

Claim Segmentation, Valuation and Operational Modelling for Workers Compensation

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Overview of the valuation methodology

- Methodology applied to NSW workers' compensation portfolio
 - Claims with different characteristics
 - Claims persist for a long time
- The proposed methodology is based on separating the claims into groups of claims with similar characteristics:
 - When a claim changes from one segment to another, we call this a "transition";
 - We can analyse payment history for each segment, separately by payment type.



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Segment definitions

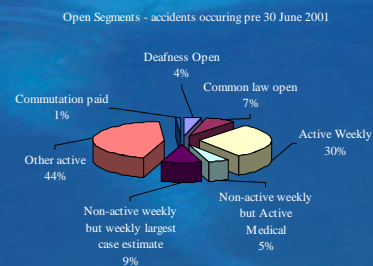
- Claim Segments
 - Open deafness claims
 - Closed deafness claims
 - Open common law claims
 - Claims that have been commuted, but are not yet closed
 - Active weekly claims
 - Non-active weekly claims, with active medical payments
 - Non-active weekly claims, with weekly the largest case estimate
 - Other open claims
 - Closed common law claims
 - Closed commuted claims
 - Other closed claims



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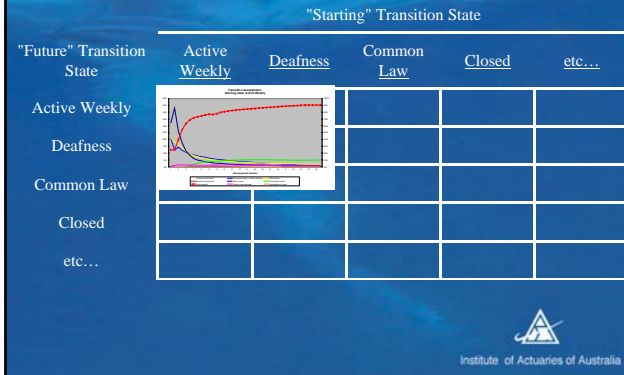
Current segment profile

– Open Claims profile as at 30 June 2003

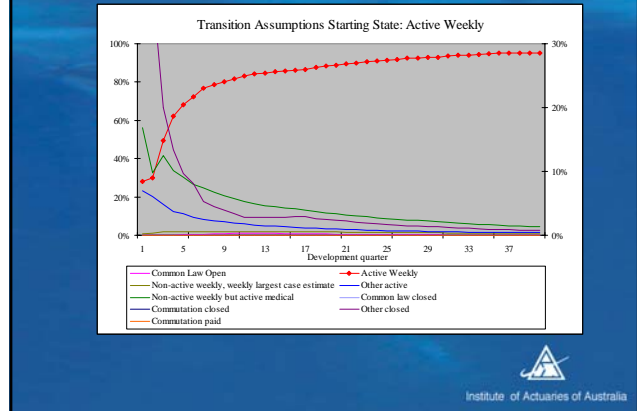


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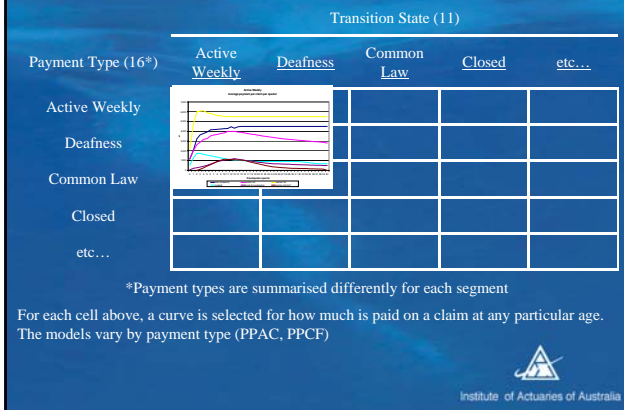
Valuation methodology - transitions



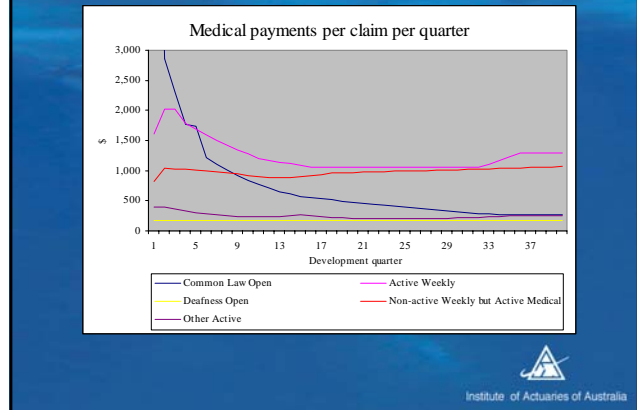
Setting transition assumptions - example



Valuation methodology - payments



Payment levels across segments



Comparison with statutory valuation

- Statutory valuation uses a more traditional framework
- Independent valuation team
 - Except some cross-over on total future common law emergence and lump sum settlements
 - Inflated and discount results agree to within 2% in total
 - Agreement across accident years also very good
- Advantage is in information generated and the transparent link to operation



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Links to operation and monitoring

- Once assumptions are set, valuation is driven only by current claim profile
- Can recast as a set of valuation factors, specific to calendar quarter and accident quarter

| | Approximate liability per claim (\$) | Number of claims at June 02 |
|-----------------------|--------------------------------------|-----------------------------|
| Active claims | | |
| Common law | 299,389 | 5,721 |
| Weeklies | 94,707 | 16,107 |
| WCE | 44,419 | 5,810 |
| Hearing open | 6,897 | 2,940 |
| Active medical | 50,105 | 4,211 |
| Other case est. | 20,657 | 29,688 |
| Commutation paid | 9,676 | 6,881 |
| Closed claims | | |
| Common law settlement | 3,407 | 7,067 |
| Commutation paid | 0 | 38,289 |
| Hearing closed | 1,049 | 38,498 |
| Other closed | 753 | 1,519,413 |



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Links to operation and monitoring

- Relativities between segments become clearer
- Importance of “controlling” transitions between segments becomes clearer
- Frequent valuations taking account of emerging claim profile become easy!
- Now show monitoring tool under development



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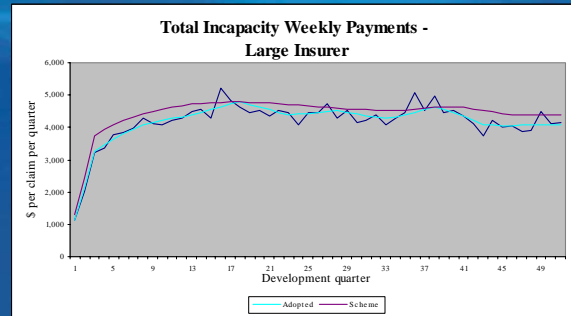
Fitting insurer specific assumptions

- Express Insurer's experience as a proportion of smoothed Scheme experience
- Assess variability of Insurer's performance
- If Insurer's experience is close to Scheme and/or highly variable, adopt Scheme assumption
- If Insurer's experience not too variable and very different from the Scheme assumption use Insurer's data to determine adopted fit
- If experience between these two extremes, use a credibility weighted average of Scheme fit and Insurer's experience



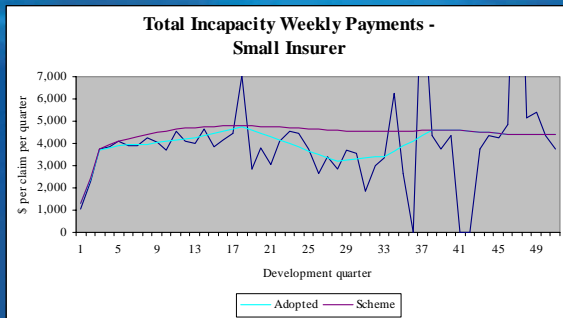
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Fitting insurer specific assumptions - example



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Fitting insurer specific assumptions - example



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