The Role of the Actuary in a General Insurance Company

Yangon, Myanmar
14 July 2014

Scott Yen
Key Roles

• Pricing
• Reserving
• Reinsurance
• Risk Management
Pricing

• Ratemaking
• Pricing
• Product development
Ratemaking vs. Pricing

• **Ratemaking**: A technical process of creating rates, rating structure, rating factors, etc. (actuarial)

• **Pricing**: A managerial process of determining the actual price of a risk by taking into consideration of competition, expense, distribution channel, target market, etc. (marketing, underwriting, actuarial, claims, distribution...)
Ratemaking

- Actuarial processes to ensure rates are sufficient to meet expected claim costs and expenses as well as to provide an adequate return on invested fund.
- It requires an understanding of the business, benefit provided, marketing/sales strategies...
- Two major components:
  1. Overall rate level
  2. Segmentation analysis
Pricing--Action Plan & Impact Study

• Discuss findings and recommendations with marketing, underwriting, claims…
• Agree on rate/underwriting actions
• Study impacts on P&L
• Establish clear targets
• Develop monitoring reports
Rate Review:
Overall indication
Segmentation analysis

Portfolio Analysis:
KPI; Production by source;
Frequency/Severity;
Average premium;
Renewal Retention; New business profile; Claim benchmarks

Market Analysis:
Distribution sources
Competitiveness

Implementation:
Communication
Training
System support
Monitoring
Product Development

- Understand the offered benefits
- Get relevant data
- Learn about marketing plan and process flow
- Develop rates
- Monitor results
Loss Reserving

• An estimation process to evaluate an insurer’s ultimate loss liability which impacts the financial statement
• It involves complex technical tasks and interpretation of numerical results
• It requires an understanding of the business, changes in coverage provided and operation procedures to ascertain the applicability of the historical patterns
Loss Reserving

- There are many estimation methods and it is not appropriate to only use a particular method
- It relies on the actuary’s knowledge and experience
- It is not a mechanical process
Reinsurance

• Understand reinsurer’s pricing
• Study the impacts of various reinsurance structures/programs in terms of cash flow, capacity, risk aggregation, surplus, profitability…
• Participate in designing reinsurance programs
• Monitor risk aggregation and concentration
Risk Management

• Risk Awareness
• Risk Measurement
• Risk Control
Risk Types

• **Insurance Risk**- pricing, reserving, concentration, aggregation...

• **Credit Risk**- reinsurance, investment, agent balance, other third parties…

• **Market Risk**- interest rate, FX, equities, liquidity, asset/liability mismatch…

• **Operation Risk**- personnel, reputation, system/IT/process, regulatory/legal, strategic, economy, disaster recovery, business continuity …. 
Risk Management

- Risk measurement through risk profile analysis; development of risk models; and calibrating the parameters for the risk models. These models allow a company to use risk measurement statistics such as VaR or TVaR to monitoring its risk position.
Risk Management

• Design and implementation of DFA (Dynamic Financial Analysis) or internal models which form an integral part of ERM tools.

• "Risk Monitor and Report" to the Board for proper and timely risk management decision and action.

• Communicate with risk owners of their respective situation to ensure proper control mechanisms are in place to manage risks.
Data Issues

• Data collection and storage
• Completeness
• Quality
• Reconciliation
• Organization
• Analysis

Data + Analysis = Information