WorkCover Authority of NSW

Actuarial Review of the Outstanding Liabilities of the WorkCover Scheme Statutory Funds as at 30 June 2001

Volume I

26 September 2001

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26 September 2001

Mr Rod McInnes
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Level 11
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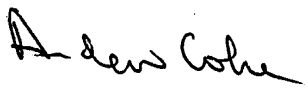
SYDNEY NSW 2000

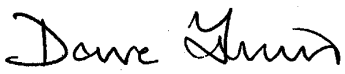
Dear Rod,

Please find enclosed our report on the valuation of the outstanding claims liabilities as of 30 June 2001 of WorkCover's Statutory Funds.

Yours sincerely,



Andrew Cohen



Dave Finnis

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1 PURPOSE AND SCOPE

1.1 Purpose

The WorkCover Authority of New South Wales ("WorkCover" or "The Authority") has engaged Tillinghast-Towers Perrin ("Tillinghast") to estimate the workers' compensation outstanding claims-related liability of the New South Wales WorkCover Statutory Funds Scheme ("the Scheme") as at 30 June 2001. This liability is incurred under the Workers Compensation Act 1987 ("the 1987 Act") and the various subsequent amendments to the legislation. It also takes into account changes due to the Workplace Injury Management and Workers Compensation Act 1998 (" the 1998 Act"). The estimated liability includes:

- future payments on, and costs of management of, claims with an injury date prior to 1 July 2001; less
- future recoveries on claims with an injury date prior to 1 July 2001.

(As part of our analysis, we have included an estimate of the outstanding liability incurred over the period 1 January 1987 to 30 June 1987, covered under the Scheme by the Interim Managed Fund.)

The main purpose of this report is to provide an estimate of outstanding claims suitable for inclusion in WorkCover's balance sheet and annual report as at 30 June 2001.

This document reports on our findings and discusses the approach, methodology and assumptions selected in relation to our estimates of the future payments and recoveries on claims incurred prior to 1 July 2001.

1.2 Scope

Tillinghast has been requested by WorkCover to estimate the outstanding claims liability (including the pre-WorkCover liabilities) of the Scheme on a half-yearly basis. This is the third time that Tillinghast has performed such a valuation for the Authority. Our report "Actuarial Review of the Outstanding Liabilities of the WorkCover Scheme Statutory Funds as at 31 December 2000", dated 8 May 2001, ("the December 2000 report") contains the results of our previous analysis of the Scheme's outstanding claims liabilities under our current contract.

The scope of our analysis is set out in the contract between Tillinghast and WorkCover and, for the June 2001 valuation, is limited to the valuation of outstanding claims liabilities as at 30 June 2001. It should be noted that we have relied heavily on our investigations into the Scheme's outstanding liability as at 31 December 2000 during this review. In this context, although thorough independent analysis of the data has been carried out in respect of all major areas of the liability, we have not performed as detailed an investigation as was carried out for the December 2000 review.

The quality and content of actuarial reports and advice on outstanding claims are governed by Professional Standard 300 ("PS300") issued by the Institute of Actuaries of Australia. Our investigations and advice are intended to comply fully with PS300, except that advice and investigations relating to the estimate of a prudential margin have not been undertaken. Our estimates do not contain any recommendation for a prudential margin to allow for uncertainty in claim estimates or the existence of future claim development, evidence of which does not exist in the claims experience. It is our understanding that the accounting policy of WorkCover is not to include such margins in claim provisions.

2 DISTRIBUTION AND USE

This report (including the appendices) is provided solely to WorkCover for internal use in relation to an estimate of the liability for workers' compensation claims outstanding as at 30 June 2001 and can only be relied on by WorkCover. It is not intended, nor necessarily suitable, for any other purpose.

We understand that WorkCover may wish to provide a copy of the report to the Audit Office of New South Wales. In addition, we understand that third parties may request a copy of the report under the Freedom of Information Act. Permission is hereby granted for such distribution on the condition that the entire report be distributed rather than any excerpt. Third parties should recognise that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data contained therein that would result in the creation of any duty or liability by Tillinghast to the third party. Any further distribution or reference to this document in any report, accounts, other form of publication or any verbal report is not authorised without our prior written consent. We cannot be held responsible for conclusions drawn from our reports by unauthorised third parties. Third parties, whether authorised or not, should place no reliance on this report that would create any duty or liability by Tillinghast to the third party.

Judgements about the conclusions drawn in this report should be made only after considering the report in its entirety, including references to previous reports.

Finally, we remain available to answer any questions that may arise regarding this report.

3 RELIANCES AND LIMITATIONS

In preparing this report, Tillinghast has relied on historical data and other quantitative and qualitative information supplied by WorkCover without audit or independent verification. We did, however, review this information for reasonableness and internal consistency, where possible. The accuracy of our results is dependent upon the accuracy and completeness of the underlying data. Therefore, any material discrepancies discovered in the data by WorkCover should be reported to us to enable this report to be amended accordingly.

There is a limitation upon the accuracy of the estimates in this report in that there is an inherent uncertainty in any estimate of outstanding claim liabilities. This is due to the fact that the ultimate liability for claims is subject to the outcome of events yet to occur. These include, but are not limited to, the likelihood of injured workers lodging claims under the Scheme, the amounts of compensation paid and the attitudes of claimants towards settlement of their claims. In our judgement, we have employed techniques and assumptions that are appropriate, and the conclusions presented herein are reasonable, given the information currently available. However, it should be recognised that future claim development is likely to deviate, perhaps materially, from our estimates.

The usual uncertainty associated with estimates of the liability for outstanding claims is magnified in this instance due to the implementation and consequent effects of a number of legislative changes over the life of the Scheme. Particular mention, in this regard, should be made of the recent increased focus on commutation of benefits as a means of settling claims and the increasing use of common law as an option for compensation of claimants.

Legislative changes have greatly affected the benefit structure of the Scheme over time. The actual impact on the Scheme of such legislative changes is often not as expected, and the future implications of such changes are difficult to model. We acknowledge that the current reform process, yet to be fully implemented, is again likely to change claim cost outcomes.

We have made no explicit allowance for the effect of any prospective changes to the Scheme structure. The precise detail of the reforms currently under discussion (including those proposed by the Sheahan inquiry) is yet to be determined (including

the date when they are likely to take effect). In our view, therefore, it would be somewhat speculative to factor such changes into the current valuation approach. We have constructed an actuarial model of the revised dispute resolution process and have provided estimates of the cost/saving implications of the Amendment Act passed in July 2001. We estimate that the effect of the reforms contained in this legislation, on the outstanding claim liability as at 30 June 2001, is relatively insignificant i.e. the reforms will have minimal retrospective effect. Also, no allowance has been made for any effect of the Sheahan recommendations at this stage. Past experience has shown that any such changes – even if they have no retrospective effect on benefit levels – do tend to have a financial effect on outstanding liabilities because of linked changes to the overall claim culture. This effect cannot, by definition, be estimated in advance of it taking place.

In stable circumstances, evidence from a period of development, such as is available since the start of the Scheme, would enable a reasonable level of confidence to be placed in our valuation projections. However, the continuing significant changes in claim culture and amending legislation have reduced the relevance of past experience in making our projections.

The workers' compensation class of business is a long-tailed class, since benefits are largely oriented to replacement of income and compensation for permanent impairment. In particular, the provision of ongoing weekly income replacement benefits and treatment costs (such as medical and rehabilitation costs) results in compensation being paid to claimants over periods of many years, perhaps 40 years or more following injury. As a result, the claims experience available to us for analysis, while it covers a period of 14 years, should be viewed as being of limited use. Estimates concerning the claim costs of individual development periods beyond the limits covered by the data, are largely an extrapolation of existing payment patterns and rely on some judgement.

4 SUMMARY OF RESULTS

4.1 Headlines

- The **estimated outstanding claims liability** as at 30 June 2001 is $8,284M - $650M higher than the December 2001 liability of $7,634M. Approximately $310M of the increase was anticipated by our December 2000 model, so that the underlying deterioration in the estimated outstanding liabilities is about $340M.

- Total **assets** in the Scheme as at 30 June 2001 are $6,443M - almost $440M lower than the $6,881M in assets held as at 31 December 2000. Approximately $240M of the reduction in assets was anticipated by our December 2000 model, so that the underlying reduction in assets is about $200M.

- The **estimated deficit** in the Scheme as at 30 June 2001 is $2,756M – i.e. $577M higher than the December 2000 deficit of $2,179M. Although some deterioration in the deficit would have been expected, the increase in the deficit is $522M more than projected in our December review.

- The Scheme's funding ratio at 30 June 2001 is 70%, compared to 76% at 31 December 2000.

- The key components of the increase in the deficit can be broadly categorised in terms of a balance sheet at 30 June 2001, as being $340M claims liability-related and $200M asset-related. (Other balance sheet items have also had a minor effect on the deficit.)

4.2 Outstanding Claims Liability Estimates

The underlying deterioration, since December 2000, in the outstanding claims liabilities is approximately $340M. The main components of this deterioration (to the nearest $5M) are set out in Table 4.1:

TABLE 4.1

Contribution to Deterioration in June 2001 Outstanding Claims Liability

	Deterioration $M	Improvement $M	Total $M
Common law activity	(235)		
Commutation numbers	(115)		
Legal costs	(65)		
Claim handling expenses	(55)		
NTS/GST	(30)		
Recoveries	(30)		
Other	(20)		
Discount rate		130	
Weekly		50	
Permanent injury		30	
Total	(550)	210	(340)

The main drivers of the increase in the liability are the strengthening of the common law liability and the commutation liability estimates by $235M and $115M respectively.

Further detail is provided in subsequent sections of this report. However, the main reasons for the strengthening of the liabilities for these benefit types is as follows:

- A 35% per annum historical underlying growth rate in common law numbers has been fully recognised in our model. This growth rate is net of the observed acceleration in reporting of common law claims (due, we assume, to the uncertainties surrounding future access to common law);
- An increase in the number of future commutations, based on an observed increase in commutation settlements over the last 6 months (in contrast to an expected decrease in settlements).

4.3 Asset-related Effects

Although, typically, WorkCover's balance sheet exhibits a reduction in asset levels between December and June balance dates (mainly related to the unbalanced "flow" of unearned premiums into assets), these levels have reduced by around $200M in addition to our expectations.

We understand that the return on assets available for investment was broadly in line with our risk-free expectations. Therefore, the reduction in assets below the level expected is linked to cashflow issues. The main causes of this effect are as follows:

- Claims payments were $120M more than predicted by our December 2000 model;
- Premium income was $80M less than predicted by our December 2000 model (largely due to seasonal influences in the premium collection not captured by our model).

4.4 Summary of Outstanding Claims Estimates as at 30 June 2001

Our estimates of outstanding liability for claims incurred on or before 30 June 2001 are set out in Table 4.2. For comparison purposes, our estimates of the outstanding liability as at 31 December 2000 are also shown.

The overall estimate is a central estimate in the sense that there is, in our view, a probability of around 50% that an amount equal to the estimate will prove to be at least sufficient to meet the liability for outstanding claims. In other words, our assumptions have been selected to yield estimates not knowingly above or below the ultimate discounted cost of liabilities. Our estimates include allowance for:

- Future inflation and investment return on an asset base sufficient to fully fund the liabilities (as per the appropriate accounting standard, AAS 26);
- Future expected recoveries; and
- Future claims handling expenses.

TABLE 4.2

Estimate of Discounted Outstanding Liability as at 30 June 2001[1]

Benefit type	Current estimate (based on June 2001 data)	Previous estimate (based on December 2000 data)
	$M	**$M**
Commutations	1,754	1,684
Weekly	950	1,016
Common Law (incl. Plaintiff legal costs)	2,259	1,887
Legal costs	1,606	1,474
Permanent Injury / Pain and Suffering	488	486
Medical	471	467
Investigation	306	279
Rehabilitation	77	71
Death	66	68
Other Payments	31	32
Pre-WorkCover Liability	3	3
Total Gross Outstanding Claims	**8,010**	**7,467**
$500 Excess Recoveries	(8)	(9)
Other Recoveries	(277)	(288)
Total Net Outstanding Claims	**7,725**	**7,170**
GST/NTS-Related Effects	269	233
Claims Handling Expenses	290	231
Total Outstanding Claims Provision	**8,284**	**7,634**

[1] Totals may not add due to rounding

The difference between our current and previous estimates is $650M. Approximately $314M of this increase was anticipated by our December 2000 model and arises mainly because of the addition of new exposures from the last 2 accident quarters, and because claims costs are discounted to 30 June 2001 rather than 31 December 2000.

The remaining $336M represents a deterioration in the liability. The main drivers of this deterioration are as follows:

- We have increased our estimates of the outstanding claims liabilities for common law, particularly for the more recent accident periods. In particular, an estimated 35% per annum underlying growth in common law numbers has been recognised as a trend in the data - hence creating an expectation for significantly increased ultimate common law claim numbers in recent accident periods.

  The resultant increase in common law liabilities is around $235M.

- The estimated liability for commutations has been increased by $113M. Increases in the numbers of commutation settlements over the last 6 months have led us to strengthen our model, mainly by delaying the assumed point in time at which the number of commutations is expected to decrease, and by increasing the levels at which commutation numbers will peak.

- Offsetting the above increases, to some extent, is a reduction in weekly (and related benefits) and permanent injury benefits. Our estimates of weekly and permanent injury liabilities are $80M lower than expected. The extent of this offsetting effect suggests it is less apparent that commutations are delivering savings. It is, nevertheless, difficult to determine the extent to which weekly and permanent impairment benefits have reduced **purely** as a result of the increase in common law and commutations, as other factors also influence the liability estimate. For example, for weekly benefits, we have strengthened the continuance rates implicitly assumed at long durations for weekly claimants, in line with comparisons of emerging experience with our December 2000 model.

- The estimated liability for legal expenses has increased by $63M. This effectively reverses the decrease in the liability estimated at December 2000 and reflects the significant increase in legal costs payments over the last 6 months (albeit relative to what turned out to be an unusually low level of payments over the 6 months to December 2000).

- The change in economic assumptions (driven by an increase in bond yields) has increased the “real yield” (the gap between the discount rate and the inflation rate) by 0.5% p.a. This is quantified as a reduction in the outstanding liability estimate of around $130M.

- We have increased the allowance for claim handling expenses from 3.0% to 3.5% of gross outstanding claims. This is quantified as an increase in the outstanding liability estimate of $53M.

- The outstanding claims liability estimate related to NTS/GST effects is $29M higher than expected, due to the changing mix of benefits (particularly the greater focus on common law).

- Various other changes to the assumptions we have selected, in total, account for the remaining $53M increase in estimates. This includes a $28M reduction in our estimates of recoveries.

4.5 Estimate of Scheme Deficit as at 30 June 2001

Based on our estimates set out in Table 4.1 and unaudited accounts figures provided to us by WorkCover, the deficit in the Scheme as at 30 June 2001 can be estimated. Table 4.3 sets out the calculations.

TABLE 4.3

Estimated Deficit at 30 June 2001 [1,2]

	$M
Investments	5,865
Claims recoveries[3]	294
Other Assets	285
Total Assets	**6,443**
Gross Outstanding Claims[4]	8,578
Unearned Premiums Provision	378
Unexpired Risk Provision	53
Other Liabilities	190
Total Liabilities	**9,199**
Deficit	**(2,756)**

[1] Consistent with WorkCover draft June 2001 balance sheet provided 18 September 2001.
[2] Totals may not add due to rounding.
[3] Includes GST/NTS related effects of $9M.
[4] Includes GST/NTS related effects ($278M) plus allowance for claims handling expenses ($290M).

The deficit of $2,756M shown in Table 4.3 is just over $520M higher than the projected deficit at 30 June 2001 from our December 2000 model (see Table 10.5 of our December 2000 report). The difference between the two estimates can be explained broadly as follows:

- The estimate of the total outstanding claims liability is $340M higher than expected (refer to more detailed breakdown in Section 4.2);
- The level of total assets is $200M less than expected (the main drivers being: claims payments of $120M greater than expected, and premium collections over the last 6 months $80M less than predicted by our December 2000 model);
- Other balance sheet factors have reduced the deficit by about $20M.

The funding ratio (defined as total Scheme assets divided by total Scheme liabilities) is 70%, compared to 80% at the June 2000 valuation, 76% at the December 2000 valuation and 75% projected for June 2001 using our December 2000 model.

4.6 Estimated Effects of the Reform Package

The proposed reforms are set out in Workers Compensation Legislation Amendments Act (No.2). The full implementation details of these reforms are yet to be determined. We estimate that the effect of the reforms contained in this legislation, on the outstanding claim liability as at June 2001, is relatively insignificant i.e. the reforms will have minimal retrospective effect. Therefore, we have not made any explicit allowance for these amendments.

A report on the Sheahan Inquiry into Common Law, which proposed a number of changes to access to common law, has only recently been published. At this stage, the New South Wales government has not commented on the report and no details of any amending legislation are available to quantify the effects on the outstanding claim liability of the proposals made by Justice Terry Sheahan. We have therefore made no allowance for any such effects in this valuation review.

4.7 "Breakeven" Premium Rate for 2001/2002

We estimate the Scheme breakeven premium rate for the Policy Renewal Year ("PRY") 2001/2002 to be as follows (equivalent *targeted* figures for the 2001/2002 PRY are included for comparison):

- 3.05% of wages, net of any GST - related adjustment (2.80% targeted);
- 3.13% of wages, inclusive of the GST-related effect on underlying claims costs (2.87% targeted); and
- 3.45% of wages, inclusive of the 10% GST (3.15% targeted).

The estimated ultimate wageroll for 2001/2002 is $80.8bn. Hence, we estimate premiums required to meet the costs of claims and expenses in 2001/2002 would be $2,535M (excluding GST).

If we assume the ultimate premium rate including NTS/GST – related effects collected is 2.76% (equivalent to our estimate for 2000/2001) then our estimate of the ultimate premiums expected to be collected for 2001/2002 is $2,230M. Hence, our estimate of premiums expected to be collected would be $305M, less than required to fund the cost of claims incurred in 2001/2002.

Table 4.4 provides a comparison of estimated historical "breakeven" and estimated collected premium rates. To enable comparisons with prior years, the estimates of premiums for the 2000/2001 PRY and outstanding claims liabilities for all years do not include any loading for NTS/GST-related effects.

TABLE 4.4

Comparison of Estimated Breakeven and Collected Premium Rates (excluding NTS/GST – related effects)

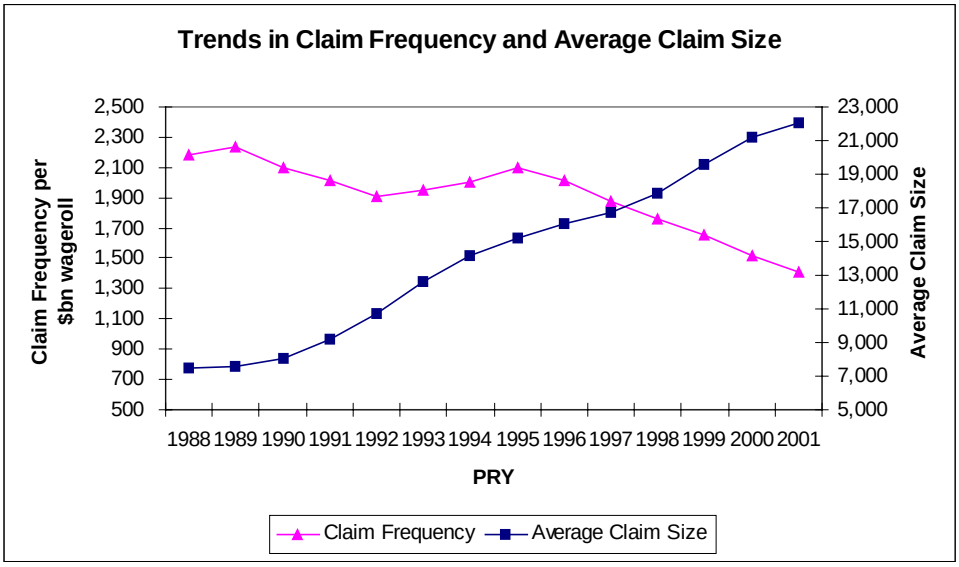
Policy Renewal Year	Breakeven Rate (% of wageroll)	Collected Rate (% of wageroll)
1987/88	1.75	2.47
1988/89	1.76	2.45
1989/90	1.76	2.24
1990/91	1.90	1.92
1991/92	2.14	1.71
1992/93	2.62	1.73
1993/94	3.01	1.83
1994/95	3.22	1.95
1995/96	3.25	2.43
1996/97	3.15	2.66
1997/98	3.16	2.76
1998/99	3.23	2.85
1999/00	3.21	2.75
2000/01	3.06	2.70 [1]

[1] 2.76% rate including effects of NTS/GST

The estimated breakeven premium rate for PRY 2000/2001 is almost 5% below the rate for 1999/2000. This is consistent with the significant reduction in estimated claim frequency for 2000/2001.

In graph 4.1 we have set out our estimates of claim frequency and average claim size by PRY. It can be seen that despite a downward trend in claim frequency, the trends in average claim size are upward. The two trends offset each other to a large extent, with the result that estimated breakeven premium rates in recent years have shown no obvious upward or downward trend.

Graph 4.1



5 SCHEME BACKGROUND AND HISTORY

5.1 Introduction

An understanding of the changing structure of the WorkCover Scheme, and details of financial progress to date provides more than a broad background to our actuarial valuation. The information such an understanding brings assists in the choice of methodologies and assumptions and, in extreme cases, can cause amendment to the overall actuarial approach. In more practical terms, the actuarial valuation estimate is reliant on judgement of the relevance of information emerging on trends and discontinuities in claim costs and frequency from an objective review of the experience data. Such judgement is assisted greatly by connecting observations from data analysis with key changes in the Scheme structure, based on benefit level changes, precedents in claim settlement and other ongoing amendments.

5.2 Scheme Philosophy

The Scheme was established on 30 June 1987 and the initial structure was largely based on a need to provide a fair, efficient and reliable benefit delivery to workers in New South Wales, with strong reliance on a package of statutory benefits with the main focus on regular payment of income replacement. It could be argued that this philosophy remains, despite the rationale for such a system – largely a rapid deterioration in claims experience from the previous Scheme-being less relevant. Nevertheless, over time the strong focus on regular income replacement benefit has gradually eased, first with an expanding use of lump sums through the commutation option provided by the Scheme (and extended significantly in 1998) and, more recently, the growth in common law usage, a benefit route that was reintroduced in a limited form in February 1990) and which now forms an increasingly significant part of the Scheme's benefit alternatives.

From an actuarial perspective, this situation is manageable, if difficult to model. The elements of gradual change enable past experience to be used to provide guidance as to future claim settlement experience for outstanding claims. The most difficult uncertainties to isolate and examine are the quantification of interactions between benefit types (given the gradually changing usage) and the need to project an end to claim cost trends driven by the changes in benefit delivery to injured workers. This modelling conundrum is further complicated by the regular attempts by controllers of the Scheme (i.e. largely Government) to "nudge", or sometimes "shove", the Scheme in

the required direction to maintain, or more recently try to achieve, an acceptable level of financial control.

5.3 Eligibility and Coverage

There have been no significant "one off" changes to eligibility under the scheme. The definition of "worker" has remained reasonably constant, with some clarification on peripheral issues (e.g. "deemed worker" status). The increasing exposure to casual and part-time working has certainly changed claim culture and patterns, but for modelling purposes this can be assumed gradual, and hence incorporated in other business trends.

Scheme coverage has varied in a number of minor respects (from an overall perspective). A constant dollar claims excess of the first $500 of the first weekly benefit has declined in value in real terms over the Scheme's history. Interpretation of valid claims in certain areas, perhaps most prominently in respect of hearing loss, has also changed over time. In the case of hearing loss claims, this change has resulted in the introduction of more restrictive qualification criteria, most notably in 1995 (introduction of a 6% threshold).

Claims related to journeys to and from work have also been subject to differing levels of eligibility over the years. Limitations were introduced in 1990 and claims involving the fault of the worker were excluded from 1990 until 1997.

In general terms, no substantial adjustments are needed to the actuarial approach. We have responded to the significant issues discussed above by including separate analysis of hearing loss.

5.4 Benefits

There have been some significant changes in the levels of statutory benefits and in access to common law over the Scheme's history. Changes prior to the mid-1990s are of limited relevance to the actuarial approach because of our need to concentrate on relevant experience for input to the models. Nevertheless some of the changes in the earlier years are still of importance in determining our view of the "tail" of claim development under the Scheme because of their influence in claim culture.

5.4.1 Statutory Benefits

Weekly

Initial weekly benefits for income replacement under the Scheme are based on pre-injury average earnings (subject to a maximum amount) for total incapacity for work during the first 26 weeks of such incapacity (under s.36). This has remained a constant feature over the Scheme's history. Benefits for total incapacity beyond the 26 week period (s.37) were originally based on the lower of 90% of pre-injury weekly earnings and an award rate (increased according to the number of dependants). Since the latter of these two measures was low in comparison to average wages, and hence tended to be the base benefit in most cases, claimants tended to suffer a major reduction in benefits after 26 weeks. In 1992, the post-26 week benefit level was increased by 20% to address this issue. However, the change appears to have had the effect of substantially increasing benefit continuance at the same time – a key factor for determination of tail liability. Subsequently, this post-26 week benefit level has broadly kept pace with average wage growth less a small margin (although since 1997, indexation has been based on a Wage Cost Index rather than Award Rates of Pay growth).

Partially incapacitated claimants are compensated according to the difference between post-injury and relevant earnings based on pre-injury remuneration, again subject to a maximum. Perhaps not surprisingly this definition appears to have been subject to changing interpretation, especially as the definition of post-injury earnings also includes earnings the workers "would be able to earn" if not actually in paid employment. Over the years, there have been numerous attempts to clarify interpretation. However, we believe that, from an actuarial standpoint, it is reasonable to assume such change is represented by a gradual underlying trend in benefit use. An exception to the partial incapacity payment is provided by Section 38, which allows the equivalent of total incapacity payments to be made to workers "taking reasonable steps to obtain suitable employment" (including certain rehabilitation training). In 1998 the maximum period for which s38 payments could be made was reduced from 104 weeks to 52 weeks. Another potentially important addition to the underlying legislation in 1998 was re-wording of Section 52A, which allows for discontinuance of partial incapacity payments after 104 weeks in certain circumstances. At this stage, based on comparison of claim continuance before and after the change, our view is that s52A has had a minimal effect

on claim continuance rates and, hence, has not been included as a specific "one-off" adjustment in our model or choice of assumptions.

Overall, the model we have designed for weekly benefits allows for gradual trends caused by changing interpretations of benefit eligibility or external environment issues, together with an ability to take account of once-off changes, caused in the main by legislative amendments. Importantly, it also allows for interactions between weekly benefits and other "competing" benefits such as commutations and common law.

Permanent Injury Lump Sum

Lump sum amounts under Section S66 have been defined under the incorporated "Table of Maims". Generally the structure and relative payments for injuries defined in this table have stayed reasonably constant (awards being made as a percentage of the "maximum amount") although, over time, improved definition of eligible injuries has tended to increase those injuries specified in the table. The maximum amount has largely followed inflationary pressure exerted by the Scheme environment, but there are two important exceptions. The first occurred in 1992, when the maximum amount increased by 25% in addition to normal inflation. The second adjustment occurred in 1997 (effective from January 1997) the maximum amount was reduced by 20%, hence returning it in real terms, in theory, to pre 1992 levels.

These specific changes need also to be assessed in an environment of increasing utilisation of the benefit over the history of the Scheme. This increased utilisation is related partly to specific changes in interpretation (such as the hearing loss claims, to which we refer earlier) but also appear to include a general extension to the interpretation of "permanent injury".

In 1996, following the introduction of the Health and Other Services (Compensation) Act 1995, a hiatus in the payment of these benefits also occurred due to the introduction of procedures for settling claims which needed to meet Health Insurance Commission requirements.

The actuarial approach is couched in a simple framework to estimate frequency and average cost of claims emerging from each accident year.

Pain and Suffering Lump Sum

The payment for additional pain and suffering on permanent injuries under s67, when introduced, was a novel constituent of workers' compensation schemes in Australia. In hindsight, it is not surprising perhaps, that utilisation of this benefit grew rapidly during the formative years of the Scheme.

The link to s66 benefits is continued through the 1992 and 1996 adjustments, discussed in the previous section. Our actuarial approach is consequently very similar to that used for Permanent Injury benefit, with allowance for the threshold (10% of the maximum amount under s66). Early development, which showed significant differences between development of s66 and s67 benefit (related to the s67 "novelty effect") are now less apparent, and such an approach is, we believe, reasonable.

Death Benefits

Benefits available upon death of a worker include an indexed lump sum and regular payments to any dependants (as well as funeral costs if no dependants exist). The make-up of this benefit has remained largely untouched throughout the Scheme's history.

Death benefits are a relatively minor element of the actuarial valuation and the valuation model is based largely on past patterns of development.

Commutation

Commutation of weekly benefits under Section 51 has been part of the Scheme's benefit structure throughout. However, usage of the benefit has fluctuated considerably over the course of the Scheme's history, making modelling of outstanding liabilities a very difficult actuarial problem.

Essentially, we believe that in the Scheme's early years the benefit was used largely as an efficiency measure to reduce expenses to the Scheme resulting from payment of small weekly amounts to certain claimants. During the 1990's, commutations were gradually used more in an attempt to fill the increased demand for an overall lump sum settlement, effectively using a broader interpretation of eligibility for the benefit to achieve this. There is also evidence that commutation of other types of benefit is implicit in some claim settlements.

In 1998, the legislation was amended to encourage the use of commutation benefits for a broader range of claimants.

Our actuarial models and assumptions are focussed heavily on experience since the 1998 changes and continuing relevance of the benefit as a "tool" for insurers' tail management activity.

5.4.2 Common Law Benefits

The introduction of the WorkCover Scheme in 1987 coincided with the total removal of access to common law for settlement of claims related to work injuries in New South Wales. Limited common law remedies were reintroduced on an elective basis in 1990, but applied to serious injuries only (defined as injuries that would attract greater than or equal to 33% of the maximum amount under s66 – for economic loss awards and a significant sum – originally $67,800 – for non-economic loss). Access was broadened in 1991 by reducing the definition of serious injury (25% of maximum amount for economic loss, $48,000 for non-economic loss).

Despite the renewed access, common law was used sparingly under the Scheme until recent years, during which, the number of settlements, and actions commenced and expected has increased at an accelerating rate.

The actuarial model needs to allow for this growth, but also to take into account the interaction between common law and statutory benefit for workers. Essentially, in order to focus on the outstanding costs for the Scheme this needs analysis of the respective costs of common law and statutory benefits provision for an injured worker with a given set of characteristics.

Our approach to the valuation of common law benefits costs outstanding is to project the likely number of cases, make allowance for expected zero settlements, and then apply an average cost to each of the outstanding claims. At the same time, of course, an appropriate reduction to statutory benefit costs is made for any perceived increase in the utilisation of common law.

It should be noted that various aspects of common law access and process are currently under review following the report of the Sheahan Committee in August 2001.

5.4.3 Treatment Costs

The WorkCover Scheme has always included allowance for the costs of reasonable medical and other relevant treatment of workers' injuries, together with allowance for a range of rehabilitative costs. Over the years there has been evidence of varying levels in the efficiency of delivery of such support to injured workers and some "fine tuning" of the legislation has been consistent with this effect.

Our actuarial view is that the most stable, and hence reliable, way of modelling treatment costs is to relate them as closely as possible to the payment of associated benefits to workers, since this is clearly the case in practice.

5.4.4 Other Costs

Other costs in the Scheme benefit structure mainly relate to the clarification of appropriate benefits and settlement of disputes. There has been an increasing level of dispute over the Scheme history, linked to an extent in recent years at least, to the increasing use of lump sum instruments for settlement, but also related to the increased awareness of available benefits under the Scheme. Our attempts to model legal and investigation costs recognise past patterns of development but also are linked with activity in apparent areas of greater dispute. (For instance, increasing utilisation of common law is closely linked to increasing legal costs.)

5.4.5 Recoveries

The WorkCover Authority makes a substantial level of claim recoveries in comparison to other similar schemes. In terms of outstanding claims, the first $500 recovery from the employer is a minor element. However, there are significant savings to the Scheme through shared claim and other recoveries in respect of motor vehicle injuries (through the Motor Accidents Authority Scheme) and also public liability coverages.

Our approach is to assume continuation of the level and pattern of recoveries inherent in past experience.

5.5 Other Recent Historical Issues

Over recent years, two issues in particular have increased the level of uncertainty implicit in the actuarial valuation, already a significant issue due to the effect of cultural and

other external influences on the application and use of the Scheme. The first of these is the increased use of incentives to encourage the Scheme's licensed insurers to improve claim management, and injury management in particular.

Clearly the focus of such schemes and their likely levels of success are key drivers of the outstanding claim liability estimate. WorkCover is in the process of initiating a new package of incentives, to replace the existing range, which will understandably create a different focus – and hence change the claim payment patterns with its inevitable impact on the uncertainty surrounding our models and assumptions.

Our limited analysis of the existing tail and injury management measures to date leads us to the belief that there has been a significant effect due to their introduction. Our actuarial models implicitly allow for continuation of this effect at similar levels and with focus on similar areas of the Scheme. If this equilibrium were to be disturbed by a significant change in the use of incentives, our estimates would also be affected.

The second issue, is the increased focus on the Scheme in general over recent years by participants and other interested parties, including Government. Evidence of this comes from a number of reports and other activities such as the Cost of Government report, the Grellman Inquiry and the subsequent appointment of an Advisory Council (to allow for representation of Scheme participants). Such a change offers the opportunity for increased awareness (and hence utilisation) of benefits under the Scheme for injured workers and also easier communication of more efficient injury prevention and injury management activity. Whereas evidence, at this stage, would appear to be difficult to confirm both effects, this does not preclude such evidence emerging in the future. At this stage, our valuation makes no allowance for any such effects.

A third recent issue is becoming increasingly important to our view of Scheme liabilities. The legislative reform process has gathered strength over 2001. An initial bill ("Bill 1") was drafted in March 2001 to address the excessive levels of dispute in the Scheme and introducing the concept of a more objective definition of permanent impairment (based on the American Medical Association Guides). Following subsequent negotiations a revised bill ("Bill 2") was passed in July 2001, containing a modified approach to handling of disputes in the Scheme but excluding changes to common law access contained in Bill 1.

More recently the Sheahan Committee (see above) has reported to the State Government on recommendations for changes, to common law access and processing in particular, which have yet to be implemented.

6 DATA

For the purpose of estimating the liability for claims outstanding as at 30 June 2001 we were provided with the following data:

- 2 claims data files, extracted from WorkCover's mainframe data systems, providing transaction details of each claim received by WorkCover for the history of the Scheme to 30 June 2001. These files contained, inter alia, claims information relating to payments and case estimates for each benefit type;
- Policy files, extracted from WorkCover's mainframe, containing data relating to premium and insured wageroll by policy renewal month;
- The "Common Law Register", provided in Excel format by WorkCover, containing information relating to each common law claim advised to WorkCover;
- A reconciliation, by insurer, of claim payments and case estimates as at 31 March 2001 on the mainframe and as per WorkCover's accounts department. This reconciliation was provided to us on 17 August 2001.

Other qualitative information, particularly relating to recent development of common law claims, has been obtained from discussions with WorkCover officers, Licensed Insurers and other Scheme participants with the aim of enhancing our knowledge and operation of the Scheme.

We have examined the data provided for internal consistency by comparing with the data used at the previous valuation, and with the summarised data provided to us by WorkCover for quarterly monitoring purposes. Generally, the degree of consistency was good.

The reconciliation of claim payments and case estimates by insurer was in aggregate very good, although there were some compensating variations between insurers.

7 METHODOLOGY AND ASSUMPTIONS

7.1 Overview of Approach

This section describes the approach taken to modelling each benefit type and the assumptions selected.

We have based our initial modelling approach on our generic Australian workers' compensation models which are used for valuation of the liabilities of other workers' compensation schemes. These models have been adjusted as necessary to take account of the structure of benefits in New South Wales and the format of the data provided.

Claim costs have been modelled separately by benefit type, by sex and by accident period, since these divisions represent, in our view, the most logical breakdowns of the claims experience from a compensation perspective, and the most clearly defined splits of claim cost for our modelling approach.

We have modelled weekly benefits, and a number of other benefits associated with the payment of weekly benefits, with a Payments Per Active Claim ("PPAC") method.

Under the PPAC method, the number of active weekly claims at future points in time is estimated. When combined with estimates of the average benefit paid to each active claimant, an estimate of future payments can be determined. The following benefit types have been modelled in this way:

- Weekly;
- Medical;
- Rehabilitation;
- Investigation; and
- Other payments (including transport and maintenance, interpreter services and shared claims).

Lump sum benefits have been modelled individually, and further detail is given in the relevant parts of this Section. However, in broad terms, these benefits have been valued by estimating the number of claims to receive a lump sum payment subsequent to the

valuation date and the average settlement cost of these claims. This general approach has been adopted for the following benefit types:-

- Commutations;
- Common Law (including plaintiff legal costs); and
- Permanent Injury and associated Pain and Suffering benefits (sections 66 and 67 respectively).

The remaining benefit types have been modelled with a Payments per Claim Incurred ("PPCI") method.

Under the PPCI method, estimates of future payments are based on an estimate of the ultimate number of total claims for each accident period, combined with estimates of average payment amounts (expressed relative to ultimate claim numbers). The benefit types modelled with this method are:-

- Legal costs;
- Death;
- Recoveries of the first $500 of benefits; and
- Other recoveries (principally in respect of shared claims).

A small amount of liability remains outstanding in respect of claims incurred prior to the commencement of the Scheme (1 January 1987 to 30 June 1987). These liabilities have been modelled using the projected case estimate ("PCE") method.

The weekly (and weekly-related), permanent impairment, common law and commutation models interact with each other to allow for the perceived substitution effects between these benefit types.

7.2 Claim Numbers

We have analysed the number of claims (excluding hearing loss claims) reported by accident quarter and development quarter for Scheme experience to 30 June 2001, separately for male and female claimants.

These numbers were expressed in the form of "development factors" by development quarter for each accident quarter. Development factors are calculated as the cumulative number of claims reported up to and including a development quarter divided by the cumulative number of claims reported up to and including the previous development quarter.

The factors for similar periods of development were then compared and examined for significant trends over time. The factors for the model used to estimate IBNR claims were derived from this process and, to a large extent, reflect the claims experience in the twelve months to June 2001.

At later development periods, where relevant past experience is sparse and hence volatile, we have fitted a curve to select a series of smoothed development factors.

We have noted that the number of claims reported by accident quarter changes retrospectively at each valuation date, particularly in relation to the more recent injury quarters. We understand that these adjustments reflect the removal from the dataset of claims which have been closed at no cost to the Scheme ("nil claims"). We have made an allowance in our projections, based on analysis of the extent of these adjustments over recent years.

The ultimate number of hearing loss claims has been separately estimated after analysis of recent experience of the number of such claims reported.

Based on this analysis, we have assumed that the total number of future (non-zero) hearing loss claims reported per quarter will be:-

- 590 for males; and
- 43 for females.

In comparison to our December 2000 model, these assumptions reflect a minor reduction for males but no change for females.

These claims have been allocated to accident periods based on past patterns of the distribution of reported hearing loss claims by accident quarter. Adjustments for the removal of nil claims in the historical data have been made, based on an analysis similar to that carried out for non-hearing loss claims.

7.3 Weekly Benefits

Our estimate of future payments for weekly claimants is based on the estimated size of the pool of active claimants at the end of each future quarter multiplied by the average payments paid to these active claimants during each quarter.

In simple terms, the model can be represented as follows:-

Number of Active Claims	*	Average Weekly Benefit Paid	*	Number of Weeks Benefit Paid per Active Claim

Consistent with the varying treatment under the 1987 Act, we have broken down weekly benefits into four types of claimant:-

- Weekly benefits in the first 26 weeks of permanent incapacity;
- Weekly benefits in respect of permanent incapacity greater than 26 weeks;
- Section 38 benefits (payments to partially incapacitated workers who are unemployed but seeking suitable employment and/or undergoing approved rehabilitation); and
- Section 40 benefits (payments to workers during any period of partial incapacity for work).

7.3.1 Pool of Active Weekly Claims

At any quarter-end date, we have defined the pool of active claimants as those claimants who satisfy all of the following conditions:-

- Those who have received a weekly benefit within the previous 3 months (consistent with our definition used for other workers' compensation schemes);
- Those who have not received a common law payment; and
- Those who have never received a commutation payment.

This definition therefore assumes that claimants who settle their claims through the commutation process or under common law will quickly cease to become active weekly claimants.

The future pool of active weekly claims is estimated from the current weekly pool, after allowance for reductions to the pool due to the following causes:-

- Commutation settlement;
- Common law settlement;
- Transfer to the pool of inactive weekly claimants; and
- Other causes (notably return to work, death and retirement).

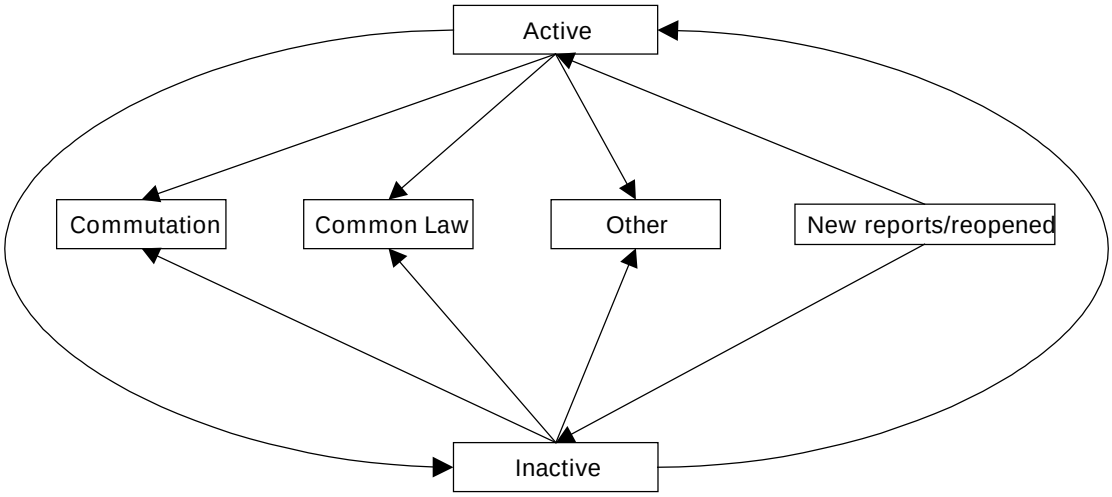
In addition, the pool is increased due to:-

- The reporting of new claims;
- The reopening of closed claims; and
- Transfers from the pool of inactive weekly claimants.

An inactive weekly claimant is defined as a claimant who has not received a weekly benefit within the previous 3 months but who, as at the valuation date, has a non-zero weekly case estimate.

The pool of inactive weekly claims is assumed to be subject to similar influences as active claims – namely, settlement through common law or commutation, movements to the active pool, new reports or reopened claims and reductions due to other causes.

The following diagram shows the possible movements described above.



In order to estimate the number of active claims at each future point in time we have selected rates of decrement (or increment in the case of reopened and reported claims) from the active pool, based on analysis of recent experience. In particular, we have considered the experience of the last 4 quarters. As a result, the effects of the 1998 amendments to the Act, to the extent that they are present in experience over the last 12 months, have been reflected in our assumptions. In addition, the increased use of common law and commutations as a method of settling claims is reflected in higher decrements in the weekly model and hence a smaller pool of active weekly claimants.

Decrements from, and increments to, the inactive pool have been modelled in a similar manner.

7.3.2 Weekly Payment per Active Claim ("PPAC")

There are two components to the PPAC in each quarterly period for each active claim:-

- the average benefit rate per week of benefit paid; and
- the number of weeks of benefit paid per active claimant.

The average weekly benefit has been selected separately for the four weekly benefit types. Our assumptions are based on experience over the last 4 quarters. For the later periods of development, where experience is volatile or not available, we have fitted a smoothed set of benefit rates.

As an example, Table 7.1 sets out our assumptions at various points of development for accidents occurring during accident year 2000/2001, for male claimants.

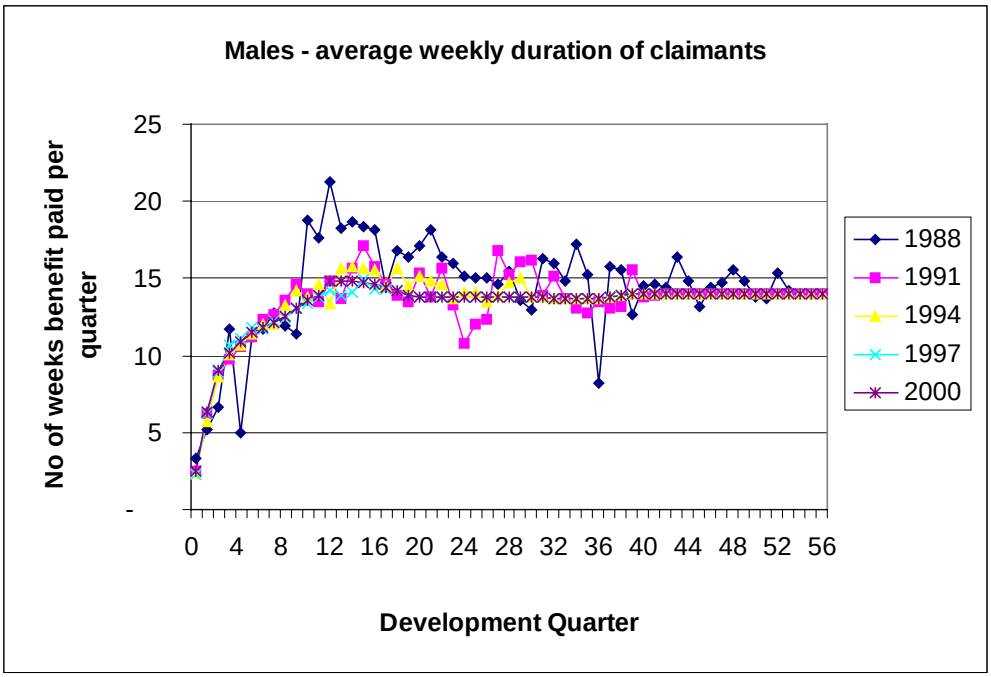
TABLE 7.1

Average Weekly Benefit Rates ($) – Male Claimants (in June 2001 Dollars)

Benefit Type	Development Quarter				
	0	4	8	20	40
< 26 weeks	536	535	533	532	532
> 26 weeks	0	359	358	349	325
s38	578	495	440	406	406
s40	396	334	296	251	196

The average number of weeks benefit paid to each active claimant varies according to the duration of the claim. As experience from an accident period develops over time the remaining active claimants are likely to be the more seriously injured, with an increasing concentration of claimants permanently receiving benefit. For example, 10 years after the date of injury we would expect the number of weeks benefit paid in a quarter to be close to 13 weeks. This can clearly be seen in the data, and has been recognised in the assumptions selected. Graph 7.1 shows the number of weeks of benefit paid per active claimant in each development quarter for various accident periods. Note that accidents occurring in accident year 1987/1988 are now up to 14 years developed, and the graph shows mostly actual historical experience for this accident year.

Graph 7.1



7.4 Commutations

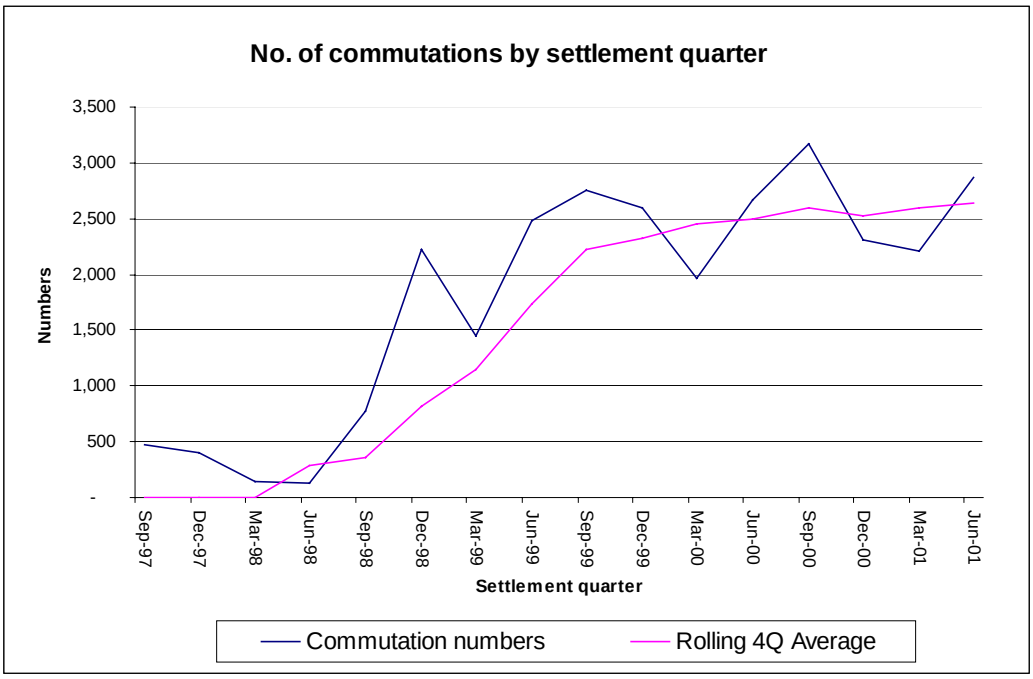
We have modelled the cost of future commutations by estimating:-

- the number of commutation settlements made at each future point in time; and
- the average cost of each commutation at the point of settlement, implicitly by type of commutation.

Historically, 90% of commutation settlements are made with a single payment. However, 10% of settlements have involved between 2 and 4 separate payments. For the purposes of our analysis, we have defined the settlement date for a commutation as the date of the earliest commutation payment.

Following legislative amendments in 1998, restrictions on eligibility for commutations were effectively removed. We understand that insurers have been actively settling claims through the commutation process to assist in the management of the cost of the tail of the Scheme. Graph 7.2 shows the number of commutation claims over recent quarterly periods and clearly shows the increase in activity following the legislative changes.

Graph 7.2



After a significant increase in activity immediately following the legislative change, there are clear indications that the rate of increase has slowed. However, it remains unclear as to whether or not the level of commutation activity has yet reached a plateau. Historical experience over the 2 years to December 2000 suggested that the number of commutations was stabilising at around 10,000 commutations per year. However, settlement experience over the last 6 months suggests a slight increase in activity above this level. We have altered our models accordingly by assuming a higher base level of commutation settlements. We have also, yet again, delayed (by 6 months) the point in

the future at which commutation activity is expected to decline. As we have mentioned in previous reports, there continues to be significant uncertainty in the future course of commutation activity, particularly in light of the increased use of common law and the potential benefit changes to the Scheme. We have assumed:

- commutations will remain a permanent and significant feature of the Scheme;
- the current level of activity will continue for the next 2 quarters (i.e. until 31 December 2001);
- then falling over the next 8 quarters to a long term level of commutations per quarter which is 35% below the current level.

Judgement has been necessary in order to select the long term level of commutations. The level selected is approximately twice the level immediately prior to the 1998 amendments.

We have also assumed that commutations will be weighted towards the more recent accident quarters on the basis that these accident quarters contain a higher proportion of open (and unreported) claims which are potential candidates for commutation.

We have considered two alternative approaches to the estimation of the number of future commutations:

- a utilisation rate approach. This method considers the number of commutations relative to the ultimate number of claims reported to the Scheme; and
- a decrement rate approach which projects the number of commutations relative to the number of open claims at each point in time. This approach has been used for commutations involving claimants for weekly benefits only.

We applied the utilisation rate approach separately to commutations relating to claimants we have defined as:

- active weekly;
- inactive weekly; and
- "non-weekly" commutations.

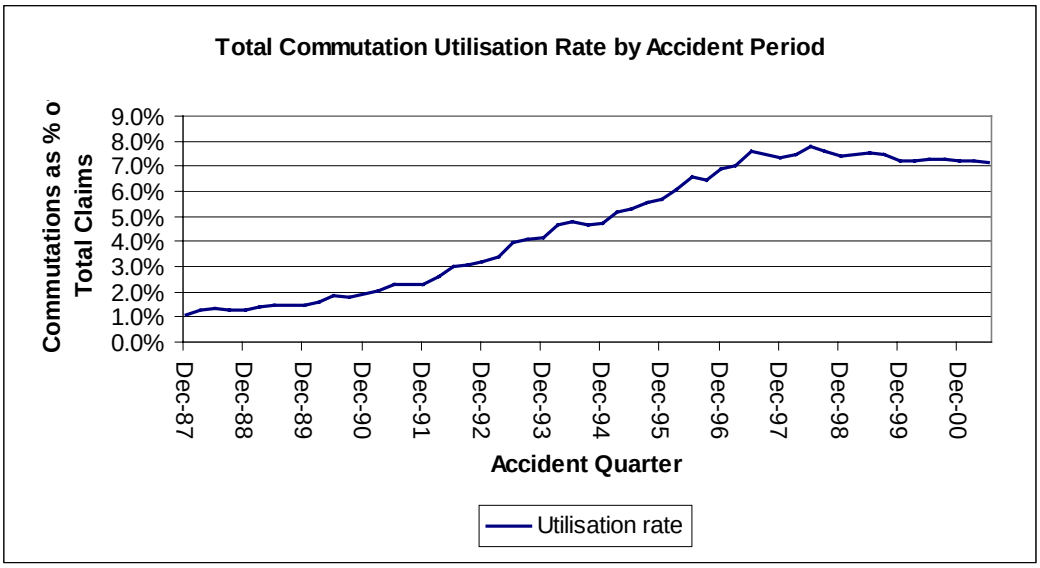
The number of historical commutations has been expressed as a proportion of the ultimate number of claims incurred in each accident period. Analysis of this data, with particular emphasis on experience in the last 12 months (a period fully exposed to the effects of the 1998 amendments), resulted in the selection of assumptions for the quarterly development of future commutations to their ultimate level.

The utilisation rate approach was also applied to a combined dataset of all commutations. Comparison of the numbers projected based on all commutations combined, with the results according to the breakdown above, showed only a 2% difference. In our view, the two estimates lie within a reasonable range, given the nature of the uncertainties involved in their projection.

The decrement rate approach is described in Section 7.3.1. The projected numbers from this approach, when applied to weekly claimants, were also similar (approximately 3% different), in aggregate, to the results from the utilisation rate approach. However, there were compensating differences by accident period. As a result of these differences, we decided the most appropriate method to ensure consistency between the weekly and commutation models (and to maintain an explicit link between the two) was to adopt the assumed commutations from the weekly (decrement rate) model. For non-weekly commutations, the assumed future commutations were obtained from the utilisation rate model.

Graph 7.3 shows the projected ultimate number of commutations as a proportion of total claim numbers incurred for males and females combined.

Graph 7.3



The utilisation rate in the more recent accident quarters is relatively stable. This contrasts with the slightly reducing trend projected at the December 2000 valuation.

Given the lags in development of both common law and commutations, there is some uncertainty in the determination of these trends for the most recent accident periods.

Over the next 3 financial years, the estimated number of commutations, in respect of injuries incurred to 30 June 2001, is shown in Table 7.2.

TABLE 7.2

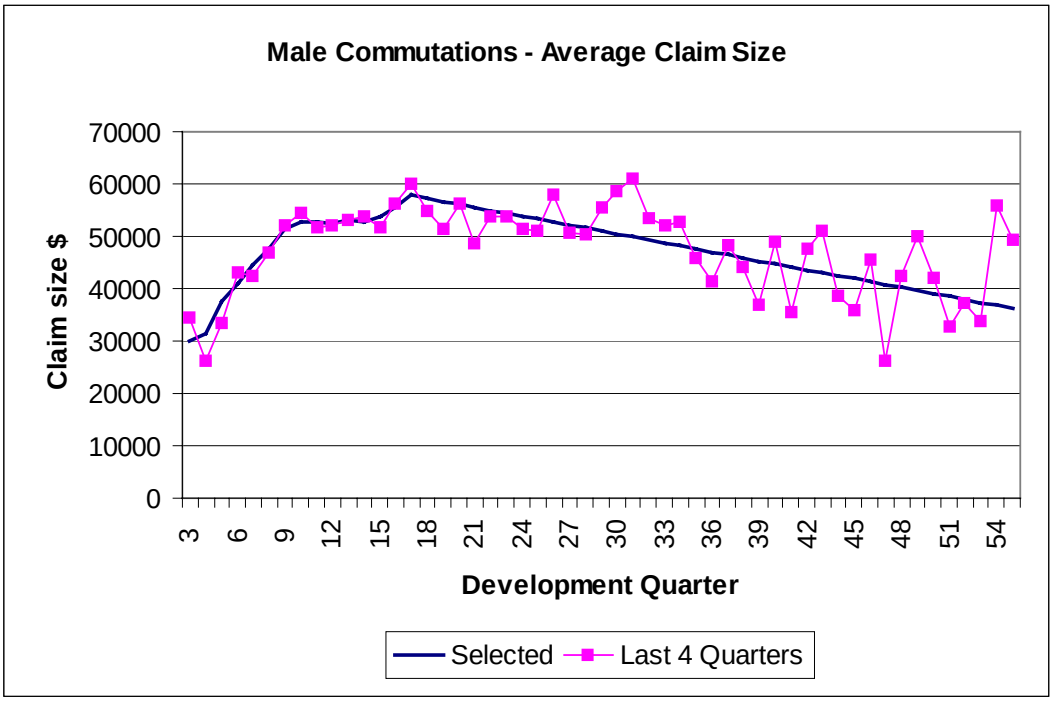
Number of Commutations by Financial Year (For Claims Outstanding as at 30 June 2001)

Financial Year ending June	Total
2002	10,200
2003	8,800
2004	6,100

The total number of claims yet to be commuted, in respect of accidents to 30 June 2001, is estimated to be 42,000.

The average claim size of each future commutation has been selected following analysis of recent experience. Graph 7.4 compares the recent average cost of commutations with our selected assumptions for male commutations (all commutations combined).

Graph 7.4



Graph 7.4 shows that the average commutation cost varies according to delay between date of injury and settlement date – at first increasing and then decreasing. This pattern can be observed for all commutation types modelled – active, inactive and non-weekly – and for both sexes.

The assumed average costs of commutations, allowing for the changing cost according to delay to settlement, is set out in Table 7.3.

TABLE 7.3

Average Commutation Size (current $) – June 2001 Accident Quarter

Type	Males $	Females $
Active	78,000	62,000
Inactive	42,000	35,000
Non-weekly	28,000	22,000
TOTAL	50,000	41,000

There has been little change, since December 2000, in our assumptions relating to the average size of commutations.

Although the average size of each commutation is broadly unchanged, our investigations suggest a change in the distribution of commutations yet to be settled. Table 7.4 sets out our distributions of outstanding commutations adopted in our June 2001 and December 2000 models.

TABLE 7.4

Assumed Distribution of Outstanding Commutations

Type	June 2001 Model	December 2000 Model
Active	28%	33%
Inactive	51%	46%
Non-weekly	21%	21%
TOTAL	100%	100%

An increased weighting of commutations of inactive claims will, given the lower average claim size of this type of commutation, all things being equal, decrease our estimate of the outstanding claims liability for commutations. We estimate the change in the mix of outstanding commutations accounts for approximately a 3% reduction in the average claim size. This offsets, to some extent, the increase in the number of commutation settlements assumed.

It is also important to stress that our assumptions are highly sensitive to any change in the current culture in which Licensed Insurers operate in offering commutations. Our reliance in the status quo may be made invalid by a range of influences (e.g. the introduction of a revised incentive system for Licensed Insurers or increased legal advice on settlement).

7.5 Common Law

The common law liability represents the cost of claims settled under common law. It includes payments made to the injured worker and also payments made to plaintiff solicitors. Due to data considerations, it is not possible to accurately model workers' awards and plaintiff solicitor costs separately. (Defendant legal costs are modelled as part of the "Legal" benefit type – see Section 7.7).

We have estimated the future common law liability as follows:

- Estimate the ultimate numbers of common law claims reported by accident period (using a utilisation rate approach similar to the approach used for estimating the ultimate numbers of commutations. Note that the approach adopted is different to the chain ladder approach used in previous valuations. The chain ladder approach, in our view, is less sensitive to the current environment of strong underlying growth in activity combined with a dramatic change in the speed of reporting.);
- Deduct the number of claims closed to date, to obtain the number of claims outstanding;
- Estimate the proportion of claims to settle at zero cost to obtain an estimate of the number of non-zero claims outstanding;
- Estimate the number of settlements at each future point in time; and
- Estimate the average claim size of non-zero claims.

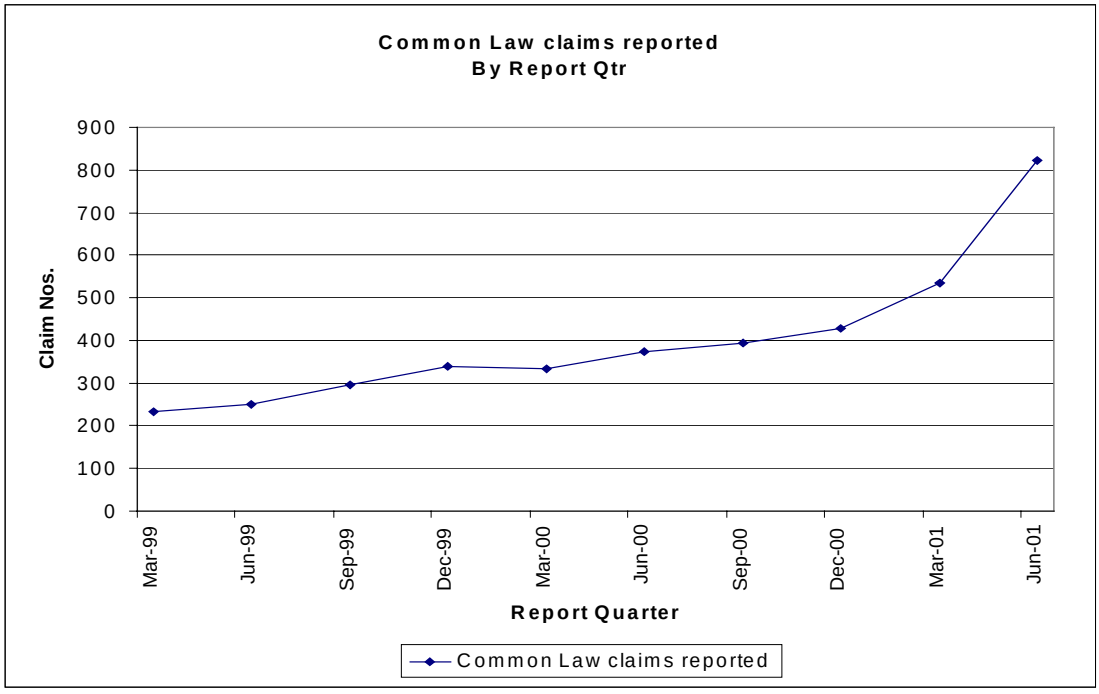
The product of the number of non-zero outstanding claims and the average claim size is an initial estimate of the outstanding liability. This estimate has been adjusted to allow for partial payments already made on unclosed common law claims.

Typically, common law claims are settled with a number of payments. For the purposes of constructing our base data, we have assumed that the settlement date of each claim is

the date of the largest payment. (We estimate that, based on examination of available experience, the largest payment on each common law claim is, on average, 95% of the total cost)

The number of common law intimations in each historical report quarter is shown in Graph 7.5. These numbers are based on data provided in WorkCover's mainframe database.

Graph 7.5



Graph 7.5 clearly shows the growth in common law claims and, in particular, the rapid escalation in numbers over the last 6 months. Further investigation into the increase in numbers reported over the last 6 months suggests that, although much of the increase is due to the underlying growth in common law activity, some of the increase can also be attributed to an acceleration (or "bringing forward") of the lodgement of common law claims. We believe this is associated with the prospect of changes to access to common law, which has resulted in a number of cases being lodged earlier than otherwise would have been the case. This effect is clearly not a growth in common law activity but rather a change in timing of lodgement. We estimate, based on examination of individual claim files, discussion with WorkCover and analysis of past report delay patterns, that this acceleration has occurred mainly in the quarter ending June 2001 and that

approximately 25% of intimations in this quarter represent an acceleration in reporting. Our model for estimating the ultimate number of common law claims has been adjusted to reflect this assumed acceleration effect. In addition, we have assumed that it will continue to the end of the December 2001 quarter.

For this valuation, we have performed a number of additional analyses. The aim of these analyses was to establish whether there was any credible, objective evidence emerging from the experience that the nature of the "average" common law claim was changing. If such evidence could be found then, from an actuarial perspective, there would be some justification for altering the key assumptions relating to the common law liability.

The investigations we performed were as follows:

- Using the common law register as at 31 August 2001, we investigated the trends in case estimates for recent lodgements of claims (as a proxy for the severity of common law claims currently being advised).
- A series of "one-way" analyses of the characteristics of common law claims.
- Analysis of a sample of recently lodged claims (to the limited extent possible, given the sparse details of each claim).

The analysis of case estimates by lodgement (statement of claim) date showed a relatively stable trend and did not provide a basis, at this stage, upon which to reduce the average claim size of future settlements.

Similarly, we could find no conclusive evidence that there had been any significant changes to the type of common law claims being lodged. Although, in this regard, it should be noted that the detail contained in the data is somewhat limited.

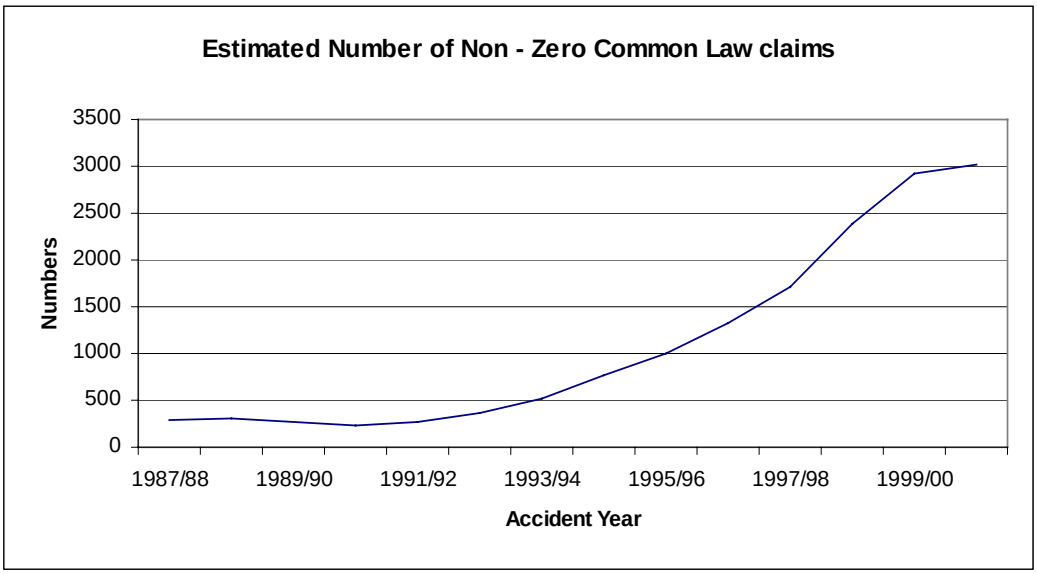
We obtained from WorkCover a sample of claim files relating to recently lodged and settled common law claims. Again, there were no factors to lead us to revise our assumptions.

We were also provided with a report by PricewaterhouseCoopers entitled "Analysis of trends in NSW workers' compensation common law claims", dated 25 July 2001. One of the conclusions contained in this report was that there was evidence of injuries with

lower severities accessing common law. However, this finding was offset by increasing average settlements amounts for a given level of severity. This supports our current assertion that there are no strong grounds, at this stage, for assuming a downward trend for average settlement costs of outstanding common law claims.

Graph 7.6 shows our estimates of the ultimate number of non-zero common law claims by accident year.

Graph 7.6



The increased utilisation of common law can easily be seen. Indeed, for the 2000/2001 accident year 3.2% of all male claims and 2.8% of all female claims are estimated to be identified as common law claims. For the more recent accident periods, this is a significant increase to our December 2000 assumptions, since we have incorporated into our model what now appears to be a firmly established, continuing growth rate in common law claims by accident year. Our analysis suggests that the underlying growth rate of common law claims (i.e. net of the acceleration effect described above), on a report year basis, is currently about 35% per annum. We have judged this underlying growth rate to continue, gradually reducing over the next two years to a relatively low level of 8% per annum.

We have analysed the number of closed common law claims not to have resulted in a common law payment. Based on this analysis, we estimate that the proportion of outstanding common law claims to result in a zero common law cost (or "failure rate")

to be 9.5% for males. The data for female zero settlements is somewhat volatile. We have judgementally assumed the same proportion as for males. These assumptions are slightly higher than the 9% failure rate assumed in our December 2000 valuation.

Our assumptions for the average claim size of future common law settlements are based on settlements in the last four quarters. We have selected an average claim size of $245,000 (in June 2001 dollars) for both males and females. This figure includes plaintiff legal costs and is 2% higher than the assumption adopted in December 2000.

Based on analysis of the common law register, we estimate plaintiff legal costs are 13% of the total settlement or $32,000 (in June 2001 dollars), assuming an average claim size of $245,000. As at December 2000, we estimated the plaintiff legal costs to be 11% of the total settlement cost.

7.6 Permanent Injury (S66 and S67)

7.6.1 Section 66 (Permanent Injury)

We have estimated the future liability for Section 66 payments in a similar manner to common law as follows:

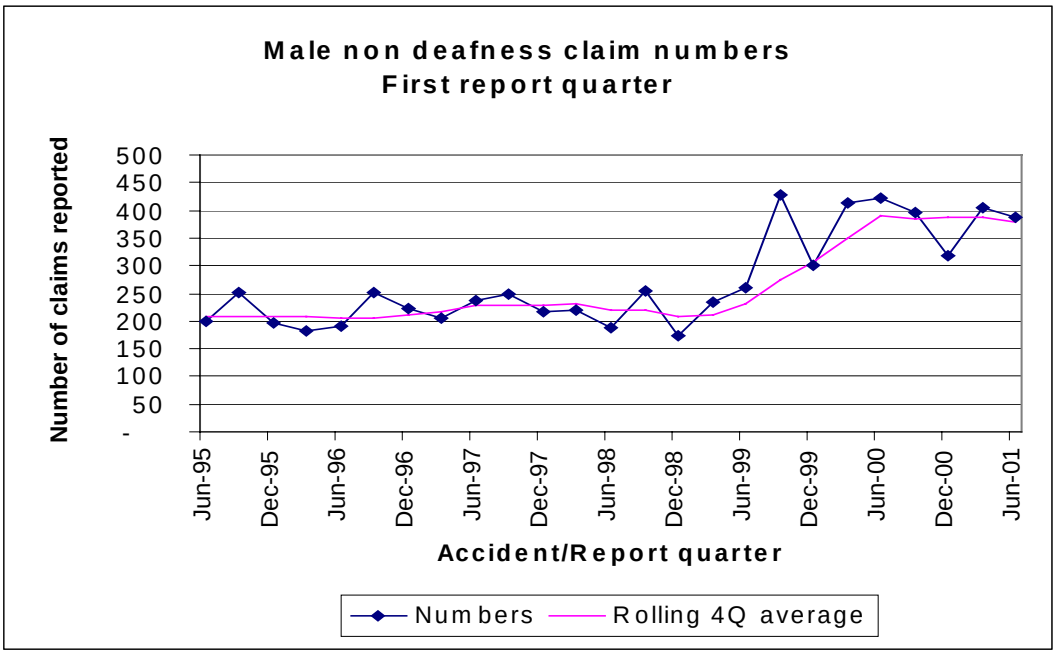
- Estimate the ultimate numbers of Section 66 claims reported by accident period (in this case, using a chain-ladder projection method);
- Deduct the number of claims closed to date, in order to obtain the number of claims outstanding;
- Estimate the proportion of claims to settle at zero cost, in order to obtain an estimate of the number of non-zero claims outstanding; and
- Estimate the average claim size of non-zero claims.

The product of the number of non-zero outstanding claims and the average claim size is an initial estimate of the outstanding liability. This estimate has been adjusted to allow for partial payments already made on unclosed Section 66 claims.

This analysis has been carried out separately for males and females, and hearing loss and non-hearing loss claims.

We have defined a Section 66 claim as any claim which, *at any time*, has had a positive Section 66 case estimate.

Graph 7.7



Graph 7.7 shows, for male non-deafness claims, the number of claims identified as Section 66 claims in the first report quarter of each accident period. Numbers reported for the most recent 2 accidents periods were consistent with the projections in our December 2000 model. The graph shows that, following a significant increase in numbers from 1999, there is some evidence that the upward trend has reached its peak.

The proportion of Section 66 claims settling at no cost has been estimated from data on claims where the Section 66 process has been completed. This proportion reflects a combination of three factors:

- the tendency for commutation settlements to include the Section 66 payment, hence giving the appearance that there was no payment under permanent injury;
- the underlying "true" propensity for Section 66 applications to settle for no cost; and
- an allowance for settlements under common law which appear as nil Section 66 claims.

The assumed average proportion of non-hearing loss Section 66 outstanding claims settling for no cost is 71% for males and 78% for females, unchanged from our assumptions adopted in our December 2000 model. These high levels are mostly due to the high number of permanent impairment claims settling by commutation.

To model the average cost of section 66 claims, we have expressed historical claims as a percentage of the maximum claim allowed under the Table of Maims. We have made an allowance in our models for the different Maximum Sums applicable, under the Table, to claims reported before and after 31 January 1997.

Following inspection of the average section 66 claim size for each accident period relative to the Maximum Sum, we selected the average claim size to apply to the assumed stock of outstanding claims.

For Section 66 claims, excluding hearing loss claims, the long run average claim size (relative to the in-force maximum) of claims outstanding at June 2001 is assumed to be 14% and 13%, for males and females respectively. As a percentage of the in-force maximum, this is 3% higher and 1% higher than assumed in December 2000 and June 2000 respectively. It should be remembered that the in-force maximum in each accident period reflects the assumed mix of claims reported before and after 31 January 1997.

Hearing loss average claim sizes were assumed to be 8% of the Maximum Sum for males and 7% for females i.e. slightly higher than assumed at December 2000.

7.6.2 Section 67 (Pain and Suffering)

Our approach to estimating Section 67 costs considers:

- the proportion of Section 66 claimants to receive a Section 67 payment; and
- the average cost of a Section 67 payment relative to the average cost of each Section 66 payment.

For non-deafness claims, we estimate 59% of males and 63% of females receive a pain and suffering (i.e. Section 67) payment in addition to their permanent injury lump sum. These assumptions are similar to the assumptions adopted in our December 2000 model.

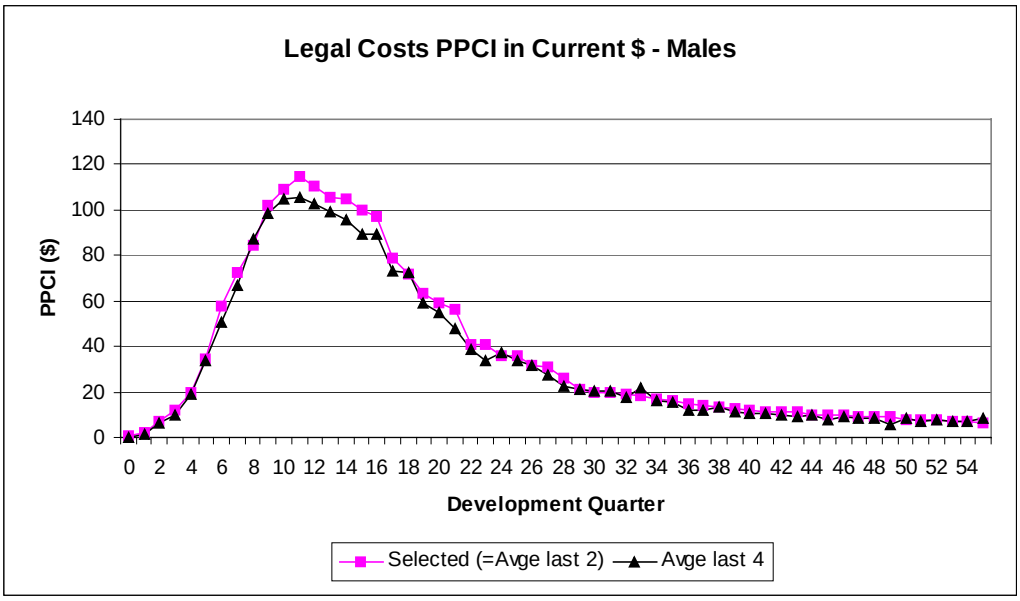
The average claim size for pain and suffering payments is estimated to be $10,000 for males and $9,000 for females, a slight decrease compared to the assumptions adopted at December 2000.

7.7 Legal Costs

The data with which we were provided in respect of legal costs relates to an aggregation of all types of related costs (except plaintiff legal costs associated with common law) and includes legal system costs associated with common law (including defendant legal costs, barrister costs etc.), commutations and lump sums. (In view of the size and sensitivity of the legal cost liability, we recommend WorkCover investigate the feasibility of collecting legal cost data according to the type of dispute with which it is associated – for example, common law, initial liability, weekly, section 66. This would allow us to perform more detailed analysis of these costs.) The costs of investigation are recorded and analysed separately.

As for the December 2000 valuation, we have modelled total legal payments as a proportion of the ultimate claim numbers reported (i.e. a PPCI model). We have observed a significant increase in legal costs over the last 6 months compared to the 6 months to December 2000. This is illustrated in Graph 7.8, which shows that the 2-quarter average PPCI for males is higher than the 4-quarter average PPCI (by about 6%). Therefore, our selected factors for future development have been based on claims experience over the last 6 months.

Graph 7.8



7.8 Medical Costs

We have considered outstanding medical costs as being closely associated with active claim numbers and have, therefore, modelled these costs by considering the average medical cost per active claimant at each point in time.

We have selected our assumptions for the payment per active claimant based on experience over the last 12 months.

In addition, in the June 2000 valuation, we investigated the characteristics of active claimants at later durations. From our analysis of these claimants, we have noted that:

- a large proportion of active claimants are partially, rather than totally, incapacitated; and
- a large proportion of active claimants receive medical benefits of less than $1,000 per quarter, with many receiving no benefits at all.

We have assumed that claimants agreeing to commute their benefit are more likely to be those who are partially incapacitated and/or in receipt of lower levels of medical benefit. As a result, under our assumptions, the average medical benefit per active claimant remaining will increase at later durations.

We have modelled this effect, giving more weight to the more recent accident periods, since these are more affected by the increase in commutation activity.

7.9 Other Benefits

The net cost of the remaining "benefit" types (Rehabilitation, Death, Investigation, $500 Excess Recoveries, Other Recoveries and Other Benefits) is relatively small.

The outstanding liabilities for these benefits have been estimated using PPAC and PPCI methods (see Section 7.1). Selection of factors to project future development was based on experience over the last 12 months, with allowance for any significant trends observed in the data.

7.10 Effects of the New Tax System ("NTS")

The NTS is defined as the system introduced by the Federal Government with effect from 1 July 2000. In order to allow comparison with our December 2000 estimates and to assist in quantifying the unfunded liability relating to NTS effects, which arises on accidents occurring on or before 30 June 2000, we have set out our liability estimates for individual benefit types, net of estimated goods and services tax ("GST") and NTS- related costs.

We estimate total NTS/GST -related costs as at 30 June 2001 to be $269M on a discounted basis, compared to $244M expected using our December 2000 model. The NTS/GST liability which relates specifically to accidents prior to 30 June 2000 (and which is therefore unfunded by premiums) is estimated to be $200M, compared to $205M at 31 December 2000. The slight reduction is due to the payment of some of the outstanding liabilities over the last 6 months although this is offset, to some extent, by the change in benefit mix since December 2000 - particularly the increasing emphasis on common law (which has a higher NTS/GST effect) and the decrease in weekly and medical benefits.

The actual effect of NTS/GST on underlying claims costs is difficult to discern from the historical data, as it is indistinguishable from the various other influences on the Scheme's claims costs which have occurred in the last 12 months. Therefore, we have estimated total NTS/GST -related costs using advice which the Authority has previously received from Trowbridge Consulting in relation to the effects of NTS on the Scheme's

outstanding claims liabilities and unearned premium provisions. This advice provides estimated loadings by benefit type for the NTS/GST -related effects on claims costs. We have continued to rely on this advice since there is limited claims data available relating to the period affected. In any case, as we have commented above, it would not be possible to separate the effects of NTS/GST from other factors influencing Scheme costs. The advice provided by Trowbridge Consulting is consistent with independent work we have performed on NTS/GST effects.

Following discussions with WorkCover, we understand that the agreed accounting treatment for the provision for unearned premiums and unexpired risk for balance sheet purposes is to express these provisions net of any GST allowance. Therefore, no additional GST amount has been added to these figures.

7.11 Provision for Claims Handling Expenses

Claims handling expenses ("CHE") are assumed to relate to the expenses associated with settling all claims which are outstanding as at the valuation date. WorkCover does not directly handle the Scheme's claims. Instead, this function is delegated to insurers. A remuneration fee (related to the number of claims closed and also to various claims performance measures) is paid to insurers in return for this service. Therefore, from WorkCover's point of view, the expense of handling claims is related to the quantum of remuneration expected to be paid to insurers.

The fee structure for future financial years is currently under discussion, and changes to the current formula are expected to be in place before the end of the 2001/2002 financial year. The detail of the changes has not been modelled; however, WorkCover's guiding tenet is that any additional payments to insurers, beyond those currently being made to insurers, should be linked to improvements in claim cost outcomes.

It should be noted that potential reductions in claim costs as a result of improvements in insurers' injury and claims management have not been factored into the actuarial estimate of the outstanding claims liability as at 30 June 2001. (Principally, this is because the detail of the new structure has not been finalised and, therefore, it would be somewhat speculative, and in our view outside the definition of actuarial review work, to model claim cost improvements where no evidence of any success is apparent.)

As a result, therefore, it would in our view, also be inconsistent to allow for any potential increase in claim management-related fees at this stage.

We have been provided with data from WorkCover which shows remuneration paid to insurers as a proportion of gross claims paid in each of the last 3 financial years. This proportion has varied between 3.4% and 3.8%. In our view, this is likely to be a reasonable guide as to the level of CHE (appropriate to WorkCover's balance sheet) in future financial years.

As a result, we have estimated a CHE provision equal to 3.5% of gross outstanding claims (including NTS/GST-related effects). This assumption is 0.5% of gross outstanding claims higher than assumed in our December 2000 model. To the extent that the actual level of CHE/remuneration in the future may be higher, it is our understanding that the improvement in claim costs (which would drive any increases in CHE/remuneration) would more than compensate for the CHE/remuneration increase. Hence, in terms of the overall liability estimate, the CHE estimate is hedged.

7.12 Unexpired Risk Provision

Based on our comparison of the estimated breakeven premium rate and the ultimate actual premium collected for the 2000/2001 PRY, we currently estimate that premiums collected will not be sufficient to meet the cost of claims and expenses. The estimated actual premium rate of 2.76% (excluding 10% GST) is 0.38% of wageroll below the estimated breakeven premium rate.

Therefore, a provision for unexpired risk, over and above the unearned premium reserve, is required. Based on unearned premiums of $378M provided to us by WorkCover in their draft balance sheet dated 18 September 2001, we estimate the required unexpired risk provision to be $53M.

8 FINANCIAL ASSUMPTIONS

8.1 Discount Rate

Accounting Standard AAS26 refers to a discount rate being determined by reference to market-determined, risk-adjusted rates of return appropriate to the insurer. In the commentary notes within the Standard it is made clear that the rates of return are to reflect an insurer's individual investment performance. The Accounting Research Foundation has issued a subsequent explanatory note (AAG13) which reiterates the need for individual insurer performance to be recognised.

We have used a single discount rate based on the 'risk-free' rate. This rate is intended to reflect the long-term yield on a portfolio of fixed-interest government securities with a mean term which matches the mean term of future claim payments on claims outstanding as at the valuation date.

Based on market yields as at 30 June 2001 and the discounted mean term of the liabilities, which we estimate to be approximately 3.1 years at the prevailing market yields, we estimate the risk-free discount rate (rounded to the nearest 0.5% p.a.) for the Scheme would be approximately 6% p.a. This is 0.5% higher than the rate assumed in the December 2000 valuation. All other things being equal, this will reduce the estimate of the discounted liabilities.

8.2 Claim Inflation Rate

It is recognised, in the 1987 Act in particular, that a proportion of workers' compensation benefits increase according to standard inflation measures. The measures range from wage-related indices and price-related indices to more specific items such as basic medical costs.

We have made the following assumptions regarding future inflation of claims costs:

- Weekly benefits, excluding payments in respect of incapacity greater than 26 weeks, inflated in line with forecasts of Average Weekly Earnings;
- Weekly benefits in respect of incapacity greater than 26 weeks, inflated in line with AWE less a 1% p.a (0.25% per quarter) margin;

- Medical costs have been inflated in line with the average of AWE and the Consumer Price Index ("CPI") ;
- Rates of benefit for Permanent Injury (S66 and S67) and Death are set out in the legislation and are fixed on an accident year basis. Hence no future inflation on claims costs is assumed;
- Inflation of "Other Benefits" (interpreter services, damage to clothing etc) is assumed to be in line with the average of AWE and CPI;
- All other benefits have been inflated in line with AWE.

As noted above, we have assumed weekly benefits in respect of incapacity greater than 26 weeks, is inflated in line with AWE less a 1% p.a. (0.25% per quarter) margin. We understand that WorkCover indexes these payments according to the Wage Cost Index (excluding bonuses) as published by the Australian Bureau of Statistics ("ABS"). The margin selected is based on a comparison of recent indexation for this benefit with AWE in New South Wales. We have observed that the index used is, on average, approximately 1% p.a. lower than AWE over the last 10 years. We have assumed this margin will be a continuing feature of Scheme costs. (Although it should be noted that this implies a level of future inflation of benefits of 1% p.a. below "normal" inflation for such compensation.)

In addition, we have made specific allowance for the provisions of the legislation relating to the indexation of weekly benefits. In particular, we have explicitly modelled the 6 monthly indexation of benefits.

Our AWE and CPI assumptions are based on:

- recent published indices;
- an average of forecasts of short term AWE and CPI, as provided by 14 economic forecasters in the August 2001 publication of Asia Pacific Consensus Forecasts; and
- an average of forecasts of long term CPI (2.5%) as provided by 16 economic forecasters in the October 2000 publication of Asia Pacific Consensus Forecasts, with an assumed 1% margin over long term CPI to estimate long term AWE. (This is consistent with the margin assumed by our Asset Consulting Division).

The assumed rates of inflation and discount rate are set out in Table 8.1.

TABLE 8.1

Financial Assumptions by Financial Year (% p.a.)

	2001/2002	2002/2003	2003/2004 +
AWE	3.5	3.5	3.5
CPI	3.5	2.5	2.5
Discount rate	6.0	6.0	6.0

The real yield (i.e. approximately the discount rate less the inflation rate) is, in the long term, 2.5% p.a., 0.5% p.a. higher than the real yield assumed in the December 2000 model (but unchanged from the assumption adopted at June 2000).

9 DETAILED VALUATION RESULTS

In this section, we have set out our aggregate results for the Scheme. In addition, we have presented some detailed results relating to the following benefit types, which account for 78% of total Scheme liabilities:

- Common law (27%)
- Commutations (21%)
- Legal costs (19%)
- Weekly (11%)

9.1 Outstanding Claims as at June 2001

Table 9.1 sets out our estimates of the outstanding claims liabilities as at June 2001. A comparison of our June 2001 estimate with our estimate of the June 2001 liability using the December 2000 model is also shown.

TABLE 9.1

Estimate of Discounted Outstanding Liability as at 30 June 2001[1]

Benefit Type	Outstanding Claims Liability as at June 2001 ($M)		Difference	
	June 2001 Model	December 2000 Model	$M	%
Commutations	1,754	1,666	88	5
Weekly	950	1,018	(68)	-7
Common Law	2,259	2,045	214	10
Legal Costs	1,606	1,576	30	2
Permanent Injury/Pain & Suffering	488	524	(36)	-7
Medical	471	471	(1)	0
Investigation	306	292	13	5
Rehabilitation	77	73	4	6
Death	66	70	(3)	-5
Other Payments	31	33	(2)	-5
Pre-WorkCover Liability	3	3	0	1
Total Gross Outstanding Claims	**8,010**	**7,770**	**241**	**3**
$500 Excess Recoveries	(8)	(9)	1	-6
Other Recoveries	(277)	(297)	20	-7
Total Net Outstanding Claims	**7,725**	**7,463**	**262**	**4**
GST/NTS – Related Effects	269	244	25	10
Claims Handling Expenses	290	240	49	21
Total Outstanding Claims Provision	**8,284**	**7,948**	**336**	**4**

[1] Totals may not add due to rounding

It should be noted that, of the $336M strengthening of the outstanding claim estimate, a reduction of approximately $130M is attributable to the change in economic assumptions. Hence, the underlying increase in claims liabilities is $466M. In Table 9.1, this effect is distributed across all benefit types. See Table 9.3 for details of the estimated change in the outstanding claim estimates excluding the effect of the change in economic assumptions.

Table 9.2 provides a breakdown of the discounted outstanding claims cost by accident year.

TABLE 9.2

Breakdown of June 2001 Outstanding Liability by Accident Year[1]

	Discounted Outstanding Liability Recoveries		
Accident Year	**Gross $M**	**Recoveries $M**	**Net $M**
1987/1988	48	(4)	46
1988/1989	65	(5)	62
1989/1990	77	(6)	74
1990/1991	91	(6)	88
1991/1992	109	(6)	106
1992/1993	144	(7)	142
1993/1994	201	(9)	199
1994/1995	291	(12)	289
1995/1996	385	(15)	383
1996/1997	523	(22)	519
1997/1998	877	(34)	872
1998/1999	1,353	(47)	1,351
1999/2000	1,810	(55)	1,816
2000/2001	2,032	(57)	2,045
Total	8,007	(285)	7,992
Pre-WorkCover	3	0	3
GST/NTS – Related Effects	278	(9)	269
Claims Handling Expenses	290	0	290
Total Outstanding Claims Provision	**8,578**	**(294)**	**8,284**

[1] Totals may not add due to rounding

Table 9.3 reconciles the difference between our estimated June 2001 liability results from our December 2000 and June 2001 investigations.

TABLE 9.3

Reconciliation of June 2001 and December 2000 Estimates[1]

	Change in O/S Liability $M
December 2000 estimate of June 2001 Liability	7,948
June 2001estimate of June 2001 Liability	8,284
Increase	336
Change Due To:	
Economic Assumptions	(131)
Common Law	235
Weekly	(52)
Permanent Impairment Benefits	(28)
Legal Costs	63
Commutations	113
Other Recoveries	27
Claims Handling Expenses	53
NTS/GST-related effects	29
Other Benefit Types	27
TOTAL	**336**

[1] Totals may not add due to rounding

The common law liability has increased significantly, in line with the continuing increase in common law activity over the last 6 months. In particular, the observed underlying growth rate in common law intimations has been incorporated fully into the projections. This has increased the liability for the more recent accident periods.

On the basis that common law benefits will be the vehicle for delivering some weekly and permanent impairment benefits, Table 9.3 shows that the liability for these benefits has reduced, offsetting the increase in common law liability to some extent.

The commutation liability has increased significantly. We have strengthened our model to reflect the increase in commutation numbers observed over the last 6 months (in contrast to our expectation that commutation activity had peaked and would have started to reduce in the period under observation).

The liability for legal costs has been strengthened, effectively reversing the decrease in the liability estimated at December 2000. This reflects the significant increase in legal costs payments over the last 6 months (albeit relative to what turned out to be an unusually low level of payments over the 6 months to December 2000).

We have increased the claims handling expense proportion by 0.5% of gross outstanding claims liabilities, consistent with information provided to us by WorkCover.

The change in benefit mix, particularly the increased focus on common law, has resulted in an increase in the estimated effects of NTS/GST on underlying claim costs.

9.2 Financial Position at 30 June 2001

Based on our estimates of the outstanding liabilities at 30 June 2001 and other balance sheet figures contained in WorkCover's (unaudited) draft financial statements dated 18 September 2001, the financial position of the Scheme at 30 June 2001 can be estimated.

Table 9.4 sets out our estimates of the financial position of the Fund at 30 June 2001.

TABLE 9.4

Fund Position at 30 June 2001

	June 2001 $M
Investments	5,865
Claims recoveries	294
Other Assets	285
Total Assets	**6,443**
Gross Outstanding Claims[1]	8,578
Unearned Premiums Provision	378
Unexpired Risk Provision	53
Other Liabilities	190
Total Liabilities	**9,199**
Deficit	**(2,756)**

[1] Includes GST plus allowance for claims handling expenses.

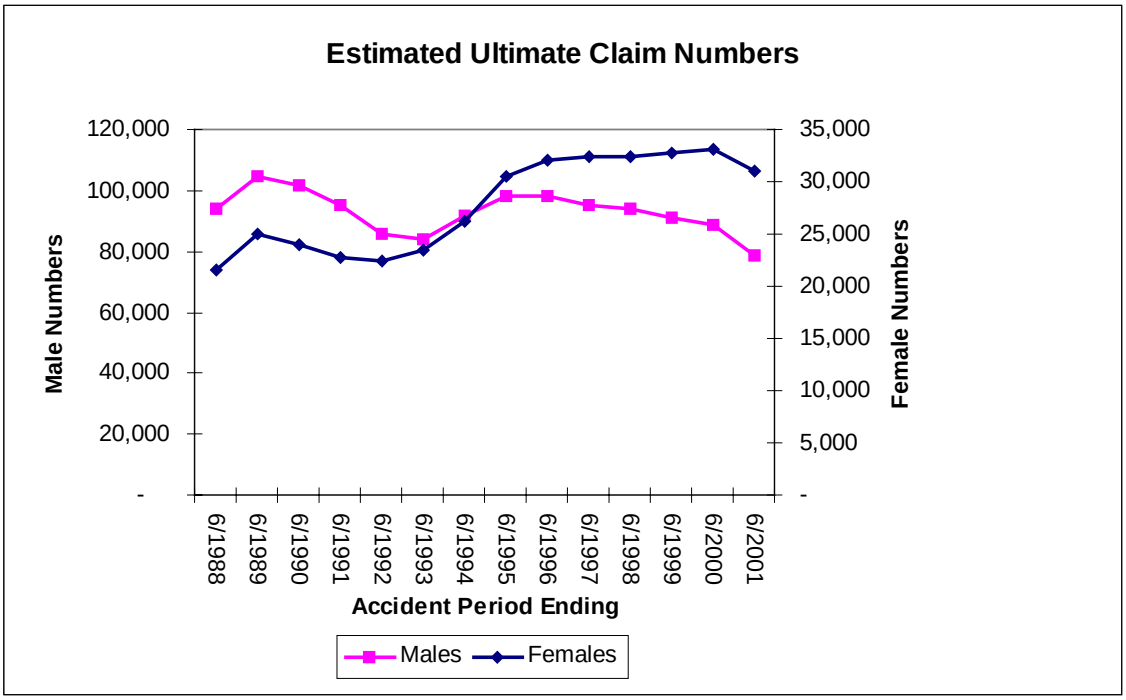
9.3 Claim Numbers

The following observations of recent experience can be made:

- 110,670 claims were reported in the 12 months to June 2001, compared to 120,329 claims reported in the 12 months to June 2000. This is a significant reduction of 8.0%;
- The reduction was more significant for male claimants (9.6% lower than reported in the 12 months to June 2000) than for female claimants(3.7% lower than reported in the 12 months to June 2000);
- The number of deafness claims reported in the last 12 months was 2,478, 1% lower than in the 12 months to June 2000;
- Over the last 6 months, actual claim numbers (53,891) were 7% lower than expected claims of 58,051 (based on our December 2000 model).

The ultimate number of claims has been estimated using the methodology described in Section 7.2. Graph 9.1 and Table 9.5 show our estimates of the ultimate number of claims by accident year.

Graph 9.1



The recent accident periods show a continuing decreasing trend for males, with a large decrease for the 2000/2001 accident year. There has been a slight increasing trend for females, although the latest accident year may signal the beginning of a downward trend. Overall, since male claims account for approximately 75% of all claims, the claims incidence of the Scheme is reducing.

Based on previous analysis of the distribution of claims according to ANZSIC division, we were able to establish that, over recent years, there has been a reduction in the proportion of total claims attributable to manufacturing industry. This "redistribution" from manufacturing has been taken up by increases in Health, Property and Business Services (which includes contract staff) and Construction. Overall, we would expect this redistribution, together with improving risk management practices, to reduce claim frequencies for the Scheme as a whole. (However, the detail available in the data does not allow us to quantify this effect.)

TABLE 9.5

Estimated Ultimate Claim Numbers

Accident Year Ending 30 June	Estimated Ultimate Claim Numbers		
	Males	Females	Total
1988	93,921	21,556	115,477
1989	104,839	24,952	129,790
1990	101,536	23,888	125,423
1991	95,029	22,802	117,831
1992	85,734	22,367	108,102
1993	84,185	23,440	107,625
1994	81,416	26,198	117,613
1995	98,001	30,589	128,590
1996	98,362	32,057	130,419
1997	95,102	32,405	127,508
1998	93,714	32,403	126,117
1999	91,132	32,690	123,822
2000	88,471	33,098	121,569
2001	78,423	31,094	109,517

Ultimate claim numbers for the full accident year 2000/2001 of approximately 110,000 are approximately 10% lower than for the 1999/2000 accident year. We have identified three drivers of this reduction:

- The general trend over recent years for claims frequency to reduce;
- The exit of Woolworth's and other self insurers (including Goodman Fielder) from the Scheme. (Note: Woolworth's accounted for approximately 3% of all claims by number); and
- A relatively low level of claims reported in the last 3 quarters (while difficult to quantify, it is possible that factors such as low claims activity during, and

immediately subsequent to, the Olympics, and resultant lower levels of economic activity, have had an effect on claims reported).

9.4 Common Law

The following observations of recent experience can be made:

- Actual payments over the last 6 months totalled $183M, compared to $147M expected – a difference of $36M or 25%. Most of the difference relates to a record high level of payments in the quarter ending June 2001, in which payments were $110M compared to a previous peak of $86M.
- Common law claim numbers reported over the last 6 months were 1,355, a 46% increase on the 929 claims reported over the 6 months to December 2000. This is also a record high level.

Yet again, the last 6 months has seen a significant increase in common law activity, which is substantially greater than predicted at December 2000 (based on experience to the end of 2000).

Our investigations lead us to conclude that the increase in activity represents both a deterioration in experience and an acceleration in the reporting of claims. We believe the acceleration in claims reporting is due to the uncertainty created by the impending changes in access to common law, although the exact detail of such changes was not known during the 6 months to June 2001. Our investigations into the acceleration effect suggest that, for the most part, the acceleration has taken place in the June 2001 quarter only. We estimate that about 25% of claims reported in the June 2001 quarter represent a "bringing forward" of claim lodgments rather than a deterioration in claim experience.

Net of the effect of acceleration in reporting, we estimate that the underlying increase in common law claims reported over the last 6 months is approximately 25% (or 12% per quarter). Over a longer historical period, we estimate the underlying growth rate in common law reported claims is 8% per report quarter. We have reflected these assumptions in our model, particularly for the most recent accident years, although we have assumed that the 8% per quarter growth rate is not sustainable indefinitely and will gradually reduce to a base level of 2% per report quarter.

Table 9.6 sets out some of the key components of our estimate of the common law liability as at 30 June 2001.

TABLE 9.6

Common Law Outstanding Liability as at June 2001

	Males	Females	Total
Total no. of O/S claims	9,310	2,979	12,289
% settling at zero	9.5%	9.5%	9.5%
Total no. of non-zero O/S claims	8,398	2,688	11,085
Average claim size (in June 2001 $)	245,000	245,000	245,000
O/S claim cost in $M (Inflated, undiscounted)[1]	2,040	670	2,709
O/S claim cost in $M (Inflated, discounted)[1]	1,781	586	2,367

[1] These estimates are net of payments already made on common law claims not yet finalised. They include the effects on underlying claims costs of NTS/GST.

Net of NTS/GST–related effects, the estimated outstanding claims liability as at 30 June 2001 is $2,259M.

Excluding the effect of the change in economic assumptions on the outstanding liability, we have increased our common law estimate by $235M, or 12%.

9.5 Weekly Benefits

The following observations of recent experience can be made:

- Actual payments over the last 6 months were $256M, compared to $242M expected – a difference of 6%.
- Total payments over the 12 months to June 2001 were $496M, compared to $487M over the 12 months to June 2000. This is an increase of $9M (or 2%). Broadly, we would have expected a decrease in payments in view of the increase in lump sum benefit activity.
- The number of active weekly claimants as at 30 June 2001 was 35,260 compared to 35,077 expected – a difference of 0.5%. However, on closer inspection, we found that our December 2000 model was overestimating (by 6%) the number of active

claimants in the most recent two accident quarters but underestimating (by 4%) the number of actives in the remaining accident quarters. The reduction in active numbers in the recent accident quarters is consistent with the significant reduction in claim numbers reported to the Scheme over the last 6 months. The underestimation of the tail has led us to strengthen our continuance rates at the later development periods;

- The number of inactive weekly claimants as at 30 June 2001 was 24,749 compared to 27,916 expected – a difference of 11%. Similar to the active claim comparison, we found that our December 2000 model was overestimating the most recent 6 accident quarters but underestimating the remaining accident quarters.

We have projected the outstanding claims liabilities for weekly claims based on our assumptions for:

- future numbers of active and inactive claimants;
- average benefit rates per week on benefit; and
- the number of weeks on benefit.

Our estimate of the outstanding claims liabilities as at 30 June 2001 for weekly benefits, is $950M. This is $68M lower than the June 2001 liability estimated by our December 2000 model.

A significant factor in this reduction is the assumed increase in future settlements of weekly claims through the common law and commutation process. Based on analysis of historical common law settlements, we have assumed that around 80% of future common law settlements relate to claims which would, *at the date of common law settlement*, be defined (according to our definitions set out in section 7.3.1) as active or inactive weekly claims. The pool of weekly claimants has been adjusted downwards in a manner consistent with this assumption.

This assumption is based on analysis of historical common law settlements. Overall, our investigation shows that 94% of historical claims settled though common law have some element of economic loss in the settlement amount.

In Table 9.7 we have broken down our estimates of weekly benefits by type of weekly benefit.

TABLE 9.7

Discounted Outstanding Liabilities for Weekly Benefits as at 30 June 2001

Benefit Type	Outstanding Liability[1] $M
< 26 weeks	96
> 26 weeks	443
S38	130
S40	295
TOTAL	964

[1]Includes the effects on underlying claims costs of NTS/GST.

9.6 Commutations

The following observations of recent experience can be made:

- Actual payments over the last 6 months totalled $238M, compared to $217M expected – a difference of 10%, mainly arising from strong payments in the June 2001 quarter;
- The number of claims commuted over the last 12 months was 10,554, a 6% increase on the number commuted over the 12 months to June 2000. On a rolling four quarter basis, the average number of commutations is approximately 2,600 per quarter, about 4% higher than the average quarterly level observed at December 2000.
- The average claim size of commutations has remained constant over the last 6 months, suggesting that the observed historical trend downwards may be flattening.

Based on our assumptions (set out in Section 7) regarding the number of outstanding commutations and their average claim size, we estimate the outstanding claims liability as at 30 June 2001, for commutations, to be $1,754M.

Excluding the effect of the change in economic assumptions on the outstanding liability, we have increased our commutations estimate by $113M, or 7%. This reflects an increase in the estimated number of outstanding commutations. This, in turn, is due to our assumption that, based on recent evidence that the number of commutations per quarter has not yet peaked, the expected downturn in commutation activity will be delayed by two quarters (compared to our December 2000 model) and will reduce from a higher peak than previously assumed.

Offsetting the increase in numbers, to some extent, is an assumed change in the mix of outstanding commutation claims, with a greater weighting of inactive commutations, (which have a lower average claim size).

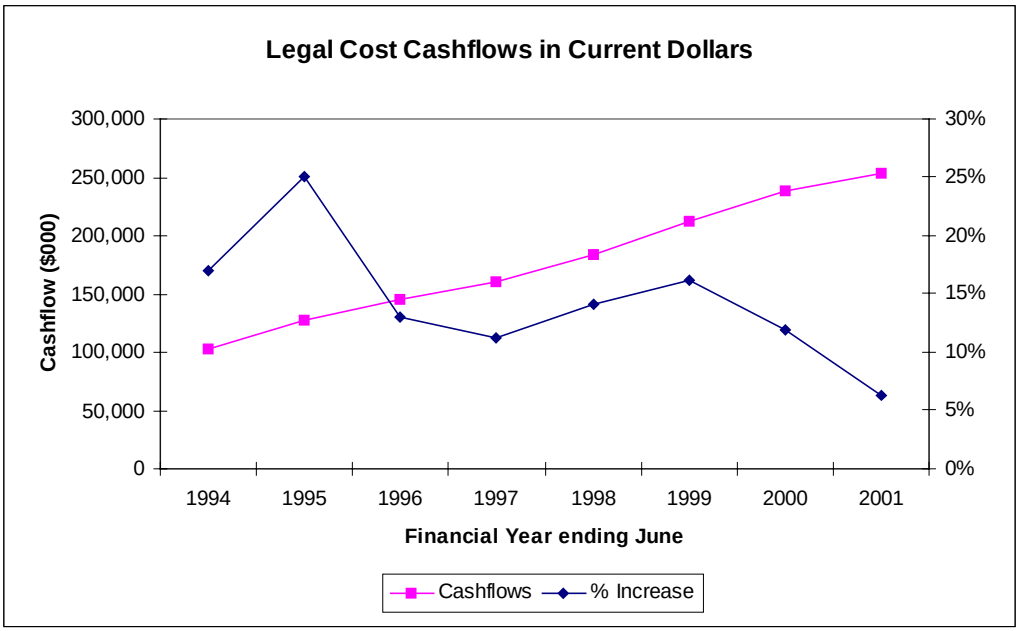
9.7 Legal Costs (excluding Plaintiff Common Law Legal Costs)

The following observations of recent experience can be made:

- Actual payments over the last 6 months totalled $133M, compared to $113M expected – a difference of 18%.
- Over the 6 months to December 2000, payments were $119M – 11% lower than payments in the last 6 months. The expected seasonal reduction in payments in March did not occur – the first time in almost 10 years that legal payments in a March quarter exceeded payments in a December quarter. In retrospect, it would appear payments in the 6 months to December 2000 were unusually low.

Graph 9.2 shows Scheme cashflows for legal costs since financial year 1992/1993 (left-hand scale) – together with the year-on-year increase (right-hand scale).

Graph 9.2



Having assumed that the level of payments in the 6 months to December 2000 was unusually low, graph 9.2 suggests that the underlying annual growth rate in legal costs is around 10%. We have strengthened our model accordingly.

Our estimate of the outstanding claims liability for legal costs is $1,606M. Excluding the effect of the change in economic assumptions, we have increased our legal costs estimate by $63M or 4%. This effectively reverses the decrease in liability estimated at December 2000.

10 PREMIUMS AND PREMIUM RATES

In this section we have set out the results of our estimates of ultimate collected premiums and breakeven premium rates.

Ultimate collected premium rates have been estimated by separately projecting premium amounts and wageroll declared. A chain ladder projection method has been used in both cases.

Breakeven premium rates have been calculated as the sum of historical claim costs, future claim costs and expenses all discounted, at the valuation discount rate of 6.0% p.a., back to the assumed average date of premium payment.

Table 10.1 provides a comparison of estimated historical "breakeven" and estimated collected premium rates. To enable comparisons with prior years, the estimates of premiums for the 2000/2001 PRY and outstanding claims liabilities for all years do not include any loading for NTS/GST-related effects. No allowance has been made for the full potential effects of the Scheme reforms, finalisation of which is currently under discussion.

TABLE 10.1

Comparison of Estimated Breakeven and Collected Premium Rates (excluding GST)

Policy Renewal Year	Breakeven Rate (% of wageroll)	Collected Rate (% of wageroll)
1987/88	1.75	2.47
1988/89	1.76	2.45
1989/90	1.76	2.24
1990/91	1.90	1.92
1991/92	2.14	1.71
1992/93	2.62	1.73
1993/94	3.01	1.83
1994/95	3.22	1.95
1995/96	3.25	2.43
1996/97	3.15	2.66
1997/98	3.16	2.76
1998/99	3.23	2.85
1999/00	3.21	2.75
2000/01	3.06	[1]2.70

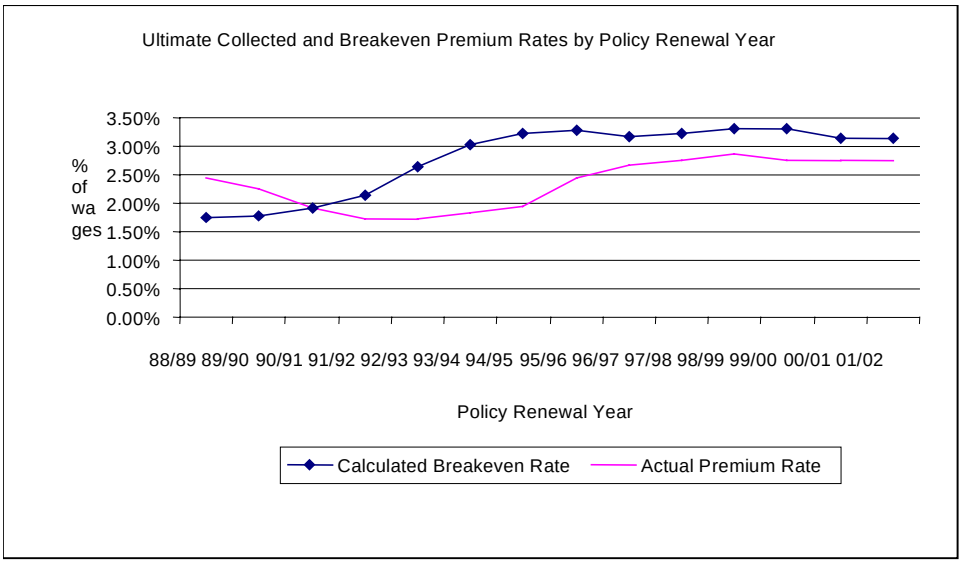
[1] 2.76% rate including effects of NTS/GST

The estimated breakeven premium rate for PRY 2000/01 is almost 5% below the rate for 1999/2000. This is consistent with the significant reduction in estimated claim frequency for 2000/2001.

Graph 10.1 shows ultimate collected and breakeven premium estimates by PRY. They differ from the figures shown in Table 10.1 as follows:

- the effects on underlying claim costs of NTS/GST are shown. Similarly, the premium rates for 2000/2001 onwards include a loading for NTS/GST.
- The target premium rate and the breakeven premium rate for 2001/2002 are also shown.

Graph 10.1



Graph 10.1 shows that the Scheme is currently in a period in which collected premiums are insufficient to meet ultimate claim and expense costs, although the gap between breakeven and projected actual premium rates has narrowed significantly since the mid-1990's.

Graph 10.1 also shows that the breakeven premium rate has been relatively stable over recent years. This is despite a steady reduction in claim frequency, which implies that this trend is offset by an increase in average claim size. For the 2001/2002 PRY, we have assumed a breakeven premium rate equal to the breakeven premium rate for the 2000/2001 PRY, with an allowance for the estimated effect of the departure from the

Scheme of a number of local government authorities. Implicitly, this assumes that any further reductions in claim frequency will be offset by increases in average claim size. As a result, the estimated breakeven premium rate for 2001/2002 is as shown in Table 10.2.

TABLE 10.2

2001/2002 Average Premium Rate

Basis	Premium Rate (% of wages)
Excluding all GST/NTS-related effects	3.05
Including GST/NTS-related effects on underlying claim costs	3.13
Including underlying GST/NTS-related effects and 10% GST	3.45

The breakeven premium rate for 2001/2002 of 3.13% compares to our estimate at December 2000 of 2.94%. The main driver of the increase is our strengthening of the common law component of the premium. This, in turn, is driven by our assumption that the observed historical underlying growth rate in common law claims (net of any acceleration effect) will, in the short term, be a continuing feature of the experience. This trend was not fully recognised in our December 2000 analysis.

We have estimated the ultimate wageroll for 2001/2002 to be $80.9bn. This is based on the 2000/2001 estimated ultimate wageroll:

- increased by 3.5% for wage inflation;
- increased by 1.3% for employee growth; and
- reduced by $0.9bn for the exit from the Scheme of 70% of the wageroll relating to local government (based on discussions with StateCover Mutual, the new insurer of local government in New South Wales).

Table 10.3 sets out our estimates of the breakeven premium by benefit type based on estimated wageroll of $80.9bn.

TABLE 10.3

Breakdown of 2001/2002 Breakeven Premium Rate[1]

Benefit Type	Annual Cost $M	% of Wages
Commutations	314	0.39
Weekly	402	0.50
Common Law (incl plaintiff legal costs)	665	0.82
Legal Costs	341	0.42
Permanent Injury (Pain & Suffering)	141	0.17
Medical	249	0.31
Investigation	114	0.14
Rehabilitation	56	0.07
Death	16	0.02
Other Payments	13	0.02
$500 Recoveries	22	(0.03)
Excess Recoveries	53	(0.07)
Total	2,312	2.86
Expenses and Levies	298	0.37
Total[2]	2,535	3.13

1 Includes allowance for the underlying effects on claims costs of The New Tax System but excludes the 10% GST.

2 Total may not add due to rounding.

11 FUND PROJECTION

Based on the following assumptions, we have estimated the Scheme's balance sheet at each future balance date for the next 5 years.

- Actual premium rate of 2.76% of wages (including GST/NTS-related effects) for future policy years;
- Breakeven premium rate (i.e. cost of claims and expenses) of 3.13% of wages (including GST/NTS-related effects) implicitly assumed for future policy years;
- Wageroll grows at a rate of 5% p.a.;
- No new self-insurers;
- The potential effects of future Scheme reforms have not been factored in.

Table 11.1 sets out our estimates.

TABLE 11.1

Estimated WorkCover Balance Sheet

	Balance Date						
	June-01	**Dec-01**	**June-02**	**June-03**	**June-04**	**June-05**	**June-06**
Assets							
Investments	5,865	6,219	6,082	6,288	6,504	6,730	6,968
Claims Recoveries	294	316	309	324	341	358	376
Other Assets	285	643	299	314	330	347	364
Total Assets	**6,443**	**7,177**	**6,690**	**6,926**	**7,175**	**7,435**	**7,708**
Liabilities							
Gross o/s claims (incl GST)	8,578	9,067	9,269	9,995	10,757	11,558	12,400
Unearned Premium Provision	378	929	397	417	438	461	484
Unexpired Risk Provision	53	128	55	57	60	63	67
Other Liabilities	190	186	197	204	211	218	226
Total Liabilities	**9,199**	**10,310**	**9,917**	**10,673**	**11,467**	**12,300**	**13,176**
(Deficit)/Surplus)	(2,756)	(3,132)	(3,228)	(3,747)	(4,292)	(4,866)	(5,468)
Funding Ratio	70%	70%	67%	65%	63%	60%	58%

Table 11.1 shows that the deficit of the Scheme will continue to increase. The increase is driven by two factors:

- The "negative return" on the (negative) net assets of the fund; and
- The addition to the deficit due to setting premiums which are lower than the cost of claims and expenses.