

WorkCover Western Australia

Overview Summary of the Actuarial Report on the Recommended Premium Rates for 2007/08 for Western Australian Workers' Compensation Insurance

1 Overview summary

This overview summary is extracted from the report presented to WorkCover Western Australia (WorkCover WA). The summary in no way replaces the full report dated 30 March 2007 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 broadly follow the Australian and New Zealand Standard Industrial Classification 1993 (ANZSIC) and are sub-divided into 480 classes. This classification standard was introduced from the 1994/95 year. 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 WorkCover WA Board, an insurer may surcharge beyond 75% of the recommended rate. The maximum surcharge was 100% up to 14 November 2005, when it was reduced to 75% by the 2004 Workers Compensation Reform Act (2004 Reforms).

Once again, this year we have made allowance in the premium rates for the impact of the 2004 Reforms, using the results of our 13 April 2005 report to the WorkCover WA Board entitled "Actuarial Assessment of Cost Impact of the 2004 Workers Compensation Reforms".

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. However, the recommended rates do not make allowance for brokerage/commission costs. *Also that 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 2007/08 should be decreased by:
 - 12.7% for expected claims experience inclusive of the estimated impact of the 2004 Reforms
- this increase includes the following major influences:
 - an estimated 3.6% increase in rates due to an adjustment to the 2004 Reform Act allowance from an overall to a risk cost basis
 - increasing election option lodgements to 31/01/2007 but reduced election option lodgements to 31/01/2006 due to retracted lodgements over the year to January 2007
 - generally favourable claims experience for 2005/06 and for the half-year to 31/12/2006. In particular claim numbers and claim payments both remain below expected
 - a release of reserves during 2005/06 on prior year claims on our estimates and on insurers current estimates

- the 4.1% decrease in the estimated claim numbers incurred for 2006 from 39,291 last year to 37,660 now
- the assumption that claim numbers for 2007 will reduce by 1.8%, based on the number of claims reported to 31/12/2006
- an average claim size after the 2004 Reform Act of \$14,644 in inflated and discounted values (see section 3.1.1) from our actuarial projection models (projected separately for statutory and common law costs).
- the 1.83% decrease from 15.58% to 13.75% in total management expenses excluding brokerage leading to a 3.29% reduction in the overall loading including contingency and interest
- the increase in superimposed inflation increases costs by 2.7%
- a decrease in common law numbers decreases costs by 2.5%
- a slight real increase in the average common law claim size increases costs by 0.5%
- a 0.9% decrease in premium rates due to the increase in the real market rates of interest used to discount projected future claim payments, as market rates of interest increased by more than the wage inflation increased
- a 15.0% increase in adjusted wages for 2005/06 which is significantly more than the 6.1% wage inflation rate.

- the combination of these assumptions imply an overall 12.7% real reduction in premium rates made up as follows:

Key driver change	Estimated ave premium rate %	% change
Recommended rate	1.849%	
Adjusted Act change allowance	1.785%	3.6%
Decrease in Dec 06 halfyear claim numbers	1.818%	-1.8%
Decrease in 2005/06 claim numbers	1.896%	-4.1%
Expense and other loadings	1.948%	-2.6%
Excess growth in declared wages above AWE	2.112%	-7.8%
Increase in superimposed inflation	2.056%	2.7%
Common law frequency	2.109%	-2.5%
Common law average claim size	2.097%	0.5%
Change in real rates market interest rates	2.116%	-0.9%
Balance due to other sources	2.117%	0.0%
Total % change		-12.7%

5 Premium rating returns

The latest *premium rating returns* collected are for the 2005/2006 year. These are the *twelfth* 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 31/12/2006 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 30/06/2006. 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 -12.7% inclusive of the allowance for the 2004 Reforms.

The brokerage component of expenses was removed from the loss ratio from 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. The level of uncertainty is increased due to the additional uncertainty surrounding the impact of the 2004 Reforms.

These uncertainties should be borne in mind whenever using the results in our actuarial report on recommended premium rates and actuarial assessment of the cost impact of the 2004 Reforms.

8 Statistical trends

The *statistical trends* observed in the aggregate data up to 30/06/2006 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 2007/08.

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 30/6/2006 values (b)	Estimated inflated incurred cost of claims \$M (c)
2006	37,660	12,933	608.935
2005	39,291	12,513	541.831
2004	38,395	12,203	474.149
2003	37,931	11,207	404.015
2002	38,022	11,013	377.068
2001	42,839	10,297	374.402
2000	49,414	9,448	374.154
1999	54,459	9,221	381.441

Comments:

- the number of claims decreased significantly to 2002, was stable in 2003 and increased 1% in 2003/04 and by 3% in 2004/05 before decreasing by 4% this year
- average claim size has increased by 40% in real terms since 1998/99 or 5% pa
- inflated incurred cost increased by 60% (\$227M) between 1999 and 2006, ie from \$381M to \$609M in actual terms including GST and both the October 1999 Act and the 2004 Reform Act impacts.

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)
2006	102.042	295.778	608.935	290%	597%	206%	87%
2005	230.410	368.909	541.831	160%	235%	147%	88%
2004	284.202	371.079	474.149	131%	167%	128%	82%
2003	286.391	338.849	404.015	118%	141%	119%	69%
2002	286.959	318.577	377.068	111%	131%	118%	64%
2001	321.070	347.071	374.402	108%	117%	108%	60%
2000	346.790	361.416	374.154	104%	108%	104%	63%
1999	360.705	370.284	381.441	103%	106%	103%	83%

- 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 for most accident years except 2003 and 2001, while the ultimate incurred cost ratio to payments (e) increased for all accident years except 2003, 2000 and 1999. The 2004 Reform Act allowance this year contributes to the increase in (e) and (f) for the most recent 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 1998 to 2001 have either improved or stabilised since last year while the loss ratio for 2002 to 2005 have worsened.

A target inflated loss ratio including all expense and profit loadings would be 85%. The 2005 and 2006 loss ratios are at slightly unprofitable and the 1999 to 2004 loss ratios are profitable. Early estimates should not be relied on because of the high uncertain projected outstanding portion. Around 85% of projected ultimate cost is still outstanding for 2005/06.

Also the retrospective aspects of the 2004 Reform Act are expected to increase the loss ratios for the most recent years.

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	Implicit margin in Gazette rates
2006	590.222	16.9%	20.4%	0%
2005	618.100	19.0%	15.8%	0%
2004	575.386	18.7%	13.6%	0%
2003	554.349	18.0%	14.2%	0%
2002	570.865	16.0%	11.1%	0%
2001	654.578	15.6%	11.0%	0%
2000	662.187	14.2%	15.0%	0%
1999	738.777	16.7%	16.6%	0%
1998	601.366	19.0%		10%

Comments:

- outstanding case estimates decreased by 5% in 2006
- total expense levels decreased to 16.9% from 19.0% last year (and decreased by 1.8% excluding brokerage from 15.6% to 13.8%)
- insurer premium discounts to Gazette rates reduced significantly from 1999 to 2001 and then stabilised before increasing in 2003 (12%) and increasing to 20% in 2006

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. Claim frequency per employee has reduced as employment numbers increased
- claim payments during 2005/06 were stable in real values i.e. after allowing for wage inflation. Claim payments decreased in real terms in the four years to 30 June 2004 and increased by 5.0% for the year ended 30 June 2005
- claim payments in the six months to 31 December 2006 increased by 7.9% in actual and 1.7% in real terms compared to the same period in the previous year
- the major source of claim payment increase is across all the main payment types ie. weekly benefits, redemptions, medical costs and common law
- insurers case estimates on open claims increased by 7% in the year to 30 June 2005 and reduced by 4.5% in the year to 30 June 2006. At 31 December 2006 they are 2.3% higher
- stable active claim numbers in the range 31,000 to 32,500 up to 1999 and then declined rapidly to 21,000 at 30 June 2002. Active claims have been fairly stable since then and were 20,501 at 30 June 2006 and 20,483 at 31 December 2006.

9 Assumptions, observations and conclusions

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

- a \$15,595 *after 2004 Reforms average claim size* in 30/06/2006 values which allows for past real growth in excess of wage inflation
- weighted average superimposed *inflation* in claim costs of:
 - 3.9% for statutory benefits and common law combined
- a 1.04% common law claim frequency rate with a \$266,923 weighted average common law claim size excluding legal costs.

leading to

- a \$14,644 *adopted average claim size* for the 2007/08 underwriting year, in inflated and discounted values
- 37,660 *incurred claims* for 2005/06 assumed to decrease by 1.8% to 36,966 for 2006/07 and 2007/08
- allowance is made for the current cost of claims

- 18.4% prospective overall risk cost impact (excluding expenses and margins) of the 2004 Reforms as per our actuarial assessment report
- the 1.8% decrease in total expense levels excluding brokerage/commission
- the Gazette rates *do not* include the 10% GST on the premium itself
- market rates of interest as at 31 January 2007 are adopted
- future wage inflation has increased to 4.5% from 4.0% previously
- an *adopted loss ratio of 79.5% excluding brokerage* in discounted terms, up from 77.4% last year, including
 - an expense loading of 13.75% of premium (15.58% last year), or 16.90% before removing brokerage (18.97% last year), and
 - an unchanged contingency margin of 8% of risk cost
- the *total expense level* of insurers is 16.9% (19.0%), made up of 3.2% (3.4%) brokerage, 1.9% (1.7%) Statutory charges and 11.8% (13.8%) management expenses. The figures in brackets are from last year.

The combination of these assumptions imply a 12.7% *real decrease in claim costs* after the estimated cost impact of the 2004 Reforms.

Other aspects include:

- retain minimum and maximum premium rates
- the *minimum premium* for a policy increases to \$65 for householder policies and increases to \$195 for all other policies
- at 30 June 2006 *insurers reserves* are lower than the actuarially assessed reserve requirements by \$85 million (6%), while last year they were \$58 million or 4% higher.
- average declared *insurer reserves* to claim payments is 322% (351% last year). One current insurer has a ratio less than 290% and four had ratios greater than 360%
- declared *prudential margins* over net central estimates, in the range 9.0% to 29.8%, with an average prudential margin of 20.1% (19.1% last year).
- insurer *expense levels* vary between 10% and 27% of premiums, with an average of 16.9% (19.0% last year).

10 Communication of Outcomes

The analyses and calculations made highlight the following:

- recommended premium rates for the 2007/08 underwriting year decrease by 12.7% in aggregate
- uncertainty exists about how robust a measure of ultimate incurred cost the recent claims experience combined with the 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 31/12/2006 are generally favourable compared to expected
- the 4.5% future wage inflation rate was adopted compared with 4.0% last year and market rates of interest as at 31 January 2007 are adopted.