

# The Role of the Actuary in a General Insurance Company

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# 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 :

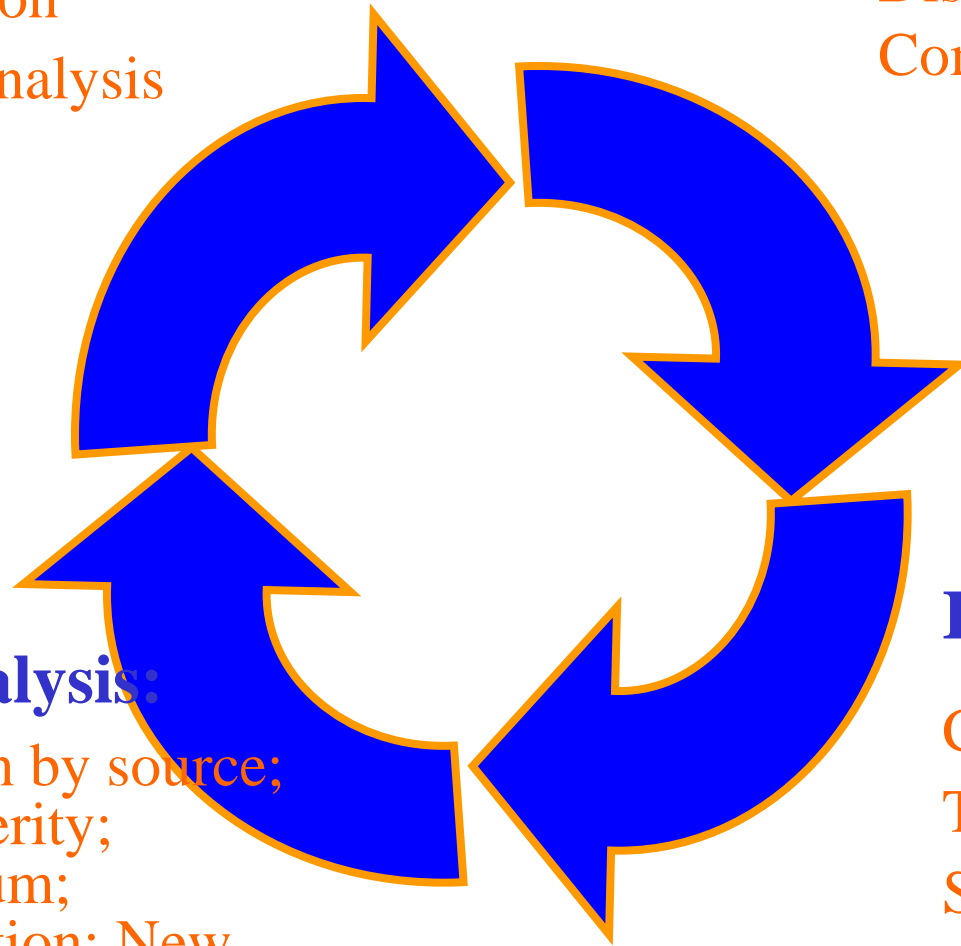
Overall indication

Segmentation analysis

## Market Analysis :

Distribution sources

Competitiveness



## Portfolio Analysis:

KPI; Production by source;

Frequency/Severity;

Average premium;

Renewal Retention; New  
business profile; Claim

benchmarks

## 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**

