XVth GENERAL INSURANCE SEMINAR

Evolution of the Industry

Institute of Actuaries of Australia

Analysing Expenses:
Should General Insurance Actuaries Get Excited?

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Agenda

- **Introduction**

- **Current Practice**

- **Methodology**

- **Example**

- **Conclusion**

Introduction

- **Claims handling expense assumption – How important is it?**

- **Why do a full expense analysis?**
    - **O/S Claims vs Premium Liabilities**
    - **Impact of changing claims experience**
    - **Dollar impact material**
    - **Simple ratio methods flawed**
    - **Understand claims handling process**

Current Practice

- **A range of methods used – simple ratios to full analysis**

- **Analysis conducted quarterly to very infrequently**

- **Some companies employed the same expense loading across all classes**

- **Some companies employed the same loading for O/S claims and Premium Liabilities**
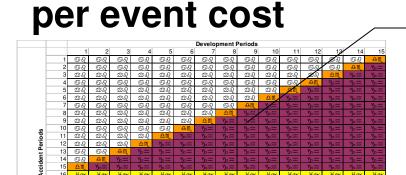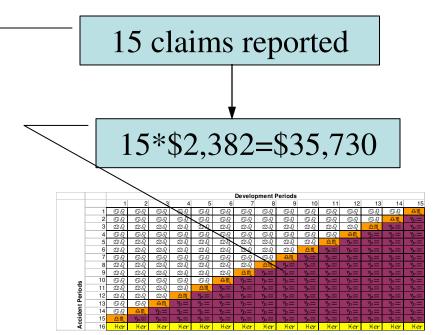
Current Practice (Cont')

Claims Handling Expense Loadings (% of Gross Central Estimates)

Class of Business	Outstanding Claims Valuation			Premium Liability Valuation		
	High	Low	Average	High	Low	Average
Total	8.5%	4.3%	5.6%	9.4%	4.9%	7.0%
Domestic Short Tail	8.5%	4.5%	5.9%	10.6%	4.9%	7.4%
Commercial Short Tail	6.0%	2.0%	4.5%	6.8%	3.2%	5.3%
Long Tail	6.7%	4.2%	5.2%	8.3%	4.5%	6.2%

Methodology

- **Projected claims handling expenses = number of future claim handling events x per event cost**

15 claims reported

15*$2,382=$35,730

Methodology (Cont')

- **Define claim handling events**
  - claims lodgement
  - claims finalisation
  - ongoing administration per open claim

- **Collect Data**
  - choose historical analysis period
  - fully allocated claims handling expenses
  - count number of past claim events
  - model the relative effort for each claim event

Methodology (Cont')

- **Model the per event cost**
    - per event cost = expenses incurred x relative effort for the event / count of events

- **Project future claims handling expenses**
    - project count of future events
    - projected future expenses = count of future events x per event expense
    - inflation and discounting
    - convert into expense loading

Methodology (Cont')

Challenges

- Fully allocated claims handling expense
- Modelling the relative effort for each type of claim event

Methodology (Cont')

Relative Effort

- List steps
- Estimate time & frequency
- Map to events
- No. of events for relative effort
- Reconcile

Event	Step	Time	Frequency	Effort	
Lodge	Receive initial claim call	3	90%	2.7	
Lodge	Receive initial claim letter	4	10%	0.4	
Lodge	Follow up call	5	10%	0.5	
	⋮				
Ongoing	Regular review of claim	90	250%	225	
	⋮				
Finalise	Pay claim	10	80%	8	
Finalise	Close claim file	15	100%	15	
	Total per claim			**1800**	min
	Lodge			720	min
	Ongoing			720	min
	Finalise			360	min

	Numbers	Effort	Relative Effort
Claims lodged	480	5,760	25%
Claims Open	1250	15,000	65%
Claims Finalised	375	2,250	10%
Total Effort expended		23,010	hours
Total Staff hours		24,742	hours
		93%	

Example

Example:	Hypothetical NSW CTP
Analysis period:	2002/03
Total gross claim payments:	$172 million
Total historical claims handling expenses:	$20 million
Ratio of claim expenses to payments:	11.70%
Relative effort spent on:	
processing claims reports	25%
processing claims finalisations	10%
ongoing administration of open claims	65%
Claims reported in analysis period:	2,099
Claims finalised in analysis period	3,125
Average number of claims open in period:	5,365
Expense per claim report:	$2,382
Expense per claim finalisation:	$640
Expense per claim open per development year:	$2,423
Inflation rate	4% pa
Discount rate	5.25% pa

Example (Cont')

	Outstanding Claims	Premium Liability
Projected number of claim reports	1,186	941
Projected number of claim finalisations	6,037	941
Projected number of open claim years	11,344	1,989
Infl&Disc Projected reporting expenses	$2.8 million	$2.3 million
Infl&Disc Projected finalisation expenses	$3.8 million	$0.6 million
Infl&Disc Projected admin expenses	$27.2 million	$4.8 million
Total projected claim handling expenses (infl & disc)	**$33.9 million**	**$7.6 million**
Gross Central Estimate of future claim payments (infl & disc)	$747.1 million	$83.4 million
Claims Handling Expense loading	**4.50%**	**9.10%**
Per claim payment	$123,800	$88,600
Per claim expense	$5,600	$8,100

Conclusion

- **Simple ratios method is flawed**
- **Difference between loading for O/S Claims vs Premium Liabilities**
- **Full analysis allows for changes in claims experience**
- **Consider differences between past and future experience**
- **Time variant factors**
- **Let's get excited!**