

# Functions of Insurers



Insurance

“Finance” Major, 3rd Year, Full-Time

# Lecture Outline

1. Product Design and Ratemaking:
  - Basic Concepts and Types of Rate
2. Production and Distribution
3. Underwriting in Details
4. Loss Adjustment
5. The Investment Function
6. Reinsurance



# Introductory Notes

- The *unique nature* of the insurance product requires certain specialized functions that do not exist in other businesses.
- The major activities of all insurers may be classified as follows:
  - Product Design and Ratemaking
  - Production and Underwriting
  - Underwriting
  - Loss adjustment
  - Investment
- In addition to these, there are other activities common to most business firms such as accounting, human resource management, and market research.



# Product Design

- The insurance process starts with creating *products* (i.e., policies or contracts) that specify the obligations between insurers and insureds.
- It is in this process that insurers determine consumers' *risk-management* and *transfer needs* and develop *insurance contracts* that will meet those needs consistent with the *basic insurance principles*.
- Insurance contracts must provide value to the insured in terms of coverage against specified *perils* while protecting the insurer against *moral hazard* and other problems that would expose the insurer to uncontrollable or unanticipated losses that could not be fairly priced.



# Product Design

- Insurance contracts typically include:
  - Provisions for covered perils;
  - Coverage amounts and limits;
  - Deductibles/retentions;
  - Co-insurance provisions;
  - Coverage exclusions;
  - The basis of loss settlement;
  - Additional coverages.



# Product Design

- Insurance contract represents a bundle of services provided to insureds that includes but is not limited to risk transfer.
- These additional services encompass risk assessment, loss prevention, claims management and investment management, among others.
- In response to consumer demand and within regulatory constraints, competition compels insurers to develop differentiated products that meet various insureds' needs and preferences.



# Ratemaking

- An insurance rate is the price per unit of insurance.
- Like any other price, it is a *function of the cost of production*.
- However, in insurance, unlike in other industries, **the cost of production is unknown when the contract is sold, and it will remain unknown until some time in the future when the policy has expired.**



# Ratemaking

- One fundamental difference between insurance pricing and the pricing function in other industries is that the price for insurance must be based on a *prediction*.
- A second important difference between the pricing of insurance and pricing in other industries arises from insurance rates being subject to *government regulation*.
  - State laws require that insurance rates must not be excessive, must be adequate, and may not be unfairly discriminatory.
- The process of predicting future losses and future expenses and allocating these costs among the various classes of insureds is called *ratemaking*.





# Ratemaking. Basic Concepts

- A rate is the price charged for each unit of protection or exposure and should be distinguished from a premium, which is determined by multiplying the rate by the number of units of protection purchased.
- The unit of protection to which a rate applies differs for the various lines of insurance.
  - In life insurance, for example, rates are computed for each \$1000 in protection;
  - In fire insurance, the rate applies to each \$100 of coverage;
  - In workers compensation, the rate is applied to each \$100 of the insured's payroll.



# Ratemaking. Basic Concepts

- Regardless of the type of insurance, the premium income of the insurer must be sufficient to cover losses and expenses.
- To obtain this premium income, the insurer must predict the claims and expenses and then allocate these anticipated costs among the various classes of policyholders.
- The final premium the insured pays is called the gross premium and is based on a gross rate.
  - The gross rate is composed of two parts, one that provides for the payment of losses and a second, called a loading, that covers the expenses of operation.
  - That part of the rate intended to cover losses is called the pure premium when expressed in dollars, and the expected loss ratio when expressed as a percentage.



# Ratemaking. Basic Concepts

- In general, the pure premium is determined by dividing expected losses by the number of exposure units.
- For example, if 100,000 automobiles generate \$30 million in losses, the pure premium is \$300:

$$\frac{\textit{Losses}}{\textit{Exposure Units}} = \frac{\$30,000,000}{100,000} = \$300$$



# Ratemaking. Basic Concepts

- The process of converting the pure premium into a gross rate requires adding the loading, which is intended to cover the expenses required in the production and servicing of the insurance.
- The determination of these expenses is primarily a matter of cost accounting. The various classes of expenses for which provision must be made normally include the following:
  - Commissions
  - Other acquisition expenses
  - General administrative expenses
  - Premium taxes
  - Allowance for contingencies and profit



# Ratemaking. Basic Concepts

- The final gross rate is derived by dividing the pure premium by a permissible loss ratio.
- The permissible loss ratio is the percentage of the premium (and so the rate) available to pay losses after provision for expenses.
- The conversion is made by the following formula:

$$\text{Gross Rate} = \frac{\text{Pure Premium}}{1 - \text{Expense Ratio}}$$



# Ratemaking. Basic Concepts

- Using the \$300 pure premium computed in our previous example, and assuming an expense ratio of 0.40, we obtain

$$\text{Gross Rate} = \frac{\$300}{1 - 0.4} = \$500$$

- Although the pure premium varies with the loss experience for the particular line of insurance, the expense ratio varies from one line to another, depending on the commissions and the other expenses involved.



# Production and Distribution

- Production and distribution involve the marketing and sale of insurance contracts and related transactions and activities.
- Most insurers use producers (generally known as either agents or brokers) in some capacity as intermediaries to transact business with insureds; however, a few insurers market directly to consumers.
  - Typically, a producer will contact or be contacted by potential insurance buyers and assist buyers in determining their insurance needs and selecting an insurer and the appropriate coverages.
  - Agents act on the behalf of insurers and do not represent the interests of consumers per se.
  - The agent submits policy applications and premiums to an insurer and may have authority to bind coverage under certain conditions.
  - Agents may provide further services to insurers and insureds, such as assisting in the filing and adjusting of claims and changing policy provisions.





# Production and Distribution

## Classification of agents

- *Independent agents* can represent more than one insurer and “own” their book of business.
  - Independent agents generally must be appointed by the insurers they represent.
- *Exclusive or captive agents* represent one insurer and do not own the business they generate.
  - They may be employees of the insurer or independent contractors.





# Production and Distribution

- Other production/distribution services performed by insurers include activities related to:
  - Marketing and advertising;
  - Processing applications, renewals and cancellations;
  - Verifying the information submitted on applications;
  - Writing policies;
  - Collecting premiums.
- Insurers also must establish and maintain distribution systems and provide information to their agents.



# Underwriting

- The underwriting function entails the risk assessment, classification and selection of insureds to achieve an insurer's desired portfolio of risks and determine appropriate premiums.
- Underwriting must be coordinated with an insurer's pricing structure to ensure the insurer collects adequate premiums to support its portfolio of risks.
  - The ultimate objective is to match each risk with an appropriate policy and premium.
  - *All else being equal, insurers with lower prices must have more stringent underwriting standards, while insurers with higher prices can afford to have less stringent standards.*



# Underwriting

- Several *principles* guide proper underwriting:
  - 1) selection according to standards;
  - 2) proper balance within classifications; and
  - 3) equity among policyholders.
- Standards are necessary to ensure the application of underwriting decisions to different risks by underwriters and agents consistent with an insurer's business plan.
  - Some standards are fairly objective and clear; e.g., uniform declination of applicants who have been convicted of fraud or arson or who have filed an unusually high number of claims in the past.
  - Others may be more subjective and discretionary; e.g., the apparent care that an applicant has taken in maintaining their home.



# Underwriting

- The balancing of risks within classifications is aimed at avoiding adverse selection causing an excessive concentration of high-risk insureds within an insurer's portfolio.
- An excessive concentration of high-risk insureds could tax an insurer's efficiency and financial performance and threaten its solvency.
- Also, if an insurer writes an increasing concentration of high-risk insureds, it will need to raise its rates and may no longer be competitively priced for low-risk insureds.



# Underwriting

- It is important that insureds are treated fairly from the pricing perspective.
- *In other words, insureds should be classified and pay premiums commensurate with their risk.*
  - High-risk insureds should pay a higher premium than low-risk insureds.
- This can be accomplished through an appropriate rate structure or limiting a portfolio to insureds with similar risk characteristics.



# Loss Settlement

- The objective of loss settlement is to pay claims or benefit obligations arising out of the insurance contract according to the provisions of the contract.
  - It is essential that claims-settlement practices are consistent with insurance contract provisions and the assumptions underlying an insurer's pricing and financial structure.
  - Otherwise, an insurer could incur much higher losses than expected, with negative financial consequences.
  - While insurers must pay appropriate attention to cost-containment and proper loss-settlement procedures, they are obligated to pay claims and benefits that are provided for under their contracts.



# Loss Settlement

- There are several steps in the settlement process.
- First, the insurer must determine that a covered loss has occurred, that a specific person or property is covered under the policy and the extent of the coverage.
- Second, the company must provide for fair and prompt payment of valid claims under its contracts.
  - This requires the company to determine an appropriate payment that is neither excessive nor inadequate under contract provisions.
- If the insured disputes the settlement offered by the insurer, the insurer and insured may negotiate a settlement to avoid litigation.
  - *It is in the interest of an insurer to resolve claim disputes amicably and maintain a positive reputation among its insureds and potential insureds.*



# Investment

- The reserves that insurers hold for unearned premiums, unpaid losses or benefits to be paid and other contingencies must be invested along with a company's surplus to recover the time-cost of money and promote efficiency.
- The income earned on appropriate investments allows insurers to *discount* premiums and/or *improve* benefits on insurance contracts.
- For insurance products that include a savings or cash accumulation component, insurers provide an additional service in managing underlying investments to achieve a good return for an acceptable level of risk.
- These functions require prudent investment policies that match liabilities and assets, manage cash flows and achieve an appropriate balance of risk and return.





# Investment

- Because of their fiduciary responsibilities and the market's valuation of their financial strength, insurers tend to invest in assets for which there is a *relatively low risk of default*.
- They also tend to *avoid high concentrations of investments with particular issuers* that would jeopardize an insurer's solvency in the event of default.
- Ideally, the timing or *duration of liabilities and assets* will be coordinated to avoid potential losses when assets have to be liquidated to pay claims or other obligations.



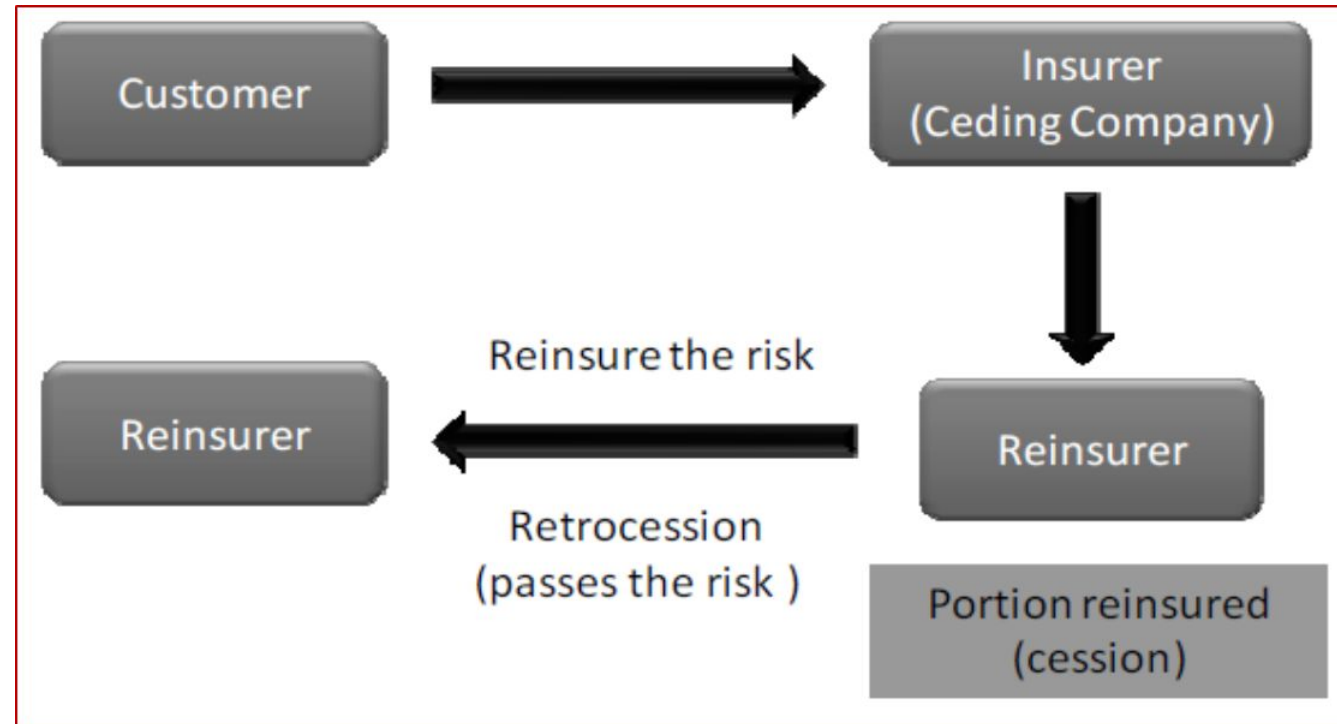
# The Essence of Reinsurance

- Reinsurance refers to the shifting of part or all of the insurance originally written by one insurer to another insurer.
- The company originally writing the coverage may wish to transfer part or all of the risk to a reinsurer for a number of reasons:
  - To increase underwriting capacity;
  - To stabilize profits;
  - To reduce the unearned premium reserve;
  - To provide protection against catastrophic loss;
  - To retire from a line of business or from a territory.



# The Essence of Reinsurance

- In reinsurance, primary insurer who wants to shift part or all of the insurance is called a **ceding company**, whereas another company accepting this insurance is called a **reinsurer**.
- The portion of risk kept by the ceding company is known as a **line or retention** and the portion reinsured is known as a **cession**.
- The process by which a reinsurer passes on risks to another reinsurer is known as **retrocession**.



# Thank You!

