

## **WorkCover Western Australia**

### **Overview Summary of the Actuarial Report on the Recommended Premium Rates for 2009/10 for Western Australian Workers' Compensation Insurance**

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#### **1 Overview summary**

This overview summary is extracted from the report presented to WorkCover Western Australia (WorkCover WA). This summary in no way replaces the full report dated 14 April 2009 and the reliances and limitations stated therein, rather it is intended for broad communication purposes only.

#### **2 Background**

The recommended premium rates are published annually, usually during the June quarter, in the Government Gazette. The published rates are sub-divided into 480 classes which broadly follow the Australian and New Zealand Standard Industrial Classification 1993 (ANZSIC). The rates are a guide to insurance companies when underwriting the workers' compensation insurance risks of employers. Depending upon an employers' risk profile and past experience, insurers may discount the recommended rates by any amount, or surcharge up to a maximum of 75% of the applicable recommended rate. Subject to the approval of the Board of WorkCover WA, an insurer may surcharge beyond 75% of the recommended rate.

Consistent with instructions from WorkCover WA, we have incorporated the impact of the 2004 Reform Act in this report. The initial estimate of the impact on the recommended rates is detailed in a special actuarial assessment report dated 13 April 2005. The Act change allowance is being gradually phased out to reflect the extent that post Act change claims experience forms part of our adopted projection basis.

### 3 Objectives

The *objectives* of the actuarial assessment of the recommended rates are :

- to calculate the total amount of premium income required
- to achieve broad equity across industry classes
- to minimise cross subsidy of rates, and
- to achieve relative stability in the rating structure.

A further objective is to assess the adequacy of insurers' outstanding claim reserves.

The actuarial assessment includes the calculation of the amount of premium income required to meet the projected cost of claims including expenses and margins with anticipated investment income. The recommended rates do not make allowance for brokerage/commission costs.

*Also the experience of the Western Australian Local Government Association (WALGA) is excluded from the premium rating process. As a consequence, the rate for Local Government Administration (81130) may not be appropriate as it is based on historical data which does not reflect the current experience of the Local Government self-insurance scheme. Users of the Gazette rates need to be aware of this.*

### 4 Key findings

The *key findings* of the actuarial assessment are:

- recommended Gazette premium rates for 2009/10 should be increased by:
  - 9.9% for expected claims experience inclusive of the scaled-down allowance for the 2004 Reforms

The 2009/10 premium rating basis has increased as a result of the following influences:

- a 5.1% increase due to the reduction in the real rates of return
- a 5.3% increase for the combined increases in claim numbers and claim payments
- a 4.6% increase in expense loading and contingency margin<sup>1</sup> (note the increase in contingency margin is a once-off influence)

partially offset by:

- a 3.8% decrease due to wages increasing in excess of wage inflation and

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<sup>1</sup> The term contingency margin is interchangeable with profit margin.

- a 3.3% reduction from the gradual phasing out the 2004 Reform Act allowances as the actual post Act change claims experience emerges

The other influences are more minor and include smaller increases and decreases, the net impact of which makes up the balance of the recommended change in premium rates.

The following table shows the main drivers influencing the overall level of premium rates since last year. It reconciles this year's recommended rate to last year's recommended rate of 1.582%.

Key driver change	Estimated ave premium rate %	% change
Recommended rate	1.738%	
Adjusted Act change allowance	1.797%	-3.3%
Increase in Dec 08 halfyear claim numbers	1.781%	0.9%
Increase in 2007/08 claim numbers	1.744%	2.2%
Expense loadings & interest credit	1.712%	1.9%
Increase in contingency margin	1.666%	2.7%
Excess growth in declared wages above AWE	1.732%	-3.8%
Decrease in superimposed inflation	1.737%	-0.2%
Decrease in common law frequency	1.744%	-0.4%
Increase in common law average claim size	1.740%	0.3%
Change in market interest rates	1.637%	6.3%
Decrease in inflation rates	1.656%	-1.2%
Increase in claim payments	1.620%	2.2%
Balance due to other sources	1.582%	2.4%
<b>Total % change</b>		<b>9.9%</b>

Note that the percentages are calculated as the multiplicative impact on the risk premium rate. The additive sum of the individual components do not add up to 9.9%, but it is the total of all the percentages when applied multiplicatively.

## 5 Premium rating returns

The latest *premium rating returns* collected are for the 2007/08 year. These are the *fourteenth* set of returns based on the ANZSIC industry classification and they are presented on the same basis as last year. The data validation process shows that data quality and efficiency of its collection has improved, however there are still some areas of inaccuracy and issues which need to be considered.

Aggregate data for the half year to 31/12/2008 and unit claim election application data was supplied and used as an indicator of the Act amendment impact on costs.

## 6 Relative premium rates by industry class

*Relative premium rates by industry class* were calculated using weighted average data over the ten year period ending 30/06/2008. A hierarchical credibility experience rating system is adopted as the basis of premium rating.

## 7 Actuarial projection methods

*Several actuarial projection methods* are used to estimate the incurred cost of claims. The final method was chosen after examining the results obtained and by forming a judgement as to which method or blend of methods to adopt.

The actuarial projection assists with both

- the examination of the adequacy of insurers' declared outstanding claim reserves, and
- the estimation of the expected incurred cost of claims.

The analysis of expenses and other margins combines with the estimated incurred cost to give a loss ratio, which leads to the calculation of the required premium income and the uniform percentage variation in relative premium rates. The resulting variation was a 9.9% increase inclusive of the scaled-down allowance for the 2004 Reforms and an increase in the profit margin from 8% to 10% this year.

The brokerage component of expenses was removed from the loss ratio of the 2002 premium rates as a once-off adjustment.

The actuarial analyses and projections used to determine the recommended premium rates involve assumptions about uncertain future events, claims, and economic, social and legislative conditions. Hence the actual outcome may well be different from the results shown.

These uncertainties should be borne in mind whenever using the results in our actuarial report on recommended premium rates.

## 8 Statistical trends

The *statistical trends* observed in the aggregate data up to 30/06/2008 are described below. For detail on the definition and source of these statistics see Attachment B of our current report on Recommended Premium Rates for 2009/10.

### 8.1 Claim numbers and sizes and estimated incurred costs

Accident year ending 30 June	Estimated number of claims incurred (a)	Average claim size in 30/06/2008 values (b)	Estimated inflated incurred cost of claims \$M (c)
2008	38,014	14,833	621.035
2007	37,664	13,917	536.805
2006	37,463	13,035	463.226
2005	39,272	13,308	465.742
2004	38,418	13,295	427.717
2003	37,949	12,170	361.769
2002	38,055	11,700	327.118
2001	42,870	11,728	354.635

Comments:

- the number of claims incurred significantly decreased to 2001/02, was stable in 2002/03 and had slight increases to 2004/05 before decreasing in 2005/06. Estimated claims incurred have since increased over 2006/07 and 2007/08
- average claim size has increased by 27% in real terms since 2000/01 or 3% pa
- inflated incurred costs increased by 75% (\$266M) between 2001 and 2008, ie from \$354M to \$621M in actual terms including GST and both the October 1999 and the 2004 Reform Act impacts. Western Australian average weekly earnings increased by 50% over the same period.

### 8.2 Reserving and loss ratios

Some overall market reserving and loss ratios which may assist insurers to judge the relative strength of their reserves are as follows:

Accident year ending 30 June	Cumulative claim payments \$M (a)	Total case estimates \$M (b)	Inflated actuarial incurred cost ests \$M (c)	Total case estimates to claim payments (d)	Ultimate incurred costs/claim payments (e)	Ultimate incurred costs/total case ests (f)	Loss ratios (g)
2008	126.055	365.017	621.035	290%	493%	170%	81%
2007	271.238	418.639	536.805	154%	198%	128%	73%
2006	316.335	397.577	463.226	126%	146%	117%	66%
2005	355.370	406.638	465.742	114%	131%	115%	75%
2004	353.606	386.438	427.717	109%	121%	111%	74%
2003	322.264	337.405	361.769	105%	112%	107%	62%
2002	309.111	320.855	327.118	104%	106%	102%	56%
2001	338.487	347.935	354.635	103%	105%	102%	57%

- Notes :
- (a) cumulative actual claim payments
  - (b) = (a) + insurer's case estimates outstanding
  - (c) = (c) from previous table
  - (d) = (b) / (a) x 100
  - (e) = (c) / (a) x 100
  - (f) = (c) / (b) x 100
  - (g) = (c) in \$ / earned premium returned by insurers

By applying the ratios in columns (d), (e) and (f) above, insurers can obtain a measure of the strength of their own case estimates and total incurred claim cost, relative to overall market levels.

Since last year, the case reserving ratio (d) at the same stage of development has decreased or remained stable for all accident years, and the ultimate incurred cost ratio to payments (e) and to total case estimates (f), decreased for all accident years.

The inflated loss ratio (g) is a measure of the cost of claims to earned premium. The higher the loss ratio, the less profitable the portfolio of risks. The loss ratio estimates for all accident years have either improved or stabilised since last year.

A target inflated loss ratio including all expense and profit loadings would be 78%. All accident year's loss ratios are profitable except 2008, though early estimates should not be relied on because of the high uncertain projected outstanding portion. Around 77% of projected ultimate cost is still outstanding for 2008/09.

### 8.3 Case estimates, expenses and discount levels and margins

Financial year ending 30 June	Insurers' case estimates outstanding \$M	Total expense levels %	Discount level by insurers against Gazette
2008	622.134	18.5%	17.5%
2007	614.860	17.8%	24.1%
2006	590.222	16.9%	22.2%
2005	618.100	19.0%	18.2%
2004	575.386	18.7%	14.1%
2003	554.349	18.0%	14.3%
2002	570.865	16.0%	11.7%
2001	654.578	15.6%	10.7%
2000	662.187	14.2%	

Comments:

- outstanding case estimates increased by 1% in 2008
- total expense levels increased to 18.5% from 17.8% last year (and increased by 0.7% excluding brokerage to 15.2% from 14.5% last year)
- insurer premium discounts to Gazette rates have increased for all years shown except 2008. Note however that we have included a 10% adjustment factor to account for an increase in burner policies in 2007/08. Before this adjustment discount levels were higher than last year at 25%

Other trends in the returned data are:

- a material decrease in incurred number of claims up to 30 June 2002. Since then claim numbers have been relatively stable to decreasing. As a result claim frequency per employee has reduced as employee numbers have increased over that time

- claim payments during 2007/08 increased by 1% in real terms i.e. after allowing for wage inflation. Claim payments decreased in real terms in the four years to 30 June 2004, increased by 5.0% for the year ended 30 June 2005 and have been relatively stable since
- claim payments in the six months to 31 December 2008 increased by 16.8% in actual and 12.3% in real terms compared to the same period in the previous year
- the major source of claim payment increase is from weekly benefits and combined medical costs
- insurers case estimates on open claims increased by 1.2% in the year to 30 June 2008 following on from a 4.2% increase in the year to 30 June 2007. Insurer case estimates at 30 June 2008 were at their highest level in seven years. At 31 December 2008 they are 10.2% higher than at 30 June 2008
- active claim numbers have been relatively stable around 21,000 since 30 June 2002 being 21,428 at 30 June 2008 and 21,728 at 31 December 2008.

## 9 Assumptions, observations and conclusions

The analysis of the experience and the trends translate into the following *assumptions, observations and conclusions*:

- a \$16,490 *after 2004 Reforms average claim size* in 30 June 2008 values which allows for past real growth in excess of wage inflation and also the higher than expected payments in the six months to 31 December 2008
- weighted average superimposed *inflation* in claim costs of:
  - 2.5% for statutory benefits and common law combined
- a 0.96% common law claim frequency rate with a \$294,322 weighted average common law claim size excluding legal costs.

leading to

- a \$16,248 *adopted average claim size* for the 2009/10 underwriting year, in inflated and discounted values
- 38,014 *incurred claims* for 2007/08 assumed to increase by 1.0% to 38,361 for 2008/09 and 2009/10
- allowance is made for the current cost of claims
- the Gazette rates *do not* include the 10% GST on the premium itself
- market rates of interest as at 28 February 2009 are adopted
- future wage inflation has decreased to 4.00% from 4.75% last year
- an *adopted loss ratio of 75.3% excluding brokerage* in discounted terms, down from 78.8% last year, including

- an expense loading of 15.16% of premium (14.51% last year), or 18.47% before removing brokerage (17.80% last year), and
- a contingency margin of 10% of risk cost (8% last year)
- the *total expense level* of insurers is 18.5% (17.8%), made up of 3.3% (3.3%) brokerage, 1.9% (1.9%) Statutory charges and 13.2% (12.6%) management expenses. The figures in brackets are from last year.

The combination of these assumptions imply a 9.9% *real increase in claim costs*.

Other aspects include:

- retain minimum and maximum premium rates
- the *minimum premium* for a policy increases to \$70 for householder policies and \$210 for all other policies
- at 30 June 2008 *insurers reserves* are higher than the actuarially assessed reserve requirements by \$213M million (15%), and last year they were \$72 million or 5% higher
- average declared *insurer reserves* to claim payments is 300% (306% last year). Two current insurers have a ratio less than 200% this year and four of eleven returning insurers have ratios less than the average.
- declared *prudential margins* over net central estimates, in the range 7.0% to 25.2%, with an average prudential margin of 17.3% (20.9% last year).
- insurer *expense levels* vary between 13.3% and 32.9% of premiums, with an average of 18.5% (17.8% last year).

## 10 Communication of Outcomes

The analyses and calculations made highlight the following:

- recommended premium rates for the 2009/10 underwriting year increase by 9.9% in aggregate
- uncertainty exists about how robust a measure of ultimate incurred cost the recent claims experience combined with the scaled down estimated cost impact of the 2004 Reforms will be. The eventual outcome may well differ significantly (either up or down) from the projected level
- the claim costs in the half year to 31 December 2008 are generally unfavourable compared to expected
- the 4.00% future wage inflation rate was adopted compared with 4.75% last year and market rates of interest as at 28 February 2009 are adopted
- the current global economic crisis adds significantly to the complexity and uncertainty of this premium rate assessment. This will be managed by closely monitoring emerging wage, claim and cost trends over 2009/10.