
Premium Rates Committee of Western Australia

Overview Summary of the Actuarial Report on the Recommended Premium Rates for 2001/02 for Western Australian Workers' Compensation Insurance

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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 insuring 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.

4 Key findings

The *key findings* of the actuarial assessment are:

- recommended Gazette premium rates for 2001/02 should be decreased by:
 - 8.2% for expected claims experience and a further 3% for the once-off removal of the brokerage from the rates
 - the actual combined reduction is 11.7% since the removal of brokerage is impacted by the other expense and contingency allowances
- this decrease includes the following major influences:
 - stable and close to expected election option lodgements to 05/01/2001
 - better than expected claims experience to 30/06/2000 and for the half-year to 31/12/2000
 - the 9.7% reduction of the estimated claim numbers incurred from 55,649 (revised) for 1999 to 50,228 for 2000. This gives a 1% reduction in cost, assuming smaller claims are saved
 - the 2.9% reduction in total expenses
 - a 20% reduction in common law numbers (neutral basis) with an altered mix of significant and serious claims, reduces costs by 4.2%
 - a decrease in market rates of interest at 31/01/2001 and stable assumed wage inflation leading to a decrease in real rates of interest, which increases premium rates by 2.8%
 - a further 2.9% reduction, after statutory benefit substitution, from the overall improvement in experience
 - removal of the 3% allowance for brokerage/commission leads to a 3.5% reduction in rates
 - the notional 1.25% allowance last year, is retained for ANTS/GST
 - does not include the 10% GST on premium itself
 - a sixth accident year's data is used for relative premium rates.

5 Premium rating returns

The latest *premium rating returns* collected are for the 1999/2000 year. These are the *sixth* 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 accuracy has not quite maintained last year's level. There is room for further improvement.

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 31/12/2000 and unit claim election application data was supplied and used as an indicator of the Act amendment impact on costs.

A sixth 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 six year period ending 30/06/2000. This year, the six 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 this year as a once-off adjustment.

8 Statistical trends

The *statistical trends* observed in the aggregate data up to 30/06/2000 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 30/6/2000 values (b)	Estimated inflated incurred cost of claims \$M (c)
2000	50,228	9,789	499.271
1999	55,649	9,406	526.387
1998	59,779	8,647	503.577
1997	61,123	8,019	462.758
1996	61,109	6,993	388.149
1995	61,479	6,673	358.181
1994	62,209	5,842	304.754
1993	65,942	5,885	307.963

- 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 and 10% in 2000
- average claim size has increased by 68% in real terms since 1994 or 9% pa before allowance for GST and Act changes
- inflated incurred cost increased by 64% (\$195M) between 1994 and 2000, ie from \$305M to \$499M in actual terms including GST and Act change allowance.
- after 1993, incurred cost reduced by \$3M, only to increase again by \$53M the very next year
- since our estimate last year, the estimated average claim size for the 1999 accident year has increased by 3.2% to \$9,406, which is a slight reduction in real terms (allowing 4.4% 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)
2000	80.629	278.084	499.271	345%	619%	180%	83%
1999	210.863	372.522	526.387	177%	250%	141%	113%
1998	305.405	416.919	503.577	137%	165%	121%	128%
1997	344.083	428.596	462.758	125%	134%	108%	124%
1996	330.222	369.826	388.149	112%	118%	105%	113%
1995	325.413	351.911	358.181	108%	110%	102%	103%
1994	282.703	301.218	304.754	107%	108%	101%	93%
1993	294.778	306.097	307.963	104%	104%	101%	112%

- 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 ratios decreased for the *most* accident years since insurers reduced case estimates in response to the October 1999 Act changes. The ultimate incurred cost ratios increase for 1999 and 2000 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 actual loss ratio, the less profitable the portfolio of risks.

A *target inflated loss ratio* including all expense and profit loadings would currently be around 90%. The table shows that other than possibly 1994 and 2000, 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 113% loss ratio for 1999 against a 90% target still implies insurer premiums were 25% too low.

Early estimates for the 2000 year suggest a profitable loss ratio of 83% which implies insurer premiums are 8% profitable.

The target loss ratio with the profit margin removed increases to 99%. This represents a breakeven position. Against this measure, 1994 and 2000 are still the only years estimated to breakeven.

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
2000	668.304	14.2%	4.9%	0%
1999	744.017	16.7%	15.2%	0%
1998	606.247	19.0%	18.5%	10%
1997	513.506	19.3%	24.8%	16%
1996	484.574	18.7%	29.0%	20%
1995	444.736	17.0%	29.0%	24%
1994	467.406	18.0%		22%
1993	475.808	19.0%		12%
1992	434.982			17%

Comments:

- outstanding case estimates decreased by 10% in 2000
- expense levels in 2000 reduced to 14.2% from 16.7% last year
- insurer premium discounts to Gazette rates reduced significantly from 1997 to 2000
- continued firm premiums suggest a continued reduction in level of discount
- 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
- there is anecdotal evidence of continued firm premiums which suggests the current level of discount will be maintained or reduced slightly

Other trends in the returned data are:

- a material decrease (18%) in incurred number of claims over past three years
- claim payments during 1999/2000 increased by 1.1% in real values i.e. after allowing for wage inflation
- claim payments reduced significantly in actual and real terms in the six months to 31 December 2000
- major sources of claim payment reduction are common law, weekly benefits and medical and associated costs

- 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 with slower claim closure rates and a significant (14%) reduction in 2000.

9 Assumptions, observations and conclusions

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

- a \$8,060 base level average claim size in 30/06/2000 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 1.0% common law claim frequency rate with a \$283,000 weighted average common law claim size including legal costs

leading to

- a \$10,256 adopted average claim size for the 2001/02 underwriting year, in current 30/06/2000 values
- 50,228 incurred claims for 1999/2000 adjusted down for assumed continued frequency reduction to 48,972 for 2001/02
- allowance made for the current cost of claims and the estimated impact of the October 1999 Act amendments based on the now somewhat more developed experience of the election option applications
- the 2.9% reduction in total expense levels
- the removal of the 3% brokerage portion of the total management expenses
- a notional 1.25% allowance is made for ANTS/GST
- the Gazette rates *do not* include the 10% GST on the premium itself
- market rates of interest as at 31 January 2001 are adopted
- future wage inflation remains unchanged at 3.5%, assumed as per WA Treasury forecasts

- an *adopted loss ratio* of 81.8% (or 78.7% before excluding brokerage) in discounted terms, up from 76.4% last year, including
 - an expense loading of 11.2% of premium, or 14.2% before removing brokerage (16.7% last year), and
 - an unchanged contingency margin of 8% of (risk cost plus expenses)
- the *total expense level* of 14.2% (16.7%) is made up of 3% (3%) brokerage, 1.5% (1.7%) Statutory charges and 9.7% (12.0%) management expenses. The figures in brackets are from last year
- the combination of these assumptions imply a 8.2% *real decrease in claim costs* before the once-off removal of brokerage or 11.7% after brokerage is removed
- retain minimum and maximum premium rates
- the *recommended minimum premium* for a policy increases to \$55 (\$50) for householder policies and \$160 (\$155) for all other policies
- at 30 June 2000 *insurers reserves* are under-reserved by 1% compared to the actuarially assessed net central estimates, while last year they were 5% lower
- average declared *insurer reserves* to claim payments is 259% (264% last year). One current insurer has a ratio less than 160% and 2 had ratios greater than 320%
- declared *prudential margins* over net central estimates, in the range 0% to 25%, with an average prudential margin of 13.4% (9% last year). One large active insurer has a 0% prudential margin
- *insurer expense levels* vary between 11% and 29% of premiums, with an average of 14.2% (16.7% last year). Smaller insurers generally have higher expense rates.

10 Communication of Outcomes

The analyses and calculations made highlight the following:

- Gazette rates increase by 8.2% in aggregate or 11.7% including the once-off removal of the brokerage allowance
- the aggregate decrease allows for the impact of the October 1999 Act amendments based on the now somewhat more developed election option experience
- this greater development affords more reliance on the results emerging from the actuarial projection model compared to last 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 31/12/2000 are slightly favourable compared to expected
- to achieve more up-to-date premium rates, current market rates of interest at 31/1/2001 are adopted
- WA Treasury forward forecasts of WA wage inflation are adopted
- insurers are still discounting Gazette rates but at a much reduced level of 4.9%, down from 15.2% last year
- returned earned premiums for 1999/2000 indicate insurers may achieve a profitable position on the early uncertain estimates (83% estimated loss ratio, compared to a 90% target level)
- this means that to maintain reasonable profitability, premiums charged will need to stabilise or increase slightly relative to the new Gazette rates.