



Institute of Actuaries of Australia

# Pricing and Reserving Issues

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**ERNST & YOUNG**

# Agenda

- **Today**
  - **Commercial Business**
  - **Commercial Property**
  - **Public Liability**

# Commercial Business

- **Link between underwriting & pricing is much more important**
  - Exposure analysis vs pricing
  - Experience rating
  - Approaches differ for large & small business
  - Tighter underwriting = lower prices
  - Softer underwriting = higher prices
  - Awareness of market cycle
- **Greater diversity of risks, size, exposures, etc**
- **More skewed claims size**
- **Data issues usually more difficult**

# Pricing Commercial Business

- **Rating structure**
  - **Competes against other insurers**
    - Insurers having better structure that reflects risk differences are more profitable
    - Does not need to be the “best” structure just better than competitors
    - What is acceptable to market/ agents/brokers
      - Trade off between theoretical and practical
    - Rating structures are relatively simple

# Pricing Commercial Business

- **Premium rates vary**
  - Excess levels
  - Sum insured levels
  - Reinsurance programme
- **Important step**
  - Consult with business
  - Practicality of recommendations
  - Assess impact on existing policies

# Commercial property

- **Property pricing, reserving & monitoring**
  - **Claims cost**
    - Working losses
    - Large claims
    - Catastrophes
  - **Coverage**
    - Fire
    - Business interpretation (Loss of profits)
    - Glass
    - Machinery breakdown (electronic equipment)
    - Money (in transit)
    - Fidelity
    - Others

# Commercial property

- **Property pricing, reserving & monitoring**
  - **Rating factors**
    - **Hazard index**
      - Industry (use of building)
      - Additional rating factors (eg retail, location)
    - **Prevention measures**
    - **Sum insured (risk is not linear)**
    - **Turnover**
    - **Type of cover**
      - Rating factors
    - **Construction Type**
    - **Seasonality of business**
    - **Others depending on risk characteristics/coverage**

# Commercial property

- **Property pricing, reserving & monitoring**
  - **Large policies**
    - **Book premium rates are a guide**
    - **Diverse locations/countries and types of risks**
    - **More emphasis on**
      - **Risk assessment/management**
      - **Claims experience**
      - **Policy coverage, limits, excesses, fac R/I**
      - **Underwriter judgement**
  - **Monitor accumulations**
  - **Reinsurance programme is important**

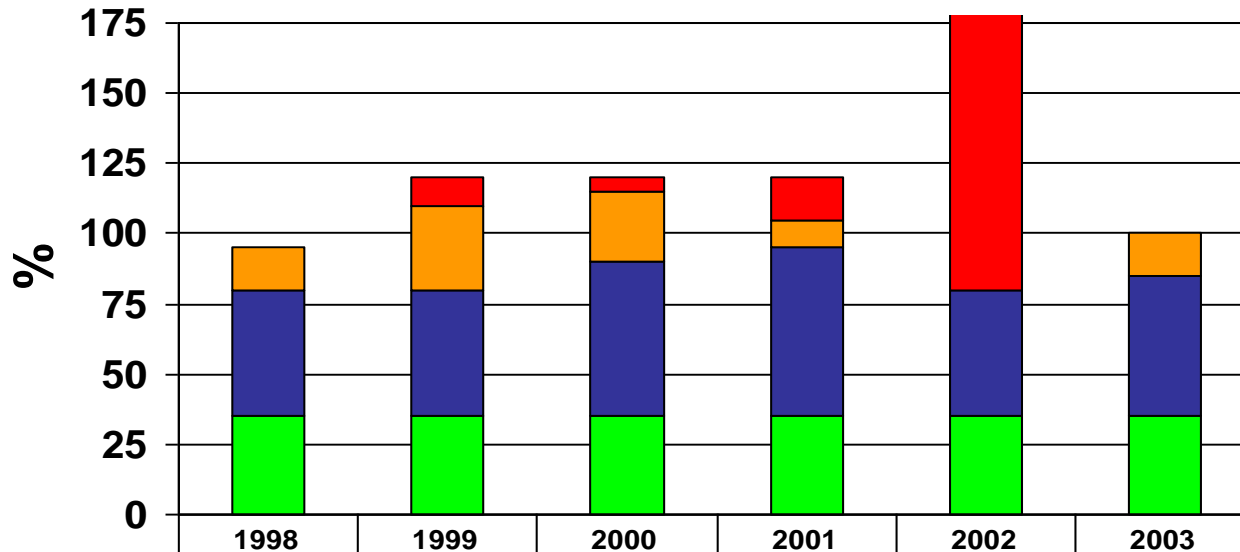


# Commercial property

- **Typical reaction to an unprofitable class**
  - Last year we had a catastrophe and a few large claims - unlucky
  - The year before we had 5 claims over \$2m - unlucky
  - The year before we had no large claims or catastrophes – i.e. we made a good profit, a normal year
  - The year before we had 4 claims over \$7m - unlucky

# Commercial Property

## Commercial Property - Gross Loss Ratio



•Target working claims loss ratio – 30%

•Target large claim loss ratio – 15%

•Target catastrophe loss ratio – 10%

	1998	1999	2000	2001	2002	2003
■ Catastrophes	0	10	5	15	100	0
■ Large claims	15	30	25	10	0	15
■ Working losses	45	45	55	60	45	50
■ Expenses	35	35	35	35	35	35

Accident Year

■ Expenses ■ Working losses ■ Large claims ■ Catastrophes

# Commercial Property

- **Lessons**
  - **Large claims are normal**
    - Numbers fluctuate
    - Low numbers do not equate to a profitable portfolio
  - **Catastrophes are normal and can be expected every few years**
  - **Working losses**
    - Best indication of underlying profitability
  - **Should make an underwriting profit in most years**

# Commercial Property

- **Other comments**
  - **Data**
  - **Risk assessments (surveys) are important for large risks**
  - **Always review the claims experience**
  - **Reinsurance cost is substantial**
    - **Large catastrophe exposures/accumulations**
    - **Programme impact on pricing**

# Public Liability

- **Public liability**
  - **Characteristics**
    - **Diverse range of risks, coverage, indemnity limits, excess, exposures & size of policies**
      - No portfolio is typical
    - **Personal injury and property damage claims**
    - **Long tail nature**
    - **Skewed claims size**
    - **High claims inflation**

# Public Liability

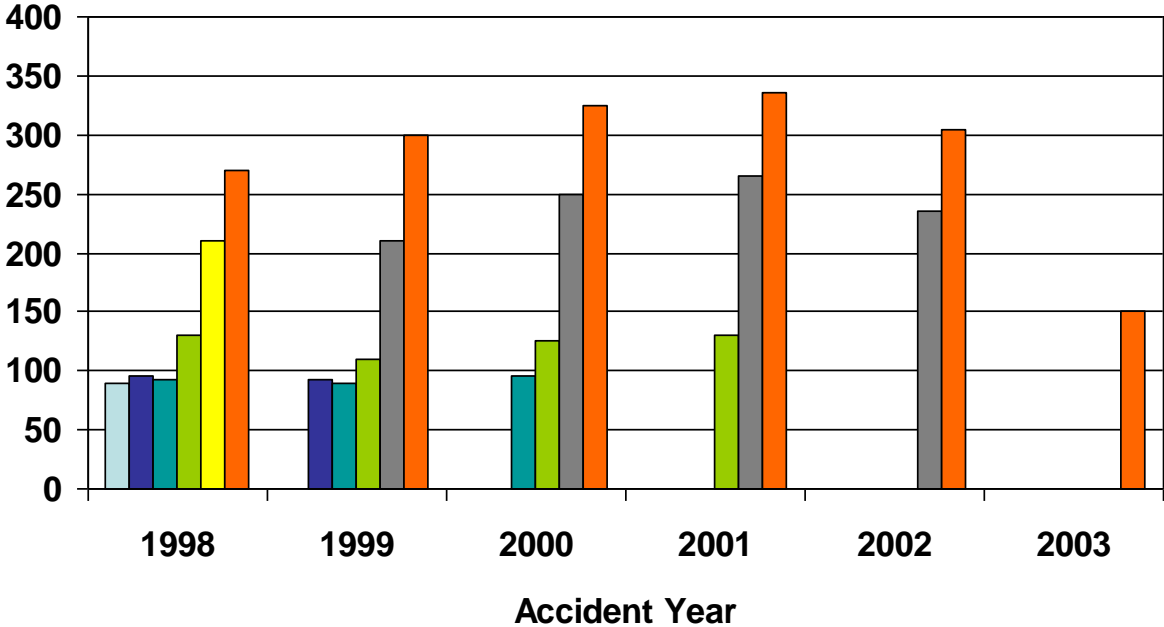
- **Public liability**
  - **Pricing and reserving issues**
    - Understand business written and changes
    - Mix of personal injury & property damage claims
      - Personal injury 5 to 10 times bigger claims size
    - Separate allowance for large claims
      - Exposure to class actions
    - Claims inflation “superimposed inflation”
    - Data issues
      - Exposure measure(s)
    - Case estimates are important
    - More judgement required

# Public Liability

- **Example - under Reserving and Pricing**
  - **Public liability**
    - Low frequency, high average claim size
    - Large corporate business
    - Non-standard risks, policy coverage, wide variations
    - Similar premium level each year (\$50m)
    - Heavy exposure nasty claims, class actions
  - **Actuarial reserves based heavily on case estimates**
  - **Restricted actuarial involvement/understanding**
  - **Actuary accepted management's view of case estimate adequacy and performance of the class**

# Public Liability

Actuarial Loss Ratio (%)  
at each Valuation Date



Profit result (financial year)

- 1998 \$5m
- 1999 \$3m
- 2000 \$2m
- 2001 (\$72m)
- 2002 (\$280m)
- 2003 (\$210m)

Dec-98 Dec-99 Dec-00 Dec-01 Dec-02 Dec-03



# Public Liability

- **Lessons - under Reserving and Pricing**
  - Illustrates link between reserving and pricing
  - Case estimates were grossly inadequate
  - Needed to understand the type & scope of risks, coverage, exposure, type of claims, pricing basis, etc
  - Actuary needed factual evidence to verify management views
    - Adequacy of case estimates from analysis
    - Claims management review
  - Prices should have been about 400% higher
    - Poor rating structure
  - Gearing impact of under reserving in casualty classes

# Public Liability

- **Pricing issues**
  - Rates by industry
    - Separate into
      - Mainly personal injury claims
      - Mainly material damage claims
      - Mixture
  - Rating for differing limit of indemnity
    - Increase limit factors (relationship to exposure)
  - Exposure
    - Varies according to type of risk
  - Overcoming data issues

# Public Liability

- **Pricing issues**
  - **Large policies**
    - Coverage will vary by client
    - More reliance on underwriter judgement
    - Book rates are a guide
    - Claims frequency accounts
      - More reliance on past claims experience
      - Experience rating models
        - » Development of claims cost (example)
        - » Loading for large claims/cats
    - Low frequency accounts (very large claims)
      - Risk assessment is important
      - But do not forget past claims experience
    - Adjust for changes in excess/deductibles
    - Level of indemnity/excess levels

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