

Premium Rates Committee of Western Australia

Overview Summary of the Actuarial Report on the Recommended Premium Rates for 2002/03 for Western Australian Workers' Compensation Insurance

1 Overview summary

This overview summary is extracted from the reports presented to the Premium Rates Committee (PRC) of Western Australia. The summary in no way replaces the full report 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 100% (50% up to October 1999) of the applicable recommended rate. Subject to the approval of the Workers' Compensation and Rehabilitation Commission, an insurer may surcharge beyond 100% of the recommended rate.

3 Objectives

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

- to calculate the total amount of premium income required
- broad equity across industry classes
- minimal cross subsidy of rates, and
- 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.

4 Key findings

The *key findings* of the actuarial assessment are:

- recommended Gazette premium rates for 2002/03 should be decreased by:
 - 6.0% for expected claims experience
- this decrease includes the following major influences:
 - stable and close to expected election option lodgements to 31/01/2002, with some increase in the seven months to January 2002
 - better than expected claims experience to 30/06/2001 and for the half-year to 31/12/2001
 - the 13.3% reduction of the estimated claim numbers incurred from 50,702 (revised) for 2000 to 43,944 for 2001. This gives an estimated 1.3% reduction in cost, assuming smaller claims are saved
 - the 1.3% increase in total expenses and brokerage remained stable
 - a 5% increase in common law numbers (neutral basis) with a similar mix of significant and serious claims, increases costs by around 1%
 - market rates of interest at 31/01/2002 decrease for one year forward and then increase, which decreases premium rates by 1.2%
 - a further 5.8% reduction, after statutory benefit substitution, from the overall improvement in experience since the items above reduce rates by

$$(-1.3+1.3+1.0-1.2) = 0.2\% \text{ in aggregate}$$
 - the once-off effect of removing the 3% allowance for brokerage/commission was accounted for last year and does not influence this year's rate change
 - two-thirds of the notional 1.25% GST allowance last year, is allowed for ANTS/GST
 - does not include the 10% GST on premium itself
 - a seventh accident year's data is used for relative premium rates.

5 Premium rating returns

The latest *premium rating returns* collected are for the 2000/2001 year. These are the *seventh* set of returns based on the ANZSIC industry classification and they are presented on the same basis as last year with two new fields on Form WC11. 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. This year the new policy number count and gross written premium were reasonably collected. Also, this year the self-insurers prepared PRC returns but these are still being validated by WorkCover.

Data for the Government Insurance Fund (Unfunded) (GIFU) and Municipal WorkCare is included for the first time in 1997/98. Where possible, the tables presented were adjusted for prior years, to reflect the new funds.

Aggregate data for the half year to 31/12/2001 and unit claim election application data was supplied and used as an indicator of the Act amendment impact on costs.

A seventh 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 seven year period ending 30/06/2001. This year, the seven year average is all on actual industry code data and the previous converted data is no longer used. A hierarchical 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 brokerage component of expenses was removed from the loss ratio last year as a once-off adjustment.

8 Statistical trends

The *statistical trends* observed in the aggregate data up to 30/06/2001 are described below.

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 30/6/2001 values (b)	Estimated inflated incurred cost of claims \$M (c)
2001	43,944	9,675	440.501
2000	50,702	9,225	468.310
1999	55,691	8,642	469.590
1998	59,821	8,380	470.537
1997	61,147	8,010	442.304
1996	61,126	7,072	374.731
1995	61,485	6,920	356.250
1994	62,226	6,076	304.126

- Notes:**
- (a) includes allowance for IBNR claims
 - (b) in current values before Act change or GST allowances
 - (c) actual cumulative past payments plus projected inflated future payments.

Comments:

- the number of claims decreased by 6% following the June 1993 legislative changes and was fairly stable to 1997. Thereafter it decreased by 2% in 1998, 7% in 1999, 10% in 2000 and 13% in 2001
- average claim size has increased by 59% in real terms since 1993/94 or 7% pa before allowance for Act changes
- inflated incurred cost increased by 45% (\$137M) between 1994 and 2001, ie from \$304M to \$441M in actual terms including GST and Act change allowance
- since our estimate last year, the estimated average claim size for the 2000 accident year has decreased by 5.8% to \$9,225, which is a significant reduction in real terms (allowing 5.2% for wage inflation)

The analysis of claims experience to 31 December 2001 shows that it is somewhat lower than expected after allowing for the estimated costs saved from the Act amendments.

8.2 Reserving and loss ratios

Some overall market reserving 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)
2001	74.396	279.882	440.501	376%	592%	157%	70%
2000	190.607	356.011	468.310	187%	246%	132%	78%
1999	279.268	385.167	469.590	138%	168%	122%	100%
1998	354.885	419.929	470.537	118%	133%	112%	120%
1997	378.726	426.430	442.304	113%	117%	104%	119%
1996	345.593	368.906	374.731	107%	108%	102%	109%
1995	335.705	352.846	356.250	105%	106%	101%	102%
1994	291.317	302.360	304.126	104%	104%	101%	87%

Notes :

- (a) cumulative actual claim payments
- (b) = (a) + insurer's case estimates outstanding
- (c) = (b) 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 ratios increased for the two most recent accident years and were stable to reducing for earlier years. It appears that insurers have retained their case estimates while payments reduced. The ultimate incurred cost ratios reduced significantly for 2000 and 2001 and are relatively stable for all other 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. All loss ratio estimates have improved since last year due to the continuing impact of the October 1999 Act changes.

A target inflated loss ratio including all expense and profit loadings would be 88%. The table shows that other than possibly 1993/94, 1999/2000 and 2000/2001, loss ratios have far exceeded the target level. The position is worst for the 1997 and 1998 years and 1999 shows some improvement. However a 100% loss ratio for 1999 against a 88% target still implies insurer premiums were 14% too low.

Early estimates for the 2001 year suggest a very profitable loss ratio of 70% which implies insurer premiums could turn out to be far more profitable than the 8% contingency margin allowed. This early estimate should not be relied on because of the high uncertain projected outstanding portion. Close to 83% of projected ultimate cost is still outstanding.

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
2001	663.111	15.6%	8.8%	0%
2000	667.964	14.2%	4.8%	0%
1999	744.017	16.7%	13.8%	0%
1998	606.247	19.0%	17.4%	10%
1997	513.506	19.3%	23.7%	16%
1996	484.574	18.7%	28.1%	20%
1995	444.736	17.0%		24%
1994	467.406	18.0%		22%
1993	475.808	19.0%		12%

Comments:

- outstanding case estimates decreased by 1% in 2001
- expense levels in 2001 increased to 15.6% from 14.2% last year
- insurer premium discounts to Gazette rates reduced significantly from 1997 to 2000 and increased from 4.8% to 8.8% in 2001
- 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 (27%) in incurred number of claims over past four years
- claim payments during 2000/01 decreased by 21% in real values i.e. after allowing for wage inflation
- claim payments in the six months to 31 December 2001 reduced by 2.4% in actual and 7.3% in real terms compared to the same period in the previous year
- major sources of claim payment reduction is common law with slight reductions in vocational rehabilitation and miscellaneous while Schedule 1 redemptions increased significantly
- continued decreases in insurers case estimates on open claims as a response to the October 1999 Act changes

- stable active claim numbers in the three years to 1997, a decrease in 1998 followed by an increase in 1999, a significant (14%) reduction in 2000 followed by a 5% reduction in 2001.

9 Assumptions, observations and conclusions

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

- a \$8,582 *base level average claim size* in 30/06/2001 values which allows for past real growth in excess of wage inflation
- *superimposed inflation* in claim costs of:
 - a historic long term rate of 3.5% per year on Statutory benefits in future
 - a 1.18% common law claim frequency rate with a \$295,500 weighted average common law claim size including legal costs

leading to

- a \$12,083 *adopted average claim size* for the 2002/03 underwriting year, in current 30/06/2001 values
- 43,944 *incurred claims* for 2000/2001 adjusted down by 2.5% for assumed continued frequency reduction to 42,845 for 2002/03
- allowance made for the current cost of claims and the estimated impact of the October 1999 Act amendments based on the now more developed experience of the election option applications
- the 1.4% increase in total expense levels including brokerage/commission
- two-thirds of the notional 1.25% allowance for ANTS/GST is made
- the Gazette rates *do not* include the 10% GST on the premium itself
- market rates of interest as at 31 January 2002 are adopted
- future wage inflation remains unchanged at 3.5%, assumed as per WA Treasury forecasts

- an *adopted loss ratio of 80.4% excluding brokerage* in discounted terms, down from 81.8% last year, including
 - an expense loading of 12.5% of premium (11.2% last year), or 15.6% before removing brokerage (14.2% last year), and
 - an unchanged contingency margin of 8% of (risk cost plus expenses)
- the *total expense level* of insurers is 15.6% (14.2%), made up of 3.1% (3%) brokerage, 1.9% (1.5%) Statutory charges and 10.6% (9.7%) management expenses. The figures in brackets are from last year
- the combination of these assumptions imply a *6.0% real decrease in claim costs*
- retain minimum and maximum premium rates
- the *recommended minimum premium* for a policy remains at \$55 for householder policies and increases to \$165 (\$160 last year) for all other policies
- at 30 June 2001 *insurers reserves* are over-reserved by 8% compared to the actuarially assessed net central estimates, while last year they were 1% lower
- average declared *insurer reserves* to claim payments is 313% (259% last year). One current insurer has a ratio less than 240% and 4 had ratios greater than 350%
- declared *prudential margins* over net central estimates, in the range 0% to 27%, with an average prudential margin of 14.4% (13.4% last year). One large active insurer has a 0% prudential margin
- insurer *expense levels* vary between 11% and 28% of premiums, with an average of 15.6% (14.2% last year). Smaller insurers generally have higher expense rates.

10 Communication of Outcomes

The analyses and calculations made highlight the following:

- Gazette rates reduce by 6.0% in aggregate
- the aggregate decrease allows for the impact of the October 1999 Act amendments based on the now more developed election option experience
- this greater development affords more reliance on the results emerging from the actuarial projection model compared to prior year's adjustments required to immature data
- uncertainty exists about how robust a measure of ultimate incurred cost the recent claims experience will be, particularly in the first few years following legislative change. The eventual outcome may well differ significantly (either up or down) from the projected level
- the claim costs in the half year to 31/12/2001 are distinctly favourable compared to expected
- WA Treasury forward forecasts of WA wage inflation are adopted and market rates of interest as at 31/01/2002
- insurers continued to discount Gazette rates at an increased level of 9% compared to 5% last year and 14% and 17% in the prior two years
- returned earned premiums for 2000/2001 indicate insurers may achieve a profitable position on the early uncertain estimates (70% estimated loss ratio, compared to a 88% target level).