



Motor Accident Insurance Commission

Scheme performance: delivery and affordability as at 31 December 2019

05 May 2020

Version: **FINAL**

A handwritten signature in black ink that reads 'Richard Brookes'.

Richard Brookes
Fellow of the Institute of Actuaries of Australia

A handwritten signature in black ink that reads 'Soroush Amirabadi'.

Soroush Amirabadi

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1 EXECUTIVE SUMMARY

1.1 Introduction

This report presents two measures of Scheme performance over time:

- » Scheme delivery, defined as the proportion of Scheme premiums eventually paid as claimant benefits
- » Scheme affordability, defined as the Scheme premium expressed as a proportion of average weekly earnings.

1.2 Definition

Scheme delivery

In simplified terms, when a premium is paid by the policyholder, it is invested and subsequently used to fund payments to various parties. We have defined the Scheme delivery index as the ratio of projected ultimate payments made to or in respect of claimants, adjusted for investment returns, to the corresponding underwritten premium. Payments to or in respect of claimants include payments made to legal representatives of those claimants. We have excluded payments by the nominal defendant, the nominal defendant levy, and the NIISQ levy from our calculations. Scheme delivery is assessed on an all classes basis.

Specifically, we group the payments into different types as tabulated in Table 1.1 below. We also include the projected size of each payment type as a percentage of the Scheme premium to illustrate the individual materiality.

Table 1.1 Scheme delivery by components

Scheme delivery	Components	Payment types	Proportion of premium (Recent 5 underwriting years)
Claimant benefits	Payment to claimants	Care and medical payments	10%
		Economic loss	33%
		General damages	9%
		Other payments (pre-approved costs, legal plaintiff costs, trustee fees and recoveries)	9%
	H & E Levy	Hospital and Emergency Services (H&E) levy	6%
Delivery cost	Insurer profit	Insurer's profit margin	18%
	Legal and investigation costs	Legal defendant costs and insurers' investigation costs	4%
	Admin levies	Statutory Insurance Scheme levy and Queensland Transport Administration fee	3%
	Other costs	Acquisition costs	3%
		Reinsurance costs	1%
		Claim handling expenses (CHE)	4%



On advice from MAIC, we have included Trustee Administration Fees in claimant benefits.

Scheme affordability

Scheme affordability is shown as the highest filed Class 1 premium expressed as a proportion of Queensland full-time adult persons ordinary time weekly earnings as declared by the Australian Bureau of Statistics. This is consistent with the “affordability index” as calculated by MAIC in accordance with the *Motor Accident Insurance Act 1994*. The affordability index is defined as 45 per cent of Queensland full-time adult persons ordinary time weekly earnings declared by the Australian Statistician in the original series of the statistician's average weekly earnings publication most recently published. A comparison of the highest filed premium with the affordability index has been regularly reported in MAIC's annual report over a number of years.

1.3 Methodology

Scheme delivery

The main technical difficulty in the calculation of the Scheme delivery index is the projection of ultimate payments. We have done this using the same models we use to estimate recent risk premiums in our regular advice to MAIC. In particular, the calculations for this report are very similar to those underlying our report on retrospective profit (subsequently referred to as the “Retrospective Profit Study”) and so our calculation of the Scheme delivery index is subject to the same assumptions and uncertainties inherent in that advice.

Scheme affordability

We have used the same methodology as shown in MAIC's annual reports, which is consistent with the *Motor Accident Insurance Act 1994*.

1.4 Results

Scheme delivery

Key insights:

- » The Scheme delivery index has been increasing overall since the end of 2013. This is primarily driven by lower insurer profit.
- » The estimates of Scheme delivery index are subject to considerable uncertainties, especially for underwriting year 2019.
- » After adjusting for inflation, premium which will eventually be spent on claimant benefits has remained reasonably stable over the last 5 years.
- » Other than insurer profit, the subcomponents of delivery cost have been stable.

Figure 1.1 shows the Scheme delivery index over time.



Figure 1.1 Scheme delivery across all vehicle classes

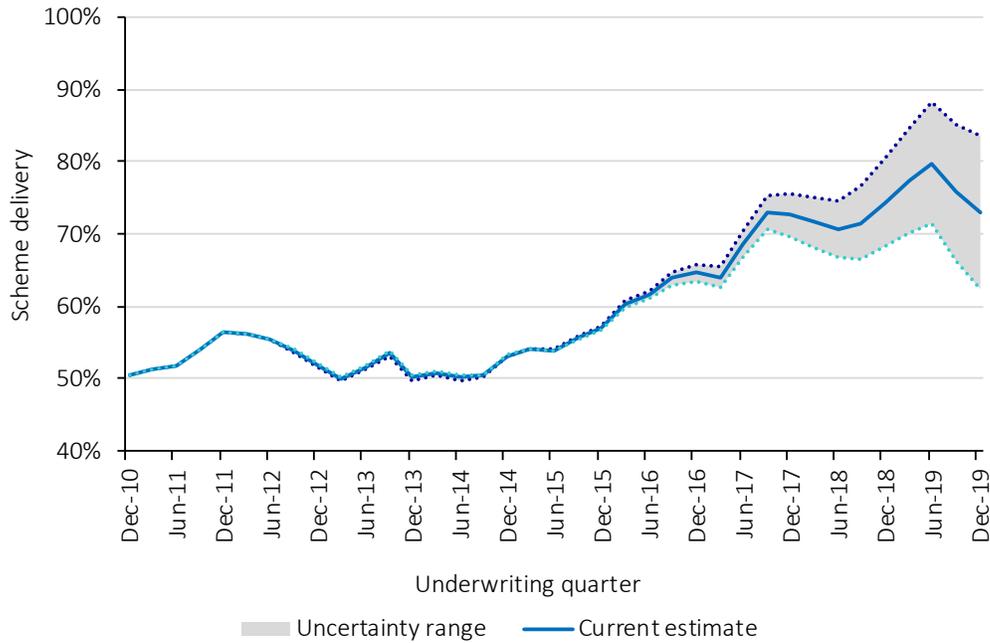


Figure 1.1 shows the delivery index has been subject to an increasing trend since late 2013, rising to an average estimate of 66% over the last 5 underwriting years from 2015 to 2019.

The estimation of the scheme delivery for recent underwriting years is subject to considerable degrees of uncertainty due to the dynamic environment and long-tailed nature of CTP. The estimates include forecasts of how much will be paid in claims costs and the heads of damage under which they will be paid. The results are subject to greater uncertainty for more underdeveloped underwriting periods, especially 2019 because most of the payments for these periods are forecast, rather than actual.

Figure 1.1 also illustrates the range of possible results given the uncertainty. We estimate the scheme delivery index for underwriting year 2019 should end up in the range 68% to 85%, with our current estimate being 76%. The range is illustrative only and there are realistic scenarios which would see the ultimate 2019 delivery index fall outside of this range.

Below is a comparison of the projected decomposition of the underwritten premium for the last five years with the equivalent one year ago. This comparison aims to provide some insights into the drivers of the increasing trend in scheme delivery index.

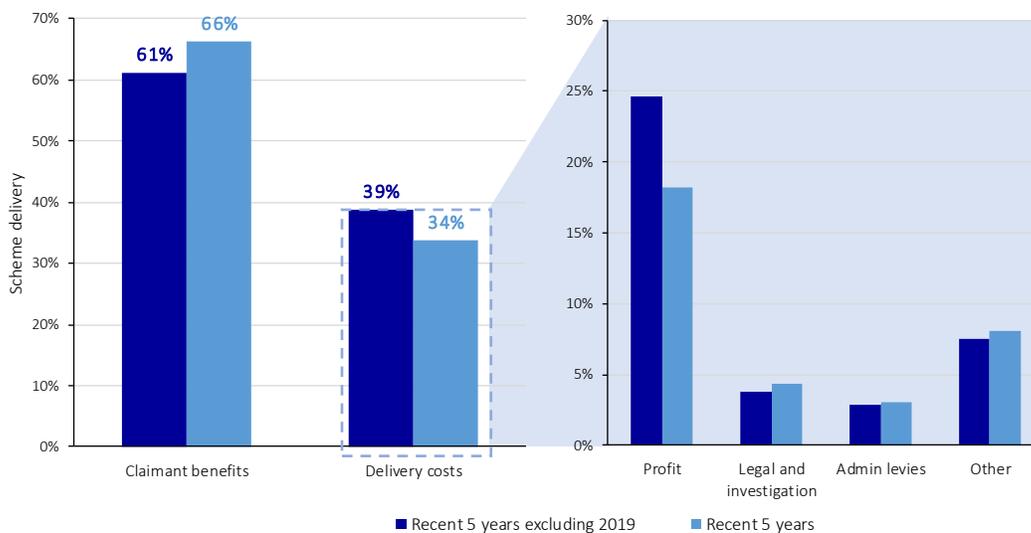


Table 1.2 Scheme delivery under 0.5% p.a. superimposed inflation

Period	Claimant benefits			Delivery costs				
	Claim payments	H&E Levy	Total	Profit	Legal and investigation costs	Admin levies	Other	Total
Recent 5 underwriting years excluding 2019 (2014-2018)	55%	6%	61%	25%	4%	3%	7%	39%
Recent 5 underwriting years (2015-2019)	60%	6%	66%	18%	4%	3%	8%	34%

Note: Other costs include acquisition costs, reinsurance costs and claim handling expenses (CHE).

Figure 1.2 Scheme delivery of recent 5 years' average vs. recent 5 years' average excluding 2019



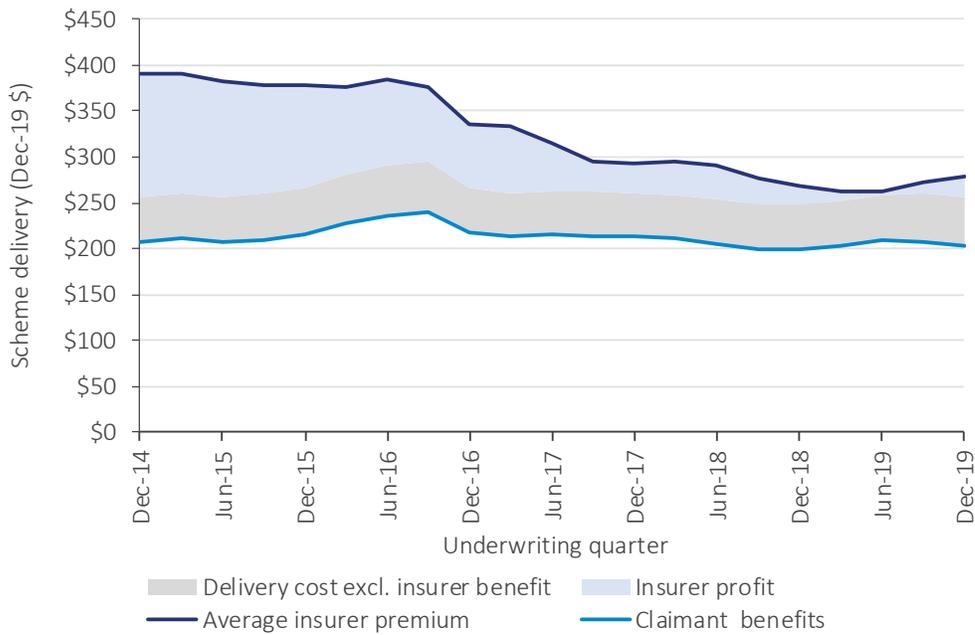
The projected proportion of claimant benefits for the recent 5 years is 5% higher than the average over the last 5 underwriting years excluding 2019. This is primarily driven by lower projected insurer profit.

Figure 1.3 below shows the trends in premium components over time. We observe that over the last 5 years, the claimant benefit component has remained stable whilst insurer profit has significantly decreased since 2016.

The National Injury Insurance Scheme Queensland (NIISQ) came into effect from 1 July 2016. All lifetime care and support costs for catastrophically injured claimants arising from accidents after 1 July 2016 are covered by the NIISQ. We have incorporated the impact of the NIISQ in this analysis. Despite this change to the Scheme, the claimant benefit component has remained relatively constant because the reduction in Scheme benefits for severe claims which are instead covered by the NIISQ has been mostly offset by an increase in Scheme claim frequency since late 2016.



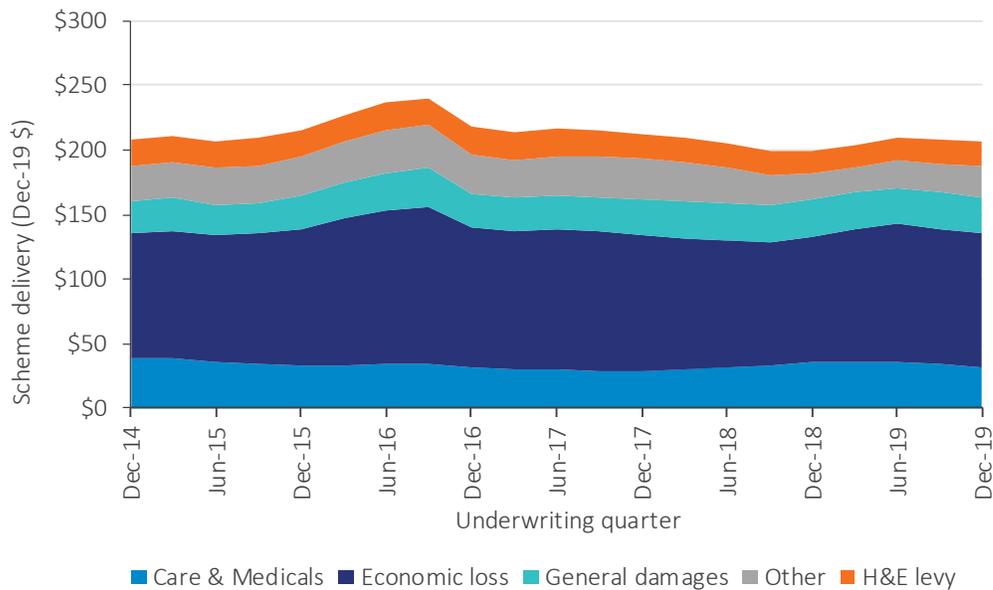
Figure 1.3 Scheme delivery by premium component



We provide a further decomposition of the claimant benefit and delivery costs (excluding insurer profit) by heads of damage in Figure 1.4 and Figure 1.5.

As is shown in Figure 1.4, the total claimant benefits have remained mostly constant after adjusting for inflation.

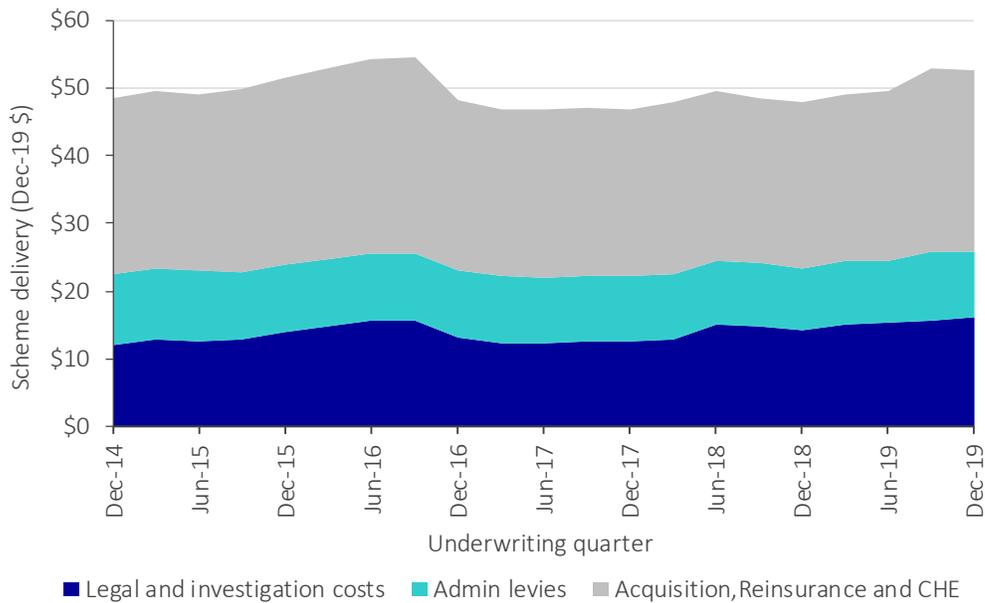
Figure 1.4 Claimant benefits by heads of damage



As Figure 1.5 shows, other than insurer profit, the subcomponents of delivery costs have remained relatively stable after adjusting for inflation.



Figure 1.5 Delivery cost by heads of damage excl. insurer profit

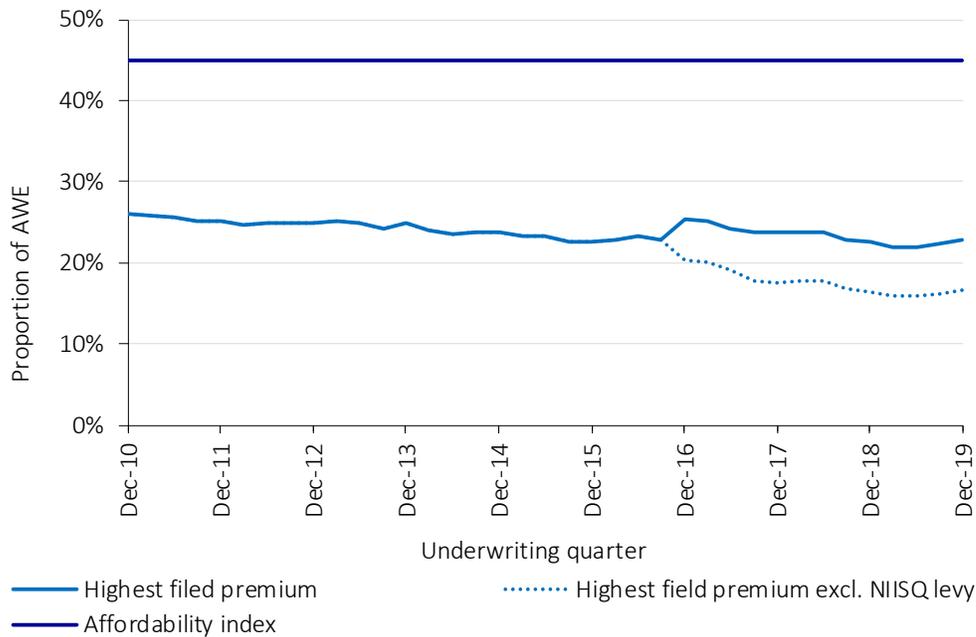


Scheme affordability

Figure 1.6 shows the affordability index and highest filed premium as a proportion of AWE. For policies underwritten from 1 October 2016, we present the highest filed premium including and excluding the NISQ levy because claims that are covered by the NISQ do not belong to the CTP scheme.

The highest filed premium has never breached the affordability index. Scheme affordability has improved from 28.6% of average weekly earnings in December 2010 to 22.8% including the NISQ levy or 16.7% excluding the NISQ levy, for the December 2019 underwriting quarter.

Figure 1.6 Highest filed premium and affordability index for Class 1 as proportion of AWE



1.5 Legal costs

We are unable to measure the financial impact of side agreements of claimant legal representation. These are effectively included in “claimant benefits” in our definition. This restricts us from greater insight into the delivery costs of the Scheme and the actual benefit payments made to claimants.



2 BACKGROUND AND SCOPE

2.1 Scheme background

2.1.1 General

Queensland operates a common law “fault” based compulsory third party scheme, first introduced in 1936. The scheme provides motor vehicle owners with insurance policies that cover their unlimited liability for personal injury caused by, through, or in connection with the use of the insured motor vehicle anywhere in Australia. It is underwritten by private licensed insurers.

2.1.2 Relevant legislation

The Motor Accident Insurance Amendment Act 2000 (“the Amendment Act”) took effect from 1 October 2000. This introduced a number of changes, bringing in statutory limits, of which one of the most significant was a restriction on plaintiff costs.

From 1 October 2000, the insurers, operating in a competitive market, determine the premiums within a range between the maximum (“ceiling”) and minimum (“floor”) rates set by MAIC.

The accident periods subject to the Amendment Act, i.e. from October 2000, will be referred to as constituting “the New Scheme”. Earlier accident periods will be referred to as constituting “the Old Scheme”.

The Civil Liability Act 2003 (“CLA”) applies to all accidents occurring on or after 2 December 2002. It affects the type of claims that can be made as well as bringing in further statutory limits, restricting some of the damages that can be claimed.

In relation to the latter, it contains Injury Scale Values (“ISV”) used for calculating general damages arising from incidents on or after 2 December 2002. Under the Act, general damages are calculated after consideration of the application of the ISV set out in the regulation.

The Civil Liability and Other Legislation Amendment Act 2010 (“CLAA”) increased the ISV scale amounts for general damages and the maximum recoverable legal costs. These changes apply for injuries occurring on or after 1 July 2010. The CLAA also made provision for further indexation, linked to AWE increases.

The Civil and Criminal Jurisdiction Reform and Modernisation Amendment Act 2010 (“CCJRA”) increased the jurisdictions of the District and Magistrates Courts. The effect is that, from 1 November 2010, many of the claims which would previously have been heard by the District Court will now be heard by the Magistrates Court and that some of those claims which would have been heard in the Supreme Court will be heard in the District Court.

2.2 Scope of this report

MAIC have requested that Taylor Fry conduct a review of Scheme performance of premiums for the Queensland CTP Scheme. Of particular interest are:

- » How has the affordability of the Scheme changed over time for Class 1?
- » How much of the premium is returned to claimants, on average, across all vehicle classes?

This report answers these questions.



We have relied upon our advice given to MAIC on components of the risk premium for CTP insurance policies underwritten in the quarter beginning 1 July 2020. This advice was based on data to 31 December 2019 and is the latest complete annual advice given to MAIC. We will refer to this as “the Annual Advice”.

An abridged version of that advice, for circulation to insurers, appeared as “Queensland CTP Market Briefing: Insurer annex - Review of the risk premium for the 2020Q3 underwriting quarter”, dated 24 March 2020, by Richard Brookes and Nelson Vasconcelos. This will be referred to subsequently as “the Risk Premium report”.

For this report, we have also relied upon our advice given to MAIC in relation to the retrospective profit of QLD CTP premiums of all vehicle classes. This report will be referred to as “the Retrospective Profit Study”.

As agreed with MAIC, we have also excluded any claim cost paid by, or levies associated with, the Nominal Defendant and the National Injury Insurance Scheme Queensland (NIISQ).

As requested by MAIC, the Scheme delivery index is measured on an all classes basis while Scheme affordability is measured based on Class 1 premiums only.

2.3 Previous report

The report titled “Scheme Performance: delivery and affordability as at 31 December 2018” dated 27 May 2019, by Richard Brookes and Nelson Vasconcelos was based on data to 31 December 2018 (“the Previous Report”).



3 DATA

3.1 General

In producing this report, we have relied on the following sources of data:

- » The MAIC database, detailing all claims notified under the Act (i.e. since 1 September 1994), as at 31 December 2019
- » Numbers of vehicles registered by month from 31 July 2000 to 31 December 2019
- » Quarterly floor and ceiling premium rates
- » Insurers' rate filings for all vehicle classes
- » Levy rates
- » Affordability
- » Analysis from the Annual Advice and the Retrospective Profit Study.

3.2 MAIC database

This provides unit record claim information on all claims, including:

- » Date of accident
- » Date of notification
- » Quarterly claim payment history
- » Quarterly claim status (open, closed, re-opened) history
- » Quarterly case estimate history
- » Injury codes.

3.3 Number of vehicles registered

This consists of total vehicle registrations, split by vehicle class for each month since 1 July 2000. The most recent twelve months of exposure was extracted and provided by MAIC on 28 January 2020; prior to this, we have relied upon the data from the Previous Report.

3.4 Quarterly floor and ceiling premium rates

Quarterly floor and ceiling premium rates were provided by MAIC on 31 January 2020. This information included the underlying assumptions for expenses, profit margin and vehicle class relativities for underwriting periods beginning 1 July 201904 to 30 June 202020. For periods before 1 July 201904, we have relied upon the data from the Previous Report.

3.5 Insurers' rate filings for all vehicle classes

Insurers' rate filings were provided by MAIC for the period 1 July 2019 to 30 June 2020 on 31 January 2020. For periods before this, we have relied upon the Previous Report.



3.6 Levy rates

MAIC has supplied us the levy rates charged for each underwriting year since the beginning of the Scheme. This data, provided on 31 January 2020, consists of the dollar amounts charged for the Hospital and Emergency Services levy, Statutory Insurance Scheme levy, Queensland Transport administration fee, the Nominal Defendant levy (inclusive of the HIH levy) and the NISQ levy for all vehicle classes.

3.7 Affordability

MAIC has supplied us with the data underlying the affordability index on 31 January 2020. This data consisted of the Queensland full-time adult persons ordinary time weekly earnings per calendar quarter and the highest filed premium since the December 2000 underwriting quarter.



4 METHODOLOGY

4.1 Scheme affordability

The calculation of Scheme affordability is straightforward and prescribed by the *Motor Accident Insurance Act 1994, Part 1 3(b) and 4*. We do not discuss the calculation in detail in this report.

4.2 Scheme delivery

4.2.1 General

The aim of this exercise is to create an index that tracks, per underwriting quarter, the proportion of average premium collected across all classes that is paid back to, or in respect of, claimants. Payments made to, or in respect of claimants include all claim payments except certain heads of damage and include the hospital and emergency services levy. We refer to the amount of monies paid back to, or in respect of, claimants as “claimant benefits”, while all other payments are referred to as “delivery costs”.

In algebraic form, the Scheme delivery index, for any given underwriting quarter, is defined as:

$$\frac{\textit{Claim payments excluding certain heads of damage + specified premium levies}}{\textit{Collected premium (includes levies and other Scheme costs)}}$$

Alternatively:

$$\frac{\textit{Claimant benefits}}{\textit{Claimant benefits + delivery costs}}$$

The calculation is more complicated than the simple formula above might suggest since:

- » For the underwriting quarters which still have significant claims payments to be made:
 - Ultimate claim payments are not yet known. So we need to project all future claim payments in order to allocate collected premium between claim payments, levies and costs, and insurer profit
 - The decomposition of future claim payments by heads of damage is not yet known. Our claim payment models are not specific to head of damage so need amendment for use in this context
- » Claim payments and premium payments are made at different times and so must be discounted to a common date for a valid comparison to be made.

4.2.2 Claimant benefits

As agreed with MAIC, claimant benefits are defined as any monies paid to or on behalf of direct benefit to claimants. Claimant benefits include:

- » Aids and appliances
- » Past and future care including home care
- » Past and future economic loss
- » General damages
- » Home and vehicle modifications
- » Plaintiff legal costs
- » Hospital, pharmaceutical and medications



- » Pre-approved costs and rehabilitation
- » Funeral expenses
- » Trustee’s administration costs
- » Trustee’s sanction fees
- » Recoveries
- » Hospital and emergency services levy (H & E levy).

The reason for including each of the above as a claimant benefit is self-explanatory except for the plaintiff legal costs. Our reasons for including these as a benefit are:

- » Claimants frequently have side agreements with their legal representation that entitles them up to 50% of the claim settlement. These agreements, governed by s345-347 of the Legal Professions Act 2007 are confidential between the claimant and their legal representation and hence not captured by MAIC. As a result, it is difficult to identify the exact amount paid and therefore potentially bias the Scheme delivery index
- » Philosophically, such payments are made in respect of the claimant for services provided to the claimant, and are under the control of the claimant
- » As defined above, the Scheme delivery index separates the benefits for claimants versus the cost of delivering the Scheme. By including plaintiff legal costs as a claimant benefit, the definition of delivery costs becomes a cleaner measure of the cost for insurers to administer the Scheme.

4.2.3 Delivery costs

Accordingly, Scheme delivery costs are all other costs, these include:

- » Insurer investigation costs
- » Defendant legal costs
- » Administration costs and other expense costs
- » Reinsurance and acquisition costs
- » Insurer’s claim handling expense (CHE)
- » Insurer’s profit margin
- » Statutory Insurance Scheme levy
- » Queensland Transport administration fee.

4.2.4 Assumed levies and other Scheme costs

In the calculation of the floor and ceiling, MAIC make assumptions regarding:

- » Claim handling expenses – percentage of risk premium
- » Acquisition and reinsurance cost – fixed dollar cost
- » Levies – fixed dollar cost
 - Hospital and emergency services levy
 - Statutory Insurance Scheme levy
 - Queensland Transport administration fee.



In our attribution of the Scheme delivery costs between levies, costs and profit we have assumed that the actual levies and costs are incurred at the level assumed by MAIC.

4.2.5 Future claim payments

Future claim payments

We have taken from the Retrospective Profit Study:

- » Projections of future claim payments using data and models underlying the most recent Annual Advice
- » Estimates of hindsight risk premium.

Future Superimposed Inflation

As in the Retrospective Profit Study, our central estimate of future claim payments and hindsight risk premium is based on future superimposed inflation (“SI”) of 0.5% per annum, which is what MAIC allowed for in their calculation of ceiling and floor premium as at 31 December 2019.

4.2.6 Hindsight risk premium

A description of the calculation of the hindsight risk premium can be found in Section 4 of the Retrospective Profit Study. We describe below the significant features of that calculation.

General

The estimation of the hindsight premium is as follows:

- » Hindsight estimates of Scheme claim frequency and claim size by accident quarter were taken from the Risk Premium report
- » The claim size estimates were inflated and discounted to the middle of the underwriting quarter to which they belong
- » The risk premium was calculated as the product of claim frequency and the average claim size.

Inflation

Future finalised claim payments have been inflated to the middle of the calendar quarter to which belong using a market-based model based on the shape of current nominal and inflation-linked bond yield curves, the QLD unemployment rate and long run assumptions of CPI and the gap between AWE and CPI. Full details of this model are outlined in the discussion paper “An alternative approach to forecasting wage inflation” dated 29 July 2019 by Richard Brookes and Nelson Vasconcelos. Future finalised claim payments are sourced from the Annual Advice.

Discounting payments

Claim payments have been discounted to the middle of the underwriting quarter using the Government bond yield curve as at the end of the underwriting quarter.

4.2.7 Proportion of claimant benefits

The estimation the proportion of risk premium allocated to claimant benefits is as follows:



- » By using the most recently supplied data (as at 31 December 2019) calculate, per accident quarter, the cumulative ratio of claimant benefit claim payments to total claim payments
- » Analyse how this ratio develops across successive development quarters (i.e. “*historical development factors*”)
- » Select “*future development factors*” that are typical of historical development
- » Estimate the “*ultimate ratio*” for each accident quarter by using the selected “*future development factors*”.

We apply the same approach to estimating the proportions of risk premium allocated to specific subcomponents of claimant benefit, which are:

- » Care and medical-related costs
- » Past and future economic loss
- » General damages
- » Other claimant benefits such as trustee fee, pre-approved costs, legal defendant costs and recoveries.

After each individual proportion is calculated, we calibrate the sum of the subcomponent proportions to be consistent with the total proportion allocated to claimant benefit.

4.2.8 Calculation of the Scheme delivery index

The numerator of the index, which we have called “claimant benefits”, is calculated by:

- » Multiplying the hindsight all class risk premium from the Retrospective Profit Study by the estimated “ultimate ratio” to calculate the amount of hindsight risk premium to be attributed to claimant benefits (for more information of the calculation of the hindsight risk premium, see Section 4 of the Retrospective Profit Study or Appendix B.1)
- » Adding in claimant benefit levies.

It should be noted, that all the underwriting quarters included in our analysis have some claims to be settled and most have some claims yet to be reported. Therefore, our calculation of claimant benefits depends on our projection of both the hindsight premium and the proportion of claimant benefits. The more recent the underwriting quarter:

- » The more dependent is the estimate of claimant benefits on the assumptions underlying our projection
- » The more uncertain is our estimate of the Scheme delivery index.

To calculate the index, we divide the estimate of claimant benefits for each underwriting quarter inclusive of claimant benefit levies by the average filed premium, weighted by insurer market share.

4.2.9 Allocation of hindsight premium which is not part of claimant benefits

The portion of the hindsight risk premium which is not part of claimant benefits can be allocated between:

- » Non-claimant heads of damage
- » Levies
- » Expenses
- » The remaining element, which is a hindsight estimate of insurer profit.

The methodology we have followed is such that our estimation of the last three of these items is identical to those in the Retrospective Profit Study. We have included premium levies and GST within our estimates



of the Scheme delivery index; as a result, our estimate of insurer profit is approximately 3% less than that reported within the Retrospective Profit Study, simply because it is a proportion of a larger denominator.

4.2.10 Summary of payments

Table 4.1 summarises the payments to various parties discussed in previous sections into major components. The results presented in Section 5 follow the same grouping of payments.

Table 4.1 Scheme delivery by components

Scheme delivery	Components	Payment types
Claimant benefits	Payment to claimants	Care and medical payments
		Economic loss
		General damages
		Other payments (pre-approved costs, legal plaintiff costs, trustee fees and recoveries)
	H & E Levy	Hospital and Emergency Services (H&E) levy
Delivery cost	Insurer profit	Insurer's profit margin
	Legal and investigation costs	Legal defendant costs and insurers' investigation costs
	Admin levies	Statutory Insurance Scheme levy and Queensland Transport administration fee
	Other costs	Acquisition costs
		Reinsurance costs
Claim handling expenses (CHE)		

4.2.11 The introduction of the National Injury Insurance Scheme Queensland (NIISQ)

The NIISQ came into effect from 1 July 2016. All lifetime care and support costs for catastrophically injured claimants arising from accidents after 1 July 2016 will be covered under the NIISQ. This is expected to reduce the average claim size for policies underwritten from 1 July 2015 due to the reduction in costs covered by CTP scheme. The claim frequency will remain unchanged as certain heads of damages (HoD) such as economic loss will still be covered by CTP scheme.

In the Scheme performance study this year, we have updated the modelling approach so that:

- » Claim sizes are modelled on a net of NIISQ basis by removing all payments from the data which we assess would have qualified for the NIISQ if it had always been existence. This means that the projected sizes of all NIISQ-eligible claims directly incorporate a reduction in costs covered by the NIISQ.
- » For claims incurred prior to 1 July 2016, claim sizes are adjusted to a gross of NIISQ basis by adding back payments and case estimates of NIISQ-eligible claims for HoDs that would have been covered by the NIISQ. This is because NIISQ is not applicable to these claims hence no claims cost was transferred to NIISQ.



As regards the development of proportions of risk premium allocated to heads of damage described in Section 4.2.7, we adopt different develop patterns for accident periods before and after the introduction of NISQ. This is to recognise different payment patterns of NISQ-eligible claims and the rest of claims.

We have also made adjustments to policies underwritten from 1 July 2015 to 30 September 2016 to reflect insurers' payments to MAIC for the exposure covered by NISQ (known as 'the NISQ claw back').

The NISQ levy was introduced on 1 October 2016. The NISQ levy is not included in our analysis.



5 RESULTS

This section outlines the major findings of our analysis. We present:

- » The historical trends of HoD subgroups and the estimated proportion of claimant benefits to total claim payments (Section 5.1)
- » The split of insurer average filed premium into risk premium, premium levies and other Scheme costs, grouped into claimant benefits and delivery cost (Section 5.2)
- » The key insights into the trend in Scheme delivery and uncertainties (Section 5.3)
- » The calculation of the Scheme affordability index (Section 5.4)
- » Comments on the overall Scheme performance (Section 5.5).

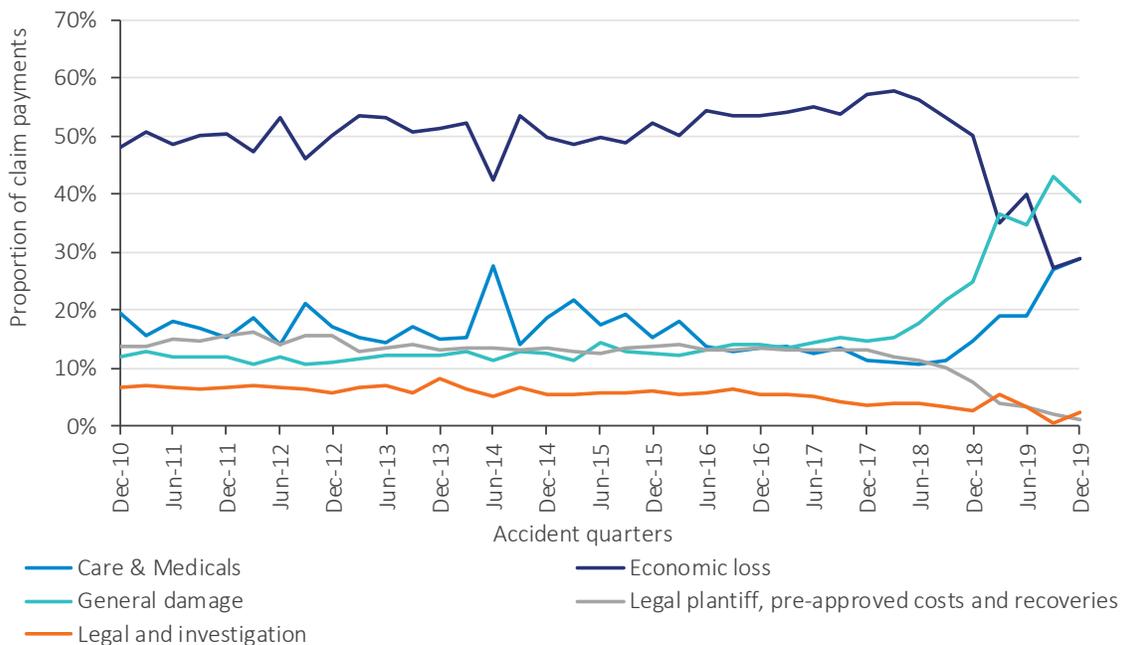
5.1 Proportion of claimant benefits

5.1.1 Proportions of claim payments to date

Figure 5.1 displays, to date, the proportion of total claim payments for the more significant HoD, for the last 10 accident years.

We cannot show the whole picture with regard to plaintiff legal costs due to side agreements. Additionally, Figure 5.1 shows a very different proportion of claim payments to date for the 2019 accident year compared to previous years; this is reflective of the immaturity of the 2019 accident year.

Figure 5.1 Portion of claim payments to date



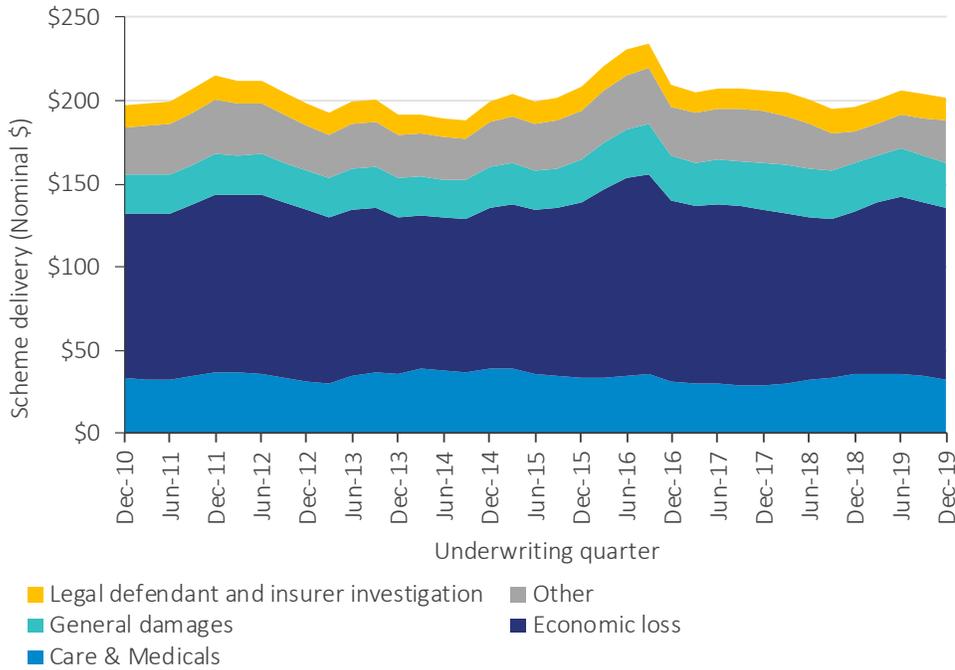
Note: Legal defendant and insurer investigation costs are regarded as part of delivery costs.



Since 2010, the proportion of claim payments relating to economic loss have been growing at the expense of “other” costs, which include past and future care, insurer investigation, hospital/pharmaceutical and pre-approved costs.

For illustrative purposes, Figure 5.2 develops each HoD to ultimate for comparison with Figure 5.1. We see the risk premium allocation by HoD has been fairly stable over the most recent 5 years after adjusting for inflation.

Figure 5.2 Ultimate risk premium by heads of damage



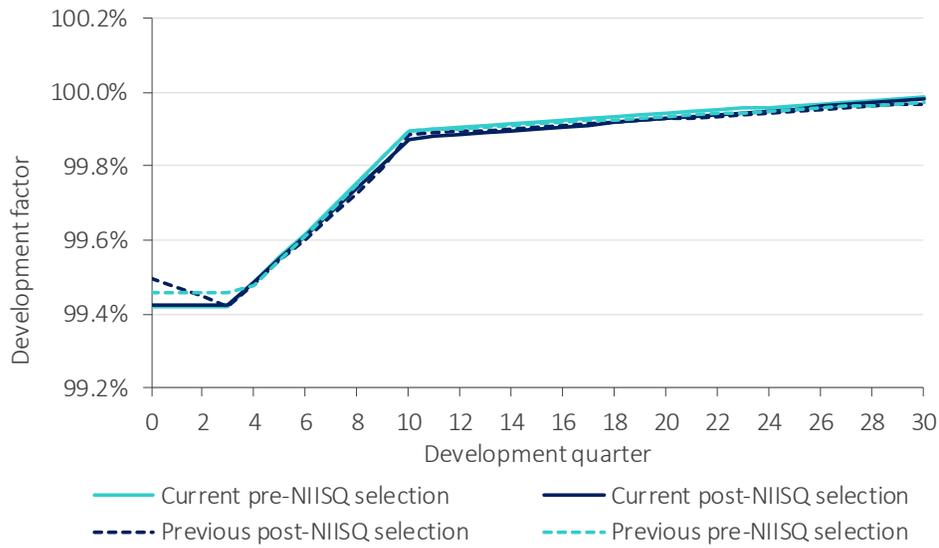
Note: Other payments include pre-approved costs, legal plaintiff costs and recoveries.

5.1.2 Development factors

Figure 5.3 displays the historical (averaged over various accident quarters) and selected development factors for the proportion of claimant benefits to total claim payments. These development factors show, per development quarter, how the proportion of claimant benefit claim payments develops over time. A development factor of 100% indicates nil change, while a factor of 99% indicates a 1% decrease in the proportion from one development quarter to the next, while a factor of 101% indicates a 1% increase.



Figure 5.3 Selected development factors



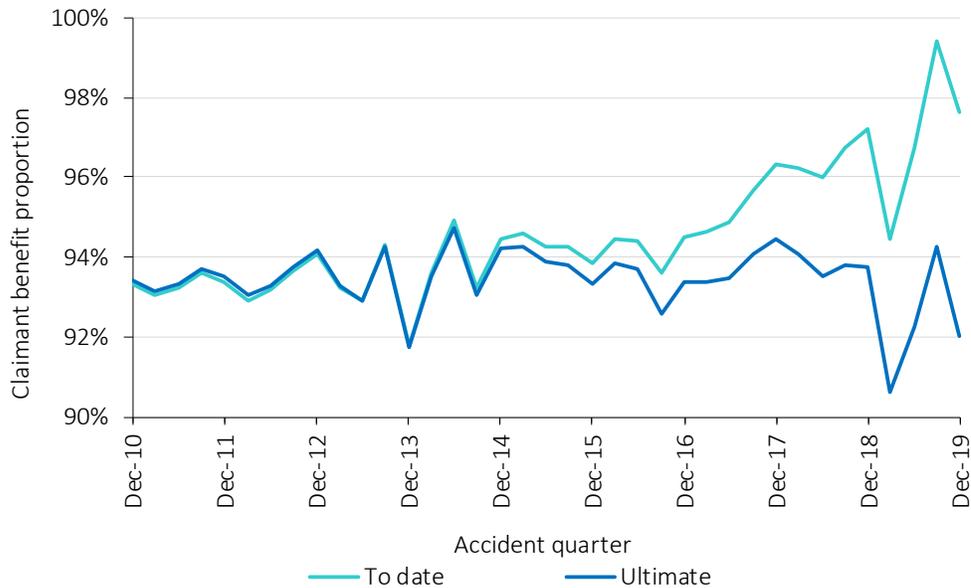
We adopt slightly different develop patterns for accident periods before and after the introduction of NIISQ. This is to recognise different payment patterns of NIISQ-eligible claims and the rest of claims.

Development factors range between 99% and 100%. The change by development quarter is small, especially more than one year after the beginning of the accident quarter. There is considerable early development volatility. The early development year experience has been smoothed in our analysis.

5.1.3 Ultimate claimant benefit proportion

Figure 5.4 shows the estimated ultimate claimant benefits as a proportion of risk premium across accident years compared with the paid proportion to date.

Figure 5.4 Claimant benefit proportions – ultimate and to date



For the 2016-2018 accident years, we project a claimant benefit proportion between 92.6% and 94.5%.

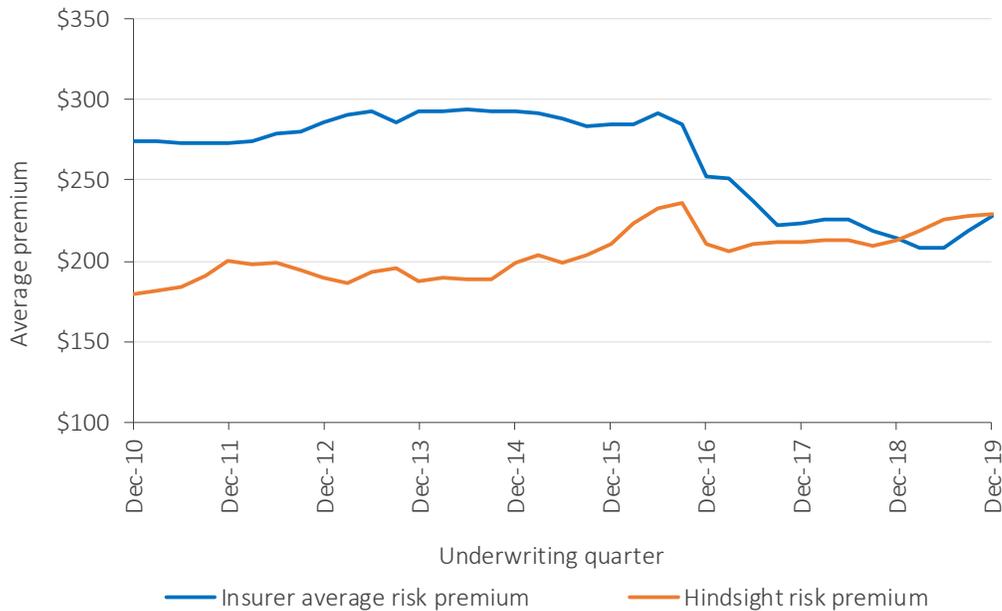


5.2 Average filed premium

5.2.1 Risk premium

In Figure 5.5 we show the estimated hindsight all class risk premium and that implicit in the average filed insurer premium from 31 December 2010 to 31 December 2019. This figure has been taken from Section 5 of the Retrospective Profit Study.

Figure 5.5 Average (non-ITC) all class gross risk premium



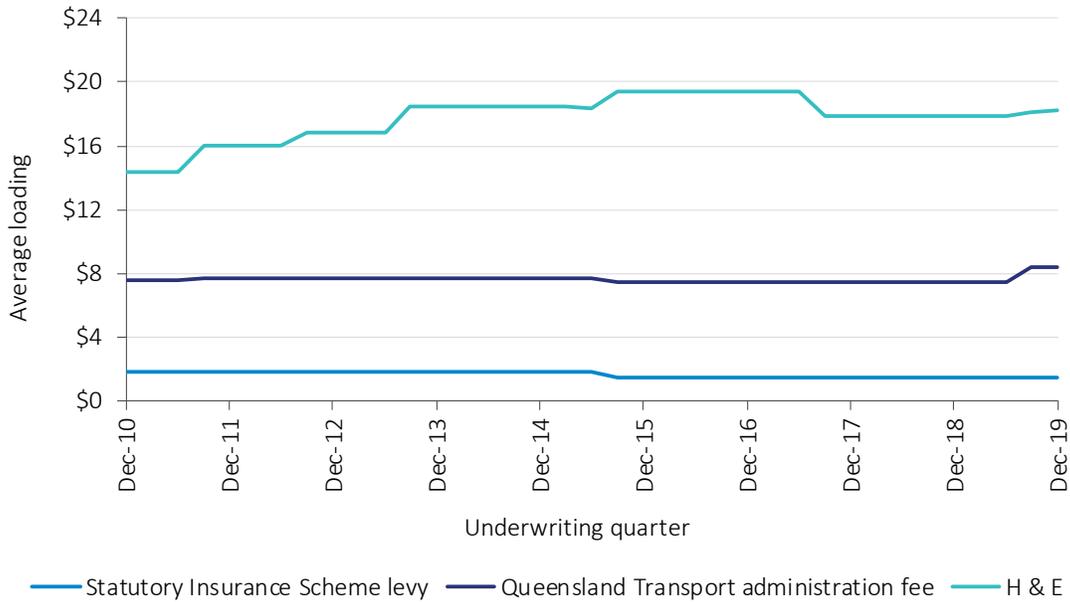
The difference between the average filed and the hindsight estimates of risk premium is equal to the current estimate of insurer profit above the target profit margin.

5.2.2 Premium levies

Figure 5.6 displays, per underwriting quarter, the average dollar value of levies included in the premium across all vehicle classes. As seen, the H & E levy (claimant benefit) steadily increased to the middle of underwriting year 2017 then decreased slightly to the current quarter. The Statutory Insurance Scheme levy and Queensland Transport administration fee have remained fairly constant (delivery costs) over time.



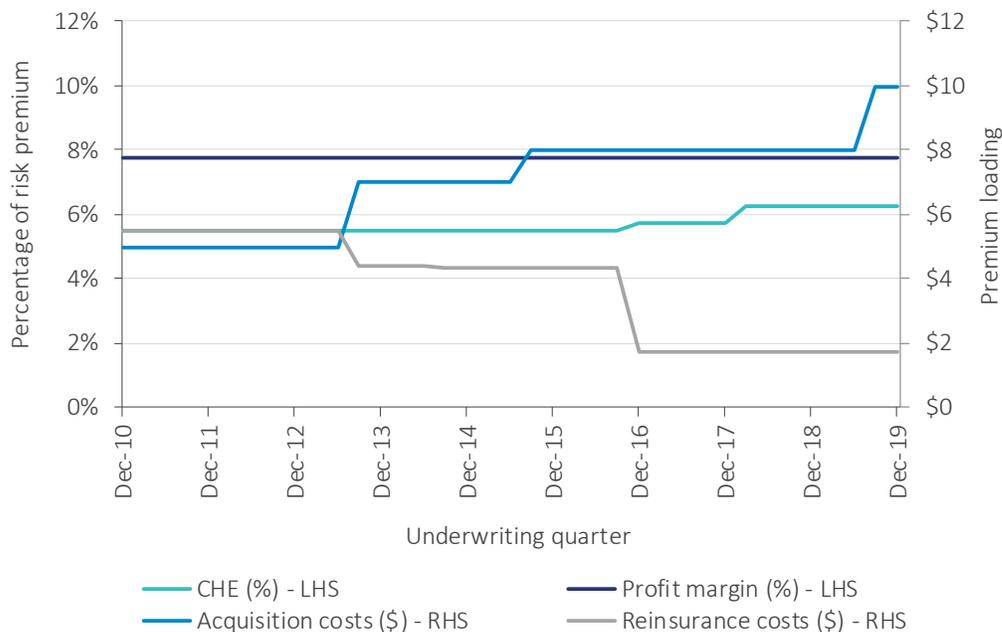
Figure 5.6 Average (non-ITC) premium loadings across all classes



5.2.3 Expenses and allowances

Figure 5.7 shows, as assumed by MAIC in their central estimate calculation, the expenses and allowance assumptions across all classes. The average acquisition and reinsurance cost across all classes are presented in Figure 5.7 because MAIC’s assumptions vary by class. We have assumed that the allowances in Figure 5.7 are those experienced by the average filed premium. All loadings as displayed in Figure 5.7 are classified as Scheme delivery costs in our calculation of delivery.

Figure 5.7 Average expenses and allowances at the MAIC central estimate across all classes



As shown, since 31 December 2010:



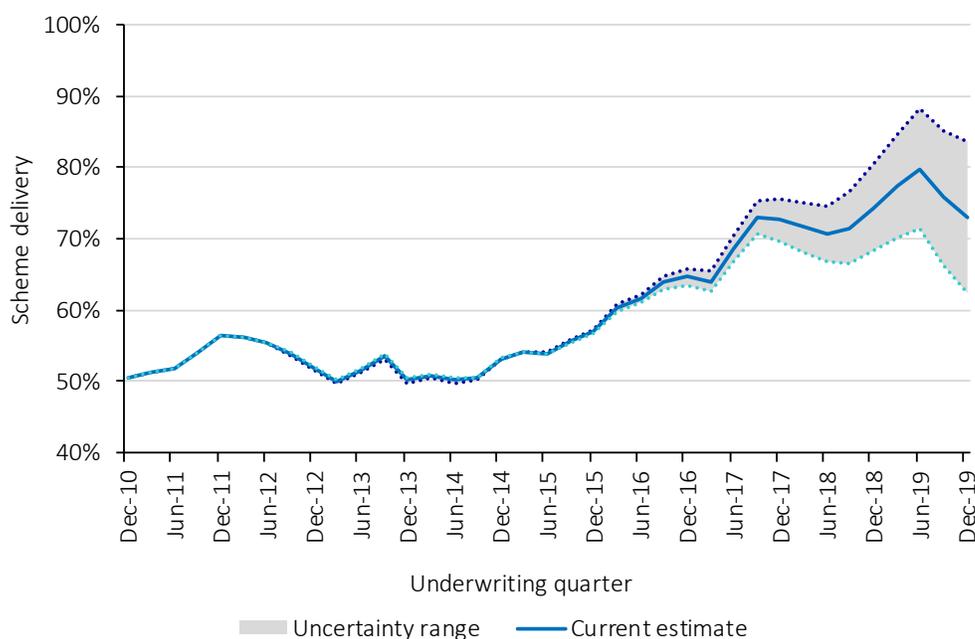
- » The claims handling expense assumption ranges from 5.5% to 6.3%. It was increased in Dec-16 due to the introduction of NIISQ
- » The profit margin has remained stable at 7.75%
- » Reinsurance costs were, on average, \$5.50 up to the June 2013 underwriting quarter. These costs gradually decreased to \$4.33 by the September 2016 underwriting quarter. Due to the introduction of NIISQ, the average reinsurance cost assumption was further reduced to \$1.71
- » Acquisition costs were at \$5 from the December 2010 underwriting quarter then increased gradually over time. From the September 2019 underwriting quarter, acquisition costs were increased to \$10.

5.3 Scheme delivery

Figure 5.8 displays the consolidation of the results shown in the previous sections into a delivery index. That is, what proportion of premium is attributed to the benefit of claimants? The figure displays the Scheme delivery index over time. displays the numerical values of Figure 5.8 and give a breakdown of claimant benefit and delivery costs into claim payments, levies and other Scheme costs.

Figure 5.8 shows the delivery index has been subject to an increasing trend since late 2013, rising to an average of 66% over the last 5 underwriting years from 2015 to 2019.

Figure 5.8 Scheme delivery across all vehicle classes



The estimation of the scheme delivery for recent underwriting years is subject to considerable degrees of uncertainty due to the dynamic environment and long-tailed nature of CTP. This is because the estimates include forecasts of how much will be paid in claims costs and the heads of damage under which they will be paid. The results are subject to greater uncertainty for more underdeveloped underwriting periods, especially 2019 because most of the payments for these periods are forecast, rather than actual.

Figure 5.8 also illustrates the range of possible results given the uncertainty. We estimate the scheme delivery index for underwriting year 2019 should end up in the range 68% to 85%, with our current estimate being 76%. The range is illustrative only and there are realistic scenarios which would see the ultimate 2019 delivery index fall outside of this range.



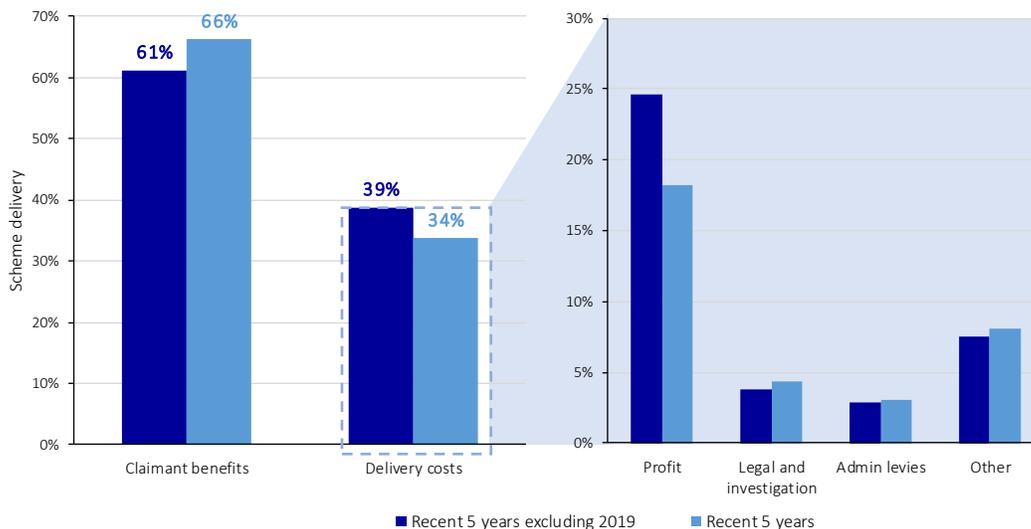
Below is a comparison of the projected decomposition of the underwritten premium for the last five years with the equivalent one year ago. This comparison aims to provide some insights into the drivers of the increasing trend in scheme delivery index.

Table 5.9 Scheme delivery under 0.5% p.a. superimposed inflation

Period	Claimant benefits			Delivery costs				
	Claim payments	H&E Levy	Total	Profit	Legal and investigation costs	Admin levies	Other	Total
Recent 5 underwriting years excluding 2019 (2014-2018)	55%	6%	61%	25%	4%	3%	7%	39%
Recent 5 underwriting years (2015-2019)	60%	6%	66%	18%	4%	3%	8%	34%

Note: Other costs include acquisition costs, reinsurance costs and claim handling expenses (CHE).

Figure 5.9 Scheme delivery of recent 5 years' average vs. recent 5 years' average excluding 2019



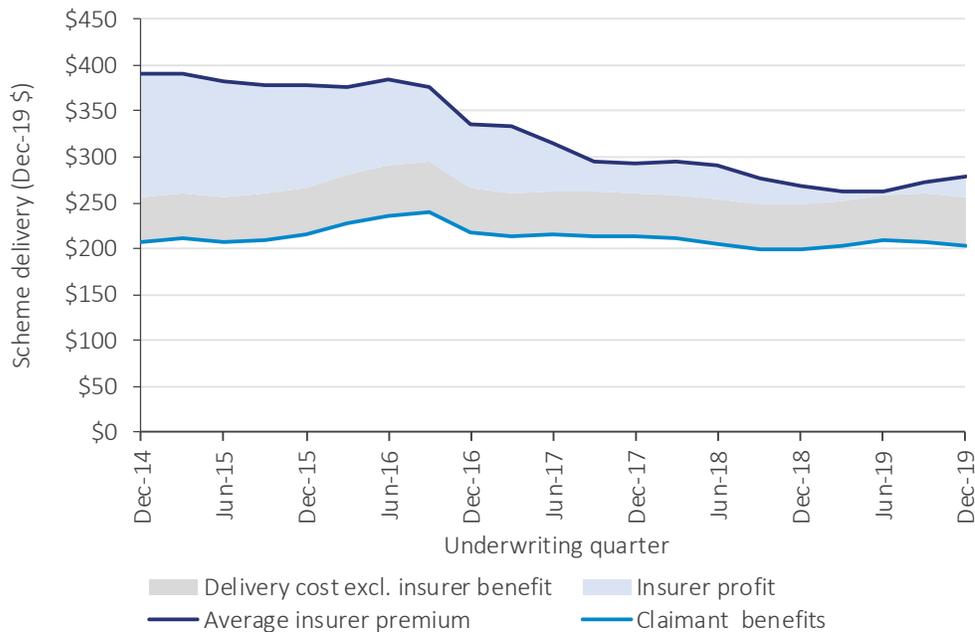
The projected proportion of claimant benefits for the recent 5 years is 5% higher than the average over the last 5 underwriting years excluding 2019. This is primarily driven by lower projected insurer profit.

Figure 5.9 below shows the trends in premium components over time. We can observe that over the last 5 years, the claimant benefit component has remained stable whilst insurer profit margin has significantly decreased since 2016.

The National Injury Insurance Scheme Queensland (NIISQ) came into effect from 1 July 2016. All lifetime care and support costs for catastrophically injured claimants arising from accidents after 1 July 2016 are covered by the NIISQ. We have incorporated the impact of the NIISQ in this analysis. Despite this change to the Scheme, the claimant benefit component has remained relatively constant because the reduction in Scheme benefits for severe claims which are instead covered by the NIISQ has been mostly offset by an increase in Scheme claim frequency since late 2016.



Figure 5.9 Scheme delivery by premium component



We provide a further decomposition of the claimant benefit and delivery costs (excluding insurer profit) by heads of damage in Figure 5.10 and Figure 5.12.

As is shown in Figure 5.10, the total claimant benefits have remained mostly constant after adjusting for inflation.

Figure 5.10 Claimant benefits by heads of damage

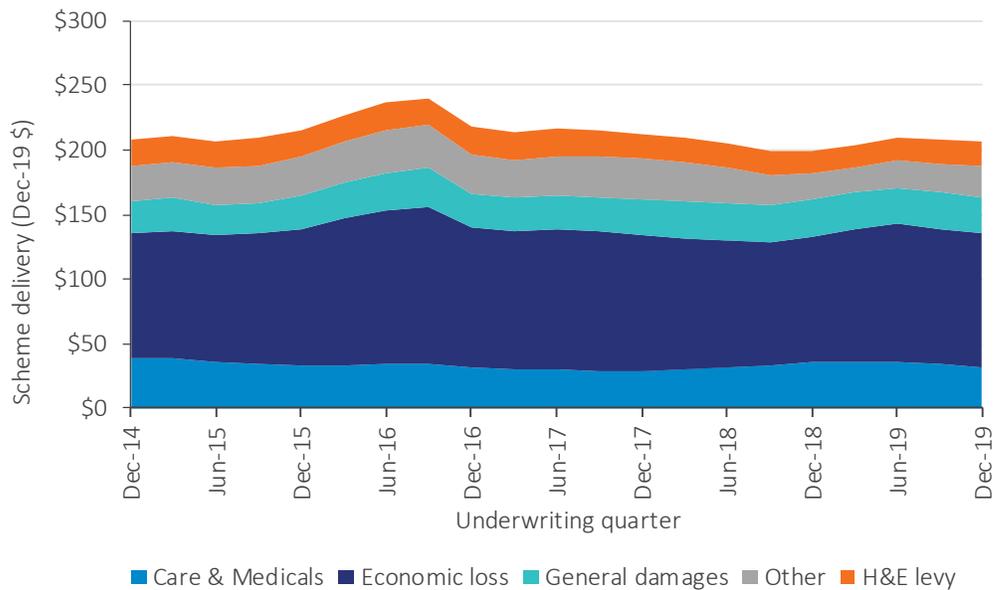
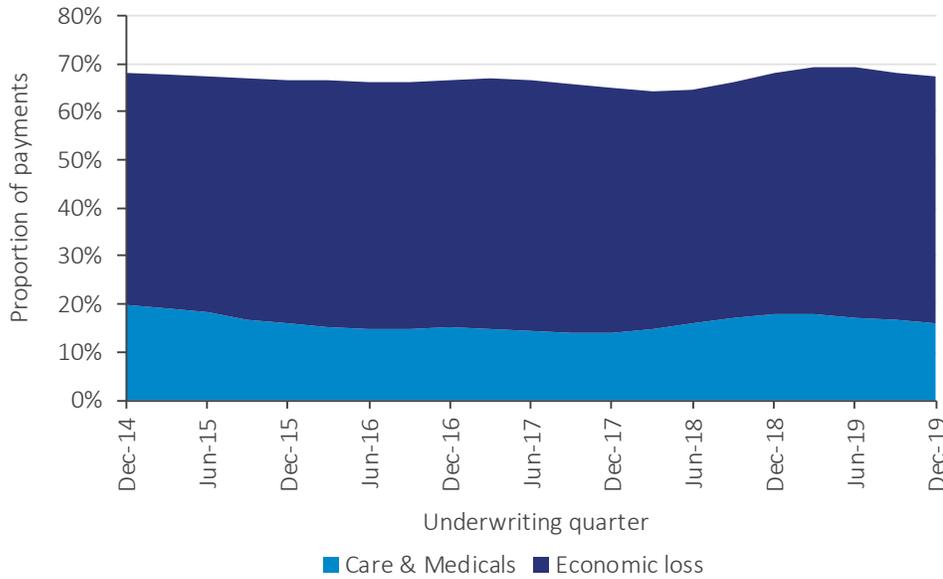


Figure 5.11 shows the trend in care and medical-related payments and economic loss as proportion of claim payments over time. As the proportion allocated to Care & Medicals decreased due to NIISQ, the



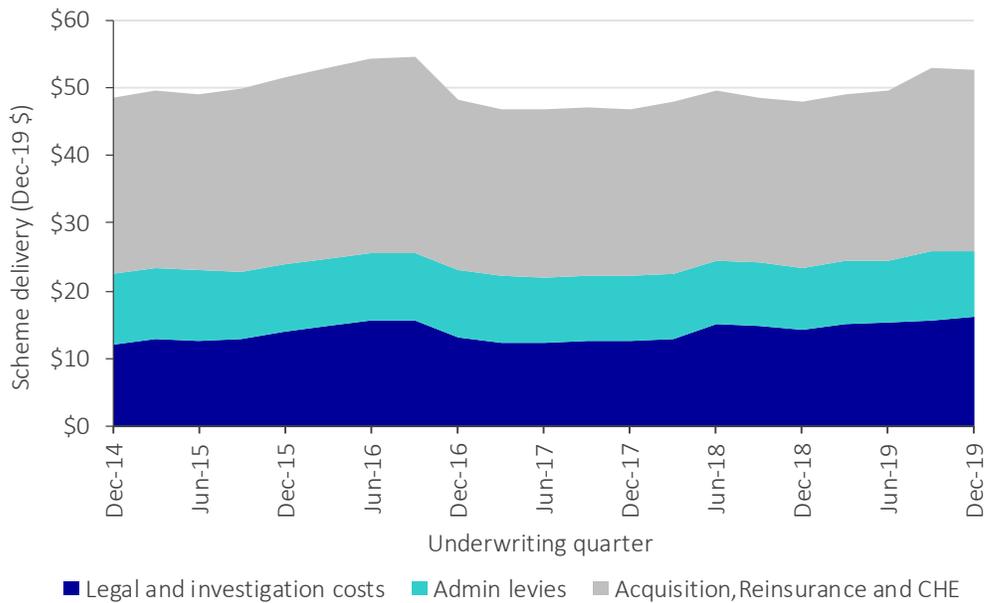
proportion of Economic loss went up and the total proportion of the two HoD subgroups remained constant.

Figure 5.11 Proportion of payments allocated to Care & Medicals and Economic loss



As Figure 5.12 shows, other than insurer profit, the subcomponents of delivery costs have remained fairly stable after adjusting for inflation.

Figure 5.12 Delivery cost by heads of damage excl. insurer profit



Key insights:

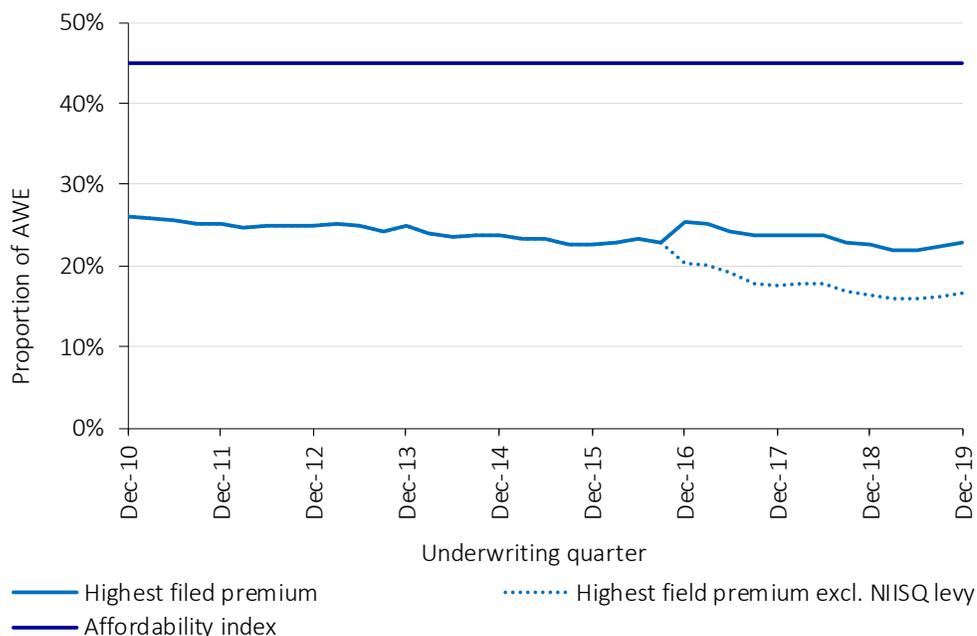
- » The Scheme delivery index has been increasing overall since the end of 2013. This is primarily driven by lower insurer profit.
- » The estimates of Scheme delivery index are subject to considerable uncertainties, especially for underwriting year 2019.
- » After adjusting for inflation, premium which will eventually be spent on claimant benefits has remained reasonably stable over the last 5 years.
- » Other than insurer profit, the subcomponents of delivery cost have been stable.

5.4 Scheme affordability

Using the methodology prescribed by MAIC, Figure 5.13 displays a history of Scheme affordability. For policies underwritten from 1 October 2016 we present the highest filed premium including *and* excluding the NIISQ levy because the claims that are covered by NIISQ do not belong to the CTP scheme. The filed premiums from underwriting periods 2015Q3 to 2016Q3 have not been adjusted for the amounts clawed back from the insurers to cover the cost of NIISQ.

Since the beginning of the New Scheme, the QLD Class 1 CTP premium has become increasingly more affordable. At 31 December 2019, QLD Class 1 CTP premiums were 22.8% of AWE including NIISQ levy or 16.7% of AWE excluding NIISQ levy.

Figure 5.13 Highest filed premium and affordability index for Class 1 as proportion of AWE



5.5 Scheme performance

It is seen from Figure 5.8 and Figure 5.13 that over the past decade:

- » The relative cost of CTP for QLD motorists has fallen from 28.6 percent of AWE in December 2010 to about 22.8 percent of AWE including NIISQ levy or 16.7 percent of AWE excluding NIISQ levy in the most recent quarter



- » The proportion of premiums paid as claimant benefits has been increasing and, for the last 2 years, assuming 0.5% p.a. future superimposed inflation, is averaging seventy four cents for every dollar.

5.6 Legal costs

As discussed in Section 4.2.2, plaintiff legal costs are included as a claimant benefits. One of the primary reasons for including these costs is the inability to accurately measure the proportion of plaintiff legal costs paid by the claimant due to side agreements. These side agreements can potentially be up to half of the total settlement. There is therefore no comprehensive view of plaintiff legal costs available from the data.



6 RECONCILIATION

In this section, we reconcile our current estimate of delivery index with the corresponding delivery index from the Previous Report:

Table 6.1 shows the changes in delivery index due to:

- » The change in the estimated retrospective profits since the Previous Report, as seen in Section 6.2 of the Profit Report.
- » Experience and assumption changes since the Previous Report. This includes how experience in the year to 31 December 2019 differed from previously forecast and affected our projection of the ultimate proportion of claimant benefits. This mostly affects the recent underwriting periods.

Table 6.1 Reconciliation to previous report

Underwriting period	Previous delivery index (All classes)	Changes due to		Current delivery index (All classes) ¹
		Retrospective profit	Experience and assumption changes	
2012	53%	1%	0%	54%
2013	49%	2%	1%	51%
2014	50%	2%	0%	51%
2015	54%	1%	0%	55%
2016	62%	0%	0%	63%
2017	69%	0%	0%	70%
2018	74%	-2%	0%	72%

1. As seen in Figure 5.8.

There has been little change over the year.



7 RELIANCES AND LIMITATIONS

In producing this report, we have relied on data supplied by MAIC on vehicle registrations, premium, premium filing and claims data without audit or independent verification. The accuracy of the results is dependent on both the accuracy and completeness of the data provided. However, in the course of the analysis, internal checks have been carried out which would be expected to find gross inconsistencies. None have come to light and we have accepted the data at face value.

Our analysis is heavily dependent on our estimates of total claims cost from each accident quarter and the estimate of hindsight premium. These are derived from the Annual Advice and the Retrospective Profit Study. This report is subject to the same reliances and limitations as seen in both of those reports.

Due to limitations on data availability, a number of approximations have been made. Should these turn out to be materially inaccurate then our results would be affected. In particular, we have extrapolated current experience to estimate the proportion of claim payments associated to claimant benefits.

In our judgement we have employed techniques and assumptions that are appropriate, and the conclusions presented herein are reasonable given the information currently available. However, it should be recognised that actual Scheme delivery and affordability may deviate, perhaps materially, from our estimates.

The report has been prepared for the Commission for the specific purpose stated in Section 2. No reliance should be placed on this report for any other purpose without confirming with us that such a purpose is appropriate. No other distribution of this report to parties outside of the Commission is permitted without the prior written permission of Taylor Fry. This report is to be considered in its entirety, as parts of the report considered in isolation may be misleading. If any part of this report is to be distributed or provided to other parties, then the entire report including all appendices and not excerpts must be distributed or provided.



- A.1 Historical claimant benefits payments
- A.2 Historical total claim payments
- A.3 Premium loadings and levies



Appendix A

Appendix A.1 Historical finalised inflated claimant benefit claim payments (gross of ITC/DAM)

Accident	Payments (\$ millions)																																						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36 Later		
Dec-10	0.0	0.0	0.5	0.5	3.0	8.7	13.9	11.1	18.4	8.3	28.4	9.3	10.7	6.8	5.0	7.4	5.8	2.0	1.9	3.8	1.4	0.9	1.3	3.7	2.7	0.2	0.9	0.2	1.9	0.0	0.3	0.0	0.8	0.3	0.0	0.0	0.0		
Mar-11	0.0	0.2	0.2	1.2	3.8	10.5	13.1	14.3	16.5	11.7	14.8	7.9	6.5	11.2	9.3	4.2	3.8	5.2	2.5	5.2	7.3	0.6	3.3	0.4	2.1	1.1	1.1	1.0	0.0	1.8	0.0	0.3	0.0	0.0	0.0	0.0			
Jun-11	0.0	0.1	0.4	0.8	4.5	9.4	16.3	13.6	16.7	11.1	10.0	10.4	14.0	10.7	7.3	7.1	3.7	5.3	16.3	13.2	2.0	2.6	3.0	0.6	3.1	0.6	0.8	0.3	0.3	0.1	0.0	0.2	1.5	0.4	0.0				
Sep-11	0.0	0.1	0.4	1.3	4.2	12.0	12.3	17.1	15.4	13.3	15.5	20.5	13.9	9.2	6.0	7.5	7.8	12.2	1.1	5.5	2.9	1.6	5.2	2.4	0.4	1.5	0.0	0.4	0.0	0.8	0.2	0.9	1.2	2.6					
Dec-11	0.0	0.1	0.2	1.4	4.4	7.4	13.8	10.1	13.6	9.5	10.2	11.9	8.9	9.5	7.6	9.9	4.5	5.8	0.7	3.1	4.6	0.7	4.9	1.9	3.2	0.2	1.9	3.2	0.3	0.0	0.1	0.0	0.0						
Mar-12	0.0	0.1	0.4	1.8	3.3	11.1	9.7	13.6	11.4	9.5	9.5	10.5	11.2	13.8	13.7	8.3	4.2	9.8	4.7	8.7	1.7	2.1	3.3	1.3	10.1	1.7	2.8	1.4	2.1	1.9	0.0	0.1							
Jun-12	0.0	0.2	0.4	1.9	6.3	9.1	16.6	12.4	10.8	13.9	10.9	10.7	14.5	16.6	9.2	8.8	8.3	8.6	4.5	3.1	3.4	0.5	2.2	0.2	0.3	3.3	0.2	0.5	0.3	0.1	0.0								
Sep-12	0.0	0.3	0.5	2.4	4.1	11.1	12.8	15.1	11.8	11.0	10.5	12.0	16.4	22.3	4.5	15.6	6.1	11.1	3.8	4.2	0.8	10.9	0.1	0.9	0.2	1.0	17.4	0.9	1.9	0.6									
Dec-12	0.1	0.1	0.6	1.3	4.2	9.1	13.1	11.7	12.5	13.3	9.0	13.4	15.4	9.9	16.1	7.1	9.4	4.4	10.0	0.9	2.3	3.1	1.8	0.2	3.0	4.2	6.5	2.6	0.3										
Mar-13	0.0	0.2	0.7	1.6	3.6	8.7	11.6	11.9	11.3	11.8	11.6	15.8	10.4	13.3	3.2	14.2	4.0	2.3	1.6	4.1	2.8	3.6	0.0	1.2	2.6	2.2	0.8	1.2											
Jun-13	0.0	0.1	0.4	1.1	6.9	10.1	14.4	12.2	15.5	12.7	10.3	9.1	8.5	9.3	9.2	3.1	3.7	2.7	3.4	3.2	1.5	4.8	2.9	3.1	0.2	0.2	0.1												
Sep-13	0.0	0.2	0.4	2.7	4.8	10.4	14.7	17.2	11.7	11.2	11.7	13.1	18.7	12.1	6.9	12.9	2.2	5.7	1.8	1.7	6.0	2.3	3.2	0.4	6.5	0.0													
Dec-13	0.0	0.3	0.5	1.3	4.6	8.8	14.1	14.1	12.7	9.7	10.2	12.4	12.7	8.9	12.7	3.3	7.8	4.0	3.2	5.5	1.2	1.4	1.3	0.3	0.6														
Mar-14	0.0	0.3	0.7	1.5	2.7	11.0	11.6	12.7	13.4	11.6	10.0	12.3	6.9	5.8	4.4	6.6	9.1	3.4	3.6	1.8	1.1	1.2	5.4	0.8															
Jun-14	0.0	0.3	0.7	1.3	6.5	11.4	18.8	11.2	18.3	16.3	13.1	9.7	11.2	7.6	11.9	6.0	3.0	2.8	16.3	2.9	27.3	2.8	0.5																
Sep-14	0.0	0.3	0.6	2.1	7.5	11.9	12.9	15.6	13.7	13.4	11.2	9.2	6.9	7.6	3.2	7.3	4.5	4.7	2.1	3.5	3.4	1.3																	
Dec-14	0.0	0.3	1.2	2.0	7.1	8.5	15.7	14.6	15.3	10.0	8.4	7.8	10.6	8.2	7.0	3.7	7.1	2.1	3.8	4.9	11.1																		
Mar-15	0.0	0.3	0.7	2.6	6.3	15.1	12.6	20.0	9.6	14.5	9.0	7.4	6.9	9.1	3.1	5.9	6.0	3.4	8.8	18.7																			
Jun-15	0.0	0.4	1.1	2.8	7.7	13.4	14.8	17.8	14.2	8.1	13.0	13.4	16.1	5.6	4.8	11.9	5.0	5.0	6.4																				
Sep-15	0.0	0.5	0.7	4.7	6.7	13.3	10.6	17.2	9.0	17.1	10.8	22.1	7.4	8.8	9.5	4.9	7.2	3.0																					
Dec-15	0.1	0.4	0.9	2.4	5.9	8.2	17.9	11.2	15.9	9.3	11.2	12.8	9.5	4.1	6.4	5.2	5.5																						
Mar-16	0.0	0.6	1.1	2.2	5.5	11.7	15.7	15.0	11.7	12.6	8.4	16.5	21.7	6.0	6.2	3.3																							
Jun-16	0.0	0.3	1.4	2.1	7.8	12.8	15.4	14.5	17.3	11.0	13.9	11.8	8.3	5.0	6.6																								
Sep-16	0.0	0.3	0.7	3.7	7.2	16.0	14.3	16.2	15.8	13.4	7.5	10.5	10.7	5.9																									
Dec-16	0.1	0.3	1.0	2.1	7.5	13.5	23.6	16.5	13.9	15.7	11.5	10.8	10.9																										
Mar-17	0.0	0.2	0.9	2.5	6.5	15.5	16.2	14.8	12.3	13.8	13.9	13.6																											
Jun-17	0.0	0.4	1.1	1.6	8.1	12.9	16.9	16.5	17.5	12.4	10.5																												
Sep-17	0.0	0.2	0.7	2.1	5.8	14.8	11.8	18.3	14.2	14.4																													
Dec-17	0.0	0.2	0.6	1.6	6.4	12.9	17.6	15.9	11.6																														
Mar-18	0.0	0.4	0.7	2.3	4.2	12.5	14.3	17.0																															
Jun-18	0.0	0.3	1.0	1.6	5.9	12.8	12.2																																
Sep-18	0.0	0.5	0.8	2.2	7.9	9.9																																	
Dec-18	0.0	0.1	0.7	2.1	4.6																																		
Mar-19	0.0	0.3	1.0	1.3																																			
Jun-19	0.0	0.4	0.8																																				
Sep-19	0.1	0.3																																					
Dec-19	0.1																																						

Notes; Sourced from the PIR system as at 31 December 2019 (as supplied by MAIC)

Appendix A

Appendix A. 2 Historical finalised inflated all claim payments (gross of ITC/DAM)

Accident	Payments (\$ millions)																																					
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36 Later	
Dec-10	0.0	0.0	0.5	0.5	3.2	9.0	14.4	11.9	19.3	8.8	29.7	10.1	11.7	7.5	5.5	8.2	6.4	2.3	2.0	4.0	1.6	1.1	1.6	4.0	2.8	0.3	1.0	0.3	2.1	0.0	0.3	0.0	0.8	0.3	0.0	0.0	0.0	
Mar-11	0.0	0.2	0.2	1.2	3.9	10.9	13.8	15.1	17.1	12.5	15.8	8.5	7.7	12.0	10.1	4.8	4.3	5.6	2.7	5.9	7.6	0.7	3.6	0.5	2.4	1.3	1.3	1.1	0.0	2.0	0.1	0.3	0.0	0.0	0.0	0.0		
Jun-11	0.0	0.1	0.4	0.8	4.6	10.0	16.9	14.2	17.6	11.8	10.7	11.2	14.9	11.5	8.1	7.6	4.4	6.1	17.1	14.0	2.1	3.2	3.2	0.8	3.5	0.9	1.0	0.4	0.4	0.2	0.0	0.3	1.9	0.6	0.0			
Sep-11	0.0	0.1	0.4	1.4	4.3	12.5	13.0	18.0	16.2	14.2	16.6	21.3	15.0	10.0	6.5	8.0	8.5	13.0	1.4	5.9	3.2	1.8	5.4	2.6	0.4	1.6	0.0	0.6	0.0	0.8	0.2	1.3	1.2	2.9				
Dec-11	0.0	0.1	0.2	1.5	4.6	7.6	14.4	10.6	14.5	10.2	11.0	12.9	9.5	10.0	8.2	10.7	4.9	6.4	0.7	3.5	5.0	0.9	5.3	2.1	3.4	0.3	1.9	3.2	0.4	0.0	0.1	0.0	0.0					
Mar-12	0.0	0.1	0.4	1.9	3.4	11.6	10.1	14.4	12.1	10.8	10.3	11.1	12.0	14.7	14.7	8.8	4.7	11.0	5.0	9.6	1.8	2.2	3.7	1.5	10.4	2.3	3.0	1.5	2.3	2.6	0.0	0.2						
Jun-12	0.0	0.2	0.4	1.9	6.5	9.3	17.2	13.1	11.8	15.0	11.6	11.7	15.6	17.8	10.1	9.7	8.8	9.2	4.8	3.5	3.7	0.6	2.5	0.2	0.6	3.5	0.5	0.5	0.4	0.2	0.0							
Sep-12	0.0	0.3	0.5	2.5	4.3	11.6	13.6	16.1	12.7	11.8	11.2	12.8	17.4	23.2	4.7	16.5	6.7	12.1	4.2	4.7	0.9	11.2	0.2	1.1	0.3	1.1	18.2	1.0	3.0	0.7								
Dec-12	0.1	0.1	0.6	1.4	4.3	9.6	13.7	12.3	13.3	13.9	9.5	14.5	16.6	10.4	17.0	7.7	10.1	4.8	10.3	1.1	2.5	3.6	1.9	0.2	3.6	4.4	6.6	2.8	0.4									
Mar-13	0.0	0.2	0.7	1.6	3.8	9.1	12.1	12.6	12.0	12.7	12.7	16.6	11.1	14.3	3.7	15.3	4.3	2.7	2.0	4.6	3.1	4.0	0.0	1.4	2.8	2.3	0.8	1.4										
Jun-13	0.0	0.1	0.4	1.1	7.1	10.5	15.1	13.0	16.8	13.6	11.1	9.9	9.2	10.0	10.1	3.6	4.0	3.0	3.7	3.7	1.6	4.9	3.1	3.3	0.2	0.3	0.4											
Sep-13	0.0	0.2	0.4	2.8	5.0	10.8	15.3	18.0	12.5	11.9	12.4	13.9	20.0	12.8	7.5	13.6	2.5	6.4	2.0	1.7	6.2	2.5	3.5	0.5	6.7	0.1												
Dec-13	0.0	0.3	0.5	1.3	4.7	9.1	14.8	14.9	13.7	10.3	10.9	13.2	13.8	9.7	13.8	3.6	8.3	4.3	4.4	6.2	1.4	1.6	1.4	1.9	0.9													
Mar-14	0.0	0.4	0.7	1.5	2.7	11.4	12.2	13.4	14.1	12.3	10.9	13.0	8.1	6.2	4.8	7.0	9.6	3.7	3.9	1.9	1.2	1.5	5.6	0.9														
Jun-14	0.0	0.3	0.7	1.4	6.7	12.0	19.5	11.8	19.4	17.6	14.0	10.4	12.0	8.2	12.7	6.3	3.2	3.1	16.8	3.3	27.8	3.0	0.5															
Sep-14	0.0	0.3	0.6	2.1	7.8	12.6	13.5	16.5	14.9	14.2	12.1	10.0	7.6	8.2	3.9	7.9	4.9	5.1	2.4	3.7	3.7	1.4																
Dec-14	0.0	0.4	1.2	2.1	7.4	8.9	16.4	15.4	16.1	10.6	9.0	8.5	11.2	8.9	7.4	4.1	7.6	2.3	4.4	5.1	11.5																	
Mar-15	0.0	0.3	0.7	2.7	6.5	15.7	13.3	20.6	10.2	15.3	9.6	7.9	7.6	9.9	3.4	6.4	6.5	3.8	9.4	19.0																		
Jun-15	0.0	0.4	1.1	2.8	7.9	13.9	15.5	18.6	15.1	8.8	14.1	14.3	17.0	6.1	5.4	12.6	5.4	5.4	6.8																			
Sep-15	0.0	0.5	0.7	4.8	6.9	13.9	11.1	18.2	10.0	18.4	11.9	23.0	8.0	9.3	10.2	5.4	7.5	3.3																				
Dec-15	0.1	0.4	0.9	2.5	6.1	8.8	18.7	12.2	16.9	10.0	11.8	13.6	10.1	4.4	6.8	5.6	6.0																					
Mar-16	0.0	0.6	1.1	2.3	5.6	12.2	16.6	16.0	12.4	13.4	9.1	17.2	22.4	6.6	7.2	3.5																						
Jun-16	0.0	0.3	1.5	2.1	8.1	13.5	16.3	15.4	18.1	11.7	14.9	12.6	8.9	5.4	7.0																							
Sep-16	0.0	0.3	0.7	3.8	7.7	16.9	15.8	17.1	16.6	14.1	8.1	11.6	11.5	6.3																								
Dec-16	0.1	0.3	1.0	2.2	7.8	14.0	24.5	17.3	15.0	16.8	12.4	11.7	11.7																									
Mar-17	0.0	0.3	0.9	2.6	6.8	16.2	16.9	15.6	13.1	14.4	15.2	14.5																										
Jun-17	0.0	0.4	1.1	1.6	8.4	13.5	17.7	17.3	18.4	13.1	11.6																											
Sep-17	0.0	0.2	0.7	2.1	6.0	15.3	12.4	19.1	14.9	15.2																												
Dec-17	0.1	0.2	0.6	1.6	6.6	13.3	18.2	16.6	12.3																													
Mar-18	0.0	0.4	0.7	2.4	4.3	13.1	14.9	17.7																														
Jun-18	0.0	0.3	1.0	1.7	6.1	13.3	12.8																															
Sep-18	0.0	0.5	0.8	2.3	8.1	10.3																																
Dec-18	0.0	0.1	0.7	2.2	4.7																																	
Mar-19	0.0	0.3	1.0	1.4																																		
Jun-19	0.0	0.4	0.8																																			
Sep-19	0.1	0.3																																				
Dec-19	0.1																																					

Notes: Sourced from the PIR system as at 31 December 2019 (as supplied by MAIC)

Appendix A

Appendix A. 3 MAIC's pricing assumptions used to set floor and ceiling premiums

Underwriting	Scheme average premium (\$, excluding GST, levies)		Claims handling expenses	Acquisition Costs (\$)	Reinsurance Cost (\$)	ANTS Impact	Profit margin	H & E levy (\$)	MAIC admin levy (\$)	QLD transport levy (\$)	Insurer average filed premium (\$)
	Floor	Ceiling									
Dec-10	237.65	274.55	8.86	4.99	5.48	-9.1%	7.8%	14.32	1.80	7.60	273.80
Mar-11	234.68	274.51	9.01	4.99	5.48	-9.1%	7.8%	14.32	1.80	7.60	273.76
Jun-11	234.80	274.62	9.12	4.99	5.48	-9.1%	7.8%	14.32	1.80	7.60	273.12
Sep-11	234.08	275.14	9.52	4.99	5.51	-9.1%	7.8%	16.01	1.85	7.70	273.34
Dec-11	234.02	275.08	9.97	4.99	5.51	-9.1%	7.8%	16.01	1.85	7.70	273.27
Mar-12	234.15	275.20	9.89	4.99	5.51	-9.1%	7.8%	16.01	1.85	7.70	274.10
Jun-12	238.86	279.90	9.94	4.99	5.51	-9.1%	7.8%	16.01	1.85	7.70	279.28
Sep-12	243.02	280.15	9.66	4.99	5.52	-9.1%	7.8%	16.82	1.85	7.70	280.12
Dec-12	248.47	285.62	9.43	4.99	5.52	-9.1%	7.8%	16.81	1.85	7.70	285.60
Mar-13	253.20	290.33	9.27	4.99	5.52	-9.1%	7.8%	16.81	1.85	7.70	290.31
Jun-13	261.08	293.15	9.64	4.99	5.51	-9.1%	7.8%	16.81	1.85	7.70	293.13
Sep-13	253.88	285.67	9.70	6.99	4.38	-9.1%	7.8%	18.46	1.85	7.70	285.67
Dec-13	260.80	292.59	9.27	6.99	4.37	-9.1%	7.8%	18.45	1.85	7.70	292.59
Mar-14	255.01	292.74	9.36	6.99	4.37	-9.1%	7.8%	18.44	1.85	7.70	292.74
Jun-14	256.52	294.24	9.29	6.99	4.37	-9.1%	7.8%	18.44	1.85	7.70	293.90
Sep-14	256.59	293.22	9.29	6.99	4.35	-9.1%	7.8%	18.43	1.85	7.70	292.88
Dec-14	256.07	292.69	9.83	6.99	4.34	-9.1%	7.8%	18.42	1.85	7.70	292.23
Mar-15	253.86	292.27	10.07	6.98	4.34	-9.1%	7.8%	18.41	1.85	7.70	291.81
Jun-15	253.59	291.98	9.87	6.98	4.34	-9.1%	7.8%	18.40	1.85	7.70	287.80
Sep-15	246.81	285.22	10.03	7.98	4.34	-9.1%	7.8%	19.44	1.50	7.50	283.40
Dec-15	247.83	285.26	10.38	7.98	4.34	-9.1%	7.8%	19.43	1.50	7.50	284.88
Mar-16	244.50	284.78	11.05	7.98	4.33	-9.1%	7.8%	19.42	1.50	7.50	284.39
Jun-16	251.33	291.60	11.58	7.98	4.33	-9.1%	7.8%	19.42	1.50	7.50	291.22
Sep-16	244.05	284.28	11.76	7.98	4.33	-9.1%	7.8%	19.41	1.50	7.50	284.28
Dec-16	228.07	252.42	10.95	7.98	1.71	-9.1%	7.8%	19.41	1.50	7.50	252.42
Mar-17	227.51	251.82	10.72	7.98	1.71	-9.1%	7.8%	19.41	1.50	7.50	250.93
Jun-17	213.30	236.68	10.93	7.98	1.71	-9.1%	7.8%	19.41	1.50	7.50	236.68
Sep-17	203.95	222.18	11.01	7.98	1.71	-9.1%	7.8%	17.82	1.50	7.50	222.18
Dec-17	204.72	223.01	10.99	7.98	1.71	-9.1%	7.8%	17.92	1.50	7.50	223.01
Mar-18	207.65	225.93	11.96	7.98	1.71	-9.1%	7.8%	17.93	1.50	7.50	225.93
Jun-18	207.32	225.57	11.91	7.98	1.71	-9.1%	7.8%	17.86	1.50	7.50	225.57
Sep-18	200.45	218.71	11.74	7.98	1.71	-9.1%	7.8%	17.85	1.50	7.50	218.71
Dec-18	196.22	213.56	11.92	7.98	1.71	-9.1%	7.8%	17.93	1.50	7.50	213.56
Mar-19	191.25	208.58	12.22	7.98	1.71	-9.1%	7.8%	17.92	1.50	7.50	208.58
Jun-19	190.89	208.16	12.59	7.98	1.71	-9.1%	7.8%	17.86	1.50	7.50	208.16
Sep-19	200.56	219.01	12.58	9.97	1.73	-9.1%	7.8%	18.11	1.50	8.40	219.01
Dec-19	209.32	227.86	12.60	9.97	1.74	-9.1%	7.8%	18.19	1.50	8.40	227.86

Notes; Supplied by MAIC
 Insurer average filed gross premium excludes levies but includes ANTS impact

Appendix B Claimant Benefit Proportion

- B.1 Estimate of average all class hindsight premium
- B.2 Cumulative ratio of claimant benefits to all claim payments
- B.3 Historical development factors



Appendix B

Appendix B. 1 Hindsight estimation of average all class premium

Underwriting	Claim frequency	Claim size (\$)	Hindsight premium (\$) 0.5% p.a. SI scenario
Dec-10	0.193%	83,449	161
Mar-11	0.190%	86,093	164
Jun-11	0.188%	88,136	166
Sep-11	0.186%	92,820	173
Dec-11	0.186%	97,294	181
Mar-12	0.185%	97,034	180
Jun-12	0.182%	99,342	181
Sep-12	0.180%	97,823	176
Dec-12	0.177%	96,706	172
Mar-13	0.175%	96,205	169
Jun-13	0.175%	100,054	175
Sep-13	0.175%	100,965	176
Dec-13	0.174%	96,764	169
Mar-14	0.176%	96,621	170
Jun-14	0.179%	94,399	169
Sep-14	0.180%	93,603	169
Dec-14	0.181%	98,673	179
Mar-15	0.182%	100,582	183
Jun-15	0.183%	97,957	180
Sep-15	0.186%	97,960	182
Dec-15	0.194%	97,090	189
Mar-16	0.203%	98,992	201
Jun-16	0.207%	101,773	210
Sep-16	0.210%	102,050	214
Dec-16	0.206%	92,477	191
Mar-17	0.202%	92,690	187
Jun-17	0.203%	93,689	190
Sep-17	0.204%	94,001	192
Dec-17	0.204%	94,122	192
Mar-18	0.203%	94,243	191
Jun-18	0.199%	95,690	191
Sep-18	0.196%	96,069	188
Dec-18	0.194%	98,175	191
Mar-19	0.193%	101,237	195
Jun-19	0.192%	104,618	201
Sep-19	0.191%	105,175	201
Dec-19	0.189%	106,560	202

Notes; Sourced from the Retrospective Profit Advice

Appendix B

Appendix B. 2 Cumulative ratio of claimant benefits to all claim payments

Development		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36 Later		
Dec-10	1.000	0.978	0.970	0.966	0.948	0.961	0.961	0.952	0.953	0.951	0.953	0.950	0.946	0.944	0.943	0.940	0.939	0.938	0.938	0.938	0.937	0.937	0.936	0.935	0.935	0.935	0.935	0.934	0.934	0.934	0.933	0.933	0.934	0.934	0.934	0.934	0.934	0.934	0.934	
Mar-11	0.995	0.995	0.974	0.973	0.976	0.969	0.960	0.955	0.957	0.954	0.951	0.949	0.941	0.941	0.940	0.937	0.936	0.935	0.935	0.933	0.935	0.934	0.933	0.932	0.932	0.931	0.931	0.931	0.931	0.931	0.931	0.931	0.931	0.931	0.931	0.931	0.931	0.931	0.931	
Jun-11	1.000	0.975	0.971	0.968	0.972	0.954	0.959	0.959	0.956	0.953	0.951	0.949	0.947	0.946	0.943	0.943	0.941	0.938	0.940	0.940	0.938	0.938	0.938	0.938	0.938	0.937	0.936	0.935	0.935	0.935	0.935	0.934	0.934	0.934	0.933	0.932	0.932			
Sep-11	1.000	0.958	0.972	0.966	0.972	0.963	0.958	0.955	0.953	0.950	0.947	0.949	0.947	0.945	0.944	0.943	0.942	0.942	0.940	0.940	0.939	0.938	0.939	0.939	0.938	0.939	0.939	0.938	0.939	0.939	0.938	0.938	0.938	0.938	0.936	0.936	0.936			
Dec-11	1.000	0.973	0.967	0.976	0.964	0.964	0.962	0.959	0.953	0.949	0.945	0.942	0.941	0.941	0.941	0.939	0.938	0.936	0.936	0.935	0.934	0.934	0.933	0.933	0.934	0.933	0.934	0.934	0.934	0.934	0.934	0.934	0.934	0.934	0.934	0.934	0.934	0.934		
Mar-12	0.969	0.978	0.959	0.975	0.971	0.963	0.959	0.955	0.953	0.941	0.940	0.940	0.939	0.940	0.939	0.939	0.937	0.934	0.935	0.933	0.933	0.933	0.932	0.932	0.935	0.933	0.932	0.933	0.932	0.932	0.930	0.930	0.929							
Jun-12	1.000	0.969	0.959	0.964	0.969	0.970	0.968	0.962	0.952	0.948	0.947	0.942	0.940	0.939	0.938	0.936	0.936	0.936	0.936	0.936	0.936	0.936	0.935	0.935	0.935	0.933	0.933	0.933	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932			
Sep-12	0.984	0.991	0.983	0.980	0.966	0.965	0.955	0.949	0.945	0.942	0.941	0.941	0.941	0.945	0.945	0.945	0.945	0.943	0.942	0.941	0.940	0.940	0.941	0.941	0.940	0.940	0.940	0.941	0.941	0.941	0.940	0.940	0.941	0.941	0.941	0.941	0.941	0.937		
Dec-12	0.996	0.993	0.975	0.975	0.969	0.961	0.959	0.956	0.953	0.954	0.952	0.948	0.945	0.946	0.946	0.945	0.944	0.943	0.945	0.944	0.943	0.942	0.942	0.941	0.939	0.940	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941		
Mar-13	1.000	0.987	0.982	0.982	0.968	0.960	0.958	0.954	0.951	0.947	0.943	0.944	0.944	0.943	0.941	0.940	0.940	0.938	0.936	0.934	0.934	0.933	0.933	0.932	0.932	0.933	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932	
Jun-13	0.982	0.981	0.959	0.963	0.970	0.964	0.961	0.955	0.946	0.945	0.944	0.941	0.940	0.939	0.936	0.934	0.934	0.933	0.932	0.930	0.930	0.931	0.931	0.932	0.931	0.932	0.931	0.932	0.931	0.932	0.931	0.932	0.931	0.932	0.931	0.932	0.931	0.929		
Sep-13	0.982	0.987	0.976	0.975	0.973	0.966	0.964	0.961	0.956	0.953	0.952	0.951	0.948	0.948	0.946	0.947	0.946	0.944	0.943	0.943	0.944	0.944	0.943	0.943	0.944	0.944	0.943	0.942	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943		
Dec-13	0.997	0.988	0.978	0.969	0.968	0.968	0.961	0.957	0.951	0.949	0.947	0.946	0.943	0.941	0.938	0.938	0.938	0.937	0.931	0.929	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.928	0.918	
Mar-14	0.994	0.965	0.967	0.969	0.970	0.964	0.956	0.954	0.953	0.951	0.947	0.946	0.939	0.939	0.938	0.938	0.939	0.938	0.937	0.938	0.937	0.938	0.937	0.938	0.937	0.936	0.937	0.936	0.937	0.936	0.937	0.936	0.937	0.936	0.937	0.936	0.937	0.936	0.937	
Jun-14	0.996	0.989	0.966	0.967	0.970	0.961	0.962	0.960	0.956	0.950	0.949	0.947	0.946	0.945	0.944	0.944	0.944	0.943	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945	0.945		
Sep-14	0.991	0.975	0.982	0.982	0.973	0.960	0.958	0.954	0.947	0.947	0.944	0.941	0.939	0.938	0.934	0.934	0.934	0.933	0.933	0.933	0.933	0.933	0.932	0.932	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.933	0.932		
Dec-14	0.998	0.981	0.983	0.977	0.969	0.964	0.961	0.959	0.957	0.955	0.953	0.950	0.950	0.947	0.947	0.946	0.945	0.944	0.942	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	
Mar-15	1.000	0.989	0.981	0.977	0.971	0.967	0.958	0.962	0.959	0.957	0.955	0.953	0.950	0.947	0.946	0.945	0.943	0.942	0.941	0.946																				
Jun-15	0.989	0.987	0.967	0.979	0.971	0.966	0.961	0.960	0.956	0.952	0.948	0.947	0.947	0.945	0.944	0.944	0.943	0.943	0.943	0.943																				
Sep-15	0.998	0.991	0.981	0.980	0.973	0.965	0.964	0.958	0.950	0.946	0.941	0.945	0.944	0.944	0.944	0.943	0.943	0.943	0.943	0.943																				
Dec-15	0.991	0.987	0.983	0.967	0.966	0.946	0.950	0.942	0.943	0.941	0.942	0.941	0.941	0.941	0.940	0.940	0.940	0.939	0.939																					
Mar-16	0.996	0.990	0.986	0.982	0.979	0.967	0.957	0.952	0.949	0.948	0.945	0.948	0.952	0.949	0.945	0.944																								
Jun-16	0.996	0.992	0.987	0.982	0.971	0.958	0.953	0.951	0.951	0.949	0.946	0.946	0.944	0.944	0.944																									
Sep-16	1.000	0.993	0.978	0.974	0.956	0.952	0.936	0.939	0.941	0.942	0.940	0.937	0.936	0.936																										
Dec-16	0.994	0.975	0.964	0.959	0.964	0.962	0.963	0.960	0.953	0.951	0.949	0.947	0.945																											
Mar-17	0.995	0.967	0.984	0.967	0.961	0.960	0.960	0.956	0.953	0.954	0.947	0.947																												
Jun-17	0.990	0.964	0.980	0.979	0.967	0.962	0.959	0.958	0.955	0.954	0.949																													
Sep-17	0.976	0.984	0.982	0.978	0.966	0.969	0.962	0.961	0.959	0.957																														
Dec-17	0.988	0.994	0.986	0.979	0.976	0.972	0.970	0.967	0.963																															
Mar-18	0.978	0.989	0.988	0.981	0.980	0.966	0.963	0.962																																
Jun-18	0.987	0.985	0.980	0.961	0.960	0.962	0.960																																	
Sep-18	0.996	0.988	0.966	0.974	0.974	0.967																																		
Dec-18	0.969	0.989	0.989	0.978	0.972																																			
Mar-19	0.974	0.987	0.961	0.945																																				
Jun-19	0.996	0.989	0.967																																					
Sep-19	0.998	0.994																																						
Dec-19	0.976																																							

Notes: Derived from Appendix A.1 and A.2

Appendix B.3 Historical development factors

Accident	Development																																												
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36 Later								
Dec-10	0.978	0.992	0.996	0.981	1.014	0.999	0.992	1.000	0.998	1.002	0.997	0.996	0.998	0.999	0.998	0.998	0.999	1.000	1.000	1.000	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
Mar-11	1.000	0.979	0.999	1.004	0.992	0.991	0.995	1.002	0.996	0.997	0.998	0.992	1.000	0.998	0.998	0.998	0.999	1.000	0.998	1.002	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000					
Jun-11	0.975	0.996	0.997	1.005	0.982	1.004	1.000	0.998	0.997	0.998	0.998	0.998	0.999	0.997	1.000	0.997	0.997	1.002	1.001	1.000	0.998	1.000	1.000	0.999	0.999	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	0.999	0.999	0.999	1.000	1.000	1.000					
Sep-11	0.958	1.014	0.994	1.006	0.991	0.995	0.997	0.998	0.997	0.997	1.003	0.997	0.998	0.999	0.999	0.999	1.000	0.998	1.000	0.999	0.999	1.001	0.999	1.000	1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000					
Dec-11	0.973	0.994	1.009	0.987	1.000	0.998	0.997	0.994	0.997	0.996	0.996	0.999	1.001	0.999	0.998	0.999	0.998	1.000	0.999	0.999	1.001	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000					
Mar-12	1.009	0.981	1.017	0.996	0.991	0.997	0.996	0.997	0.988	0.998	1.001	0.999	1.001	0.999	1.000	0.998	0.997	1.001	0.998	1.000	1.000	0.999	0.999	1.003	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.997	1.000	1.000	1.000	1.000	1.000	1.000					
Jun-12	0.969	0.990	1.004	1.005	1.002	0.997	0.994	0.990	0.996	0.998	0.996	0.998	0.999	0.998	0.998	1.001	1.000	1.000	0.999	1.000	1.000	0.999	1.000	0.999	1.000	1.000	0.999	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
Sep-12	1.008	0.992	0.997	0.986	0.998	0.990	0.993	0.996	0.998	0.999	0.999	1.000	1.004	1.000	1.000	0.998	0.998	0.999	0.999	1.002	1.000	0.999	1.000	1.000	1.000	1.002	1.000	1.000	0.996	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
Dec-12	0.997	0.982	1.000	0.994	0.992	0.998	0.997	0.996	1.001	0.998	0.996	0.997	1.001	1.000	0.999	0.999	0.999	1.002	0.999	0.999	0.998	1.000	1.000	0.998	1.000	1.000	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
Mar-13	0.987	0.995	1.000	0.986	0.991	0.999	0.995	0.997	0.997	0.995	1.002	1.000	0.999	0.998	0.999	1.000	0.998	0.998	0.998	0.999	0.999	1.000	0.999	1.000	1.000	1.001	1.000	0.999	1.000	1.001	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
Jun-13	0.999	0.977	1.005	1.007	0.994	0.997	0.993	0.991	0.999	0.998	0.997	0.999	0.999	0.997	0.998	1.000	0.999	0.999	0.998	1.000	0.999	0.999	0.998	1.000	1.001	1.000	1.001	1.000	1.001	1.000	1.000	1.000	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
Sep-13	1.005	0.989	1.000	0.998	0.993	0.998	0.997	0.995	0.997	0.999	0.999	0.997	1.000	0.998	1.001	0.999	0.997	0.999	1.000	1.001	0.999	1.000	1.001	0.999	1.000	0.999	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Dec-13	0.991	0.990	0.991	0.999	0.999	0.993	0.996	0.993	0.998	0.998	0.999	0.997	0.997	0.997	0.999	1.000	0.999	0.994	0.998	0.999	1.000	0.999	1.000	1.000	0.990	0.999	1.000	0.990	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
Mar-14	0.970	1.003	1.002	1.001	0.994	0.992	0.998	0.999	0.998	0.996	0.999	0.993	1.000	0.999	1.000	1.001	0.999	0.999	1.000	1.000	0.998	1.001	1.000	1.000	0.998	1.001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
Jun-14	0.993	0.977	1.001	1.002	0.991	1.001	0.998	0.995	0.994	0.999	0.999	0.999	0.999	0.999	1.000	1.000	0.999	1.003	0.999	1.005	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
Sep-14	0.984	1.007	1.000	0.991	0.987	0.998	0.996	0.993	1.000	0.997	0.997	0.997	0.999	0.997	1.000	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
Dec-14	0.983	1.002	0.994	0.992	0.995	0.997	0.998	0.998	0.999	0.998	0.997	0.999	0.997	1.000	0.999	0.999	0.999	0.998	1.001	1.002	1.000	0.999	0.999	0.999	0.999	1.001	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Mar-15	0.989	0.992	0.996	0.994	0.995	0.991	1.004	0.997	0.998	0.998	0.998	0.997	0.997	0.999	0.999	0.998	0.999	0.999	1.005	1.000	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	
Jun-15	0.998	0.980	1.012	0.992	0.995	0.995	0.999	0.996	0.996	0.995	0.999	1.000	0.999	0.998	1.000	0.999	0.998	1.000	0.999	1.000	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	0.999	
Sep-15	0.994	0.990	0.998	0.992	0.992	0.999	0.994	0.991	0.996	0.995	1.004	0.999	1.000	0.999	0.999	1.001	0.999	1.001	0.999	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Dec-15	0.996	0.996	0.984	0.999	0.979	1.004	0.992	1.000	0.998	1.001	1.000	0.999	0.999	1.000	1.000	0.999	1.000	1.000	0.999	1.000	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Mar-16	0.994	0.996	0.996	0.996	0.996	0.989	0.989	0.995	0.998	0.998	0.998	1.002	1.004	0.997	0.995	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Jun-16	0.996	0.995	0.995	0.988	0.987	0.994	0.998	1.000	0.998	0.997	0.999	0.999	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Sep-16	0.993	0.984	0.996	0.982	0.996	0.983	1.003	1.003	1.001	0.998	0.996	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Dec-16	0.981	0.989	0.994	1.005	0.998	1.001	0.997	0.993	0.997	0.998	0.997	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Mar-17	0.972	1.018	0.983	0.994	0.999	1.000	0.996	0.997	1.000	0.994	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Jun-17	0.974	1.016	0.999	0.987	0.995	0.996	0.999	0.997	0.999	0.994	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Sep-17	1.008	0.999	0.996	0.988	1.002	0.993	0.999	0.998	0.9																																				

C.1 Scheme delivery calculation (0.5% p.a. superimposed inflation scenario)



Appendix C

Appendix C.1 Estimate of Scheme Delivery based on data to 31 December 2019 (0% p.a. superimposed inflation scenario)

Underwriting	Hindsight premium (\$)	Estimate of the proportion of claimant benefits	Amount of hindsight premium attributed to claimant benefits (\$)	Levies attributed to claimant benefits (\$)	Risk premium	Levies	Insurer average collected premium (\$)	Acquisition & reinsurance	CHE	Profit	Scheme delivery
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
Dec-10	161.17	0.93	150.60	14.32	252.59	23.72	11.53	15.28	23.47	50.5%	
Mar-11	163.83	0.93	153.13	14.32	252.77	23.72	11.53	15.29	23.49	51.2%	
Jun-11	165.83	0.93	154.81	14.32	252.11	23.72	11.53	15.25	23.43	51.9%	
Sep-11	173.03	0.93	161.49	16.01	252.35	25.56	11.56	15.27	23.45	54.1%	
Dec-11	181.20	0.93	169.28	16.01	252.29	25.56	11.56	15.26	23.45	56.5%	
Mar-12	179.77	0.94	168.43	16.01	253.06	25.56	11.56	15.31	23.52	56.1%	
Jun-12	180.75	0.94	169.20	16.01	258.06	25.56	11.56	15.61	23.96	55.3%	
Sep-12	175.64	0.93	164.08	16.82	258.58	26.37	11.56	15.64	24.01	53.8%	
Dec-12	171.54	0.94	160.69	16.81	263.82	26.36	11.56	15.96	24.48	51.9%	
Mar-13	168.59	0.93	156.56	16.81	268.33	26.36	11.56	16.23	24.88	49.9%	
Jun-13	175.22	0.93	163.30	16.81	270.63	26.36	11.56	16.37	25.08	51.5%	
Sep-13	176.45	0.94	165.22	18.46	262.59	28.01	12.50	15.89	24.45	53.5%	
Dec-13	168.57	0.93	157.48	18.45	269.22	28.00	12.50	16.29	25.04	50.1%	
Mar-14	170.17	0.94	159.90	18.44	269.84	27.99	12.50	16.33	25.09	50.7%	
Jun-14	168.87	0.94	158.76	18.44	270.93	27.99	12.49	16.39	25.19	50.2%	
Sep-14	168.94	0.94	158.74	18.43	269.90	27.98	12.47	16.33	25.09	50.4%	
Dec-14	178.82	0.94	168.09	18.42	269.28	27.97	12.46	16.29	25.04	53.1%	
Mar-15	183.16	0.94	171.65	18.41	269.02	27.96	12.46	16.28	25.01	54.2%	
Jun-15	179.54	0.94	168.25	18.40	264.89	27.95	12.45	16.03	24.65	54.0%	
Sep-15	182.30	0.94	170.73	19.44	259.83	28.44	13.55	15.72	24.29	55.6%	
Dec-15	188.81	0.93	176.09	19.43	261.28	28.43	13.55	15.81	24.42	56.9%	
Mar-16	200.93	0.93	187.49	19.42	261.06	28.42	13.54	15.79	24.40	60.3%	
Jun-16	210.49	0.93	196.22	19.42	267.59	28.42	13.54	16.19	24.98	61.5%	
Sep-16	213.82	0.93	199.54	19.41	260.98	28.41	13.54	15.79	24.39	63.8%	
Dec-16	190.68	0.94	178.63	19.41	231.37	28.41	10.66	14.61	21.56	64.6%	
Mar-17	186.84	0.94	175.62	19.41	229.88	28.41	10.66	14.51	21.43	64.0%	
Jun-17	190.39	0.94	179.17	19.41	216.36	28.41	10.66	13.66	20.22	68.6%	
Sep-17	191.72	0.94	180.16	17.82	202.21	26.82	10.65	12.77	18.96	72.9%	
Dec-17	191.54	0.94	179.82	17.92	202.99	26.92	10.66	12.82	19.03	72.6%	
Mar-18	191.36	0.94	179.39	17.93	204.70	26.93	10.66	14.07	19.27	71.6%	
Jun-18	190.59	0.93	176.41	17.86	204.34	26.86	10.66	14.05	19.24	70.6%	
Sep-18	187.87	0.92	173.62	17.85	197.85	26.85	10.66	13.60	18.66	71.5%	
Dec-18	190.65	0.93	176.89	17.93	192.96	26.93	10.66	13.27	18.22	74.4%	
Mar-19	195.47	0.92	180.75	17.92	188.23	26.92	10.66	12.94	17.80	77.4%	
Jun-19	201.36	0.93	186.51	17.86	187.83	26.86	10.65	12.91	17.76	79.8%	
Sep-19	201.25	0.92	185.79	18.11	196.05	28.01	12.87	13.48	18.68	75.8%	
Dec-19	201.52	0.92	185.49	18.19	204.45	28.09	12.88	14.06	19.44	73.0%	

- Notes: (a) Sourced from Appendix B.1
 (b) Based on the selected development factors shown in Appendix B.3, adjusted to the underwriting quarter basis
 (c) (a) * (b)
 (d) Sourced from Appendix A.3
 (e) Sourced from Appendix A.3
 (f) Sourced from Appendix A.3
 (g) Sourced from Appendix A.3
 (h) Sourced from Appendix A.3
 (i) Sourced from Appendix A.3
 (j) [(c) + (d)] / [(e) + (f) + (g) + (h) + (i)]

D.1 Scheme affordability calculation



Appendix D

Appendix . 1 Scheme affordability

Underwriting quarter	Highest filed premium incl. NISQ levy (\$)	Highest filed premium excl. NISQ levy (\$)	Affordability index
Dec-10	313.00	313.00	538.16
Mar-11	313.00	313.00	546.09
Jun-11	313.00	313.00	552.13
Sep-11	313.00	313.00	557.80
Dec-11	313.00	313.00	561.98
Mar-12	313.00	313.00	567.91
Jun-12	318.00	318.00	573.22
Sep-12	318.80	318.80	576.93
Dec-12	323.80	323.80	584.76
Mar-13	328.80	328.80	590.23
Jun-13	331.80	331.80	598.93
Sep-13	327.60	327.60	605.81
Dec-13	334.60	334.60	605.81
Mar-14	334.60	334.60	628.58
Jun-14	336.60	336.60	640.62
Sep-14	336.60	336.60	639.90
Dec-14	336.60	336.60	639.90
Mar-15	336.60	336.60	647.46
Jun-15	336.60	336.60	647.46
Sep-15	329.60	329.60	655.61
Dec-15	329.60	329.60	655.61
Mar-16	329.60	329.60	648.41
Jun-16	336.60	336.60	648.41
Sep-16	329.60	329.60	651.02
Dec-16	368.60	299.60	651.02
Mar-17	368.60	299.60	657.14
Jun-17	352.60	283.60	657.14
Sep-17	352.00	267.00	666.95
Dec-17	352.00	267.00	666.95
Mar-18	355.00	270.00	673.25
Jun-18	355.00	270.00	673.25
Sep-18	350.20	262.00	687.51
Dec-18	344.20	256.00	687.51
Mar-19	339.20	251.00	693.86
Jun-19	339.20	251.00	693.86
Sep-19	351.20	260.70	708.30
Dec-19	359.20	268.70	708.30

Notes; As prescribed and provided by MAIC