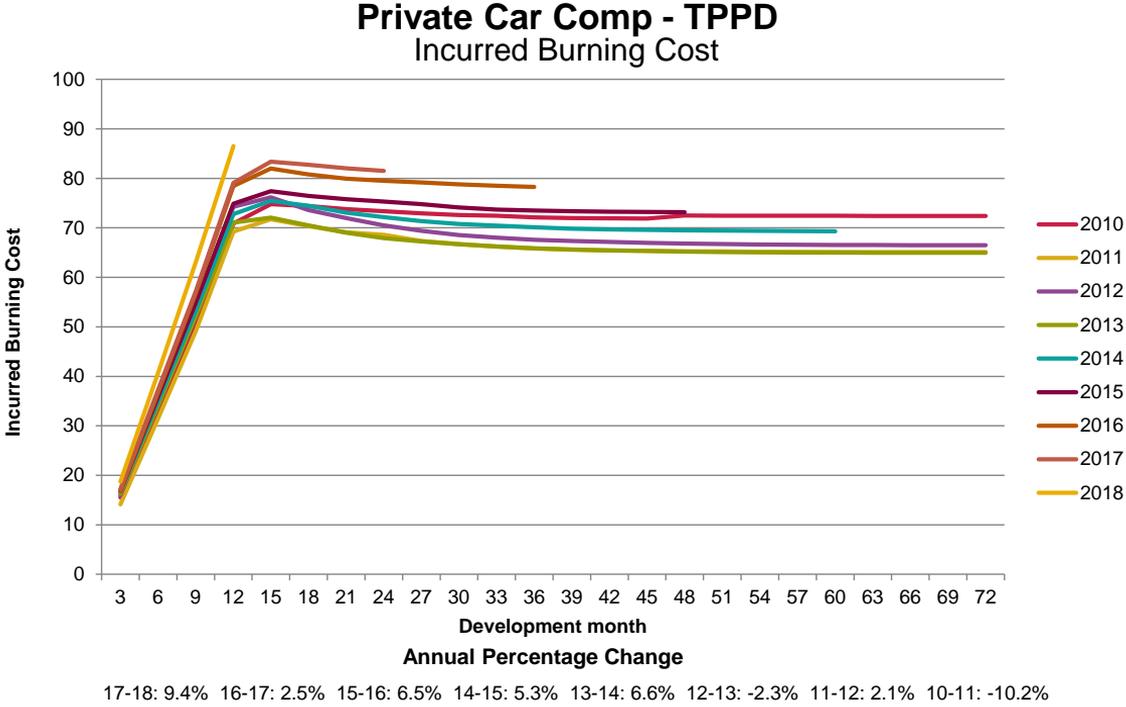
# Appendix - TPPD

## Paid to Incurred Ratio



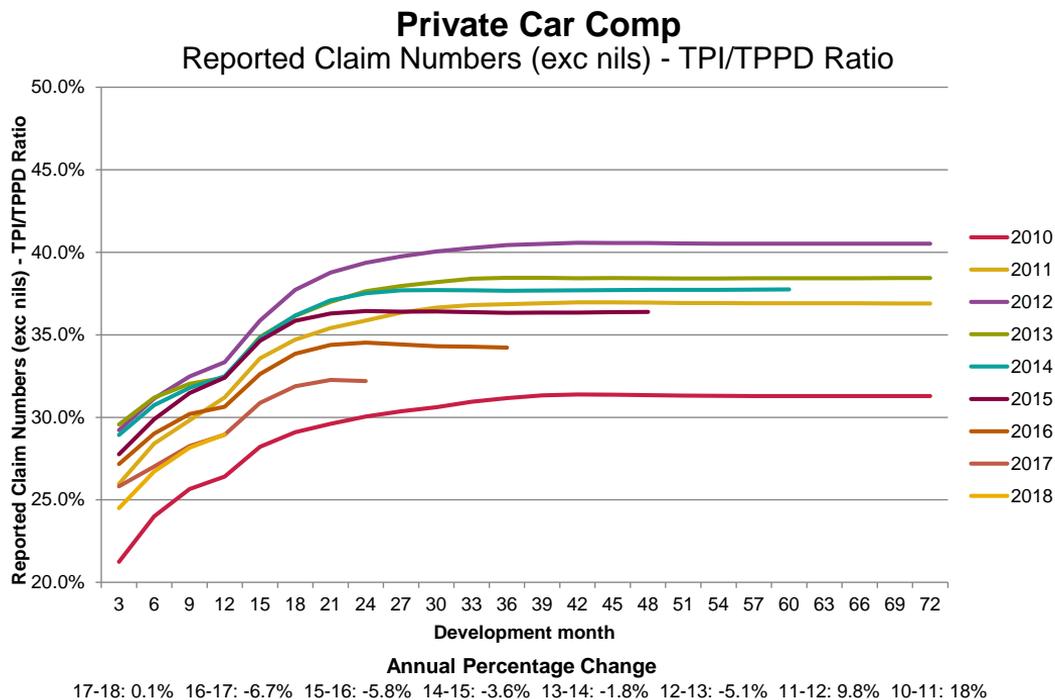
# Appendix - TPPD

## Incurred Burning Cost



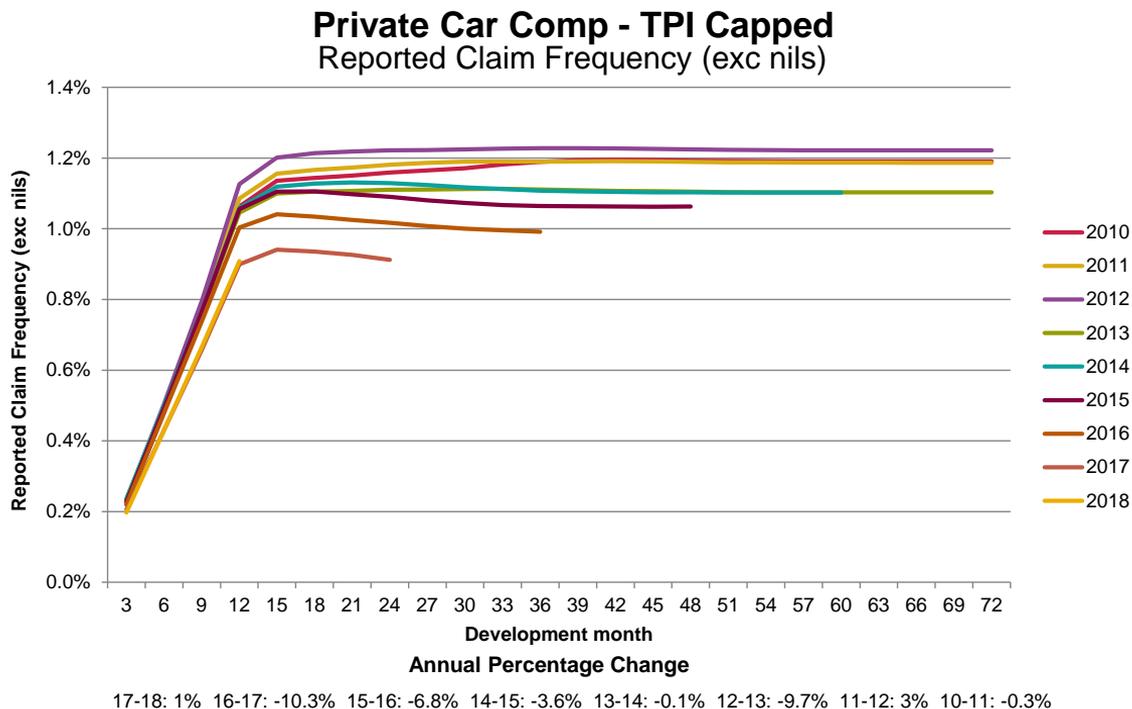
# Appendix – TPI Capped

## Ratio of TPI to TPD claim numbers (excluding nils)



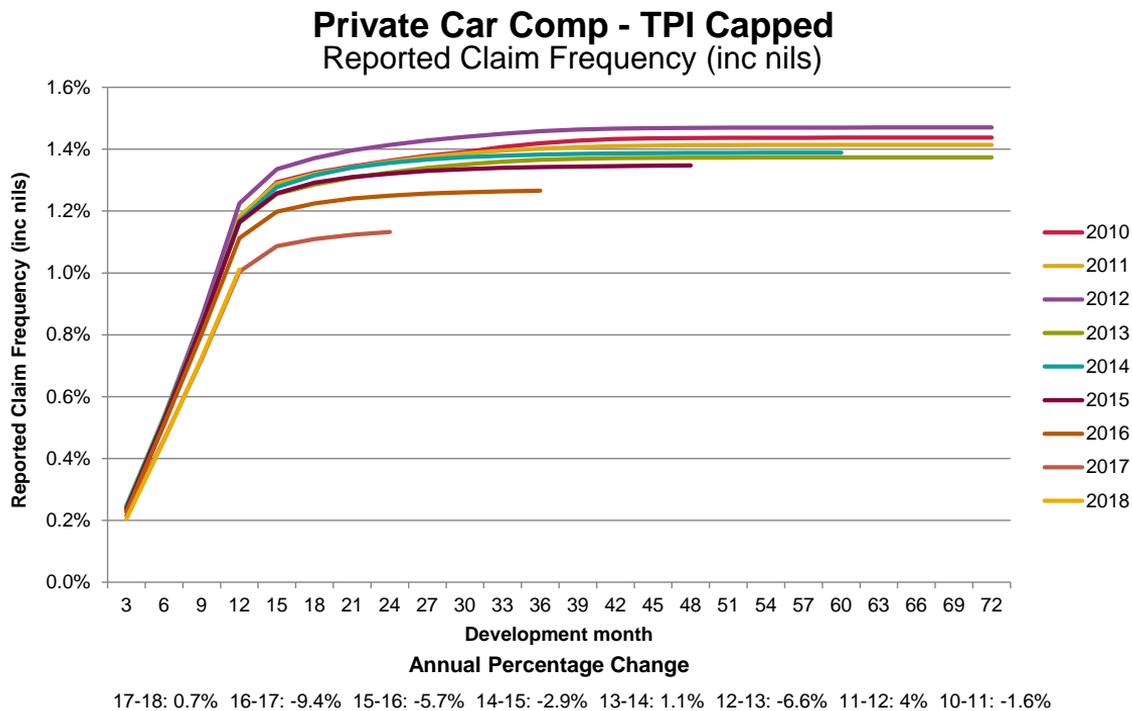
# Appendix – TPI Capped

## TPI Frequency (excluding nils)



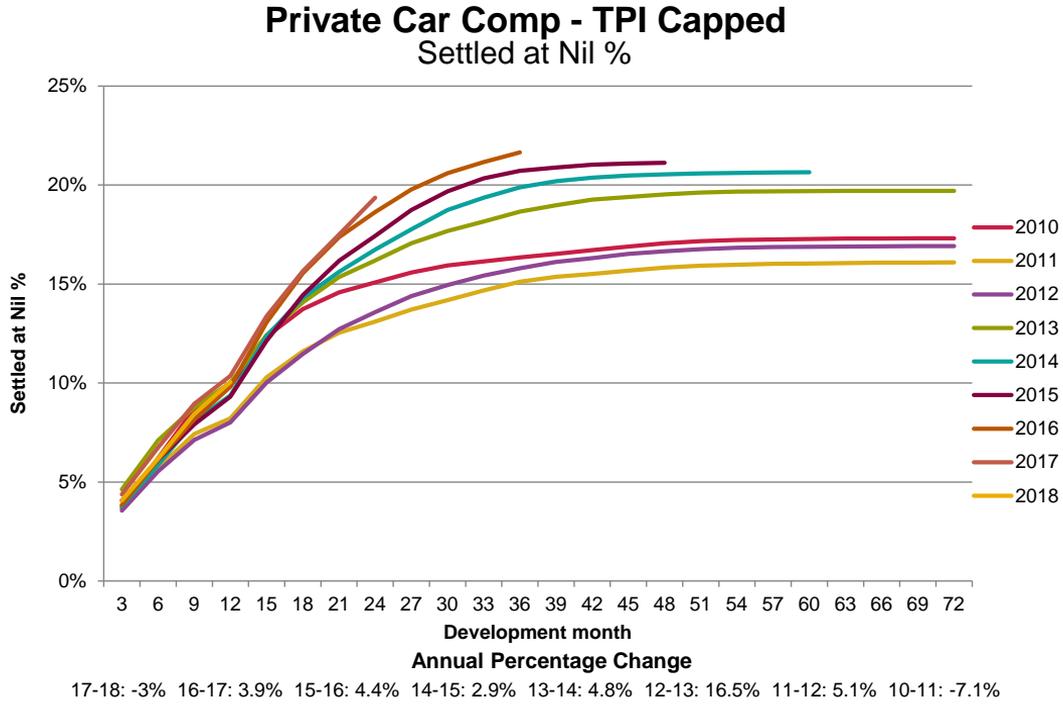
# Appendix – TPI Capped

## TPI Frequency (including nils)



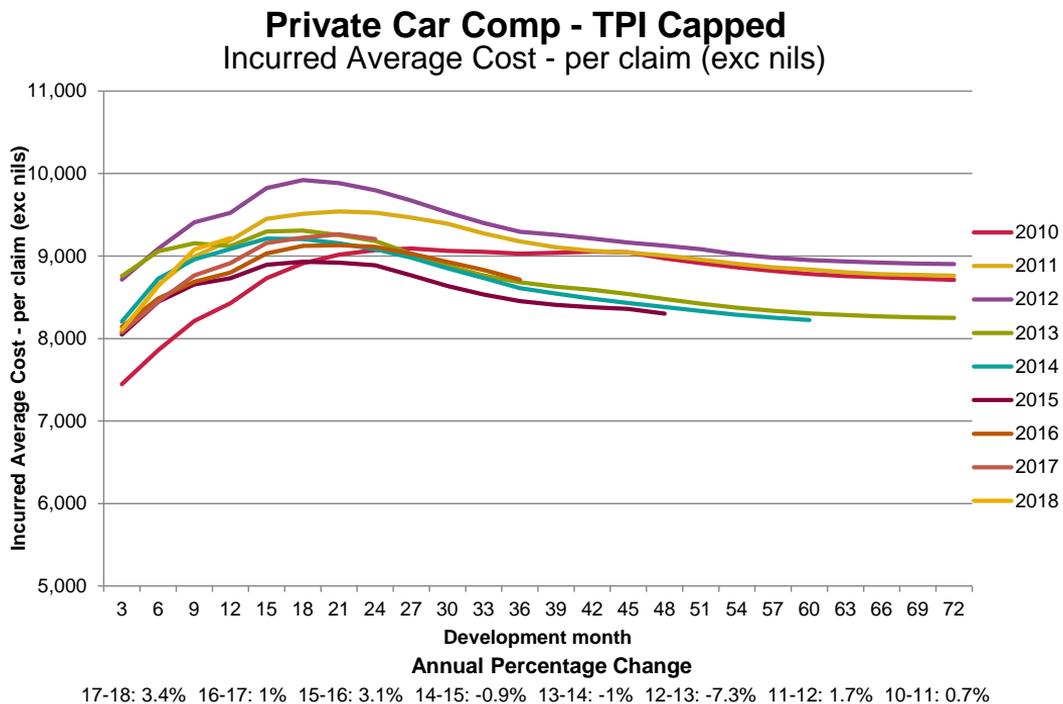
# Appendix – TPI Capped

## TPI Settled at Nil



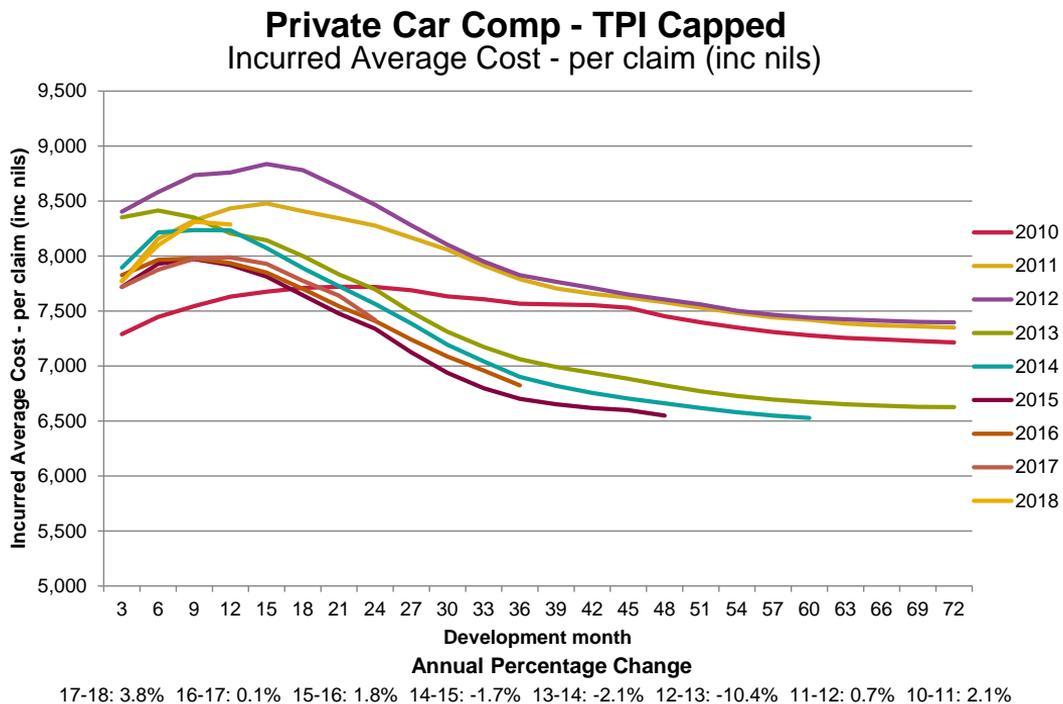
# Appendix – TPI Capped

## TPI Capped Incurred Average Cost (excluding nils)



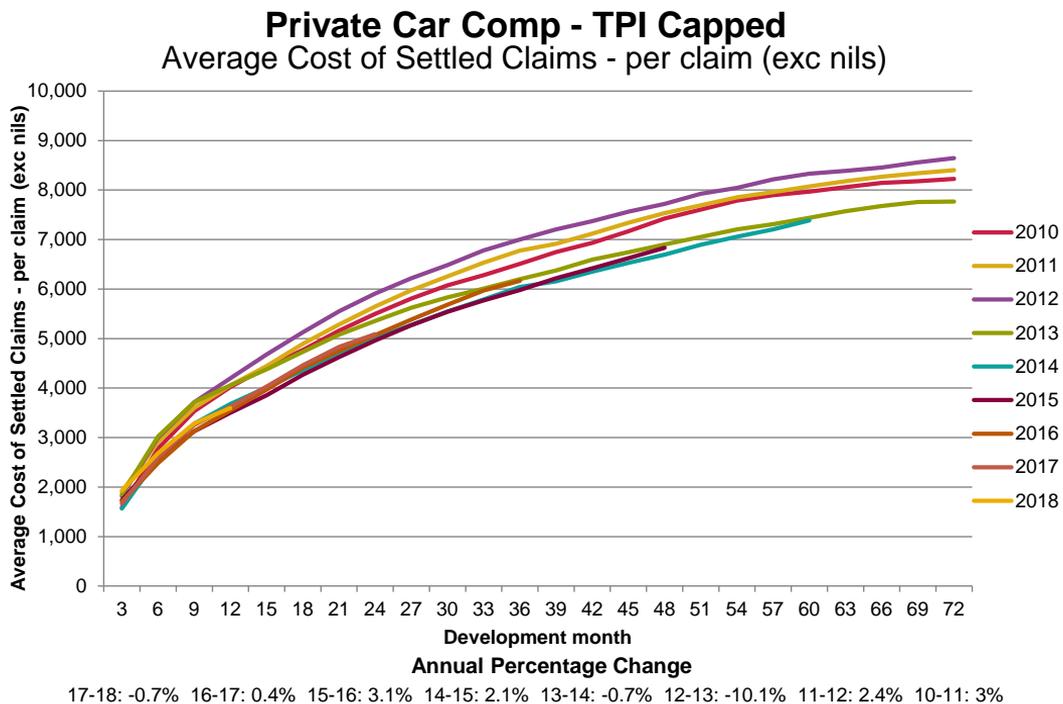
# Appendix – TPI Capped

## TPI Capped Incurred Average Cost (including nils)



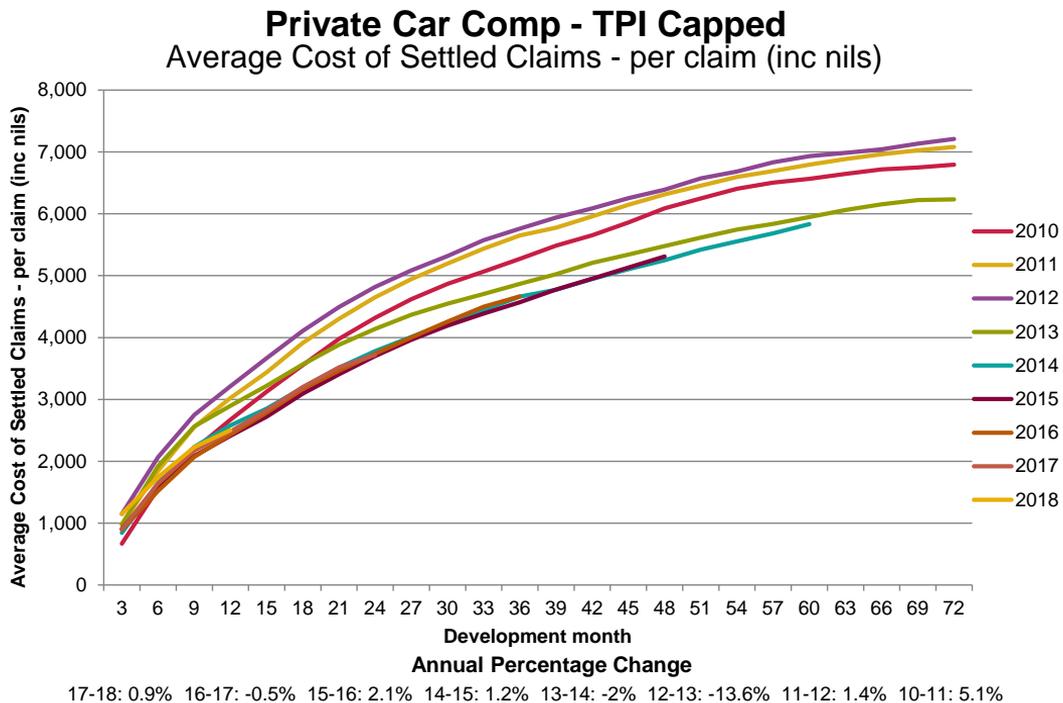
# Appendix – TPI Capped

## TPI Capped Settled Average Cost (excluding nils)



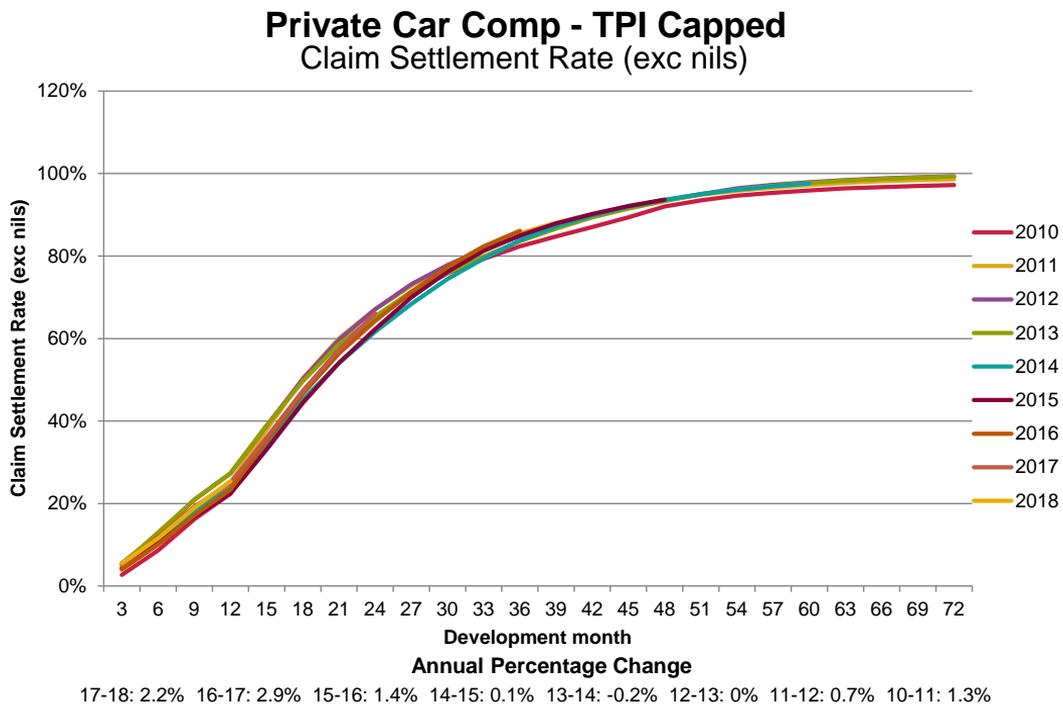
# Appendix – TPI Capped

## TPI Capped Settled Average Cost (including nils)



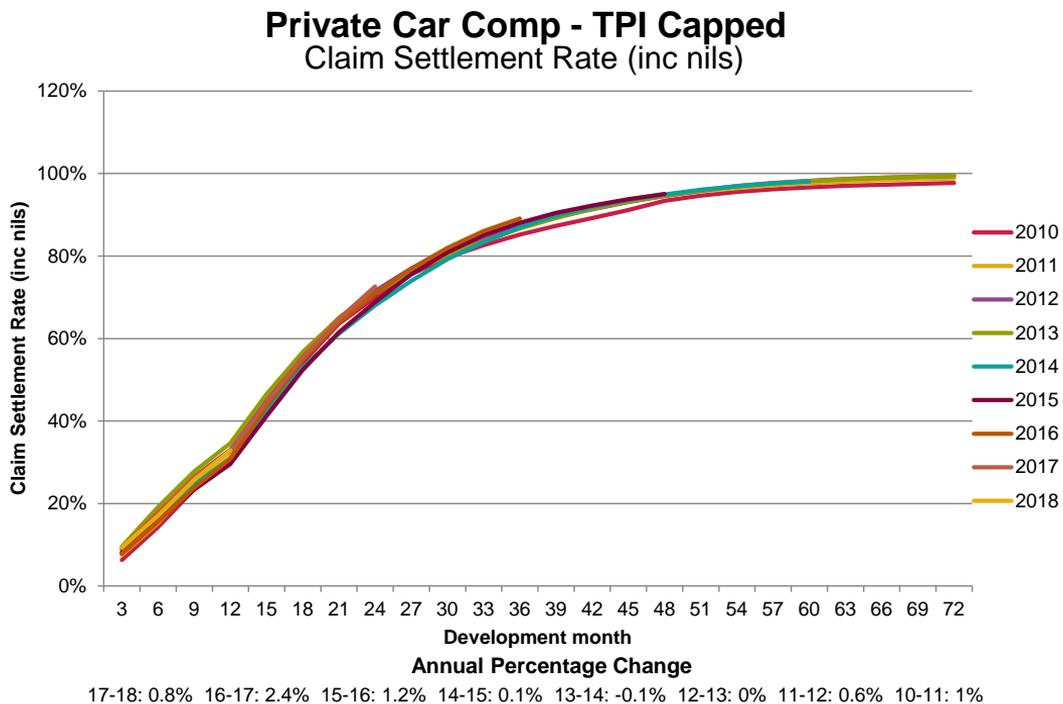
# Appendix – TPI Capped

## TPI Settlement Rate (excluding nils)



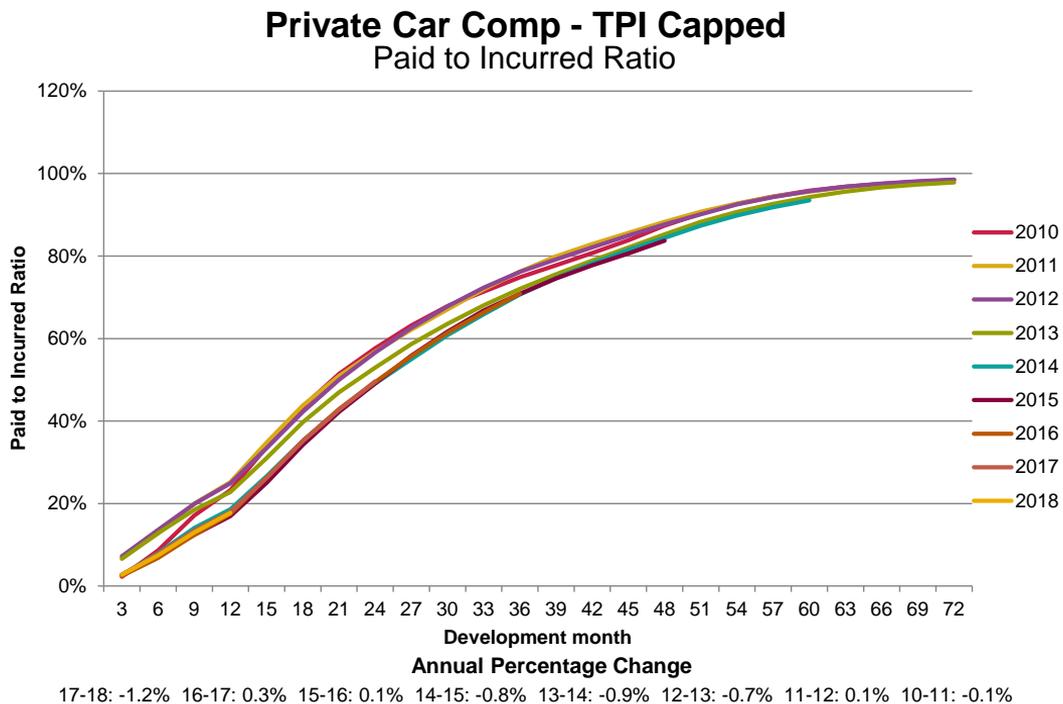
# Appendix – TPI Capped

## TPI Settlement Rate (including nils)



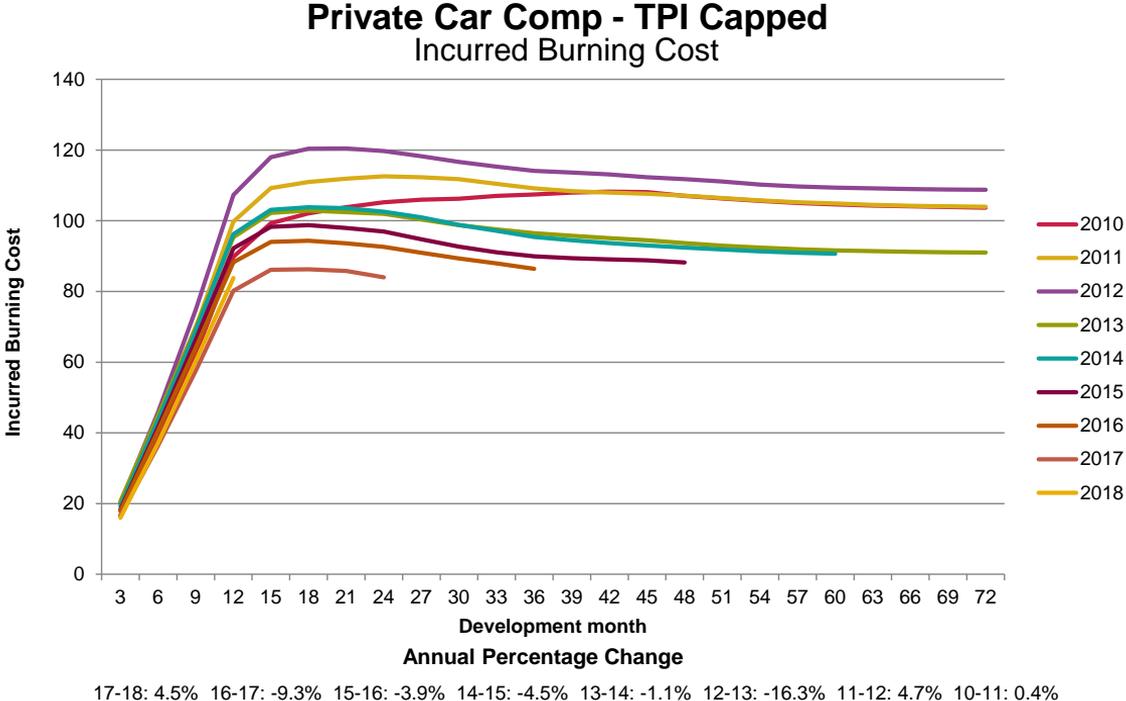
# Appendix – TPI Capped

## Paid to incurred ratio



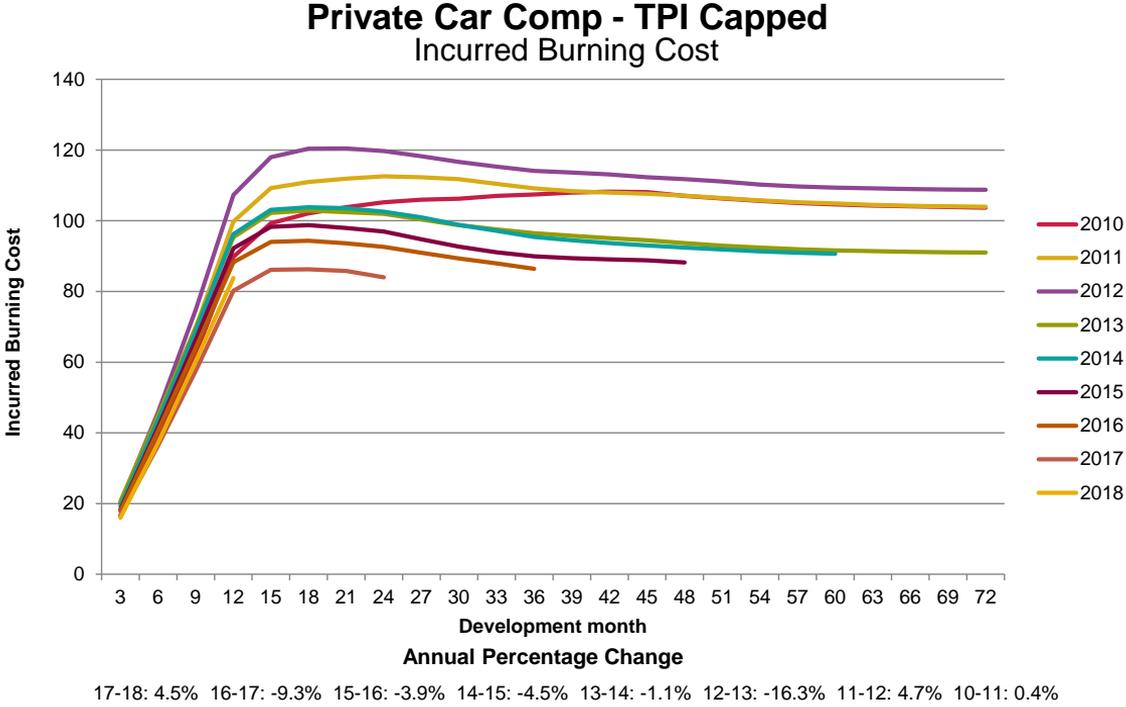
# Appendix – TPI Capped

## Incurred Burning Cost



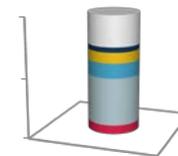
# Appendix – TPI Capped

## Incurred Burning Cost



# Appendix – TPI Capped

## Type 1 KPIs

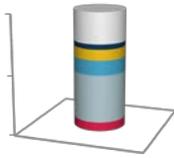


Private Car Comprehensive TPI Capped Results in Layer (all layers given in 2010 money, indexed at 7% pa)

Accident Year	£0 - 1k	£1k - 10k	£10k - 20k	£20k - 50k	£50k - £100k	<100k
<b>Frequency exc Nils (in layer and above) (claims per million vehicle years)</b>						
2009	12,699	11,377	3,173	1,047	192	12,699
2010	12,660	11,340	2,964	943	171	12,660
2011	12,830	11,284	3,006	964	182	12,830
2012	13,175	11,524	3,182	1,045	196	13,175
2013	11,460	10,285	2,296	706	163	11,460
2014	11,306	10,185	2,112	617	163	11,306
2015	10,851	9,791	1,892	561	155	10,851
2016	10,206	9,106	1,747	526	153	10,206
2017	9,125	8,070	1,505	477	148	9,125
2018	9,317	8,261	1,557	505	161	9,317
<b>Average Cost (£)</b>						
2009	914	5,271	5,769	12,167	27,857	8,501
2010	928	5,308	5,735	12,489	30,737	8,371
2011	929	5,370	5,783	12,870	32,945	8,442
2012	937	5,497	5,929	13,005	35,493	8,735
2013	970	5,025	5,787	13,825	41,842	8,088
2014	982	4,939	5,697	14,860	48,005	7,999
2015	995	4,890	5,717	15,342	50,764	7,923
2016	1,000	4,955	5,778	15,904	57,820	8,094
2017	1,003	4,961	5,921	16,456	61,957	8,230
2018	1,019	5,048	6,082	17,342	68,499	8,631
<b>Burning Cost (£)</b>						
2009	11.6	60.0	18.3	12.7	5.3	108.0
2010	11.7	60.2	17.0	11.8	5.3	106.0
2011	11.9	60.6	17.4	12.4	6.0	108.3
2012	12.3	63.3	18.9	13.6	6.9	115.1
2013	11.1	51.7	13.3	9.8	6.8	92.7
2014	11.1	50.3	12.0	9.2	7.8	90.4
2015	10.8	47.9	10.8	8.6	7.9	86.0
2016	10.2	45.1	10.1	8.4	8.8	82.6
2017	9.2	40.0	8.9	7.9	9.1	75.1
2018	9.5	41.7	9.5	8.8	11.0	80.4



# Appendix – TPI Capped Type 1 Change in KPIs



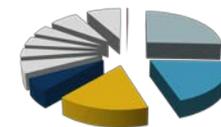
Private Car Comprehensive TPI Capped Results in Layer (all layers given in 2010 money, indexed at 7% pa)

Accident Year	£0 - 1k	£1k - 10k	£10k - 20k	£20k - 50k	£50k - £100k	<100k
<b>Frequency exc Nils (in layer and above) (claims per million vehicle years)</b>						
2009	5.9%	10.2%	22.3%	26.3%	12.8%	5.9%
2010	-0.3%	-0.3%	-6.6%	-9.9%	-10.7%	-0.3%
2011	1.3%	-0.5%	1.4%	2.2%	6.5%	1.3%
2012	2.7%	2.1%	5.8%	8.4%	7.2%	2.7%
2013	-13.0%	-10.7%	-27.8%	-32.4%	-16.4%	-13.0%
2014	-1.3%	-1.0%	-8.0%	-12.6%	-0.1%	-1.3%
2015	-4.0%	-3.9%	-10.4%	-9.2%	-4.9%	-4.0%
2016	-5.9%	-7.0%	-7.6%	-6.2%	-1.6%	-5.9%
2017	-10.6%	-11.4%	-13.9%	-9.2%	-3.4%	-10.6%
2018	2.1%	2.4%	3.5%	5.8%	8.8%	2.1%
<b>Average Cost (£)</b>						
2009	4.6%	5.7%	3.4%	-3.3%	6.4%	11.7%
2010	1.4%	0.7%	-0.6%	2.6%	10.3%	-1.5%
2011	0.2%	1.2%	0.9%	3.0%	7.2%	0.9%
2012	0.8%	2.4%	2.5%	1.1%	7.7%	3.5%
2013	3.5%	-8.6%	-2.4%	6.3%	17.9%	-7.4%
2014	1.2%	-1.7%	-1.6%	7.5%	14.7%	-1.1%
2015	1.4%	-1.0%	0.4%	3.2%	5.7%	-1.0%
2016	0.5%	1.3%	1.1%	3.7%	13.9%	2.2%
2017	0.3%	0.1%	2.5%	3.5%	7.2%	1.7%
2018	1.6%	1.7%	2.7%	5.4%	10.6%	4.9%
<b>Burning Cost (£)</b>						
2009	10.8%	16.5%	26.5%	22.2%	19.9%	18.3%
2010	1.1%	0.4%	-7.1%	-7.6%	-1.4%	-1.8%
2011	1.6%	0.7%	2.3%	5.4%	14.1%	2.2%
2012	3.5%	4.5%	8.5%	9.6%	15.4%	6.2%
2013	-10.0%	-18.4%	-29.6%	-28.1%	-1.4%	-19.5%
2014	-0.2%	-2.7%	-9.5%	-6.1%	14.6%	-2.4%
2015	-2.7%	-4.8%	-10.1%	-6.3%	0.5%	-4.9%
2016	-5.5%	-5.8%	-6.7%	-2.8%	12.1%	-3.9%
2017	-10.3%	-11.3%	-11.8%	-6.1%	3.5%	-9.1%
2018	3.8%	4.1%	6.3%	11.5%	20.3%	7.1%



# Appendix – TPI Capped

## Type 2 KPIs

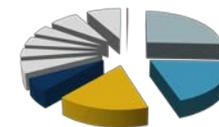


Private Car Comprehensive Capped TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 1% pa)

Accident Year	£0 - 1k	£1k - 10k	£10k - 20k	£20k - 50k	£50k to £100k	< 100k
<b>Frequency exc Nils</b> (claims per million policy years)						
2009	1,323	8,204	2,126	855	112	12,619
2010	1,320	8,376	2,021	771	103	12,591
2011	1,546	8,278	2,042	781	116	12,764
2012	1,651	8,342	2,136	850	128	13,107
2013	1,175	7,989	1,589	543	101	11,397
2014	1,121	8,073	1,494	454	99	11,242
2015	1,060	7,899	1,332	405	96	10,793
2016	1,100	7,358	1,222	373	93	10,147
2017	1,054	6,566	1,027	330	93	9,071
2018	1,056	6,704	1,052	345	101	9,258
<b>Average Cost</b> (£)						
2009	264	4,853	13,635	28,031	65,762	7,960
2010	305	5,002	13,745	28,597	67,896	7,872
2011	342	5,029	13,846	28,998	70,061	7,932
2012	358	5,112	14,040	29,357	71,883	8,194
2013	443	4,834	14,083	29,287	75,147	7,457
2014	445	4,822	14,158	29,793	79,955	7,297
2015	481	4,846	14,210	30,165	80,789	7,202
2016	490	4,924	14,312	30,608	86,082	7,265
2017	475	4,959	14,413	30,867	89,525	7,321
2018	524	5,039	14,632	31,942	93,916	7,588
<b>Burning Cost</b> (£)						
2009	0.3	39.8	29.0	24.0	7.3	100
2010	0.4	41.9	27.8	22.1	7.0	99
2011	0.5	41.6	28.3	22.7	8.2	101
2012	0.6	42.6	30.0	24.9	9.2	107
2013	0.5	38.6	22.4	15.9	7.6	85
2014	0.5	38.9	21.2	13.5	7.9	82
2015	0.5	38.3	18.9	12.2	7.8	78
2016	0.5	36.2	17.5	11.4	8.0	74
2017	0.5	32.6	14.8	10.2	8.4	66
2018	0.6	33.8	15.4	11.0	9.5	70



# Appendix – TPI Capped Type 2 Change in KPIs



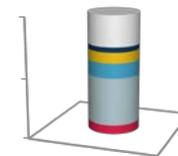
Private Car Comprehensive Capped TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 1% pa)

Accident Year	£0 - 1k	£1k - 10k	£10k - 20k	£20k - 50k	£50k to £100k
<b>Frequency exc Nils (claims per million policy years)</b>					
2009	-20.8%	6.1%	20.4%	29.8%	29.5%
2010	-0.2%	2.1%	-4.9%	-9.8%	-7.8%
2011	17.1%	-1.2%	1.0%	1.3%	13.1%
2012	6.8%	0.8%	4.6%	8.7%	10.4%
2013	-28.9%	-4.2%	-25.6%	-36.1%	-21.7%
2014	-4.5%	1.0%	-6.0%	-16.4%	-1.5%
2015	-5.5%	-2.2%	-10.9%	-10.7%	-2.7%
2016	3.8%	-6.8%	-8.2%	-8.0%	-3.0%
2017	-4.2%	-10.8%	-15.9%	-11.6%	0.0%
2018	0.2%	2.1%	2.4%	4.5%	8.4%
<b>Average Cost (£)</b>					
2009	-70.0%	-0.8%	6.3%	5.7%	24.5%
2010	15.7%	3.1%	0.8%	2.0%	3.2%
2011	12.0%	0.5%	0.7%	1.4%	3.2%
2012	4.8%	1.6%	1.4%	1.2%	2.6%
2013	23.6%	-5.4%	0.3%	-0.2%	4.5%
2014	0.6%	-0.3%	0.5%	1.7%	6.4%
2015	8.0%	0.5%	0.4%	1.2%	1.0%
2016	2.0%	1.6%	0.7%	1.5%	6.6%
2017	-3.1%	0.7%	0.7%	0.8%	4.0%
2018	10.2%	1.6%	1.5%	3.5%	4.9%
<b>Burning Cost (£)</b>					
2009	-76.2%	5.3%	27.9%	37.2%	61.3%
2010	15.5%	5.2%	-4.2%	-7.9%	-4.8%
2011	31.1%	-0.6%	1.8%	2.7%	16.7%
2012	11.9%	2.4%	6.1%	10.1%	13.3%
2013	-12.1%	-9.4%	-25.4%	-36.2%	-18.1%
2014	-4.0%	0.8%	-5.5%	-14.9%	4.8%
2015	2.1%	-1.7%	-10.6%	-9.6%	-1.7%
2016	5.9%	-5.3%	-7.6%	-6.6%	3.3%
2017	-7.1%	-10.1%	-15.3%	-10.9%	4.0%
2018	10.4%	3.8%	3.9%	8.2%	13.7%



# Appendix – TPI Excess

## Type 1 KPIs



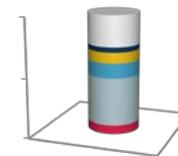
Private Car Comprehensive TPI Capped Results in Layer (all layers given in 2010 money, indexed at 7% pa)

Accident Year	£100k - 250k	£250k - 500k	£500k - 1m	£1m - 2m	£2m to 5m	> £5m
<b>Frequency exc Nils (in layer and above)</b> (claims per million vehicle years)						
2009	80.4	36.2	17.2	9.4	5.8	2.1
2010	68.6	26.0	13.8	7.4	4.7	1.6
2011	66.1	26.6	14.0	7.4	3.0	1.3
2012	67.1	26.9	13.6	7.4	3.9	1.0
2013	62.9	25.1	12.7	7.4	4.1	1.7
2014	64.1	28.6	15.2	8.8	5.1	2.4
2015	58.8	24.8	13.1	7.6	4.5	1.7
2016	59.2	25.3	12.6	7.8	5.1	1.9
2017	54.1	24.1	12.7	8.0	4.7	2.1
2018	59.2	25.2	13.2	7.8	4.3	2.0
<b>Average Cost</b> (£)						
2009	90,570	158,818	351,965	723,254	1,649,342	2,614,499
2010	91,405	174,816	351,393	784,563	1,547,616	4,146,511
2011	97,975	185,341	364,360	663,784	2,370,226	4,598,729
2012	104,399	193,877	393,543	837,202	1,693,019	6,905,909
2013	111,258	207,648	428,801	826,344	2,197,981	5,475,372
2014	126,548	234,824	465,330	1,004,571	2,556,300	5,097,660
2015	128,760	250,743	500,228	1,061,617	2,578,114	5,402,548
2016	136,736	262,083	555,648	1,222,745	2,636,734	6,881,096
2017	151,661	292,657	585,421	1,228,613	3,096,621	6,188,706
2018	158,744	304,956	618,030	1,260,905	3,070,918	7,830,584
<b>Burning Cost</b> (£)						
2009	7.3	5.7	6.1	6.8	9.6	5.6
2010	6.3	4.5	4.8	5.8	7.3	6.5
2011	6.5	4.9	5.1	4.9	7.1	5.8
2012	7.0	5.2	5.4	6.2	6.5	6.9
2013	7.0	5.2	5.4	6.1	9.1	9.6
2014	8.1	6.7	7.1	8.8	13.2	12.1
2015	7.6	6.2	6.6	8.1	11.7	9.4
2016	8.1	6.6	7.0	9.5	13.4	13.3
2017	8.2	7.1	7.4	9.8	14.6	12.8
2018	9.4	7.7	8.2	9.9	13.2	15.8



# Appendix – TPI Excess

## Type 1 Change in KPIs



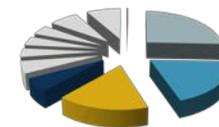
Private Car Comprehensive TPI Capped Results in Layer (all layers given in 2010 money, indexed at 7% pa)

Accident Year	£100k - 250k	£250k - 500k	£500k - 1m	£1m - 2m	£2m to 5m	> £5m	>100k
<b>Frequency exc Nils (in layer and above)</b> (claims per million vehicle years)							
2009	-4.4%	9.3%	13.5%	11.9%	87.1%	51.9%	-4.4%
2010	-14.7%	-28.1%	-19.8%	-21.9%	-18.9%	-26.0%	-14.7%
2011	-3.6%	2.1%	1.9%	0.5%	-37.0%	-19.6%	-3.6%
2012	1.4%	1.2%	-2.9%	-0.5%	29.5%	-21.8%	1.4%
2013	-6.3%	-6.8%	-7.2%	0.4%	7.4%	76.3%	-6.3%
2014	2.0%	14.3%	20.4%	18.8%	24.1%	35.9%	2.0%
2015	-8.3%	-13.5%	-13.9%	-13.0%	-11.9%	-26.7%	-8.3%
2016	0.7%	2.2%	-4.1%	1.6%	11.7%	11.1%	0.7%
2017	-8.7%	-4.7%	0.7%	3.1%	-6.7%	6.7%	-8.7%
2018	9.5%	4.6%	4.2%	-2.2%	-8.9%	-2.2%	9.5%
<b>Average Cost</b> (£)							
2009	16.8%	10.6%	12.7%	31.0%	-8.3%	29.6%	47.8%
2010	0.9%	10.1%	-0.2%	8.5%	-6.2%	58.6%	0.7%
2011	7.2%	6.0%	3.7%	-15.4%	53.2%	10.9%	0.8%
2012	6.6%	4.6%	8.0%	26.1%	-28.6%	50.2%	6.6%
2013	6.6%	7.1%	9.0%	-1.3%	29.8%	-20.7%	21.9%
2014	13.7%	13.1%	8.5%	21.6%	16.3%	-6.9%	29.5%
2015	1.7%	6.8%	7.5%	5.7%	0.9%	6.0%	-3.5%
2016	6.2%	4.5%	11.1%	15.2%	2.3%	27.4%	15.9%
2017	10.9%	11.7%	5.4%	0.5%	17.4%	-10.1%	13.3%
2018	4.7%	4.2%	5.6%	2.6%	-0.8%	26.5%	-2.2%
<b>Burning Cost</b> (£)							
2009	11.7%	20.8%	27.9%	46.6%	71.6%	96.8%	41.3%
2010	-13.9%	-20.9%	-19.9%	-15.3%	-23.9%	17.3%	-14.1%
2011	3.4%	8.3%	5.6%	-14.9%	-3.6%	-10.9%	-2.8%
2012	8.1%	5.9%	4.9%	25.5%	-7.5%	17.4%	8.2%
2013	-0.1%	-0.2%	1.2%	-0.9%	39.5%	39.8%	14.2%
2014	16.0%	29.2%	30.6%	44.4%	44.3%	26.5%	32.0%
2015	-6.7%	-7.6%	-7.5%	-8.1%	-11.1%	-22.3%	-11.5%
2016	7.0%	6.8%	6.5%	17.0%	14.2%	41.5%	16.8%
2017	1.3%	6.4%	6.1%	3.6%	9.6%	-4.1%	3.5%
2018	14.6%	8.9%	10.0%	0.4%	-9.6%	23.8%	7.1%



# Appendix – TPI Excess

## Type 2 KPIs



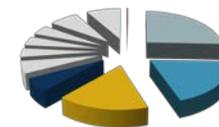
Private Car Comprehensive Excess TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 7% pa)

Accident Year	£100k - 250k	£250k - 500k	£500k - 1m	£1m - 2m	£2m to 5m	> £5m
<b>Frequency exc Nils (finishing in layer) (claims per million policy years)</b>						
2009	44.2	19.0	7.8	3.6	3.7	2.1
2010	42.6	12.2	6.4	2.6	3.2	1.6
2011	39.6	12.5	6.6	4.4	1.7	1.3
2012	40.2	13.2	6.3	3.5	2.9	1.0
2013	37.8	12.4	5.3	3.3	2.4	1.7
2014	35.5	13.4	6.5	3.6	2.8	2.4
2015	34.0	11.6	5.5	3.1	2.8	1.7
2016	33.9	12.7	4.8	2.7	3.1	1.9
2017	30.0	11.4	4.7	3.3	2.7	2.1
2018	34.0	12.0	5.4	3.5	2.3	2.0
<b>Average Cost (£)</b>						
2009	143,410	324,719	678,859	1,314,430	2,853,848	7,287,396
2010	155,611	339,911	680,861	1,396,776	2,821,424	9,146,511
2011	163,012	360,569	708,935	1,460,029	3,888,190	9,948,729
2012	173,851	384,917	755,609	1,643,634	3,380,915	12,630,409
2013	185,728	413,024	783,208	1,542,485	3,572,102	11,600,587
2014	201,099	456,680	862,065	1,882,489	3,998,074	11,651,640
2015	209,579	488,762	921,131	1,966,774	4,366,437	12,415,307
2016	220,857	525,414	992,248	2,201,599	4,484,209	14,384,747
2017	240,424	573,688	1,015,614	2,289,878	4,973,404	14,217,614
2018	257,124	597,546	1,126,054	2,419,817	4,666,223	16,421,515
<b>Burning Cost (£)</b>						
2009	6.3	6.2	5.3	4.7	10.6	15.6
2010	6.6	4.2	4.4	3.7	8.9	14.4
2011	6.4	4.5	4.7	6.5	6.7	12.6
2012	7.0	5.1	4.7	5.8	9.7	12.5
2013	7.0	5.1	4.1	5.0	8.6	20.3
2014	7.1	6.1	5.6	6.9	11.1	27.7
2015	7.1	5.7	5.0	6.1	12.2	21.6
2016	7.5	6.7	4.8	5.9	14.0	27.8
2017	7.2	6.6	4.7	7.5	13.2	29.4
2018	8.7	7.2	6.1	8.5	10.7	33.2



# Appendix – TPI Excess

## Type 2 Change in KPIs



Private Car Comprehensive Excess TPI Type 2 Layered Results (all layers given in 2010 money, indexed at 7% pa)

Accident Year	£100k - 250k	£250k - 500k	£500k - 1m	£1m - 2m	£2m to 5m	> £5m
<b>Frequency exc Nils (finishing in layer) (claims per million policy years)</b>						
2009	-13.3%	5.7%	15.5%	-32.3%	115.9%	51.9%
2010	-3.7%	-35.7%	-17.2%	-26.8%	-14.8%	-26.0%
2011	-7.0%	2.4%	3.4%	68.2%	-45.7%	-19.6%
2012	1.6%	5.8%	-5.5%	-20.7%	67.5%	-21.8%
2013	-5.9%	-6.5%	-16.0%	-7.4%	-16.4%	76.3%
2014	-6.1%	8.1%	22.6%	12.0%	15.4%	35.9%
2015	-4.2%	-13.0%	-15.1%	-14.6%	0.8%	-26.7%
2016	-0.3%	9.3%	-12.1%	-13.2%	12.1%	11.1%
2017	-11.7%	-10.0%	-3.1%	21.3%	-14.9%	6.7%
2018	13.4%	4.9%	15.1%	7.5%	-14.1%	-2.2%
<b>Average Cost (£)</b>						
2009	10.2%	8.6%	14.6%	6.3%	-0.6%	14.1%
2010	8.5%	4.7%	0.3%	6.3%	-1.1%	25.5%
2011	4.8%	6.1%	4.1%	4.5%	37.8%	8.8%
2012	6.6%	6.8%	6.6%	12.6%	-13.0%	27.0%
2013	6.8%	7.3%	3.7%	-6.2%	5.7%	-8.2%
2014	8.3%	10.6%	10.1%	22.0%	11.9%	0.4%
2015	4.2%	7.0%	6.9%	4.5%	9.2%	6.6%
2016	5.4%	7.5%	7.7%	11.9%	2.7%	15.9%
2017	8.9%	9.2%	2.4%	4.0%	10.9%	-1.2%
2018	6.9%	4.2%	10.9%	5.7%	-6.2%	15.5%
<b>Burning Cost (£)</b>						
2009	-4.4%	14.9%	32.3%	-28.0%	114.5%	73.4%
2010	4.5%	-32.7%	-16.9%	-22.2%	-15.8%	-7.2%
2011	-2.6%	8.6%	7.6%	75.8%	-25.2%	-12.6%
2012	8.3%	13.0%	0.7%	-10.7%	45.7%	-0.8%
2013	0.5%	0.4%	-12.9%	-13.1%	-11.6%	61.9%
2014	1.6%	19.5%	35.0%	36.7%	29.2%	36.5%
2015	-0.1%	-6.9%	-9.3%	-10.8%	10.0%	-21.9%
2016	5.0%	17.5%	-5.3%	-2.8%	15.1%	28.7%
2017	-3.8%	-1.8%	-0.8%	26.2%	-5.7%	5.4%
2018	21.3%	9.3%	27.7%	13.6%	-19.4%	13.0%

