

ACT Workers' Compensation Review of Scheme Performance

The Chief Minister and Cabinet Directorate

January 2012

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31 January 2012

Ms Meg Brighton
Director Continuous Improvement & Workers' Compensation
Chief Minister and Cabinet Directorate
Canberra Nara Centre
Cnr Constitution Avenue & London Circuit
CANBERRA ACT 2601

Dear Meg

2009/10 ACT Workers' Compensation Review of Scheme Performance

Please find enclosed for release our report and review of the ACT private workers' compensation scheme experience for 2009/10.

This is the third review of its kind we have undertaken of the ACT private workers' compensation scheme and we are pleased to present a report covering trends in the scheme.

We look forward to discussing our report with you.

Yours sincerely



Karen Cutter



Estelle Pearson

Fellows of the Institute of Actuaries of Australia



ACT Workers' Compensation Review of Scheme Performance

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Part I Executive Summary

1 Introduction & Background

The Chief Minister and Cabinet Directorate (CMCD) has requested that Finity Consulting (Finity) undertake an actuarial review of the performance of the ACT private sector workers' compensation scheme (the Scheme) for publication. As part of this review, we were required to investigate trends in the claims experience.

This is the third review of its kind that Finity has conducted.

We note that the scope of our review is limited to the insured private sector workers' compensation scheme, i.e. it does not include self-insured employers. Our review (based on data to 31 December 2010) encompasses:

- Identifying major trends in the private sector experience that have impacted on the cost of the Scheme. We have examined:
 - ▶ Trends in claim numbers and frequency - in total, for non-nil claims, for the number of claims receiving weekly benefits (lost time claims) and also for lump sum benefits
 - ▶ Trends in claim payments and average claim sizes by benefit type
 - ▶ Trends in claim duration
- Estimates of future claim costs for past accident years, including estimated claim numbers, average claim sizes and payment patterns.

2 Legislative Reform

The Exposure Draft Workers' Compensation Amendment Bill 2010 ("the Bill"), released for public consultation in October 2010, proposes a number of changes to the workers compensation legislation in the ACT.

The draft bill has not been tabled in the ACT Legislative Assembly, and we have made no allowance for the impact of legislative change.

Section 2 of this report summarises the various historical legislative reforms that have had a significant impact on the cost of the ACT workers' compensation scheme.

3 Scheme Experience

Section 5 of the main body of the report details various elements of claims experience. Our key findings in relation to the scheme experience are:

- The total number of claims reported in 2009/10 increased by 10% over 2008/09, however the total number of non-nil claims (i.e. in receipt of their first payment in 2009/10) increased by only 6%.

In a number of other workers compensation jurisdictions in Australia we have seen a reduction in claim numbers in 2008/09 followed by an increase in 2009/10. We believe that the reduction in 2008/09 primarily reflects a decline in the workers' propensity to claim caused by the Global Financial Crisis (GFC), due to worker's concerns over their employment prospects and their ability to return to their previous employment during an economic downturn. The increase in claim numbers in 2009/10 reflects a return to more normal economic conditions.

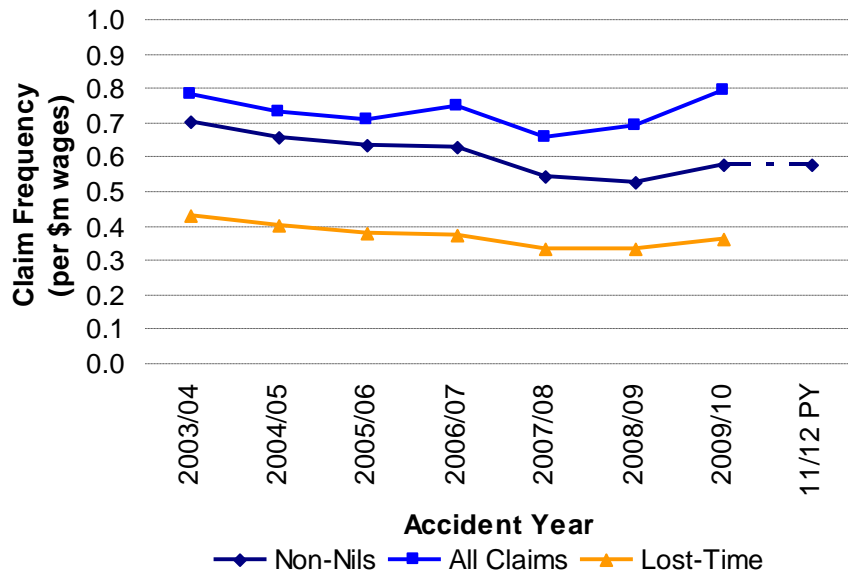
- Claim payments increased by 7% in 2009/10, after having reached an historical low in 2008/09. The increase has been driven mainly by an increase in lump sum payments.
- Common law and lump sum claims are important drivers of the scheme financials. These claims account for around 12% of non-nil claims by number, however payments associated with these claims (including weekly benefit payments, medicals, rehabilitation and legal costs) account for around 80% of total scheme payments to date.

4 Actuarial Estimates

Claim Frequency

Figure 1 shows our estimated ultimate claim frequency for the Scheme. We have shown three different measures – all claims, non-nil claims only and lost time claims only (reflecting the frequency of claimants receiving weekly benefits). The estimated ultimate number of claims is divided by earned wages to arrive at a measure of the ultimate claim frequency per \$ million earned wages (inflated to December 2010 values).

Figure 1 – Estimated Ultimate Claim Frequency



While total claim frequency has increased since 2007/08, much of this increase is attributable to an increase in the reported number of nil claims. The non-nil claim frequency fell between 2007/08 and 2008/09, but has increased in 2009/10. This increase in frequency in 2009/10 is the result of a 4% increase in numbers of non-nil claims (following the GFC-related decline in numbers in 2008/09), coupled with a 6% decline in real wages in the year.

The lost time claim frequency has followed a similar trend to the non-nil claim frequency.

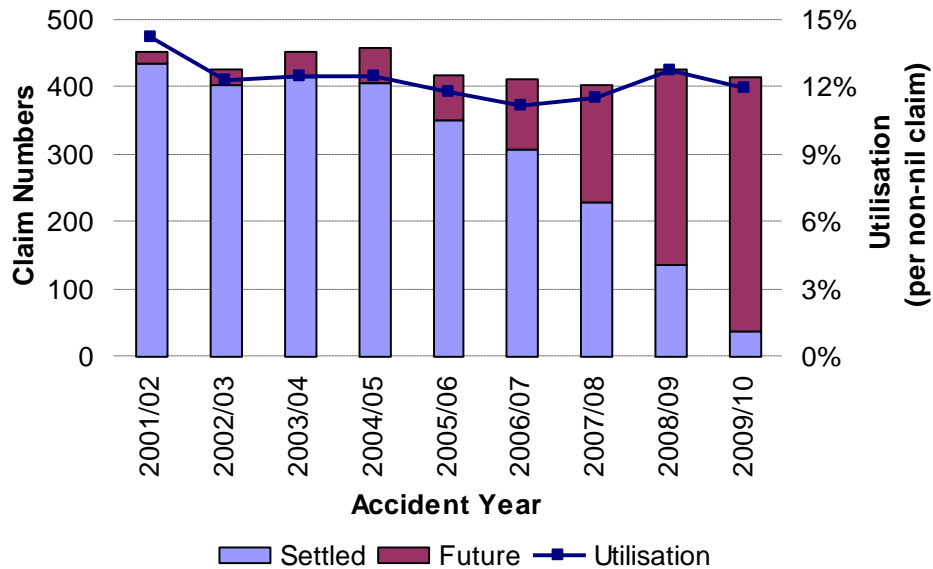
We estimate the ultimate non-nil claim frequency for the 2009/10 year to be 0.58 claims per \$ million wages.

Lump Sum Claim Numbers

We estimated the ultimate number of lump sum claims (including common law claims) for each past accident year. We also calculated the rate of lump sum utilisation by accident year (expressed as ultimate lump sum claims over ultimate non-nil claims).



Figure 2 - Estimated Ultimate Lump Sum Claim Numbers and Utilisation



For 2009/10 we estimate the ultimate number of lump sum claims to be around 420.

Given the reasonably low number of claims involved, the utilisation of lump sum claims has been reasonably stable since 2002/03. The ultimate lump sum utilisation in 2009/10 is projected to be around 12%, in line with the longer term experience since 2002/03.

Average Claim Size

Figure 3 summarises the adopted gross average claim sizes for each past accident year, and our selection.

Figure 3 - Adopted Gross Average Claim Size (per Non-Nil Claim) by Payment Type

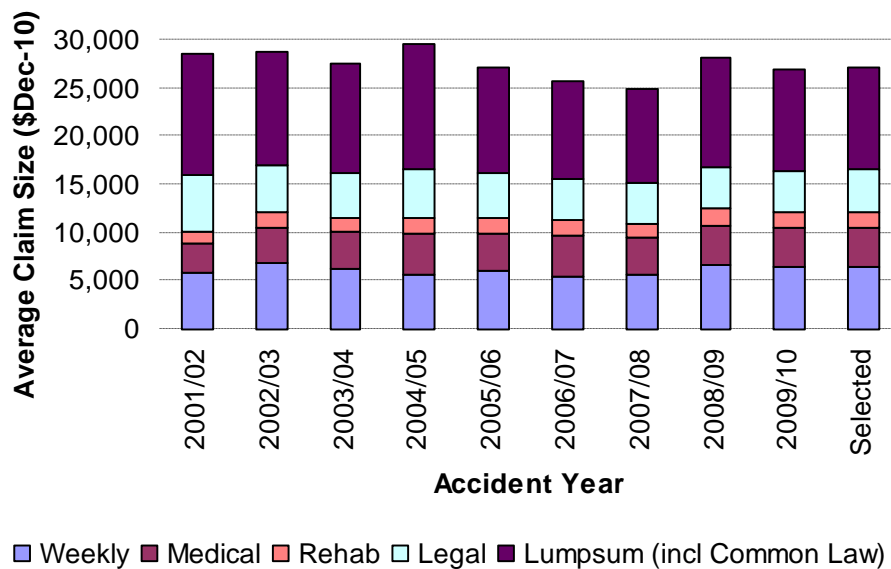


Figure 3 shows our selected gross average claim size per non-nil claim is approximately \$27,200.

The increase in average claim size for the 2008/09 accident year is primarily due to the weekly benefits and common law payment types, where payments made to date have been higher than previous years. We have taken the view that the higher average weekly benefits in 2008/09 results from the GFC-related lower claim number for this year i.e. that the claims with a lower claim size on average are the ones that are not reported in an economic downturn. For common law, we have only partially reflected the higher average claim size in our assumptions due to the somewhat “lumpy” nature of the payments.

There is also some evidence of an increasing trend in average claim sizes in medical and rehabilitation payments. We have allowed for superimposed inflation in these payment types as discussed below.

After allowance for recoveries, the selected net average claim size per non-nil claim is \$26,100. This is 0.5% higher than that selected in our previous review (\$25,974 after adjustment to December 2010 dollars).

5 Economic Assumptions

The long-tailed nature of workers’ compensation business means that it is appropriate to allow for both future inflation and the time value of money in estimating future claims costs.

Two types of inflation are incorporated into our cost models: normal inflation (in this case wage inflation based on AWE increases, given the income-related nature of the weekly benefits) and superimposed inflation, which represents the tendency for costs to increase above the rate of normal inflation.

We have made allowance for the following economic assumptions:

Element	Assumption	Basis
Discount rate	5.40% p.a.	Expected returns on government bonds over the period in which future claims payments are made.
Wage Inflation	4.00% p.a.	Current economic forecasts for medium term wage inflation.
Superimposed inflation	3.0% p.a. for medical benefits 1.0% p.a. for rehabilitation costs	Analysis of recent Scheme experience, together with expectations for the future (necessarily judgemental).

6 Compliance with Relevant Australian Standards

The purpose of this report is to provide an overview of the performance of the ACT workers compensation scheme, not to advise any individual entity on the financial reporting of its workers compensation liabilities. Accordingly, Professional Standard 300 “Valuations of General Insurance Claims” (PS 300) issued by the Institute of Actuaries of Australia does not apply to this report. In the absence of any other applicable professional standard we have used PS 300 for guidance on our approach to the review, but our report is not intended to comply with all requirements of PS 300.

This report has been prepared in accordance with the Institute of Actuaries of Australia’s Code of Professional Conduct for the provision of actuarial advice.

7 Reliances and Limitations

Data

We have relied on the accuracy and completeness of all data and other information (qualitative, quantitative, written and verbal) provided to us by WorkSafe ACT and private insurers for the purpose of this report. We have not independently verified or audited the data but we have reviewed it for general reasonableness and consistency. It should be noted that if any data or other information is inaccurate or incomplete, we should be advised, so that our advice can be revised, if warranted.

Specific data limitations identified and the impact of these on our review are discussed further in Appendix B.

Uncertainty

The estimates of future claims costs are intended to be a central estimate and are based on assumptions selected without deliberate bias towards either over-estimation or under-estimation. Please note however, that it is not possible to put a value on future claims cost with certainty. As well as difficulties caused by limitations on the historical information, outcomes remain dependent on future events, including legislative, social, and economic forces. Although we have prepared estimates in conformity with what we believe to be the likely future experience, actual experience could vary considerably from our estimates. Deviations are normal and are to be expected.

We have generally assumed that the payment of claims will proceed as in the recent past, and we have not anticipated any extraordinary changes to the legal, social or economic environment that might affect the cost, frequency or future reporting of claims.

In particular, we note the Exposure Draft Workers Compensation Amendment Bill 2010 was released in 2010, which introduced potential changes to lump sum and common law benefits. We have not made any allowance for the impact of this draft Bill.

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 future claim emergence will likely deviate, perhaps materially, from our estimates.

Distribution and Use

This report is being provided for the use of the Chief Minister and Cabinet Directorate (CMCD) for the purposes stated in Section 1.1 of this report. It is not intended, nor necessarily suitable, for any other purpose. This report should only be relied on by CMCD for the purpose for which it is intended. The report should be considered as a whole.

We understand that CMCD intends to publish this report. Permission is granted for such publication on the condition that the entire report (including appendices), rather than any excerpt, be distributed.

Third parties, including but not limited to parties who obtain this report from its public release, should recognise that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data contained herein which would result in the creation of any duty or liability by Finity to the third party.

Finity has performed the work assigned and has prepared this report in conformity with its intended utilisation by a person technically competent in the areas addressed and for the stated purposes only. Judgements about the conclusions drawn in this report should be made only after considering the report in its entirety, as the conclusions reached by a review of a section or sections on an isolated basis may be incorrect.

Part II Detailed Findings

1 Introduction

1.1 Purpose

CMCD has requested that Finity Consulting (Finity) undertake an actuarial review of the performance of the ACT private sector workers' compensation scheme (the Scheme) in order to inform CMCD on key developments in the scheme experience. As part of this review, we were required to investigate trends in the claims experience to 30 June 2010.

We note that the scope of our review is limited to the insured private sector workers' compensation scheme, i.e. it does not include self-insured employers.

This is the third review of its kind that Finity has conducted. Our previous review is contained in the report "2008/09 Review of the ACT Workers' Compensation Scheme" dated 18 May 2010 (the previous report).

Our review is based on data to 31 December 2010. We note however that the last full financial year of data is for the year ending 30 June 2010, and much of the graphs and commentary in this report are prepared using data to 30 June 2010 only.

1.2 Scope

Our review of the ACT private workers' compensation scheme encompassed:

- Identifying major trends in the private sector claims experience that has impacted on the cost of the Scheme. We have examined:
 - ▶ Trends in claim numbers and frequency - in total, for non-nil claims, for the number of claims receiving weekly benefits (lost time claims) and also for lump sum benefits
 - ▶ Trends in claim payments and average claim sizes by benefit type. For our analysis, the benefit types were grouped into:
 - Weekly benefits
 - Medical and related benefits (including medical, hospital, and other treatment/appliances)
 - Rehabilitation
 - Legal and investigation costs (including legal costs, investigation and medico-legal costs, and other non-compensation benefits)
 - Lump sum benefits (including common law settlements, statutory impairment lump sums, commutations and death benefits)
 - Recoveries (including sharing, employer and other recoveries)

- ▶ Trends in claim duration
- Estimates of future claim costs for past accident years, including estimated claim numbers, average claim sizes and payment patterns.

1.3 Compliance with Relevant Australian Standards

Actuarial Professional Standards

The purpose of this report is to provide an overview of the performance of the Scheme, not to advise any individual entity on the financial reporting of its workers' compensation liabilities. Accordingly, Professional Standard 300 "Valuations of General Insurance Claims" (PS 300) issued by the Institute of Actuaries of Australia does not apply to this report. In the absence of any other applicable professional standard, we have used PS 300 for guidance on our approach to the review, but our report is not intended to comply with all requirements of PS 300.

This report has been prepared in accordance with the Institute of Actuaries of Australia's Code of Professional Conduct for the provision of actuarial advice.

Basis of Estimates

The estimates of future claims costs provided in this report are intended to be central estimates, which means they are based on assumptions selected without deliberate bias towards either over-estimation or under-estimation.

The claims estimates have been developed on the basis of the following principles:

- (i) Estimates of expected claims costs should be "central estimates", incorporating allowance for both "normal" and "superimposed" inflation
- (ii) Claim costs are to be discounted to allow for the time value of money
- (iii) Estimates of claims costs should take into account any amounts recoverable in respect of the claims.

1.4 Structure of the Report

The details of our review are set out in the following report sections:

Section 2 sets out the background of the ACT workers' compensation scheme

Section 3 describes the data we were supplied with for this investigation

Section 4 sets out our approach to analysis of Scheme performance

Section 5 presents the trends in Scheme claims experience

Section 6 includes our assessment of the Scheme claim number and claim payment experience and includes our assumptions required to estimate ultimate claim costs

Section 7 summarises the economic assumptions adopted

Section 8 details the reliances and limitations to which this report is subject.

The Appendices include supporting information.

1.5 Distribution and Use

This report is being provided for the use of CMCD for the purposes stated in Section 1.1 of this report. It is not intended, nor necessarily suitable, for any other purpose. This report should only be relied on by CMCD for the purpose for which it is intended. The report should be considered as a whole.

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Finity has performed the work assigned and has prepared this report in conformity with its intended utilisation by a person technically competent in the areas addressed and for the stated purposes only. Judgements about the conclusions drawn in this report should be made only after considering the report in its entirety, as the conclusions reached by a review of a section or sections on an isolated basis may be incorrect.



2 Scheme Background

This section covers the background to the workers' compensation scheme in the ACT, including the impacts of the major legislative amendments.

2.1 Introduction

The ACT workers' compensation scheme (Scheme) is a privately underwritten scheme, operating under the Workers' Compensation Act 1951 (the Act). WorkSafe ACT is responsible for the administration of the Act.

Under the Act, employers are required to take out a workers' compensation insurance policy with an approved insurer (approved by the Minister) or be granted an exemption to self-insure these risks by the Minister. There are currently 7 licensed insurers and 8 self insurers in the ACT. The licensed insurers are:

- QBE (including the run-off of Mercantile Mutual Insurance)
- Allianz
- IAG (including the run-off of CGU, FAI, HIH, NZI and VACC)
- Suncorp (written through the GIO licence and including the run-off of Vero)
- Zurich
- Guild
- Catholic Churches Insurance (CCI).

The Default Insurance Fund

The Default Insurance Fund (DIF) is a body established under the Act to cover the cost of claims for compensation where the employer is uninsured, bankrupt or insolvent. The DIF is funded by a levy on premiums, and on notional premiums in the case of self insurers. We have excluded the cost of claims covered by the DIF from the analysis of claim performance of the Scheme.

2.2 Compensation Types

Under the Act, a worker is entitled to compensation as described below.

Weekly Benefits

Compensation is provided to a worker who is incapacitated for work as a result of an injury or disease arising out of, or in the course of, the worker's employment. Weekly payments may continue for the duration of the incapacity, or to age 65. The level of the weekly payment ("the replacement ratio") varies by duration of incapacity as shown in Table 2.1 below.

Table 2.1 – Weekly Benefit Entitlements

Weeks on Benefit	Total Incapacity	Partial Incapacity
0-26 weeks	100% of average pre-incapacity weekly earnings.	100% of the difference between average pre-incapacity weekly earnings and average weekly amounts the worker is being paid or could earn in reasonably available suitable employment.
26 weeks +	* 100% of average pre-incapacity weekly earnings, if average pre-incapacity weekly earnings are less than the pre-incapacity floor (i.e. the federal minimum wage immediately before the incapacity); or * Maximum of either 65% of average pre-incapacity weekly earnings and the statutory floor.	A percentage of the difference between average pre-incapacity weekly earnings (subject to the minimum statutory floor and maximum statutory ceiling of 150% of AWE) and average weekly amounts the worker is being paid or could earn in reasonably available suitable employment, with this percentage varying depending on the weekly hours worked relative to pre-incapacity hours of the employer.

The weekly benefits described above have been in place since 1 July 2002.

Medical and Rehabilitation Benefits

The Act provides for compensation to the injured worker for costs associated with medical treatment (including hospital), rehabilitation services, alterations to the worker's place of residence, wages lost by the worker whilst attending treatment, transport to/from treatment, accommodation (incl. meals) while at treatment, repair/replacement of damaged clothing, etc. The total amount of medical costs relating to repair or replacement of contact lenses, crutches, prosthesis, spectacles, artificial aids and for loss or damage to a worker's clothing is capped at \$500 (CPI indexed to approximately \$650 at the date of this review).

Death Benefits

Dependants are entitled to lump sum compensation on the death of the worker, capped at \$150,000 (CPI indexed to approximately \$196,000 at the date of this review). In addition, dependants may be entitled to receive weekly payments of \$50 per week (CPI indexed to just over \$65 per week at the date of review) and funeral expenses of \$4,000 (CPI indexed to just over \$5,200 at the date of this review).

Impairment Lump Sums

Workers who suffer a permanent impairment from a work-related injury or disease are entitled to receive a maximum lump sum payment of \$100,000 (CPI indexed to approximately \$130,000 at the date of this review) for a single injury or \$150,000 (CPI indexed to approximately \$196,000 at the date of this review) for multiple injuries. The level of the lump sum payment varies between 2% and 100% of the maximum amount for a total loss as shown in Schedule 1 of the Act. For partial losses, the claimant is entitled to a proportionate reduction on the Schedule 1 amount. In most cases, a claim for an impairment lump sum cannot be made earlier than two years after the injury. Weekly benefits may continue to be payable despite payment of a lump sum benefit, subject to negotiation between the injured worker and employer or insurer.

Redemptions of Statutory Entitlements

In certain circumstances, subject to negotiation between the injured worker and the employer or insurer, claimants may commute their statutory benefits. The redemption may include amounts for the worker's entitlement to weekly benefits, medical and other expenses. Throughout the report we refer to the redemption of statutory entitlements as "commutations".

Common Law

A worker may be entitled to seek damages under common law where the work-related injury or disease was caused or contributed to by the negligence of a third party. Damages awarded are reduced by the amount of compensation already paid to the worker. Access to common law and the maximum amount of compensation available are unlimited under the Act.

Legal Costs

An injured worker may also seek reimbursement for the costs of legal and other expenses incurred as a result of pursuing common law damages or negotiating a settlement of their statutory entitlement.

2.3 Journey Claims

Workers are covered for injuries arising out of journeys both to and from work and undertaken for work purposes.

2.4 Employer Excess

The level of employer excess is not prescribed under the Act, but can be negotiated between the employer and the insurer.

2.5 Legislative Reform

This section summarises the legislative reforms that have had a significant impact on our review. The reader is referred to the relevant legislation for full details of the changes.

2002 Amendments

The *Workers' Compensation Amendment Act 2001* came into effect on 1 July 2002, and applied to injuries where the accident occurred on or after this date.

The amendments from the previous legislation may be summarised as follows:

- Weekly benefits
 - ▶ Benefits cease upon return to work or pension age (previously death)
 - ▶ Benefits depend on average pre-injury earnings including overtime (previously did not include overtime or allowances)
 - ▶ Benefits for incapacity post 26 weeks drop to 65% of pre-injury earnings (previously based on a statutory rate) subject to a minimum of a statutory floor
 - ▶ Benefits for partial incapacity subject to a minimum of a statutory floor (the federal minimum wage) and statutory ceiling (150% of AWE) (previously based on a statutory amount).
- Lump sums
 - ▶ Introduction of 6% threshold for access to compensation for hearing loss
 - ▶ Expanded the table of maims
 - ▶ Increased maximum impairment, death and funeral benefits
 - ▶ Introduction of a two year waiting period before a worker could claim for permanent impairment benefits.
- Medical benefits
 - ▶ Increased maximum amount for specified medical costs.
- Common Law
 - ▶ Reduced statute of limitations for common law to 3 years (previously 6 years).
- Other
 - ▶ Definition of worker expanded to include volunteers
 - ▶ Definition of employment-related diseases tightened
 - ▶ Definition of journey claims tightened
 - ▶ Increased focus on injury management processes, including the strengthening of requirements for employers to provide suitable return to work
 - ▶ Encouraged early notification of claims.

Civil Law (Wrongs) Act 2002

The amendments introduced as part of the Civil Law (Wrongs) Act 2002 came into force in late 2002 and resulted in changes to legal proceedings in the ACT. In September 2003, the legislation was amended to exclude workers' compensation claims from the Wrongs Act.

2006 Amendments

The Workers' Compensation Act 2006 and *Workers' Compensation Amendment Act 2006 (No 2)* became effective 1 July 2006 and resulted in the:

- Establishment of the Default Insurance Fund
- Change in definition of maximum duration of weekly compensation to 65 years of age
- Categorisation of some 'carers' as workers
- Encouragement of early reporting of injury
- Specific mention of rehabilitation costs.

2009 Amendments

The Workers Compensation (Default Insurance Fund) Amendment Act 2009 came into effect on 3 September 2009 and amended the Act to enable the DI Fund Manager to make decisions regarding the conduct of matters and settlement of claims without the employer's consent. Under the provisions, the DI Fund Manager was required to, as far as practicable, consult with the employer regarding the matter.

The Workers Compensation (Default Insurance Fund) Amendment Act 2009 (No 2) introduced amendments to:

- Limit the circumstances in which a Principal can seek indemnity from the Default Insurance Fund for the cost of workers' compensation in connection with a claim brought by the injured worker of an uninsured subcontractor; and
- Implement a revised funding model through which the DI Fund raises capital.

The Workers Compensation Amendment Act 2009 introduced a range of amendments that may be summarised as follows.

- Red tape for employers
 - ▶ Permitted the appointment of a rehabilitation service provider in the event that an injured worker had been unable to return to work in their pre-injury hours and duties within 4 weeks from the date notice of the injury was provided;
 - ▶ Eliminated the requirement for employers to provide either a statutory declaration or a certificate from a recognised auditor in connection with the provision of wage related information to insurers
- The National Framework for the Approval of Workplace Rehabilitation Providers (the Framework) developed by the National Heads of Workers' Compensation Authorities (HWCA) was implemented; and

- Introduced new offences and penalties for sustained non-compliance by employers, including the alignment of penalties with the employer's operational size.

2010 Amendments

The *Workers Compensation (Default Insurance Fund) Amendment Act 2010* introduced amendments that:

- Reduced the representative membership of the DI Fund Advisory Committee to a total of 3 members;
- Clarified the responsibility of that Committee to monitor the operations of the DI Fund and provide advice, as requested, by the Minister or DI Fund Manager.

2011 Amendments

The *Workers Compensation Amendment Regulation 2011* came into effect of 1 September 2011 and introduced amendments to expressly recognise the obligation of Approved Insurers and Self Insurers to participate in, and bear the cost of, compliance audits intended to measure their compliance with the obligations and responsibilities imposed by the legislative framework.

2.6 Workers' Compensation Amendment Bill 2010

The Exposure Draft Workers' Compensation Amendment Bill 2010 ("the Bill"), released for public consultation in October 2010, proposes a number of changes to the workers compensation legislation in the ACT.

The draft bill has not been tabled in the ACT Legislative Assembly, and we have made no allowance for the impact of legislative change.

3 Data

This section describes the data items we were supplied with for this investigation, the results of our reconciliations and the data summaries produced.

3.1 Data Supplied

WorkSafe ACT administers the Accident Information Management System (AIMS) database. AIMS was established in 1999 and contains workers' compensation premium and claim information from all insurers and self-insurers operating in the Scheme. As part of our review, WorkSafe ACT supplied us with the following information from AIMS:

- Individual claim file showing the accident and report date, insurer code, current liability status, total payments to date and estimated future payments outstanding for each claim reported or having had a payment between 1 July 1999 and 31 December 2010
- Claim payment transaction file with payments made (by type and month) between 1 July 1999 and 31 December 2010
- Individual policy files, with the ANZSIC Division and insurer codes for each policy written or renewed between 1 July 1999 and 31 December 2010.

In addition to the information provided, we also received the following summarised data from each of the insurers:

- Premiums by ANZSIC Division;
- Wages by ANZSIC Division;
- "Triangulations" of numbers of claims reported; and
- "Triangulations" of claim payments
- Current case estimates.

We have also compiled workforce figures from information available from the Australian Bureau of Statistics (ABS) and the Australian Public Service Employment Database (APSED), plus information on the number of ACT public sector employees supplied by Chief Minister and Cabinet Directorate.

Refer to Appendix A for a more detailed listing of the data.

3.2 Reconciliation

At our previous review, our key findings in respect of the AIMS data were:

- Claim number information on AIMS is fairly reliable and is satisfactory for the purposes of our actuarial review.

- Claim payment information on AIMS for 2001/02 and later years is of reasonable quality and is satisfactory for the purposes of our actuarial review. Significant amounts of payments prior to 2001/02 are missing (around 25%), primarily due to one insurer.
- Premium and wages information on AIMS is inadequate because the current system does not adequately capture policy adjustments. We have instead relied on information sourced directly from insurers. The new system anticipated to be implemented in 2012/2013 is anticipated to deal with this system deficiency.

We also compared case estimates from AIMS to case estimate provided by the insurers and found case estimates for 2004/05 and prior are significantly understated in AIMS, and are 40% lower than the estimates provided by insurers.

As such, in preparing this advice we have relied on the claims information (with the exception of case estimates) supplied by WorkSafe ACT and case estimate, premium and wages information supplied by the private sector insurers.

We have compared the AIMS data provided for this review with the data provided for our previous review (see Appendix B.2). The data from the two extracts matched closely.

We have also reviewed and checked the AIMS data for reasonableness and consistency. Reliance was placed on, but not limited to, the accuracy of the information described in this report.

3.3 Information Provided by Insurers

Each of the insurers of workers' compensation in the ACT provided us with summarised premium, wages and claims information, including:

- Written premiums and wages by policy year – both initial amounts and amounts after adjustment for actual wages and premium adjustments
- Earned premiums and wages by year and by ANZSIC Class – both initial amounts and amounts after adjustment for actual wages and premium adjustments
- Numbers of claims reported, subdivided by accident year and report year
- Claim payments made, subdivided by accident year and payment year
- Case estimates, as at 30 June 2010 and 31 December 2010, subdivided by accident year.

At this review, a number of insurers also provided wages and premium information for burner policies separately.

In order to improve the comparability and consistency of the information supplied by insurers, the data required adjustment in some cases so that:

- Premiums include brokerage
- Wages exclude superannuation.

We compared the premium and wages information supplied for this review with that supplied for the previous review and found no material differences.

We compared the claim number and claim payment information supplied by the insurers to that on AIMS. The reconciliations are detailed in Appendix B.2. Our findings were:

- There are some significant differences between AIMS claim number data and insurer records arising from differences in recording and reporting of nil claims and notifications for two insurers. This is not expected to impact our analysis as our average payment models are based on the number of non-nil claims.
- There are some significant differences between AIMS claim payment data for years 1999/00 and 2001/02 that relate to one insurer that has a significant amount of payments missing from the AIMS database. We were aware of this limitation at our previous review and as a result only relied on the AIMS payment information for 2002/03 onwards. Differences in other years were minimal, and relate primarily to timing differences.

At an overall level however we found no material differences between AIMS and the insurer data.

3.4 Coding of Claim Payments on AIMS

There are a number of areas of uncertainty as to the definition of claim payments recorded on the AIMS database. This is partly due to a lack of clarity in the AIMS data specification, but is also a function of the ACT being a privately underwritten market with a number of insurers participating – hence recording practices between insurers may vary. Specific areas of inconsistency are discussed further below.

Common Law, Commutations and Impairment Benefits

Discussions with the CMCD have revealed there may be some differences in coding practices of common law, commutation and impairment benefit payments. Specific examples include:

- For claims where a common law action is commenced and is subsequently settled out of court, some insurers may code the payments as common law while others may code as a commutation.

- Some insurers are negotiating commutations with the claimant and having the claimant sign a common law deed of release. These are being coded as common law rather than commutations.
- Some insurers are coding what are essentially impairment benefit payments as commutations.

As a result of these differences in practices, we have grouped all common law, commutation and impairment benefit payments together in undertaking this review.

Legal Payments

It is not clear whether all insurers are coding their legal costs consistently. We understand that the legal costs payment field includes the insurer's legal costs, and may also include plaintiff legal costs to the extent that they can be identified. Plaintiff legal costs associated with common law settlements are unlikely to be coded as "legals", but will be included in the common law payment amount.

Rehabilitation

It is not clear whether the rehabilitation payment type captures only vocational rehabilitation or if it also includes some elements of medical rehabilitation.

GST and ITCs

We understand that all claim payments made in the post-GST environment are reported inclusive of GST for all insurers. However, practices vary in relation to the treatment of ITC recoveries – some insurers net them off payments captured on AIMS while others do not. (We understand that the AIMS data specification is in the process of being amended to offer greater clarity to insurers on the treatment of ITCs. However, historical information will not be amended.)

As we have analysed payment data net of ITC recoveries, we have had to adjust the data for those insurers who have not netted off the ITC recoveries. Given that the majority of workers' compensation payments do not attract GST, we have only netted off estimated ITC amounts from legal and investigation costs for these insurers. Some elements of medical and rehabilitation payments will also attract GST (e.g. home modifications, vocational rehabilitation services) and hence should have ITC recoveries netted off. However we do not know what proportion of medical and rehabilitation payments attract GST, and have therefore not adjusted these payments. We believe this is immaterial in the context of our review.

Incident notifications

We understand that some insurers are submitting incident notifications as well as claim records to AIMS, and that the treatment of this varies by insurers. This is another area where the AIMS data specification may be improved to provide greater clarity to, and improve consistency between, insurers.

3.5 Workforce Information

We have calculated an approximate private sector workforce as follows:

- Total workforce in the ACT
- less ACT public sector employees
- less Commonwealth public sector employees.

We do not have a “full time equivalent” number of workers, and have therefore used the numbers of full time workers to approximate the total ACT private sector workforce.

3.6 Reinsurance and Other Recoveries

The data supplied for the purposes of our review did not include details of reinsurance recovery amounts. Therefore, all data and projections contained in this review are gross of reinsurance, but net of all other recoveries.

3.7 Data Adjustments

In performing our claims analysis we have identified and separately considered claims which have zero payments made to date (“nil claims”).

Further, in determining the number of claims in receipt of common law and lump sum benefits, we have excluded from our claim number summaries those claims which received total common law or lump sum benefits of less than \$500. We found that one insurer in particular had a large number of such claims. We have excluded these from all lump sum claim counts (noting the costs of such claims continue to be included in our claim payment summaries).

4 Approach

For the purpose of analysis, all data has been grouped into accident years, i.e. the year in which the injury occurred which gave rise to the claim. Development of this data is then analysed and projected by development year (which is a measure of the number of years since the year in which the accident occurred, e.g. development year 2 is the year after the year in which the injury occurred). All analysis has been carried out on a financial year basis (i.e. years ending 30 June).

In conducting our analysis of the ACT workers' compensation experience, we have followed the same approach as in the previous review. This involved examining claim numbers and frequency, and average size by benefit type. The development analysis allows us to project future claim reports and costs in respect of injuries which have already occurred, from which we can estimate the ultimate number and cost of claims arising from each accident year. This allows analysis of the underlying trends in Scheme experience and provides a basis for assessing a reasonable level of premium.

4.1 Claim Numbers

In order to estimate ultimate numbers of claims we use the Chain Ladder method to estimate the number of claims relating to accidents that occurred prior to 30 June 2010 that are yet to be reported (i.e. "Incurred But Not Reported" or "IBNR" claims). The estimated ultimate number of claims (reported to date plus IBNR claims) is then expressed as a claim frequency by dividing the ultimate number of claims in each accident year by a measure of exposure.

Claim numbers were modelled by the following groups:

- All claims - we analysed the number of claims and the frequency of such claims relative to ultimate inflation-adjusted wages earned in the period.
- Non-nil claims - as for all claims, we estimated the ultimate number and frequency of claims that are expected to result in a payment by the insurer.
- Lost time - we analysed the numbers of claims receiving weekly benefits ("lost time") and the frequency of lost time claims relative to non-nil claims.
- Lump sums - we analysed the numbers of lump sum claims (common law, statutory impairment, commutations and death benefits, excluding claims with total lump sum payments less than \$500) and utilisation rate (expressed as the ultimate number of lump sum claims divided by ultimate number of lost time claims).

4.2 Claim Duration

We examined trends in duration of weekly benefit claims by analysing the number of claims that remain active in each development quarter. A claim received an "active" flag and was counted once if it received a weekly payment in the quarter. We excluded from

our active count any claims where total weekly payments to date were negative or where the weekly payments made in a quarter total zero.

4.3 Average Claim Size

Claim payments were analysed and projected using the following benefit type groupings:

- Weekly benefits - modelled using a Payments Per Claim Incurred (PPCI) approach, where the claim count used is the estimated ultimate number of lost time claims. We supplemented this primary model with a Payment Per Active Claim (PPAC) model.
- Medical and related benefits - modelled using a PPCI approach, where the claim count used is the estimated ultimate number of non-nil claims.
- Rehabilitation benefits - modelled using a PPCI approach, where the claim count used is the estimated ultimate number of non-nil claims.
- Lump sums - modelled using a Payments Per Claim Settled (PPCS) approach, where the claim count used is the ultimate number of lump sum claims.
- Legal and other benefits - modelled using a PPCI approach, where the claim count used is the estimated ultimate number of non-nil claims.
- Recoveries - modelled using a PPCI approach, where the claim count used is the estimated ultimate number of non-nil claims.

An explanation of these methods can be found in Appendix C.

From each of the above models we estimate the average payment, by payment type and development year. The overall average claim size for each accident year is the result of adding our estimated payments for each payment type and dividing by the projected ultimate number of claims.

5 Overview of Claims Experience

This section summarises trends in the experience of the Scheme. Full details of claim frequency and average claim size, including projections by payment type, follow in Section 6.

5.1 Summary of Findings

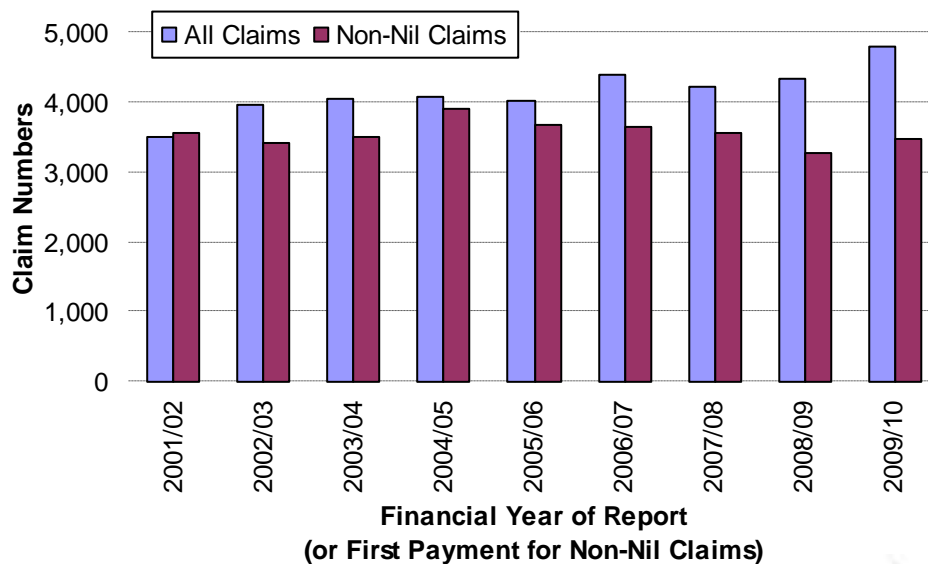
Key findings from this section are:

- The total number of claims reported in 2009/10 increased by 10% over 2008/09, however the total number of non-nil claims (i.e. in receipt of their first payment in 2009/10) increased by only 6%.
- Claim payments increased by 7% in 2009/10, after having reached an historical low in 2008/09. The increase has been driven mainly by an increase in lump sum payments.
- Common law and lump sum claims are important drivers of the scheme financials. These claims account for around 12% of non-nil claims by number, however payments associated with these claims (including weekly benefit payments, medicals, rehabilitation and legal costs) account for around 80% of total scheme payments to date.

5.2 Numbers of Claims Reported

The following graph shows claim numbers reported in each year of report, and number of non-nil claims counted in the year of their first payment.

Figure 5.1 – Claim Numbers



Total claim reports have increased across the period shown, but this primarily relates to an increase in the number of nil claims. We believe this increase may be in response to the 2006 legislative amendments which encouraged early reporting of claims. Around 4,800 claims were reported in the ACT in the 12 months to 30 June 2010, a 10% increase relative to the previous year. We understand that this is primarily due to increased reporting of incident only notifications.

The number of non-nil claims reported was fairly stable over the period 2005/06 to 2007/08 at around 3,600 per annum but declined significantly in 2008/09 to around 3,300. Non-nil claim numbers in 2009/10 increased by 6% to around 3,500, which remains below earlier years. In a number of other workers compensation jurisdictions in Australia we have seen a similar reduction in claim numbers in 2008/09 followed by an increase in 2009/10. We believe that the reduction in 2008/09 primarily reflects a decline in the workers' propensity to claim caused by the Global Financial Crisis (GFC), due to worker's concerns over their employment prospects and their ability to return to their previous employment during an economic downturn. The increase in claim numbers in 2009/10 reflects a return to more normal economic conditions.

The following table compares the claims experience that has emerged in the year to 30 June 2010 with the expected experience taken from our previous report, for accident periods to 30 June 2009 (prior periods).

Table 5.1 – Actual vs. Expected Claims Reported in 12 months to 30 June 2010 for Accidents Prior to 30 June 2009

Accident Year	All Claims Reported				Non-Nil Claims Reported			
	Actual	Expected	Difference	Difference	Actual	Expected	Difference	Difference
Prior	0	0	0	0%	0	0	0	0%
2001/02	2	1	1	100%	1	2	-1	-39%
2002/03	1	0	1	0%	1	1	0	-4%
2003/04	2	1	1	114%	2	2	0	-4%
2004/05	7	5	2	31%	7	6	1	20%
2005/06	9	9	0	0%	11	8	3	35%
2006/07	7	8	-1	-9%	10	12	-2	-19%
2007/08	23	21	2	12%	23	26	-3	-11%
2008/09	253	255	-2	-1%	435	455	-20	-4%
Total	304	300	4	1%	490	512	-22	-4%

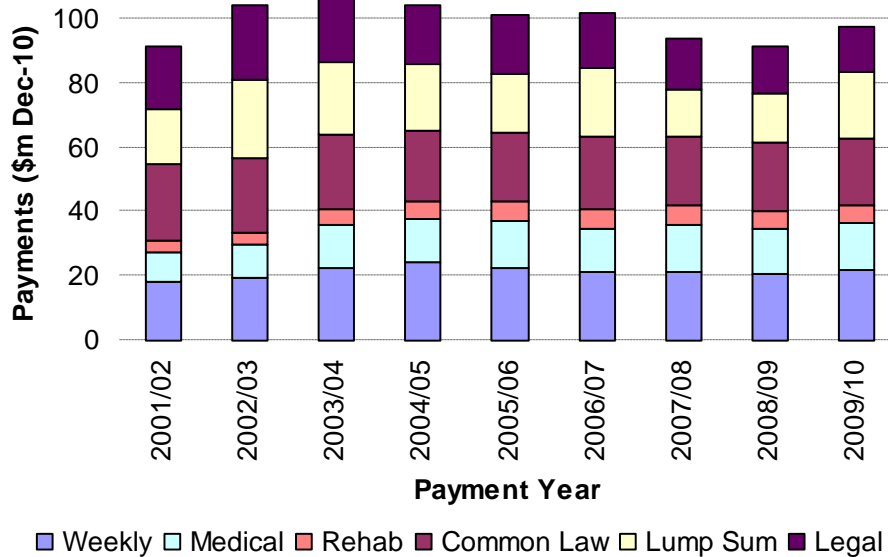
Of the 4,800 claims reported in the 12 months to 30 June 2010 (as shown in Figure 5.1 above), 304 related to prior accident periods. This actual number of reports is very close to the expected number of 300 taken from our previous review.

The number of non-nil claims reported (i.e. the number of claims in receipt of first payment) in the 12 months to 30 June 2010 for prior accident periods was 22 claims (4%) better than expected, the bulk of which relates to the 2008/09 accident year.

5.3 Claim Payments

The following graph shows the mix of gross payments, split by payment type. All amounts have been inflated to December 2010 values.

Figure 5.2 - Payments by Type



After falling for a number of years to 2008/09, gross claim payments increased by 7% in 2009/10. Gross payments in 2009/10 were \$97.9 million (in December 2010 values), an increase of \$6.6 million in the year, largely as a result of higher lump sum payments.

Insurers also received \$3.5 million in non-reinsurance recoveries in the year, to bring net payments in the year to \$94.4 million.

It is important to note that payment year data contains a mix of payments from various accident and legislative periods; so it does not necessarily indicate underlying trends in Scheme costs. The accident year analysis in Section 6 investigates underlying cost trends.

The following table compares the payments made in the 12 months to 30 June 2010 by payment type (for prior accident periods) against those expected from our previous report.

Table 5.2 – Actual vs. Expected Payments in the 12 months to 30 June 2010 for Accidents Prior to 30 June 2009

Payment Type	Actual	Expected	Difference	Difference
	\$m	\$m	\$m	%
Weekly	12.8	12.6	0.3	2%
Medical	8.0	7.8	0.1	2%
Rehab	3.2	3.0	0.2	7%
Lumpsums ¹	38.5	37.1	1.4	4%
Legal	12.6	13.4	-0.8	-6%
Recoveries	-3.2	-3.5	0.2	-6%
Total	71.8	70.4	1.4	2%

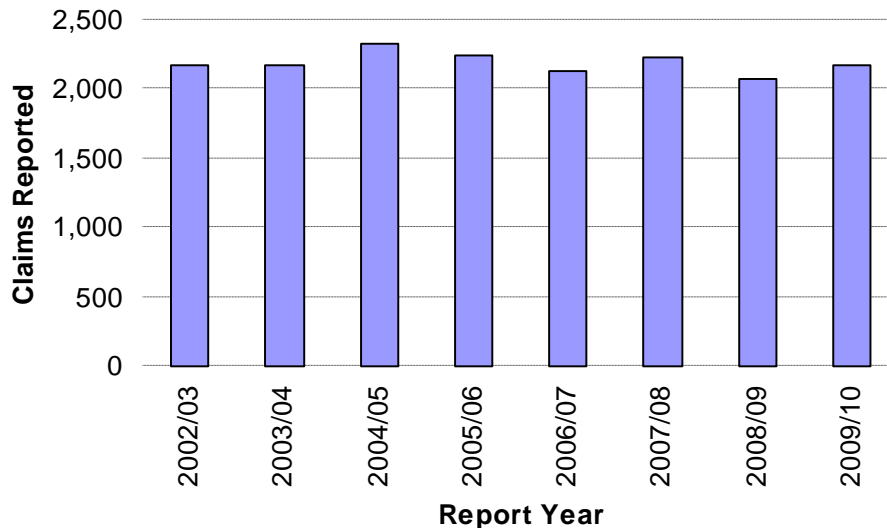
¹ All payments made on lump sum settlements in the 12 months to 30 June 2010, including payments made on these settlements in prior years.

Payment experience in the 12 months to 30 June 2010 for prior accident periods was 2% higher than expected, with payments higher than expected across all payment types except the legal payment type.

5.4 Weekly Benefits

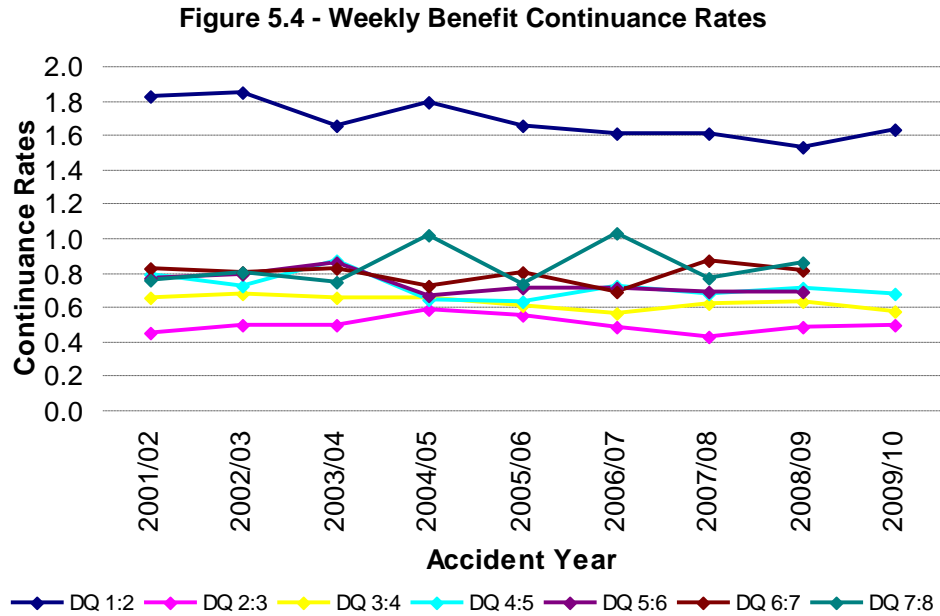
Figure 5.3 below shows the number of new weekly benefit claims (lost time claims) reported in each year. We have counted claims as “new” lost time claims in the year that they first received a weekly benefit payment.

Figure 5.3 - Lost Time Claims Reported



The number of lost time claims peaked in 2004/05 and has subsequently reduced. After a drop in the number of lost time claims in 2008/09 to the lowest level seen since 2001/02, the number increased in 2009/10, with approximately 2,170 new claims in receipt of weekly benefits. This increase in the number of lost time claims in 2009/10 is consistent with the trend in non-nil claim numbers and is consistent with our theory around the GFC and its impact on claim reports.

The following graph shows the weekly benefit continuance rates for the 2001/02 to 2009/10 accident years in the first two years (8 quarters) following the date of injury i.e. the proportion of lost time claims that “continue” to be on benefits from one period to the next. All else being equal, a lower continuance rate implies better outcomes for the Scheme (as more claimants are returning to work).



Our comments on the experience are:

- The continuance rate between development quarters 1 and 2 increased in 2009/10, after having declined through much of the period to 2008/09. The continuance rate between development quarter 1 and 2 is greater than 1.0 due to the delay between the time the accident occurs, reporting the claim and commencement of payment of weekly benefits.
- The continuance rate between development quarters 2 and 3 increased over the period 2001/02 to 2004/05, which may be due to the 2002 legislative amendments that increased benefits levels paid 26 weeks after the injury. The continuance rate subsequently declined to 2007/08, but has increased again in the last two years.
- For subsequent development quarters, the continuance rates have generally fallen or remained relatively stable over the period shown.

We have previously investigated the extent, if any, that the observed improvement in weekly benefit continuance rates has been due to higher numbers of claims receiving either common law or redemptions i.e. that the improvement in continuance rates is perhaps masking underlying deterioration in overall scheme costs. Our analysis showed:

- Almost no redemptions or common law claims are paid before development quarter 4, hence the observed improving continuance rate experience for development periods 1:2 and 2:3 is not due to redemptions or common law.
- For subsequent development periods, the proportion of inactive claims becoming inactive due to common law or redemptions increases from around 2% (for development quarter 3:4) to around 35% (for development quarters 8+). The proportion of claims becoming inactive due to common law or redemptions has been either stable or falling over the period shown, hence we conclude that the improving continuance rate experience is not due to redemptions or common law.

5.5 Common Law and Lump Sums

Injured workers may choose to pursue either:

- A common law claim;
- A redemption of statutory entitlements; or
- A statutory permanent impairment benefit.

Pursuing either a common law claim or a commutation results in finalisation of the claim, as all of the worker's entitlements are settled via this path. However, payment of a statutory permanent impairment benefit results in the settlement of the impairment benefit component only – the worker continues to have an entitlement to receive future weekly benefits and medical costs.

In reality, very few claimants pursue statutory permanent impairment benefits relative to common law or commutations. We understand that they may not be as attractive as common law or commutations, to both:

- Claimants, as the amount of statutory entitlements is viewed as “low” relative to what may be paid via the other two routes
- Insurers, as the insurers prefer to settle claims via common law or commutations as they are able to permanently finalise the claim through a deed of release, hence obtaining some certainty of their claims costs.

Figure 5.5 shows the number of claims that have received common law, commutation, statutory impairment benefits or death benefits in each payment year. Note that around 30 claimants per year receive more than one type of these benefits (usually claimants receiving both a common law and a commutation) and for the purpose of this graph we have counted claims using the following hierarchy:

- If a claim has a common law payment then it is counted as common law
- If a claim has no common law payment but has a commutation payment, then it is counted as a commutation lump sum

- If a claim has no common law or commutation payments, then it is counted as a statutory impairment lump sum
- If a claim has no common law, commutation, or impairment benefit payments, then it is counted as a death benefit.

Figure 5.5 – Number of Common Law and Lump Sum Claims

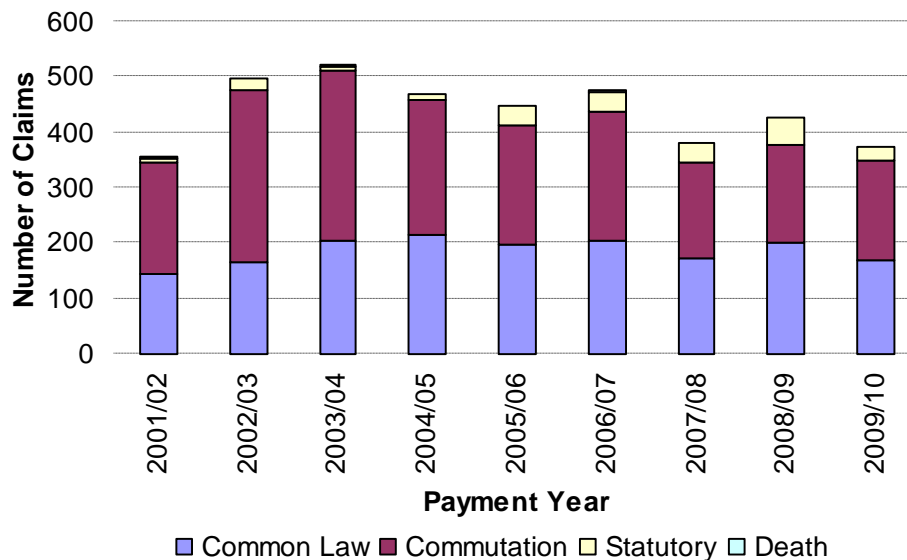


Figure 5.5 shows:

- The number of claimants receiving common law damages increased between 2001/02 and 2003/04 and has since stabilised at around 200 claims per annum. The number of common law claims in 2009/10 was lower than this level, with just 169 common law settlements in the year.
- The number of commutations has declined from a peak in 2002/03 of around 310, to around 180 commutations in each of the last three years
- The number of statutory impairment benefits has increased since 2004/05, perhaps reflecting the lagged impact of the 2002 amendments which introduced a two-year time limit before workers can receive permanent impairment benefits. That said, the number claimants receiving a statutory impairment benefit in 2009/10 was at its lowest level in five years at only 24.
- As expected, there are very few death benefit claims in each year.

We have also investigated the total average cost of claims that receive common law payments and commutations (i.e. for those claims which receive a common law or commutation payment, the average across all benefit payments received, not just the common law/commutation component). Figure 5.6 below shows for claims that have received a common law benefit, the average amount received for common law, lump sums, weekly benefits, medicals and rehabilitation, and legal costs. Figure 5.7 shows the same information for claims that have received a commutation.

Note the following:

- If a claim has received both a common law payment and a commutation payment, we have grouped them in with the common law claims in Figure 5.6.
- The graphs are constructed on an accident year basis and we expect the average claim size to develop significantly for the more recent accident years. As such, we have only shown accident years 2001/02 to 2007/08.

Figure 5.6 – Average Size of Claims Receiving Common Law

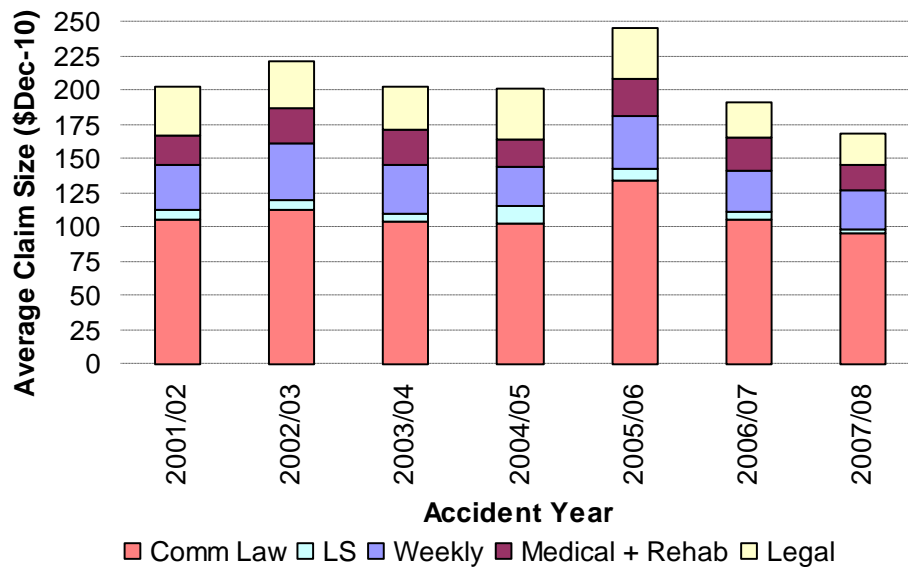


Figure 5.6 shows the overall average cost of claims receiving common law payments (for accident years 2001/02 to 2006/07) is around \$200,000 (in December 2010 values), made up as follows:

- The common law component of the claim is around \$110,000 per claim (just over 50% of the cost)
- Other lump sums add around \$8,000 per claim
- Weekly benefits add around \$35,000 per claim. Of these weekly benefits, 99% of payments are made prior to the common law settlement
- Medical and rehabilitation costs add around a further \$25,000 per claim. Of these medical and rehabilitation payments, 99% are paid prior to the common law settlement
- Legal costs account for around a further \$30,000 per claim.

Figure 5.7 – Average Size of Claims Receiving Commutations

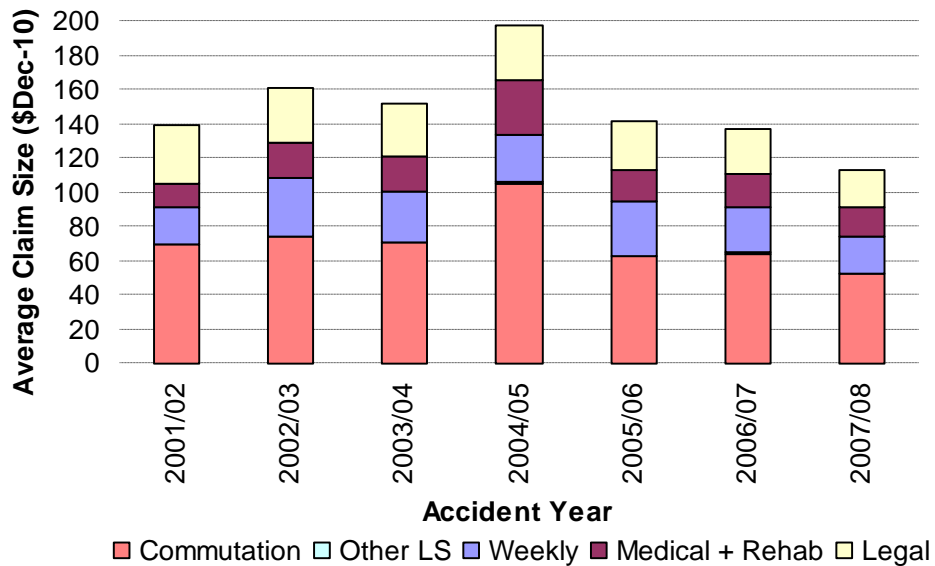


Figure 5.7 shows that the overall average cost of claims receiving commutations (for accident years 2001/02 to 2007/08) is around \$150,000 and is made up as follows:

- The commutation component of the claim is around \$75,000 per claim (approximately 50% of the cost)
- Other lump sums are negligible
- Weekly benefits add around \$25,000 per claim. Of these weekly benefits, around 97% of payments are made prior to the commutation
- Medical and rehabilitation costs add a further \$20,000 per claim approximately. Of these medical and rehabilitation payments, 98% are paid prior to the commutation
- Legal costs account for around a further \$30,000 per claim, similar to the amount paid on common law claims.

Figure 5.8 shows the number of common law or lump sum settlements in each year expressed as a proportion of scheme non-nil claims reported in that year, compared with the amount spent on the common law or lump sum settlements in each year (including the weekly benefit, medical, rehabilitation and legal cost components) expressed as a proportion of total payments made in each year.

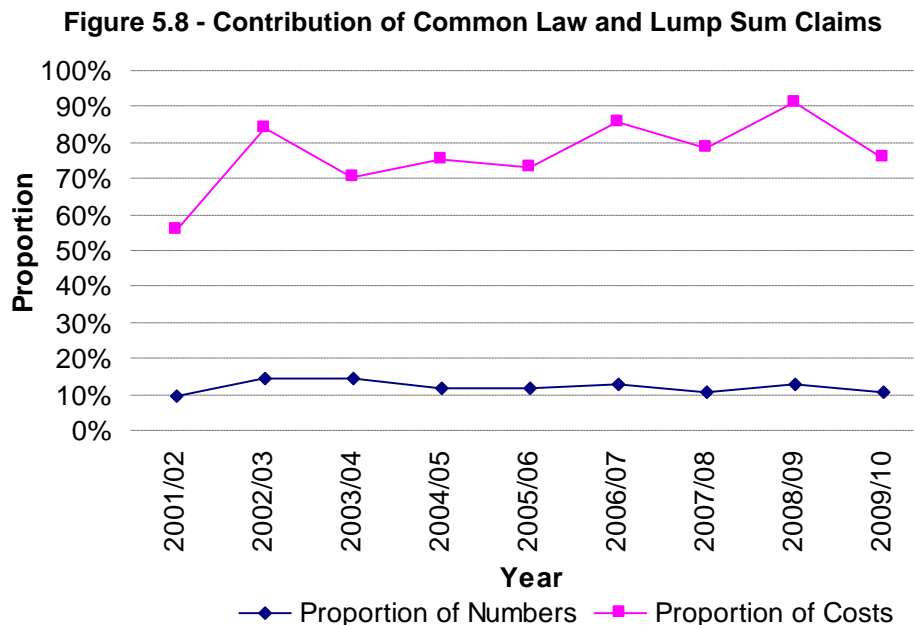


Figure 5.8 demonstrates the importance of the common law and lump sum claims to the scheme financials as they represent around 12% of non-nil claims by number and around 80% of claim payments.

5.6 Open Claims

In this section we provide some information on “open” claims. As discussed in Section 3.2, we have some concerns around the quality of the finalised/open flag, with significant numbers of open claims with zero case estimates. As such, we have not used this flag. Instead we have estimated the number of open claims on two different bases:

- If the claim has a non-zero case estimate at 31 December 2010
- If the claim has had a payment in the December 2010 payment quarter.

The following table shows the number of “open” claims on each of these bases.

Table 5.3 – Number of “Open” Claims

Accident Year	Non-Nil Case Est.	Payment in D10 Qtr	Difference
2001/02	30	7	23
2002/03	48	14	34
2003/04	56	25	31
2004/05	78	30	48
2005/06	92	66	26
2006/07	133	105	28
2007/08	226	166	60
2008/09	383	352	31
2009/10	808	939	-131
Total	1,854	1,704	150

Based on case estimates, the total number of open claims for the 2001/02 and later years is around 1,900. Based on whether or not the claim had a payment in the last quarter, the number of open claims is much higher than this at around 1,700. The bulk of this difference is in the 2009/10 accident year. Reasons for the differences include:

- The case estimate definition is likely to underestimate the true number of open claims for the most recent year, as claims that have recently been reported may not have had sufficient time for a case estimate to be established on the file.
- The case estimate definition may overstate the number of open claims for older years if there are processing delays in setting the estimate to zero.
- The payment based definition is likely to overstate the true number of open claims, for the most recent year in particular, as many recently reported claims of short duration will have had a payment in the quarter and be finalised, but won't be captured as "closed" under this definition.
- The payment based definition may understate the number of open claims for older years if, for example, there are no ongoing weekly or medical payments but a common law or lump sum claim is yet to be settled.

The incurred costs on these claims are shown in the following table.

Table 5.4 – Incurred Costs on “Open” Claims

Accident Year	Non-Nil Case Est.	Payment in D10 Qtr	Difference
	\$000	\$000	\$000
2001/02	1,181	701	481
2002/03	6,990	2,816	4,174
2003/04	4,908	4,296	612
2004/05	8,885	18,012	-9,127
2005/06	19,246	17,745	1,501
2006/07	24,060	23,672	388
2007/08	35,232	33,874	1,358
2008/09	62,785	59,247	3,538
2009/10	75,915	74,344	1,571
Total	239,201	234,706	4,496

Case estimates on the open claims accounts for \$151 million of the incurred cost in the years shown.

6 Claim Analysis and Assumptions

This section describes our findings in relation to trends in the Scheme claim number experience, claim payments and average claim costs, and documents our assumptions required to estimate ultimate claim costs.

6.1 Summary of Findings

The key findings from this section are:

- Non-nil claim frequency as measured per \$m of wages has increased by 10% in 2009/10 due to two factors:
 - ▶ a decrease in wages of 6% (in real terms) in the year
 - ▶ An increase in non-nil claim number of 4% in the year with a return to more normal economic conditions following the GFC.
- There is some evidence of an increasing trend in average claim sizes in medical and rehabilitation payments, and we have allowed for superimposed inflation in these payment types as discussed in Section 7.2. We also observed higher average weekly benefit claim sizes in 2008/09 but we have taken the view that this results from the GFC-related lower claim numbers for this year.

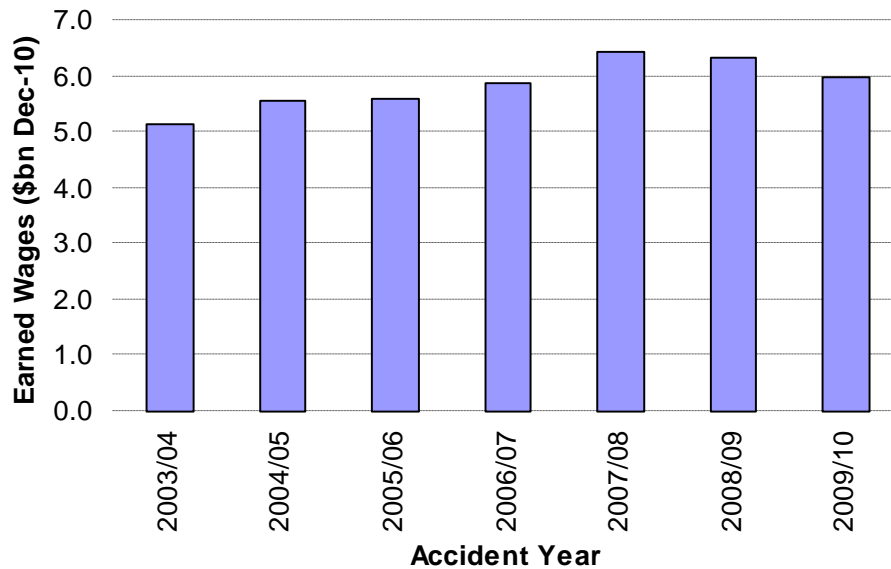
6.2 Exposure

“Earned” Wages

Wages are used as a measure of exposure in the calculation of ultimate claim frequency. When an employer purchases workers’ compensation cover, the amount they pay is usually expressed as a premium rate that is a percentage of “wages covered” for the policy year. In our analysis of claim numbers, we estimate the ultimate number of claims for each accident year (as opposed to policy year). In order to determine the relevant wages for each accident year, we use policy-year wages spread over the period of cover (“earned” wages for each accident year), using data provided by insurers.

Figure 6.1 shows earned wages by accident year. In this graph the wages have been increased for historical wage inflation, i.e. all amounts are expressed in December 2010 values so that the graph shows real growth in total wages. Note, the figures shown are estimates based on information to March 2011 (wages are often revised from initial estimates to actual figures at the end of the policy year and the figures shown here allow for the expected movement from initial to final wages).

Figure 6.1 – Estimated Ultimate Earned Wages

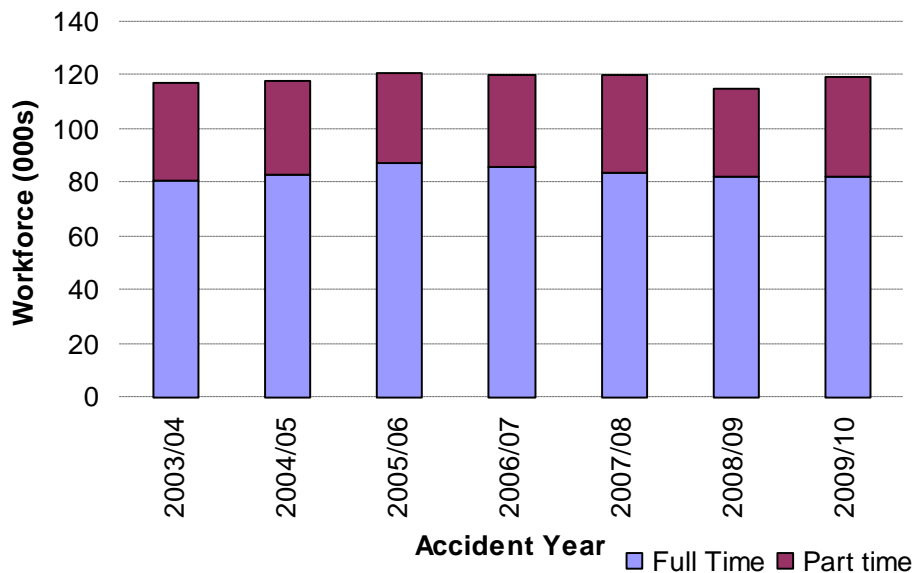


Wages in 2009/10 have declined by around 6% in real terms relative to the previous year.

Number of Employees

Figure 6.2 shows our estimate of the ACT private sector workforce by accident year, split between full time and part time workers.

Figure 6.2 – Workforce (000s)



The proportion of full time versus part time employees has been relatively stable over the period shown at around two thirds of the workforce. We have used the number of full time ACT private sector employees as a measure of exposure in the calculation of ultimate claim frequency. Full time employee numbers have been relatively stable in the

past few years, growing by just 0.5% in the year to 30 June 2010. The lower number of part time employees in 2008/09 may be GFC-related.

6.3 Total Claim Numbers and Frequency

Figure 6.3 shows the number of nil and non-nil claims that have been reported to the insurers to 30 June 2010 and our estimated ultimate number of such claims for each accident year.

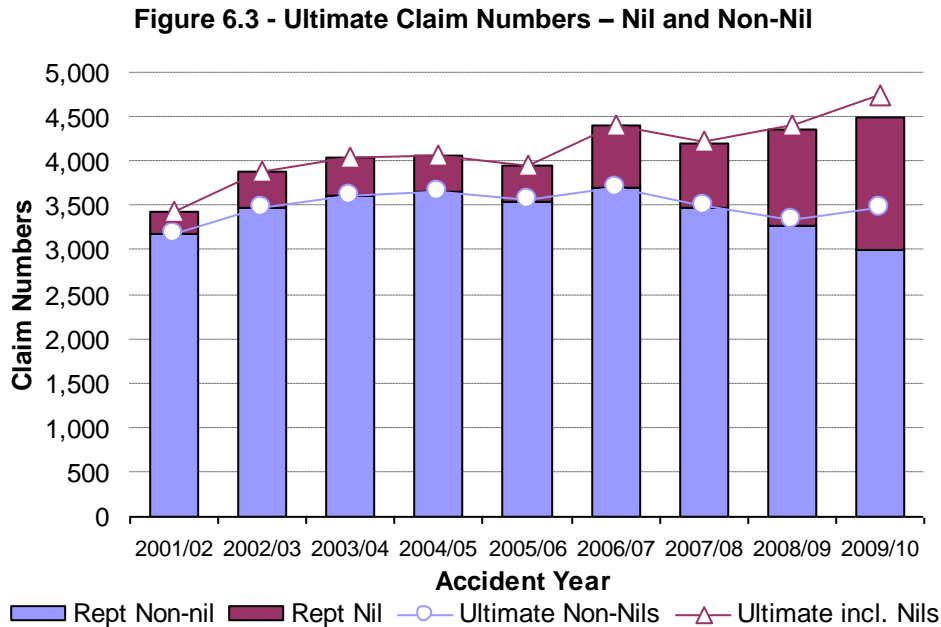


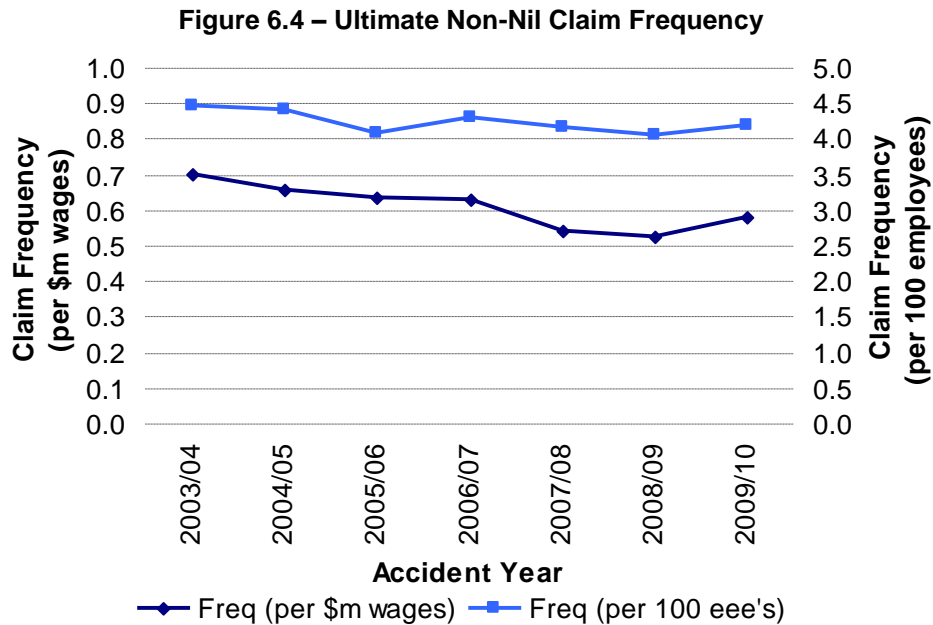
Figure 6.3 shows that for all but the most recent accident years the number of IBNR claims is small (i.e. the “ultimate” number is very close to the “reported” number). We also expect only small numbers of claims to move from nil to non-nil for all but the latest accident year.

While the estimated ultimate number of claims in total (i.e. including nils) has increased since 2007/08, this is due to an increase in the number of nil claims. Discussions with insurers have revealed the higher number of nil claims to be primarily the result of one large employer changing insurers during 2008/09, with the new insurer reporting incidents as well as claims on AIMS, while the previous insurer did not report incident only notifications to the same extent. As a result there is an increase in the number of nil claims.

The number of non-nil claims had been stable in the period 2003/04 to 2006/07 at approximately 3,600 per year, but declined in 2007/08 (to 3,500) and 2008/09 (to 3,350). We estimate the ultimate number of non-nil claims will increase by around 4% in 2009/10 to around 3,500 non-nil claims. In a number of other workers compensation jurisdictions in Australia we have seen a similar reduction in claim numbers in 2008/09 followed by an increase in 2009/10. We believe that the reduction in 2008/09 primarily reflects a decline in the workers’ propensity to claim caused by the Global Financial Crisis (GFC), due to

worker’s concerns over their employment prospects and their ability to return to their previous employment during an economic downturn. The increase in claim numbers in 2009/10 reflects a return to more normal economic conditions.

The estimated ultimate number of claims is divided by both earned wages and full time employees to arrive at a measure of the ultimate claim frequency per \$ million earned wages and per 100 employees respectively, as shown in Figure 6.4 below.



While non-nil claim numbers were fairly flat over the period 2003/04 to 2006/07, wages increased hence claim frequency per \$m wages has fallen. In 2007/08 claim numbers declined and real wages growth was strong, hence frequency per \$m of wages decreased quite sharply. In 2009/10, claim numbers were 4% higher than 2008/09 levels, and real wages decreased by 6%, hence the increase in claim frequency in this year.

Claim frequency per 100 employees has been relatively more stable over the last three or so years but still shows a dip in 2008/09 followed by an increase in 2009/10.

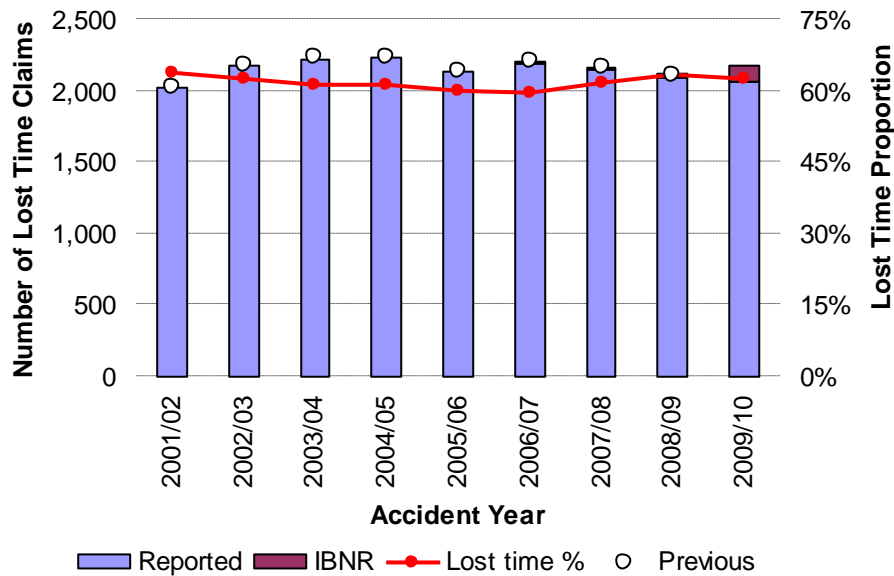
We estimate the ultimate frequency to be 0.58 claims per \$ million wages or 4.20 claims per 100 (full time) employees for the 2009/10 accident year.

6.4 Weekly Benefits

In order to understand the trends in the number of claimants receiving weekly benefit payments, we have also estimated the ultimate number of lost time claims.

Figure 6.5 show the ultimate number of lost time claims and the estimated proportion of non-nil claims that involve weekly benefits.

Figure 6.5 - Estimated Ultimate Lost Time Claims and Proportion

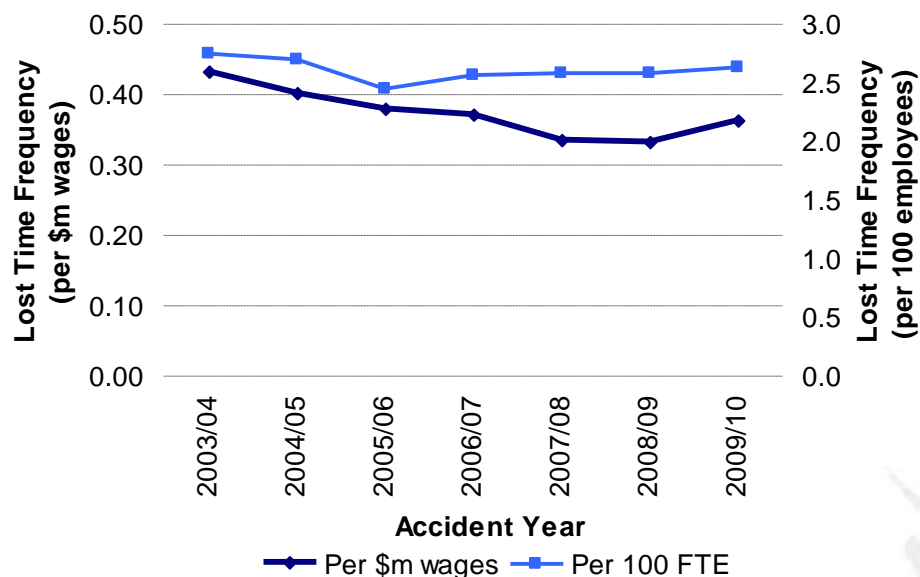


We have estimated the ultimate number of lost time claims in the 2009/10 year to be approximately 2,170, a 3% increase on 2008/09 levels. As for non-nil claims, we believe the increase in claim numbers in 2009/10 reflects a return to more normal economic conditions following the GFC.

The estimated ultimate lost time proportion declined from 64% in 2001/02 to 59% in 2006/07. Subsequently, the lost time proportion has increased and for the 2009/10 accident year is estimated to be 62%. This reflects the fact that non-nil claim numbers have declined by more than the number of lost time claims.

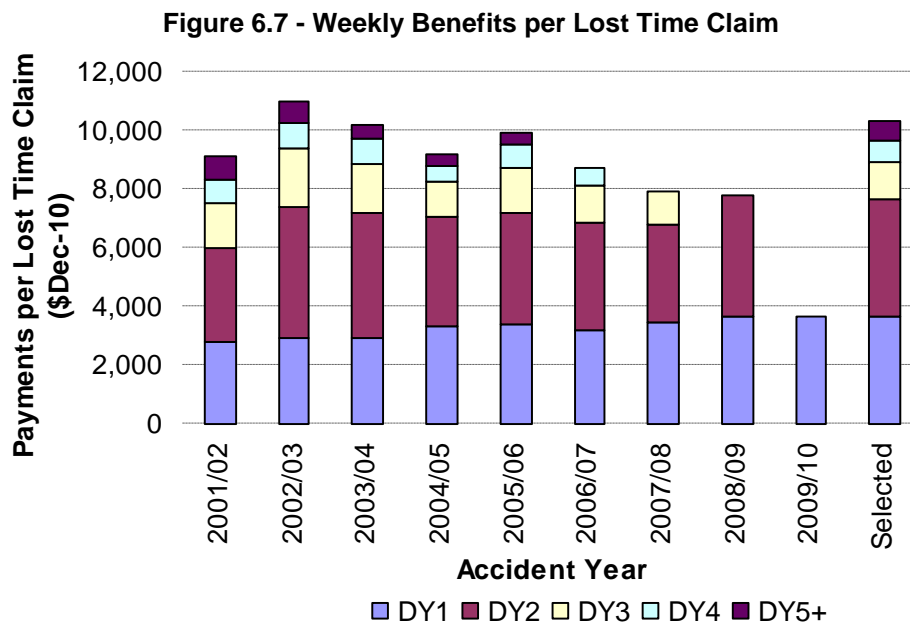
Figure 6.6 shows the ultimate lost time claims expressed as a frequency (per \$ million of wages and per 100 employees respectively).

Figure 6.6 - Estimated Ultimate Lost Time Claim Frequency



The frequency of claimants receiving weekly benefits has followed a similar trend to the non-nil claim frequency. Due to strong wage growth in the 2007/08 year in particular, the lost time frequency per \$ million of wages declined. In 2009/10, the lost time claim frequency has increased to 0.36 per \$ million of wages due to a combination of a 3% increase in claim numbers coupled with a 6% decrease in real wages. The lost time claim frequency per 100 full time employees has however stayed reasonably stable since 2006/07, and is estimated to be 2.63 for the 2009/10 year.

Figure 6.7 below shows the average weekly benefits paid per lost time claim by accident year. Each of the accident years is split into payments made in the year of accident (“DY1”), the year following the year of accident (“DY2”), etc. Our selected average weekly benefit claim size per lost time claim is also shown.



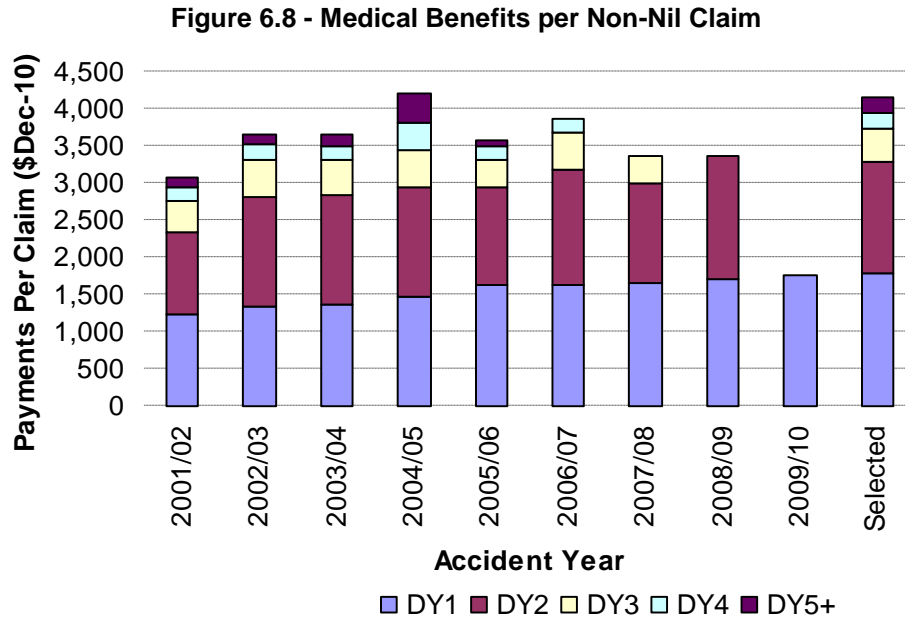
Average weekly benefits per lost time claim in development year one (DY1) have generally increased across the period shown, noting the average for 2009/10 was similar to 2008/09. The average weekly benefit in development year 2 generally declined across the period shown, however the average for the 2008/09 accident year was considerably higher than earlier years. We have taken the view that this results from the GFC-related lower claim numbers for this year i.e. that the claims with a lower claim size on average are the ones that are not reported in an economic downturn.

Our selected average claim size for weekly benefits is \$10,306 (in December 2010 dollars) per lost time claim. The average claim size expressed over all non-nil claims (not just lost time claims) is \$6,439. This is 7.4% higher than selected in our previous review (\$5,997 after adjustment to December 2010 dollars).



6.5 Medical and Related Payments

Figure 6.8 shows the average medical payments per non-nil claim for each past accident year and our selected average medical claim size per non-nil claim.



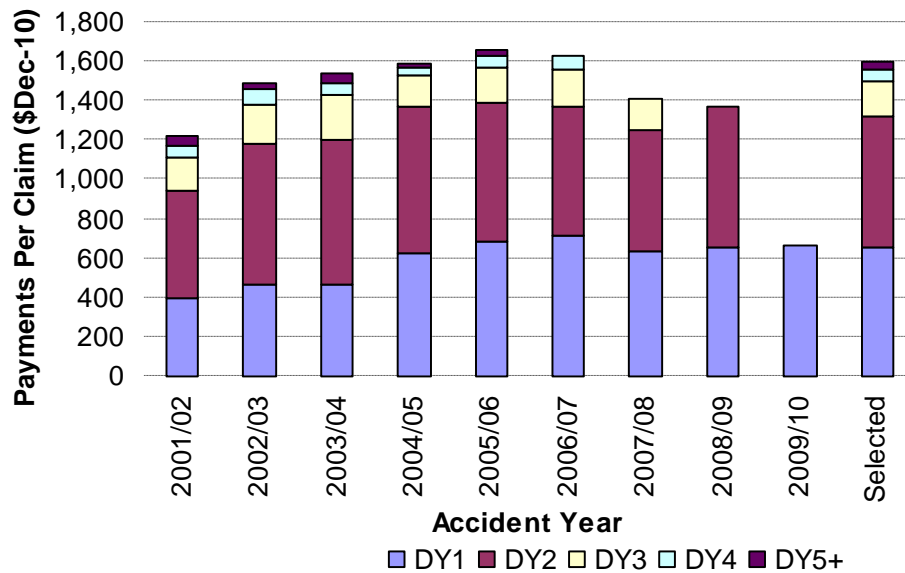
Average medical benefits per non-nil claim have increased in development year 1 for each year over the period shown. Average medical benefits in development year 2 have been more volatile, and were higher for the 2008/09 accident year. We have allowed for future superimposed inflation in this payment type (see Section 7.2).

The selected average claim size for medical benefits is \$4,170 per non-nil claim in December 2010 dollars. This is 2.8% higher than selected in our previous review (\$4,057 after adjustment to December 2010 dollars).

6.6 Rehabilitation

Figure 6.9 shows the average rehabilitation benefits per non-nil claim along with our selected average rehabilitation claim size per non-nil claim.

Figure 6.9 – Rehabilitation Benefits per Non-Nil Claim



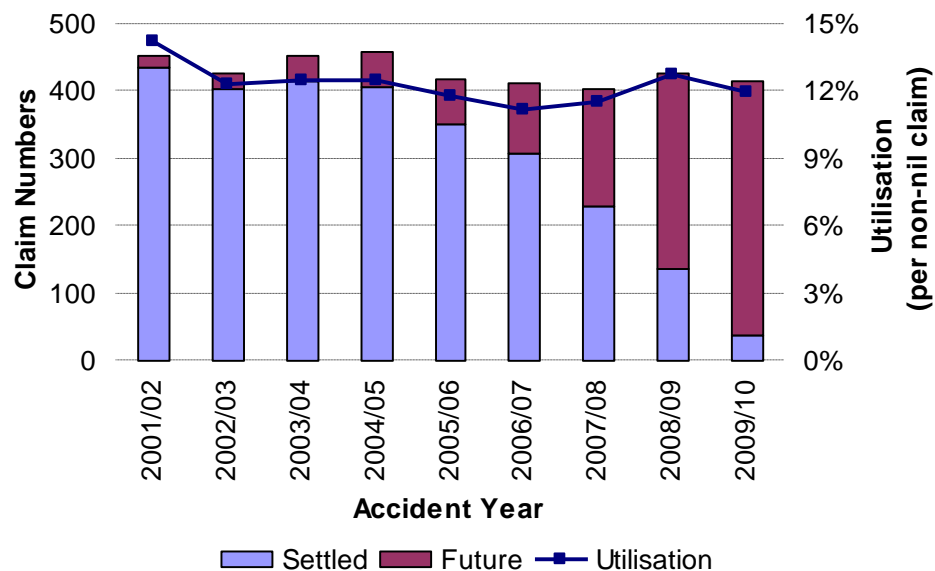
Average rehabilitation benefits per non-nil claim increased in development year 1 over the period 2001/02 to 2006/07, reduced in 2007/08 and have increased only a little from this level for the latest two accident years. Average rehabilitation benefits in development year 2 had increased to 2004/05, declined in each of the next three accident years, but then increased again for the 2008/09 accident year. We have allowed for future superimposed inflation in this payment type (see Section 7.2).

Our selected average claim size for rehabilitation benefits is \$1,603 per non-nil claim in December 2010 dollars. This is 4.1% higher than selected in our previous review (\$1,540 after adjustment to December 2010 dollars).

6.7 Lump Sums

We estimated the ultimate number of lump sum claims (including common law claims) for each past accident year. We also calculated the rate of lump sum utilisation by accident year (expressed as ultimate lump sum claims over ultimate non-nil claims).

Figure 6.10 - Estimated Ultimate Lump Sum Claim Numbers and Utilisation



For 2009/10 we estimate the ultimate number of lump sum claims to be around 420, a similar level to the previous four years. We note the considerable level of uncertainty in these projections and the large IBNR component, even for quite old accident years.

Given the reasonably low number of claims involved, the utilisation of lump sum claims has been reasonably stable since 2002/03. The ultimate lump sum utilisation in 2009/10 is projected to be around 12%, in line with the longer term experience since 2002/03.

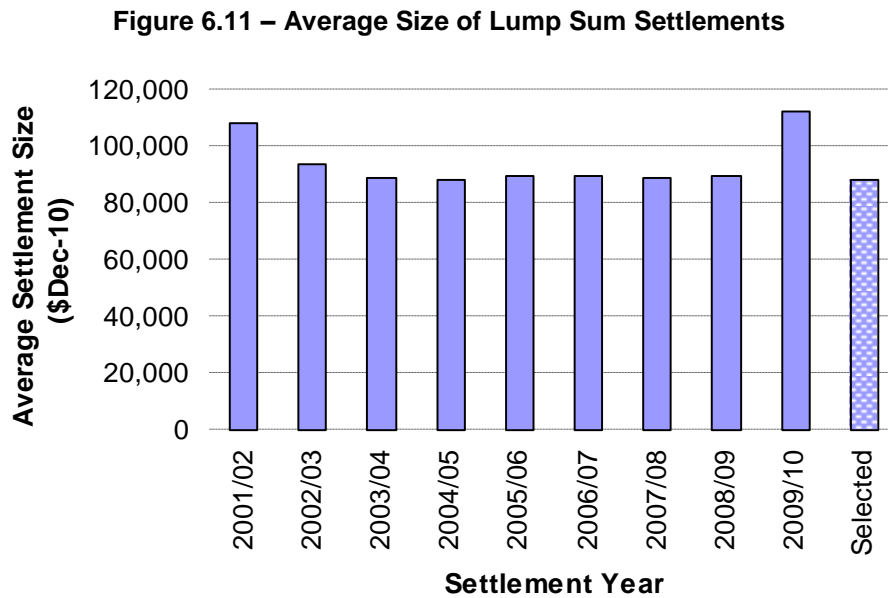
The following table shows the number and average size (inflated to December 2010 dollars) of common law and lump sum settlements that have already been made, separately and by year of settlement.

Table 6.1 – Average Size of Common Law & Lump Sum Settlements

Year of Settlement	Common Law			Lump Sums		
	Number of Claims	Proportion	Average size (\$Dec-10)	Number of Claims	Proportion	Average size (\$Dec-10)
2001/02	144	9%	161,400	224	9%	72,000
2002/03	168	10%	131,700	352	14%	68,900
2003/04	205	12%	111,700	347	14%	67,000
2004/05	218	13%	101,000	280	11%	71,200
2005/06	196	12%	111,600	278	11%	65,100
2006/07	204	12%	106,900	314	13%	67,700
2007/08	174	10%	113,500	234	9%	60,400
2008/09	202	12%	117,200	254	10%	58,800
2009/10	169	10%	116,700	218	9%	99,700
Total	1,680	100%	117,300	2,501	100%	69,500

The average size of common law claims been around \$115,000 in each of the last three years. Excluding the 2009/10 year, the average size of lump sum claims had been between \$60,000 and \$65,000 in recent years.

Due to classification differences between the common law and lump sum payments types (as discussed in Section 3.3) we have grouped all common law and lump sum claims together in order to arrive at an estimate of the cost of such claims. The following graph shows the average size of all lump sum (including common law) claims, by year of settlement and inflated to December 2010 dollars.



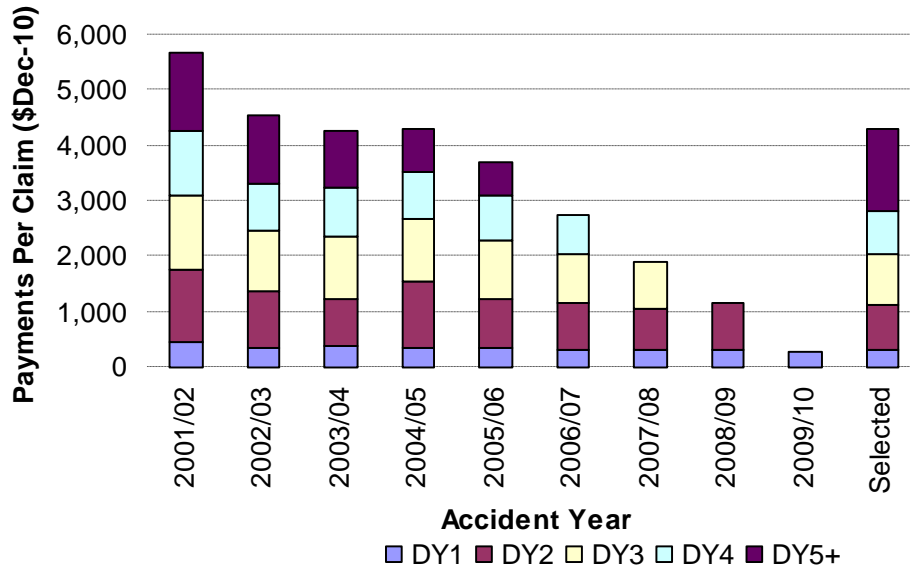
The average size of lump sum settlements has remained fairly stable since 2002/03. The average claim size for the 2009/10 settlement year is significantly higher than earlier years, but this was driven by the settlement of a single large claim. If we exclude this claim, the average claim size for the 2009/10 settlement year is \$92,000, similar to prior years.

The selected average size for lump sum claims is approximately \$88,400 per lump sum claim in December 2010 dollars, similar to the average claim size over the last three years (after excluding the claim from the 2009/10 year). The average claim size across all non-nil claims (not just lump sum claims) is \$10,639. This is 3.5% lower than in the previous report (\$11,020 after adjustment to December 2010 dollars).

6.8 Legal and Investigation

Figure 6.12 shows legal and investigation costs per non-nil claim along with our selected average claim size per non-nil claim.

Figure 6.12 - Legal and Investigation Costs per Non-Nil Claim

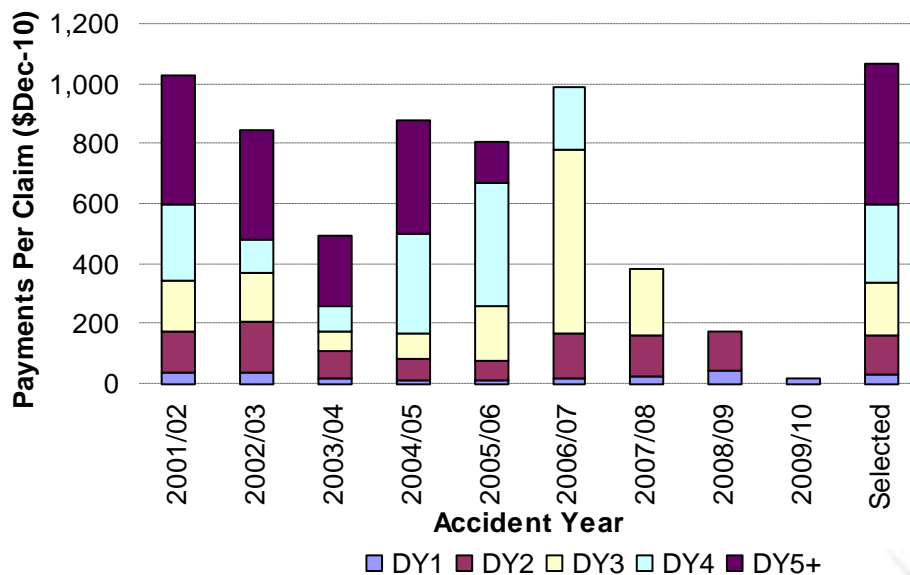


Average legal and investigation costs have generally declined since 2004/05. Our selected average claim size for legal and investigation costs is \$4,314 per non-nil claim in December 2010 dollars. This is 0.7% lower than in the previous report (\$4,344 after adjustment to December 2010 dollars).

6.9 Recoveries

Figure 6.13 shows the amount recovered by insurers per non-nil claim along with our selection. Recoveries include recoveries from other insurers (sharing), employers (excess) and other sources.

Figure 6.13 - Recoveries per Non-Nil Claim



Recoveries vary significantly by year, but recoveries in the first three development years have generally increased since 2003/04. Our selected average size for recoveries is \$1,067 per non-nil claim in December 2010 dollars. This is 8.3% higher than in the previous report (\$985 after adjustment to December 2010 dollars).

6.10 Overall Average Claim Size

Figure 6.14 summarises the adopted gross average claim sizes for each past accident year.

Figure 6.14 - Adopted Gross Average Claim Size (per Non-Nil Claim) by Payment Type

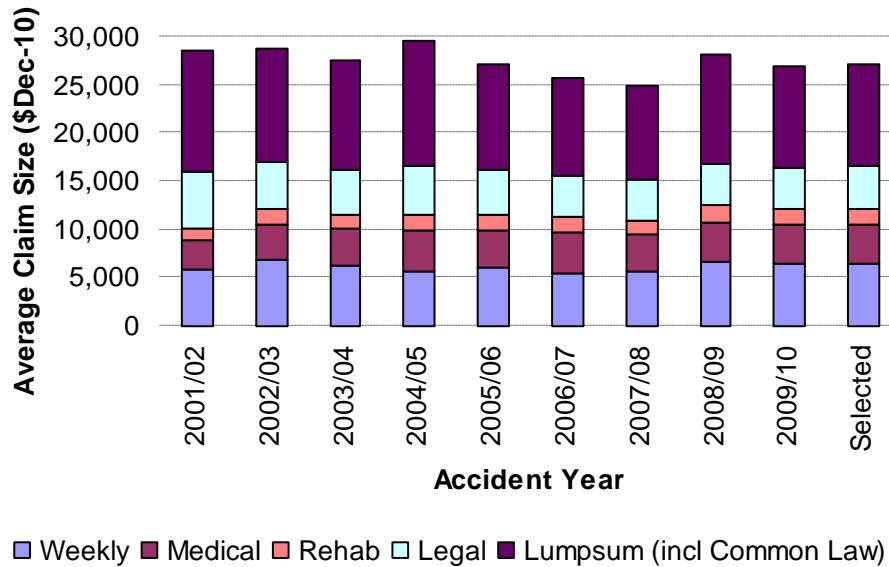


Figure 6.14 shows our selected gross average claim size per non-nil claim is \$27,167. After allowance for recoveries, the selected net average claim size per non-nil claim is \$26,100. This is 0.5% higher than that selected in our previous review (\$25,974 after adjustment to December 2010 dollars).

6.11 Payment Pattern

The valuation methods incorporate assumptions about the pattern of payments by development year. The analysis is done by payment type, and the resulting payment pattern is shown below in Figure 6.15 for all payment types combined.



Figure 6.15 – Selected Net Payment Pattern

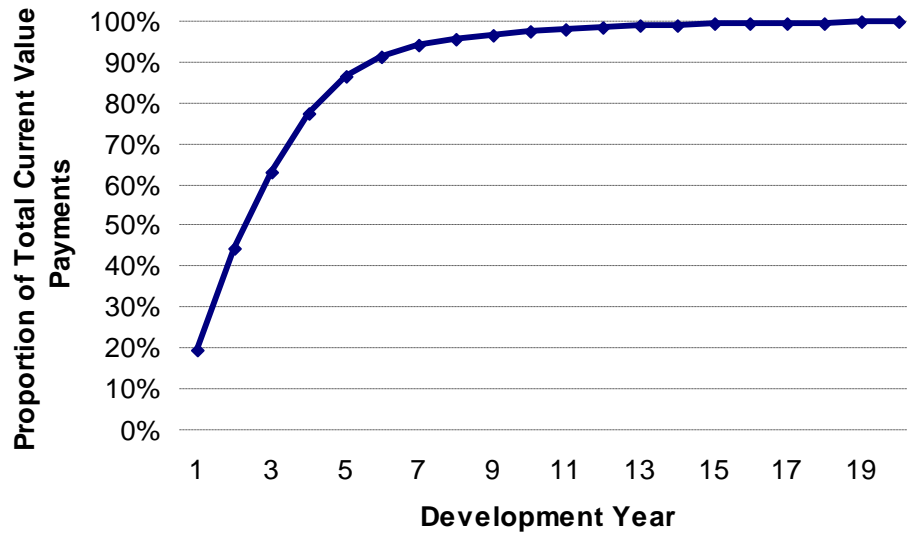
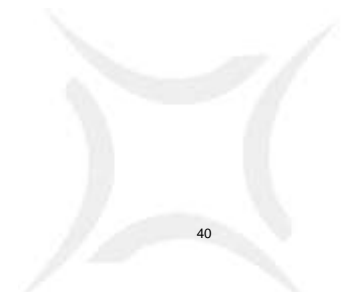


Figure 6.15 shows the majority of payments tend to be made within the first few years after the accident, with around 85% of payments being made within 5 years of the accident.



7 Economic Assumptions

This section outlines the economic assumptions incorporated into our assessment of claims costs.

7.1 Discount Rate

We have calculated the discount rate applicable to the duration of the ACT workers' compensation claims, based on the forward rates implied by the yields available on Commonwealth Government bonds at 31 December 2010. Economic conditions have remained fairly stable since the previous review, and yields on Commonwealth bonds have decreased slightly. As a result, the discount rate is now set to 5.40% per annum (down from 5.5% previously).

7.2 Inflation

Two types of inflation are incorporated into our cost models: normal economic inflation (in this case wage inflation based on AWE increases, given the income-related nature of the workers' compensation benefits) and superimposed inflation.

Wage Inflation

We have adopted a uniform assumption of 4.00% per annum for all future periods, in line with market forecasts. This is unchanged since the previous review.

Superimposed Inflation

Superimposed inflation is the tendency for payments to increase at a higher rate than normal economic inflation (i.e. wage inflation). Some examples of the forms superimposed inflation can take are:

- Longer periods of payment - for example, in the case of weekly benefits and medical costs
- More claims for particular heads of damage - for example, more claimants seeking lump sum benefits
- Costs per claim increasing in real terms – e.g. medical costs, common law awards.

We analysed the experience of the ACT workers' compensation portfolio in order to detect any evidence of superimposed inflation; this was done for each payment type. We observed evidence of superimposed inflation in the medical and rehabilitation payment types. This is consistent with what we have observed in other workers' compensation schemes in Australia where these costs are growing faster than inflation. We believe there may still be long term inflationary pressures in this area.

We have therefore incorporated a superimposed inflation assumption of 3.0% per annum for medical benefit payments and 1.0% per annum for rehabilitation costs, unchanged

since the previous review. This is equivalent to approximately 0.30% per annum across all payment types.

We believe our assumption takes a balanced view of the likely rates of future superimposed inflation, but acknowledge that this is one of the areas in the actuarial basis that is highly subjective.

8 Reliances & Limitations

8.1 Data

We have relied on the accuracy and completeness of all data and other information (qualitative, quantitative, written and verbal) provided to us by WorkSafe ACT and private insurers for the purpose of this report. We have not independently verified or audited the data but we have reviewed it for general reasonableness and consistency. It should be noted that if any data or other information is inaccurate or incomplete, we should be advised, so that our advice can be revised, if warranted.

Specific data limitations identified and the impact of these on our review are discussed further in Appendix B.

8.2 Uncertainty

The estimates of future claims costs are intended to be a central estimate and are based on assumptions selected without deliberate bias towards either over-estimation or under-estimation. Please note however, that it is not possible to put a value on future claims cost with certainty. As well as difficulties caused by limitations on the historical information, outcomes remain dependent on future events, including legislative, social, and economic forces. Although we have prepared estimates in conformity with what we believe to be the likely future experience, actual experience could vary considerably from our estimates. Deviations are normal and are to be expected.

We have generally assumed that the payment of claims will proceed as in the recent past, and we have not anticipated any extraordinary changes to the legal, social or economic environment that might affect the cost, frequency or future reporting of claims.

In particular, we note the Exposure Draft Workers Compensation Amendment Bill 2010 was released in 2010, which introduced potential changes to lump sum and common law benefits. We have not made any allowance for the impact of this draft Bill.

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 future claim emergence will likely deviate, perhaps materially, from our estimates.

8.3 Distribution and Use

This report is being provided for the use of CMCD for the purposes stated in Section 1.1 of this report. It is not intended, nor necessarily suitable, for any other purpose. This report should only be relied on by the CMCD for the purpose for which it is intended. The report should be considered as a whole.

We understand that the CMCD intends to publish this report. Permission is granted for such publication on the condition that the entire report (including appendices), rather than any excerpt, be distributed.

Third parties, including but not limited to parties who obtain this report from its public release, should recognise that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data contained herein which would result in the creation of any duty or liability by Finity to the third party.

Finity has performed the work assigned and has prepared this report in conformity with its intended utilisation by a person technically competent in the areas addressed and for the stated purposes only. Judgements about the conclusions drawn in this report should be made only after considering the report in its entirety, as the conclusions reached by a review of a section or sections on an isolated basis may be incorrect.

Part III Appendices

A Glossary of Terms

The table below provides a summary of a number of terms used throughout the report. The terms described below may have different meanings ascribed to them in other actuarial reports.

Term	Definition
Accident Year	The year (years ending 30 June) in which the injury occurred which gave rise to a claim. E.g. a claim occurring on either 30 September 2007 or 30 March 2008 is said to belong to the 2007/08 accident year.
Active claim	A claim which has received a weekly payment in the quarter, excluding any claims where total weekly payments to date were negative or where the weekly payments made in the quarter total zero.
Central Estimate	An estimate of the liability which is intended to contain no deliberate bias to either over- or under-estimation and does not include allowance for claims handling expenses.
Claim Frequency	Estimated ultimate number of claims divided by a measure of exposure (either wages or employees).
Continuance Rate	The number of claimants in receipt of weekly benefits in one quarter divided by the number in receipt of weekly benefits in the preceding quarter. For example, the rate for development quarter 1:2 is calculated as the number of claimants receiving weekly benefits the second quarter after the accident quarter, compared with the number receiving weekly benefits in the accident quarter.
Development Year	The number of years since the year in which the accident occurred, e.g. development year 1 is the same as the year of accident, development year 2 is the year following the accident year, etc.
Earned Premium	Policy-year premiums spread over the period of cover. All premiums shown are exclusive of GST and inclusive of brokerage/commissions.
Earned Wages	Policy-year wages spread over the period of cover. All wages shown are exclusive of superannuation, but include salary, overtime, shift & other allowances, over-award payments, bonus, commissions, payments for public and annual holidays (incl. loadings), payments for sick and long service leave, value of board/lodging provided by employer, reimbursement for expenses incurred by the worker due to employment, any amount expended on behalf of the worker, directors' fees, and fringe benefits costs.

Loss Ratio	Estimated ultimate cost (net of recoveries) divided by gross earned premium for that year. Ultimate costs have been discounted to the mid-point of the relevant accident year.
IBNR	Incurred but Not Reported Claims – i.e. claims that have occurred at the review date but have not yet been reported.
Nil claims	Claims which have no payments made to date. Some nil claims will always remain nil (“report only claims”) while others will become non-nil claims as payments are made
Outstanding Claims Costs	Includes the costs of IBNR claims and allowance for further payments on already reported claims.
PPCF	Payment per Claim Finalised
PPCI	Payment per Claim Incurred
PPCS	Payment per Claim Settled
Premium Pool	Estimated claims costs plus allowance for expenses and insurer margins.
Premium Rate	Premiums divided by wages. The premium rate may be calculated on either a written or earned basis.
Risk Premium	Total expected claim costs divided by wages. Historical risk premiums are calculated from actual past payments plus our estimate of outstanding claims.
Superimposed Inflation	The tendency for claims costs to increase at a higher rate than normal economic inflation (i.e. wage inflation).
Ultimate Claim Numbers	The total expected number of claims for an accident year. This will include all claims reported to the review date together with any IBNR claims for the accident year.
Ultimate Claims Costs	The total expected claim costs for an accident year. This includes all amounts paid to the review date (net of recoveries) plus outstanding claims costs.

B Data

This section summarises the data provided to us for this review and documents the reconciliations performed.

B.1 AIMS Data

The AIMS data provided to us by WorkSafe ACT is detailed below.

Claim File

We received an individual claim file listing all claims reported or having had a payment between 1 July 1999 and 31 December 2010, which included the following variables:

- Insurer Reference Code
- Policy Number
- Claim Reference Number
- Date of Lodgement of Claim
- Date of Occurrence/Report
- Date Claim Finalised
- Payments – Total to Date
- Estimated Payments – Outstanding
- Claim finalised flag – ‘Claim Details – Finalised’
- Claim reopened flag – ‘Claim Details – Reopened’
- Reason Reopened
- Current Liability Status
- Estimate of Recoveries.

Payment Transaction File

We received a claim payment transaction file with payments made (by payment type and month) between 1 July 1999 and 31 December 2010, which included the following variables:

- Claim Reference Number
- Payment Type Code
- Month End Date
- Total of all Monthly Payments.



Policy File

We received an individual policy file for all policies written or renewed between 1 July 1999 and 31 December 2010, which contained the following variables:

- Insurer Reference Code
- Policy Number
- Inception Date
- Expiration Date.

Industry File

We received an individual file for all policies written or renewed between 1 July 1999 and 31 December 2010, which contained the following variables:

- Policy Number
- Industry Class Code
- Industry Class
- Anticipated No. of Employees (current policy period)
- Actual No. of Employees (previous policy period)
- Anticipated Wages (current policy period)
- Actual Wages (previous policy period)
- Initial Gross Premium (current policy period)
- Actual Gross Premium (previous policy period).

B.2 Data Reconciliations

We compared the AIMS data provided for this review with the data provided for our previous review. The following table summarises the comparison of claim reports and claim payments to 30 June 2009 from the two data sources.



Table B.1 – Reconciliation to Previous Data

Accident Year	Claim Numbers				Claim Payments (\$m)			
	Current Dataset	Previous Dataset	Difference	% Difference	Current Dataset	Previous Dataset	Difference	% Difference
1999/00	3,605	3,605	0	0%	52.0	52.0	0.0	0%
2000/01	3,561	3,560	1	0%	52.1	52.1	0.0	0%
2001/02	3,432	3,432	0	0%	59.8	59.8	0.0	0%
2002/03	3,880	3,880	0	0%	69.5	69.5	0.0	0%
2003/04	4,042	4,043	-1	0%	69.4	69.4	0.0	0%
2004/05	4,056	4,055	1	0%	68.4	68.3	0.0	0%
2005/06	3,956	3,955	1	0%	60.0	60.0	0.0	0%
2006/07	4,399	4,399	0	0%	49.4	49.4	0.0	0%
2007/08	4,175	4,170	5	0%	31.7	31.7	0.0	0%
2008/09	4,117	4,113	4	0%	15.1	15.1	0.0	0%
Total	39,223	39,212	11	0%	527.4	527.4	0.0	0%

The data from the two sources matched closely.

We also received summaries of claim and policy data from the insurers operating in the Scheme in response to our request to confirm the validity of the AIMS data.

Claim Numbers

Table B.2 shows a reconciliation of the number of claims on the AIMS database to those supplied by insurers.

Table B.2 - Claim Numbers Reported - AIMS vs. Insurer Data

Accident Year	AIMS Data	Insurer Data	Difference	% Difference
1999/00	3,606	3,328	278	8%
2000/01	3,563	3,427	136	4%
2001/02	3,434	3,256	178	5%
2002/03	3,883	3,888	-5	0%
2003/04	4,046	4,853	-807	-17%
2004/05	4,063	5,073	-1,010	-20%
2005/06	3,966	3,963	3	0%
2006/07	4,409	4,399	10	0%
2007/08	4,205	4,187	18	0%
2008/09	4,385	4,376	9	0%
2009/10	4,681	4,671	10	0%

The differences between the AIMS data and insurer data are significant in the 2003/04 and 2004/05 years in particular, but this relates to one insurer that had an abnormally high number of nil claims recorded on their databases against these years, while the AIMS database does not include nil claims. As such, our view is that the number of claims on the AIMS database reconciles satisfactorily to the insurer data.

Claim Payments

Table B.3 shows a reconciliation of claim payments in AIMS to that supplied by insurers.

Table B.3 - Claim Payments - AIMS vs. Insurer Data

Payment Year	AIMS Data \$000	Insurer Data \$000	Difference \$000	Difference %
1999/00	5,526	8,322	-2,796	-34%
2000/01	14,549	20,784	-6,235	-30%
2001/02	31,225	34,711	-3,486	-10%
2002/03	47,296	45,488	1,808	4%
2003/04	59,497	58,255	1,242	2%
2004/05	67,269	67,513	-244	0%
2005/06	73,115	73,855	-739	-1%
2006/07	80,269	79,775	494	1%
2007/08	75,093	77,295	-2,202	-3%
2008/09	73,512	73,524	-12	0%
2009/10	89,176	90,076	-900	-1%

The significant differences in the 2001/02 and prior accident years relate to one insurer that has a significant amount of payments missing from the AIMS database. We are aware of this problem, hence have only relied on the AIMS payment information for the 2002/03 and later years. Differences for the 2002/03 to 2009/10 years are minimal.

As such, our view is that the claim payment data on the AIMS database reconciles satisfactorily to the insurer data.

Case Estimates

Table B.4 shows a reconciliation of case estimates in AIMS to that supplied by insurers.

Table B.4 - Case Estimates - AIMS vs. Insurer Data

Accident Year	AIMS Data \$000	Insurer Data \$000	Difference \$000	Difference %
1999/00	-1,895	1,322	-3,217	-243%
2000/01	540	1,009	-469	-46%
2001/02	502	711	-208	-29%
2002/03	1,779	2,047	-268	-13%
2003/04	1,878	2,609	-731	-28%
2004/05	4,192	4,350	-159	-4%
2005/06	9,792	9,277	515	6%
2006/07	15,199	15,726	-527	-3%
2007/08	21,047	20,296	750	4%
2008/09	42,463	41,874	588	1%
2009/10	57,238	56,559	680	1%

The case estimates from AIMS are significantly understated relative to insurer data for years to 2003/04. For later years, there are some minor differences by year. As a result we do not rely on case estimates in our analysis of ultimate claim size or costs.

Wages

Table B.5 shows a reconciliation of the AIMS wages data to that supplied by insurers.

Table B.5 - Written Wages - AIMS vs. Insurer Data

Policy Year	AIMS Data	Insurer Data	Difference	Difference
	\$m	\$m	\$m	%
2003/04	3,626	3,948	-322	-8%
2004/05	3,741	4,255	-514	-12%
2005/06	3,990	4,544	-554	-12%
2006/07	4,087	5,209	-1,122	-22%
2007/08	3,935	5,753	-1,818	-32%
2008/09	3,777	5,529	-1,753	-32%
2009/10	3,058	5,742	-2,684	-47%

The data is significantly different to the insurer data. The wage information from AIMS has therefore not been used in our analysis, and we have instead relied on the information provided directly to Finity by insurers.

Premiums

Table B.6 shows a reconciliation of the AIMS premium data to that supplied by the insurers.

Table B.6 - Written Premiums - AIMS vs. Insurer Data

Policy Year	AIMS Data	Insurer Data	Difference	Difference
	\$m	\$m	\$m	%
2003/04	124	138	-13	-10%
2004/05	135	148	-13	-9%
2005/06	130	152	-22	-15%
2006/07	133	151	-18	-12%
2007/08	119	143	-25	-17%
2008/09	108	133	-25	-19%
2009/10	86	132	-46	-35%

Again, the AIMS data is significantly different to the insurer data. The premium information from AIMS has therefore not been used in our analysis, and we have instead relied on the information provided directly to Finity by insurers.

B.3 Premiums & Wages Data

Due to the limitations with the AIMS premium and wages information, we were supplied with this information directly from each of the insurers. Each of the insurers provided:

- Written wages for policy years ending 30 June 2004 to 30 June 2010. Insurers provided both initial (i.e. that initially estimated at the start of the policy period) and final adjusted written wages, separately for burner and all other policies.
- Written premium for policy years ending 30 June 2004 to 30 June 2010. Insurers provided both initial and adjusted written premiums, separately for burner and all other policies.

- Earned wages for accident years ending 30 June 2004 to 30 June 2010, and by ANZSIC Class. Insurers provided adjusted earned wages.
- Earned premium for accident years ending 30 June 2004 to 30 June 2010, and by ANZSIC Class. Insurers provided adjusted earned premiums.

In some cases, we need to adjust the data received from some insurers to ensure that all the data was on a consistent basis. These adjustments were as follows:

- All but two insurers provided wages information exclusive of superannuation. For these insurers, we adjusted the wages supplied to remove the estimated superannuation component.
- One insurer provided premium information which excluded brokerage and commission costs. We have adjusted their premium data to include brokerage/commission based on their advice as to the average rate of brokerage/commission paid.



C Valuation Approach

C.1 Chain Ladder Method

The chain ladder method estimates the ultimate number of claims incurred in each accident year by analysing past claim reporting patterns and estimating a pattern for the future.

The chain ladder method can be applied to any cumulative data triangle that summarises the experience by accident year and development period.

Chain ladder ratios are calculated from the data triangle by taking, for each accident period:

$$\frac{\text{Cumulative Number of Claims reported to Development Period } t}{\text{Cumulative Number of Claims reported to Development Period } (t - 1)}$$

Ratios for projection are selected taking into account the observed ratios in recent periods and changes expected in the future. The ratios generated are then applied to the most recent cumulative claim figures (separately for each accident period) to project reported claims to ultimate.

C.2 Payments Per Claim Incurred

The Payments Per Claim Incurred (PPCI) method models the claim process by assuming that the payments in respect of a group of claims will develop in a predictable pattern over a period of years. This pattern is defined by:

- An average claim size
- The proportion of claim payments that will be made in each development year.

The PPCI method proceeds as follows:

- (i) Estimate the ultimate number of claims incurred in each accident year by using the Chain Ladder method.
- (ii) Inflate past claim payments, subdivided by accident and payment years, to the monetary values of the latest accident year using an appropriate measure of past inflation.
- (iii) For each accident year divide the inflation adjusted claim payments [derived in (ii)] by the estimated ultimate number of claims incurred [calculated in (i)] to obtain an historical PPCI pattern of payments.

- (iv) Taking into account the result for (iii) and expectations for the future, select the average claims size together with the proportion of the payments made in each development year.
- (v) Using an assumed future rate of claim inflation calculate projected future payments for each accident year by multiplying together:
 - (a) The estimated ultimate number of claims incurred
 - (b) The average claim size in current dollars
 - (c) The proportion of payments by development year
 - (d) The assumed inflation factor.

The present value of liabilities is calculated by discounting projected payments to the valuation date at the assumed discount rate.

C.3 Payments Per Claim Settled

This method models the claims process by assuming that the payments in respect of a group of claims will develop in a predictable pattern over a period of years. This pattern is often expressed as the payments per claim settled together with the proportion of claims which will be settled in each development year.

There can sometimes be a timing mismatch between the date a claim first receives a lump sum payment and the date of final payment, and we note that a small amount of common law and lump sum claims do involve multiple common law or lump sum payments. We therefore define date of settlement to be the date of last payment. We note that the method may be susceptible to changes in data due to re-openings and payment of further benefits, but this is not expected to materially alter the results of our analysis providing the rate of such re-openings remains stable over time.

In order to use this method, we need to make assumptions about:

- The number of claims incurred in each accident year
- The average payment per claim settled in the monetary values of the latest accident year (not necessarily the same average cost for all accident years)
- The proportion of claims settled in each development period, before allowance for claim inflation
- Rates of future claim inflation and investment earnings.

Future payments are projected by multiplying together:

- The number of claims outstanding
- The payment per claim settled in current dollars
- The proportion of claims settled by development period



- The proportion of future settlements paid by development period
- The inflation index based on projected rates of claims inflation.

The present value of liabilities is then calculated by discounting projected payments to the valuation date at the assumed discount rate.

C.4 Continuance model

The continuance model is in effect a Payments Per Active Claim (“PPAC”) method which assumes that the payments in respect of a group of claims will develop in a predictable pattern over a period of years. This pattern is defined by:

- An average claim size
- The proportion of claims will remain active and receiving benefits in each development year.

The PPCI method proceeds as follows:

- (i) Estimate the ultimate number of active claims incurred in each accident year by using the Chain Ladder method, taking into account the number of claims active in the most recent period and assumed continuance rates in future.
- (ii) Inflate past claim payments, subdivided by accident and payment years, to the monetary values of the latest accident year using an appropriate measure of past inflation.
- (iii) For each accident year divide the inflation adjusted claim payments [derived in (ii)] by the estimated ultimate number of active claims [calculated in (i)] to obtain an historical pattern of average weekly benefits per continuing claim.
- (iv) Taking into account the result for (iii) and expectations for the future select the average claims size together with the proportion of the payments made in each development year.
- (v) Using an assumed future rate of claim inflation, calculate projected future payments for each accident year by multiplying together:
 - (a) The estimated ultimate number of active claims incurred
 - (b) The average claim size in current dollars
 - (c) The proportion of payments by development year
 - (d) The assumed inflation factor.

The implied payments were then converted into PPCIs for comparison with the PPCI model.

