Anti - Selective Lapse Effects in YRT Business?

Martyn Gilling, FIAA
Duncan Rawlinson, FIA, FIAA

Chief Pricing Actuary, RGA Reinsurance
CFO, RGA Reinsurance
Agenda

• Why consider anti-selective lapses?
• North American experience
• Australian lapses
• Possible pricing approaches
• Australian experience
• Other considerations
Why Consider Selective Lapses?

RGA Internal Studies: comparison of lapses and mortality
Why Consider Selective Lapses?

Profitability

- Financial analysis is typically based on loss ratios
- Growing portfolios
- Today’s on sale products are tomorrow’s legacy products
North American Experience

Historical YRT business

- USA use to have YRT business
- Emergence of anti-selective lapse effect on YRT business
- Market evolved to level term
North American Experience

Level term business

- Level term products 5, 10, 20 year terms
- Cliff lapses at end of level term
- Extremely high post level term mortality
- Different product types but parallels to Australia
- Premium size, age, gender and smoking status impact lapses and selection in US
- Similar effects in Australia?
Australian Lapses

Drivers of lapse behaviour

- Need
- Affordability
- Advice
- Premium payment method
- Awareness
- Health
Australian Lapses

Lapse rates vary by

- Age
- Benefit Type
- Gender
- Smoking status
- Duration

………. all affect………. 

- Absolute premium size
- Is there a base level of lapses?
- Are lapse rates on level term significantly lower?
- Is the difference selective?
Australian Lapses

RGA Internal Studies: Lapse rates by age and benefit
Australian Experience

Quarterly Discontinuance Rates
(Stand Alone Lump Sum)

Source: NMG Consulting IFA Trend Analysis
Australian Experience

Lump Sum Year on Year Growth Rate (Premiums)

Source: NMG Consulting, IFA Trend Analysis
Possible Pricing Approaches

Select mortality models

- Becker – Kitsos
- Dukes – MacDonald
- Shapiro – Snyder

Based on “Conservation of Deaths” concept
Possible Pricing Approaches

Conservation of deaths

- From any starting insured population, the total deaths will be the same
- People who lapse: “Reverters”
- People who don’t lapse: “Persisters”
- Assumptions as to effectiveness
Possible Pricing Approaches

Model assumption

- % of lapses that are selective
- Effectiveness of lapse selection
- Mortality of reverters

- A very simple example
- 5% “anti-selective lapses”
- Reverters 10% better mortality
Possible Pricing Approaches

Conservation of death - example

Mortality Curves for Selective Lapses

- Standard
- Persisters
- Reverters
Possible Pricing Approaches

Conservation of death – Ratio of mortality to standard
Australian Experience

Will we see this?

Loss Ratios by Duration

- Steady State
- Higher Lapses
- Higher Lapses, Lower NB
Other Considerations

- Pricing for new business
- Valuation
- Capital
- Review IF premiums
What do we know?

- Overseas experience shows anti-selective effect of lapses on mortality
- Lapses have increased significantly in recent years
- New business has fallen
- Mortality improvement may be slowing

All combine to make the possibility of anti-selective lapse effects in YRT business something we should consider