

WorkCover Western Australia

Overview Summary of the Actuarial Report on the Recommended Premium Rates for 2006/07 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 12 April 2006 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. From 2001/02, recommended rates no longer make allowance for brokerage/commission costs. *This is the third year that the experience of the Western Australian Local Government Association (WALGA) has been excluded from the premium rating process.* As a consequence, the 2006/07 rate for Local Government Administration (81130) may not be appropriate as it is based predominantly on historical data collected from private insurers and 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 2006/07 should be decreased by:
 - 8.6% for expected claims experience inclusive of the estimated impact of the 2004 Reforms
- this increase includes the following major influences:
 - an estimated 14.3% overall cost increase (including expenses and margins) allowance for the initial *prospective* impact of the 2004 Reforms. This equates to an 18.4% increase in the risk cost of claims. The *retrospective* impact of the 2004 Reform Act is not included.
 - an estimated 1.1% reduction in rates due to the deferral of stage 2 of the 2004 Reform Act, carried over from last year's decision by the WorkCover Board.
 - increasing election option lodgements 31/01/2006 but reduced election option lodgements to 31/01/2005 due to retracted lodgements over the year to January 2005

- fairly neutral claims experience for 2004/05 and reducing for the half-year to 31/12/2005. In particular claim numbers and claim payments both remain below expected
 - a slight strengthening of reserves during 2004/05 on prior year claims on our estimates and a release on insurers current estimates
 - the 2.1% decrease in the estimated claim numbers incurred from 40,394 for 2004 to 39,542 for 2005
 - the assumption that claim numbers will reduce by 4.2% in 2005/06, based on the number of 2005/06 claims reported to 31/12/2005
 - an average claim size after the 2004 Reform Act of \$13,609 in inflated and discounted values (see section 3.1.1 of our full report) from our actuarial projection models (projected separately for statutory and common law costs).
 - the 0.44% increase from 15.14% to 15.58% in total management expenses excluding brokerage leading to a 0.75% increase in the overall loading including contingency and interest
 - the reduction in superimposed inflation decreases costs by 0.7%
 - an increase in common law numbers increases costs by 2.2%
 - a slight real decrease in the average common law claim size decreases costs by 0.5%
 - a 1.1% increase in premium rates due to the decrease in the real market rates of interest used to discount projected future claim payments, due mainly to the increase in wage inflation assumed from 3.5% to 4.0% per year.
 - a 11.9% increase in adjusted wages which is significantly more than the 6.0% wage inflation rate for 2004/05
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- the combination of these assumptions imply an overall 8.6% real reduction in premium rates made up as follows:

Key driver change	Estimated ave premium rate %	% change
Recommended rate	2.129%	
Deferral of Stage 2 of 2004 Reform Act		-1.1%
Decrease in Dec 05 halfyear claim numbers	2.217%	-4.0%
Decrease in 2004/05 claim numbers	2.265%	-2.1%
Expense and other loadings	2.251%	0.6%
Excess growth in declared wages above AWE	2.354%	-4.4%
Reduction in superimposed inflation	2.371%	-0.7%
Common law frequency	2.319%	2.2%
Common law average claim size	2.331%	-0.5%
Change in real rates market interest rates	2.305%	1.1%
	sub-total	-8.8%
Balance due to other sources		0.2%
	Total	-8.6%

5 Premium rating returns

The latest *premium rating returns* collected are for the 2004/2005 year. These are the *eleventh* 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.

Data for the Government Insurance Fund and Municipal WorkCare was included for the first time in 1997/98. Beginning with the 2004/05 rate we were instructed to remove all WALGA data from our analysis and pricing models.

Aggregate data for the half year to 31/12/2005 and unit claim election application data was supplied and used as an indicator of the Act amendment impact on costs.

A eleventh accident year's data was added to the ANZSIC class Form WC11.

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 30/06/2005. 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 -8.6% 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 reports 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 30/06/2005 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 2006/07.

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 30/6/2005 values (b)	Estimated inflated incurred cost of claims \$M (c)
2005	39,542	12,125	522.049
2004	38,412	11,799	470.321
2003	37,923	11,042	413.139
2002	38,007	10,760	383.576
2001	42,828	10,165	387.924
2000	49,406	9,351	401.049
1999	54,446	8,926	390.233
1998	58,588	9,649	439.274

Comments:

- the number of claims decreased by 7% in 1999, 9% in 2000, 13% in 2001, 11% in 2002, was stable in 2003 and increased 1% in 2003/04 and by 3% in 2004/05
- average claim size has increased by 26% in real terms since 1997/98 or 3% pa
- inflated incurred cost increased by 19% (\$83M) between 1998 and 2005, ie from \$439M to \$522M in actual terms including GST and the October 1999 Act change allowance (but not the 2004 Reform Act impact).

The table above does not include the cost impact of the 2004 Reforms.

8.2 Reserving and loss ratios exclusive of 2004 Reforms cost impact

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)
2005	95.802	307.565	522.049	321%	545%	170%	85%
2004	210.250	360.365	470.321	171%	224%	131%	82%
2003	250.274	330.408	413.139	132%	165%	125%	70%
2002	268.349	311.634	383.576	116%	143%	123%	66%
2001	307.039	346.768	387.924	113%	126%	112%	62%
2000	336.642	360.574	401.049	107%	119%	111%	68%
1999	355.485	371.857	390.233	105%	110%	105%	85%
1998	400.986	415.863	439.274	104%	110%	106%	114%

- 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 increased for most accident years except 2005, 2002 and 1998, while the ultimate incurred cost ratio to payments (e) increased for all accident years. The ultimate incurred cost ratio to total case estimates (f) is decreasing to stable for most years, except 2002 which is significantly higher, 2005 and 1998.

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 2004 have either worsened or stabilised since last year with the exception of 2000 which has improved.

A *target inflated loss ratio* including all expense and profit loadings would be 85%. The table shows that 1998 was very unprofitable as the loss ratio far exceeded the 85% target level. The 1999 and 2005 loss ratios are at breakeven and the 2000 to 2002 loss ratios are profitable. The early estimates for 2003 to 2004 suggest profitable loss ratios of 70% to 82% which implies insurer premiums could turn out to be somewhat more profitable than the 8% contingency margin allowed. These early estimates should not be relied on because of the high uncertain projected outstanding portion. Around 79% of projected ultimate cost is still outstanding for 2004/05.

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
2005	618.100	19.0%	16.4%	0%
2004	575.386	18.7%	12.0%	0%
2003	554.349	18.0%	10.3%	0%
2002	570.865	16.0%	11.1%	0%
2001	654.578	15.6%	9.7%	0%
2000	662.187	14.2%	13.8%	0%
1999	738.777	16.7%	15.8%	0%
1998	601.366	19.0%	13.5%	10%
1997	511.320	19.3%		16%

Comments:

- outstanding case estimates increased by 7% in 2005
- total expense levels in 2004 increased to 19.0% from 18.7% last year (and increased by 0.4% excluding brokerage from 15.1% to 15.5%)
- insurer premium discounts to Gazette rates reduced significantly from 1998 to 2000 and then stabilised before increasing in 2004 (12%) and increased further in 2005 (16.4%)

- a significant implicit margin in the Gazette rates was removed in 1998. The margin arose in 1994 on introduction of the industry based premium rating classes.

Other trends in the returned data are:

- a material decrease in incurred number of claims up to 30 June 2003. Since then claim numbers have increased, however recent claim frequency per employee was stable as employment numbers increased
- claim payments during 2004/2005 increased by 5.0% in real values i.e. after allowing for wage inflation. Claim payments decreased in real terms in the four years to 30 June 2004
- claim payments in the six months to 31 December 2005 increased by 8.5% in actual and 1.1% in real terms compared to the same period in the previous year
- the major source of claim payment increase is common law payments while most other payment types remained stable or declined
- insurers case estimates on open claims have increased significantly since 30 June 2004. They are 7% higher at 31 December 2005 having increased by 13% last year
- 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 were stable in 2003 and increased to 21,500 by 31 December 2005.

9 Assumptions, observations and conclusions

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

- a \$14,392 after 2004 Reforms (\$12,714 pre-2004 Reforms) average claim size in 30/06/2005 values which allows for past real growth in excess of wage inflation
- superimposed *inflation* in claim costs of:
 - 3.0% for both statutory benefits and common law
- a 1.23% common law claim frequency rate with a \$242,864 weighted average common law claim size excluding legal costs.

leading to

- a \$13,609 adopted average claim size for the 2006/07 underwriting year, in inflated and discounted values

- 39,542 incurred claims for 2004/2005 assumed to decrease by 4.0% to 37,960 in 2006/07
- allowance is made for the current cost of claims
- 14.3% prospective overall cost impact (including expenses and margins) of the 2004 Reforms as per our actuarial assessment report
- the 0.44% increase 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 28 February 2006 are adopted
- future wage inflation has increased to 4.0% from 3.5% previously
- an adopted loss ratio of 77.4% excluding brokerage in discounted terms, down from 77.9% last year, including
 - an expense loading of 15.58% of premium (15.14% last year), or 18.97% before removing brokerage (18.65% last year), and
 - an unchanged contingency margin of 8% of risk cost
- the total expense level of insurers is 19.0% (18.7%), made up of 3.4% (3.5%) brokerage, 1.7% (1.9%) Statutory charges and 13.8% (13.2%) management expenses. The figures in brackets are from last year.

The combination of these assumptions imply a 8.6% *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 remains stable at \$60 for householder policies and increases to \$185 for all other policies
- at 30 June 2005 *insurers reserves* are higher than the actuarially assessed reserve requirements by \$58M (4%), while last year they were \$118M or 10% higher.
- average declared *insurer reserves* to claim payments is 351% (362% last year). Two current insurers have a ratio less than 290% and 5 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 19.1% (18.7% last year).

- insurer *expense levels* vary between 13% and 32% of premiums, with an average of 19.0% (18.7% last year).

10 Communication of Outcomes

The analyses and calculations made highlight the following:

- recommended premium rates for the 2006/07 underwriting year decrease by 8.6% 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 31/12/2005 are slightly favourable compared to expected
- the 4.0% future wage inflation rate was adopted compared with 3.5% last year and market rates of interest as at 28/02/2006 are adopted.