4

Insurance Company Operations

Learning Objectives

An understanding of the material in this chapter should enable you to

4-1. Describe the nature and purpose of underwriting.

4-2. Explain the nature and purposes of reinsurance.

4-3. Explain the purpose of claims adjustment, the types of claims adjusters, and procedures for claims adjustment.

4-4. Describe factors involved in insurance rate making.

4-5. Explain the investment function and other functions of an insurance company.

The previous chapter discussed the various classifications of private insurers and how they market their products to the public. Now we turn our attention to insurers' internal operations. The principal areas described are underwriting, reinsurance, claims adjusting, rate making, and investing. Financial planners need to understand the basic operation of these functions in order to help their clients make the most effective use of insurance, which is invariably a part of any sound financial plan.

UNDERWRITING

Insurers are not usually required to sell insurance to every person who applies for it.[15] This fact puzzles many people. Something seems wrong with a business that can refuse to sell its product or service to the people who need and want it most. In the case of insurance, these are the people most likely to have losses. Insurers are more interested in finding and accepting the clients who are least likely to have losses.

Insurance is legally viewed as a "business affected with the public interest."[16] Insurers serve the public interest not only by providing a wide

15. Exceptions apply in some cases. For example, insurers are required in some states to provide an insurance policy to all applicants for auto insurance. However, behind the scenes, the insurer can transfer an undesirable risk to a residual market facility.
16. See *German Alliance Insurance Co. v. Lewis*, 233 U.S. 389 (1914).

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variety of coverages to most applicants, but also by remaining, or at least attempting to remain, financially solvent so that they can deliver on the promises made in the insurance contracts they sell. Financial planners need to recognize and appreciate the delicate balancing act insurers face in meeting these sometimes conflicting objectives.

Purpose

underwriting

Underwriting is the selection and pricing of insurance applications that are offered to an insurer. The insurer attempts to accept only applicants who, on average, will have actual loss experience comparable to the expected loss experience for which the company has set its premium rates. Selection implies that there are some acceptances and some rejections, or that not all applicants will be accepted for insurance. Most other businesses welcome virtually all paying customers and do not attempt to screen them. However, banks and other institutions that lend money practice a selection process that resembles insurance underwriting. The selection process lenders use is, in fact, referred to as credit underwriting or loan underwriting.

Most insurance prices are based on an average rate for an entire class or group, such as 30-year-old female nonsmokers or owners of 2008 Buick Lucernes in Philadelphia with no youthful drivers. Some applicants within each class will be better than average and some worse than average. Which type of policyowners will an insurer that does no selection tend to have? Those persons who are better than average are most likely not to want or need the insurance at the price quoted for the class, and conversely, those persons who know they are worse than average will be most likely to desire the insurance contract at that price. The result is obvious: The bad applicants at the average rate would be getting a bargain.

This is known as adverse selection and is found throughout insurance. As mentioned in chapter 1, "adverse selection" refers to the natural tendency for those who know they are highly vulnerable to loss from a specific risk to be most likely to acquire and retain insurance that covers that risk or to select insurance options that best fit their situations. Insurers, on the other hand, are most eager to sell insurance to the people least likely to suffer a covered loss. Insurers attempt to avoid adverse selection in order to prevent the financial disaster that results when an insurer ends up with a customer base of worse-than-average applicants, who will have worse-than-average losses, but collects premiums based on applicants whose loss experience would be average. Underwriters attempt to avoid adverse selection by selecting a large, safely diversified, profitable group of applicants.

The major need for insurance underwriting stems from this tendency toward adverse selection, which, without underwriting, would ruin insurers. An insurer can be profitable only by exercising careful selection that reasonably offsets the natural economic forces which lead to adverse selection in insurance applications. The insurer needs adequate and accurate information about its applicants to determine fair classifications and to charge sufficient prices

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Underwriting is the process by which the insurer evaluates the applicants it has been asked to accept. A compromise is often necessary between two objectives: (1) to obtain a large number of individual insureds within each classification so that reasonable predictability of losses is possible, and (2) to obtain a homogeneity of insureds within each classification so that reasonable equity between the better and the more loss-prone individual insureds is achieved. The care with which an insurer combines these objectives is vital to its underwriting success and thus to its entire operations.

Underwriters are the backbone of the insurance business. They must decline many applications, but they are also often able to help consumers become insurable and thereby have their applications accepted. Proper rate classes and prices, coupled with good risk control practices, help make insurance available to most people who need it.

Selection of Applicants

The selection of applicants and the pricing of insurance contracts are closely related. If an adequate price for a class of insureds has been established, the insurer must underwrite to secure at least an average group of insureds within that class. Otherwise, the insurer's losses will exceed the premium income available to pay claims for this group of insureds' losses. If the pricing for an insurance contract is inadequate, even reasonably careful selection can produce an unprofitable group of applicants. When rates are inadequate, insurers respond with strict underwriting, accepting only the very best applicants in each rate class. Pricing, or rate making, is discussed later in this chapter.

The Agent and Insurer As Underwriters

field underwriting

For most insurers and most lines of insurance, the choice of applicants begins with the underwriting done by the agent, sometimes referred to as *field underwriting*. Each time an agent prepares a prospect list or, for example, telephones Mr. Brown instead of Mr. Green to sell insurance, the agent is performing the first step in field underwriting. Well-qualified agents usually try to choose clients that meet the insurer's underwriting rules. Even though the agent does some underwriting for the insurer, most of the underwriting is an insurance company function, performed by salaried employees in the home office or branch office.

Underwriting does not involve rejecting all difficult or doubtful applications. Both the agent and the insurer frequently explain how a borderline applicant can become acceptable through loss prevention or other methods. Good judgment and good information are needed in this process. For example, an auto insurance underwriter whose company rules do not permit him or her to write a teenaged driver with a high-performance sports car might suggest that the parents purchase a more conservative vehicle that would meet underwriting standards at a standard rate. Or the underwriter

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might suggest that an applicant for disability income insurance, whose type of work occasionally involves minor injuries, would be acceptable for coverage with a waiting period longer than the one indicated on the original application.

Generally, the insurer determines the underwriting rules to be carried out by its agents and its company personnel in the underwriting department. Agents receive instructions on what types of applicants are unacceptable, as well as encouragement through directives and sales contests that specify what types of contracts and what kinds of business the company particularly desires. Other types of applicants may be specified as insurable only after the insurer has detailed information.

Types of Underwriting

- Field underwriting
- Initial home office or branch office underwriting
- Renewal underwriting

Underwriting by the insurer and the agent takes place not only at the time of the original application but also at each renewal of the insurance contract. During renewal underwriting, loss experience and other new information are considered in most insurance lines.

Sources of Underwriting Information

The sources of underwriting information on which insurers rely, depending on the line of insurance, include (1) the applicant, (2) the agent, (3) the insurer's own inspection or claims department, (4) insurer bureaus and associations, and (5) outside agencies.

The applicant for an insurance contract often makes both written and oral statements. Signed written statements are standard in life and health insurance, and the application becomes a part of the contract. Auto and business insurance applicants also frequently complete written application forms that give the insurer basic underwriting details. Agents in many kinds of insurance give their companies reports, opinions, and recommendations that are valuable aids in selecting or rejecting applications. Many insurers maintain separate inspection departments to give the underwriters physical inspection and engineering reports on applicants' properties. The insurer's claims department, too, can be a source of important underwriting data for renewal decisions.

Insurers also combine efforts to maintain bureau or association lists of insurance applicants. For example, the MIB Group, Inc. (MIB) offers a centralized source of information about medical and other impairments of individual applicants for life insurance. Other service organizations provide regular inspection and rating services in regard to property insurance.

Insurance companies often use outside agencies to supplement the information gathered from the applicants, agents, and other insurer

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representatives. For example, physicians supply life insurance companies with medical reports after physical examination of the applicants. Standard financial rating services, such as Dun & Bradstreet (D&B), are used for many insurance applications from businesses. Life insurers have used credit investigations by outside firms for many years. Auto insurers have used external agencies to check motor vehicle reports and court records of new applicants, especially for younger drivers. Agencies that develop a credit score or an insurance score, such as Fair Isaac and ChoicePoint, have become increasingly important sources of information in several other personal lines of property and liability insurance as well.

Inspection agencies are valuable for gathering factual data and for identifying a prospect's poor habits or moral problems through such sources as employers, neighbors, or associates. The evaluation of moral and attitudinal hazards is crucial, yet difficult, for many kinds of insurance. Types of moral and attitudinal hazards that cause increased losses are discussed in chapter 1. The aim of these investigations is not only to gather negative information but also to obtain positive character reports that will permit insurance to be written. The independent investigative companies must comply with federal legislation that deals with credit reporting and privacy. Insurers must also meet these requirements, as well as laws on the state level, such as the NAIC (National Association of Insurance Commissioners) Health Information Privacy Protection Model Act, adopted by many states.

Automation in Underwriting

The increasing complexity of computer systems has enabled insurers to automate many underwriting activities, especially for high-volume lines of business such as auto and homeowners insurance, that involve many routine transactions. The insurer's experience and underwriting expertise is translated into complex computer algorithms that automate the decision-making process. This reduces the need for human intervention, and consequently reduces the insurer's underwriting expenses while it expedites the handling of insurance applications. Based on information in the application and other underwriting sources, automated systems can determine the eligibility, acceptability, and rate classification of a routine insurance policy almost instantaneously and offer an immediate quote. Borderline cases or others that are not routine in some manner may still be referred to a human underwriter for evaluation. The extent to which automated underwriting processes are used and the nature of those processes vary substantially among insurers.

REINSURANCE

reinsurance

Financial planners must recognize how underwriters' ability to accept applications is both broadened and limited by reinsurance available to the insurer. *Reinsurance* is an arrangement in which an insurance company

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transfers to another insurance company some or all of the risks it has taken on by writing primary insurance. With reinsurance, the primary insurer or ceding company that issues the policy transfers all or part of the risk to another insurer, the reinsurer.

Purposes

How can an insurer accept large loss exposures that sometimes exceed many millions of dollars in a single building, a ship, or an airplane? How can liability contracts for business firms have policy limits of $100 million or more? How can a person obtain in excess of $10 million of life insurance? When hurricanes affect many policyowners at one time, how can insurers survive the concentration of loss that occurs? Gigantic losses do not occur frequently, but when they do occur, they illustrate the real reason for insurance—protection against losses that perhaps only the private insurance system can provide.

Catastrophes illustrate the most important purpose of reinsurance: the spread or diversification of losses. One insurer can write large amounts of insurance on a single life or property or in a concentrated area, then use reinsurance to shift part of the loss exposure to perhaps several other insurance companies. Large losses are thus shared, and excessive losses in one occurrence are less likely to cause financial instability for individual insurers. Without reinsurance, each insurer would be limited to its own financial ability to pay losses. Reinsurance enhances financial strength by spreading losses throughout the insurance business.

Reinsurance also has other purposes. Mandatory reserve requirements drain surplus and restrict growth, a particularly severe problem for newer or smaller companies. These companies can achieve more rapid growth by transferring part of the responsibility for maintaining reserves from the insurer to a reinsurer, permitting the insurer to increase its writing of new business. Reinsurers also offer many technical advisory services to new insurers or those expanding to new types of insurance or territories.

Significance to Financial Planners

Insurance companies usually obtain reinsurance from two basic types of organizations: (1) professional reinsurers, which sell only reinsurance, and (2) other insurance companies that write some reinsurance in addition to issuing policies directly to consumers. The financial planner should recognize that the policyowner is not a party to a reinsurance agreement. Reinsurance is usually transparent to policyowners. Neither the policyowner nor the financial planner is usually aware of the primary insurer’s specific reinsurance arrangements. Reinsurance operates in the background as a separate contract between the primary insurer and the reinsurer. The policyowner or other claimant looks to the primary insurer that wrote the policy for claims payment. This primary insurer is responsible for paying the entire claim and is then reimbursed by the reinsurer, if reinsurance applies.

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Reinsurance agreements are often highly complex, and the typical financial planner does not need to understand the many types of such agreements. However, the planner should at least be aware of the difference between treaty, or automatic, reinsurance agreements and facultative agreements.

treaty (automatic) reinsurance

Treaty (automatic) reinsurance exists when the primary insurer agrees in advance to transfer, or cede, some types of loss exposures and the reinsurer agrees to accept them. The reinsurer agrees to insure an amount or a proportionate part of a designated class of past or future business written by the primary insurer. The reinsurer participates in the risk as soon as the primary insurer accepts the loss exposure. Automatic protection is thus ensured for the primary insurer because the reinsurer has agreed beforehand to accept all loss exposures within the terms of the treaty. Usually, the policyowner will not even be aware of the existence of treaty (automatic) reinsurance.

facultative reinsurance

Facultative reinsurance, on the other hand, is optional for both the insurer and the reinsurer. Each facultative reinsurance contract is written on its own merits and is a matter of individual bargaining between the primary insurer and the reinsurer. The primary insurer may or may not offer part of a loss exposure to the reinsurer. The reinsurer is under no obligation to accept the loss exposure if it is offered. Each party thus retains the "faculty" or privilege of accepting or rejecting the reinsurance agreement. For large or unusual cases, the availability of facultative reinsurance may be the deciding factor in the underwriting process as to whether an application for insurance is acceptable to the primary insurer. Delays in obtaining coverage for a client often result from the primary insurer's need to obtain a facultative reinsurance commitment.

CLAIMS SETTLEMENT

Settling claims, often referred to as claims adjusting, is certainly the most obvious function of insurance. Without covered claims that lead to loss payments, there would be no insurance business. This section of the chapter paints a broad picture of the claims process as it applies with all lines of insurance, and it includes paying covered claims and denying claims that are not covered. Specific claims-handling details naturally vary substantially depending on the line of insurance, the nature and size of the claim, and the insurer involved in any specific case.

Thousands of claim checks are delivered to insureds, third-party claimants, or beneficiaries every day. Most claims are routine, but some are unique and spectacular. Losses from hurricanes or epidemics can affect thousands of people. Tornadoes, earthquakes, floods, explosions, nuclear accidents, terrorism, and other natural and man-made catastrophes can cause huge numbers of deaths and injuries and massive damage, producing covered claims that cost insurers billions of dollars.

When policyowners receive claims payments, they quite clearly recognize the value of their insurance. Up to that time, some might only have had a feeling that they were complying with some vague duty. When they actually receive

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insurance proceeds that make it possible for them to rebuild their homes, to replace lost income, or to pay nursing home expenses, they come to appreciate insurance. Those who were inadequately insured often realize belatedly that they should have purchased more coverage, and they may blame—or even sue—their agents or financial planners.

Apart from routine medical expense claims, most individuals and families experience relatively few claims. Experienced financial planners, because they deal with many clients, usually have more opportunities to recognize the value of adequate insurance in the financial planning process. Unfortunately, claims experience can also demonstrate the problems that result from inadequate insurance.

Financial planners usually discover that claims provide an extremely rewarding opportunity to see insurance in action. Tremendous personal satisfaction results when a family receives steady income during a long period when the primary breadwinner cannot work, because the family took the planner's advice and purchased disability income protection. It is highly gratifying to see a dream home rebuilt, with homeowners insurance proceeds, on the ashes of a fire that otherwise would have caused a loss of lifetime savings. Experienced financial planners point with quiet pride to families whose sons and daughters have been able to attend college without financial hardship, despite the unexpected early death of family breadwinners. Because experienced financial planners and insurance agents have seen firsthand the value of insurance, it is easy to understand their missionary zeal in urging clients to have adequate coverage.

Purpose

The claims settlement process is set in motion when a notice of loss is filed with an insurer. The purpose of the claims settlement process is to confirm whether the insurer has an obligation to pay for a given loss and to reach an agreement on the amount of any covered loss or damage that is payable under the insurance contract.

Insureds and beneficiaries have a legally enforceable contractual right to seek payment for any covered claim. Arriving at a fair and equitable measure of the loss should be the objective of both insurers and claimants. There are sometimes areas of disagreement, but if both parties resolve to reach an equitable adjustment, disagreements can usually be reconciled.

Claims adjusters have been advised to follow the "4F rules": Be fair, frank, friendly, and firm. New claims adjusters are taught that their responsibility is to settle claims equitably and not, as policyowners sometimes believe, to pay the smallest dollar amount to which claimants will agree. Adjusters are also advised to give reasonable assistance to claimants during the traumatic days immediately following a serious loss—for example, helping the family relocate to temporary housing following a fire, providing names of reputable repair shops after an auto accident, or helping injured or disabled claimants find properly qualified medical or rehabilitation facilities. Adjusters are further

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instructed, when claimants do not know what is due them under their contracts, to fully explain what items or expenses to include in their claims. In the interest of equity, adjusters are also trained to recognize unethical practices and to resist padded claims or fraudulent demands. Fairness to uninformed claimants and resistance to wrongful claims benefit both insurers and their policyowners, who in the long run must pay premiums based on loss experience.

An insurer's reputation rests not only on how satisfied the claimants are but also on how many other persons they tell about their experience. Satisfied claimants often take their payments as a matter of course, but dissatisfied policyowners tell everyone why they believe they were unfairly treated, and they often file complaints with state insurance commissioners. Insurer's complaint data is publicly available on the National Association of Insurance Commissioners (NAIC) Web site at naic.org.

Insurance Adjusters: Types and Organization

The parties most directly involved in the claims settlement process fall into four general categories:

- agents
- company employees
- independent adjusters
- consumer advocates

Agents' Role

Many property-liability insurers permit their agents to settle claims that involve small losses. This practice is common for fire, windstorm, and medical payments under homeowners and auto insurance contracts. The agent usually is close to the client, is familiar with the policyowner's insurance contracts, and has the earliest facts concerning the claim. The agent also has a prime interest in seeing that the consumer receives prompt and fair treatment in the claims adjustment process. Most claims involve larger losses or more complex adjusting methods, and in these cases the insurer handles the settlement process.

With life insurance, the agent is often involved in loss payment as an intermediary but not as an adjuster. The claims procedure for smaller contracts is simple. Notice to the company and a death certificate are often all that is required before the policy's death benefit can be paid. The life insurance agent usually forwards the death notice and certificate to the insurer. In some cases, especially those involving smaller amounts, the insurer may issue a check for the agent to deliver to the beneficiary, or the company may simply mail the check. When larger amounts are involved, instead of issuing a check, the company will usually open a money market account, funded with policy proceeds, and provide the beneficiary with a checkbook on that account. Unlike property insurers, life insurers do not usually have the problem of determining the extent of loss payment because there is no such thing as a partial loss, and the contract itself states the amount to be paid upon loss. For

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larger life insurance policies, the agent may need to explain various settlement options that provide alternatives to a lump-sum cash payment.

Insurance agents usually are not involved in medical expense, disability, or long-term care insurance claims, but in unusual cases the agent who sold the policy might become involved in resolving matters with personnel from the insurer's claims department.

Company Employees

Many insurance claims are settled by insurance company employees, who may be referred to by various titles, such as *staff adjuster, claims examiner,* or *claims analyst*.

With property and liability insurance, staff adjusters usually devote their entire time to handling loss settlements. Sometimes they investigate claims by inspecting the scene of an accident or property damage, interviewing claimants and witnesses, and consulting hospital and police records. Some auto insurers in larger cities have drive-in claims locations where immediate estimates and payments for covered damage to autos are made by staff adjusters known as *physical damage appraisers*. Small, uncomplicated claims may be handled by telephone and mail.

Claims examiners or claims analysts handle life, medical, disability, and long-term-care insurance claims. When handling life insurance claims, for example, they typically review the cause of death, since many policies pay additional benefits for accidental death but not for a death by natural causes. Medical expense claims are reviewed to determine whether or to what extent they qualify for benefits, and payment is made accordingly.

Staff adjusters, claims adjusters, and claims analysts often consult with other professionals, such as accountants, architects, construction workers, engineers, lawyers, and physicians, to get expert advice as they investigate and evaluate various claims.

Independent Adjusters

independent adjusters

Insurance companies often outsource certain aspects of the claims settlement process. Property-liability insurers, for example, often use *independent adjusters* to settle claims. Independent adjusters are experts who have made loss adjusting a business. Some specialize in particular fields. Others have a general knowledge and understanding of adjustment procedures and handle losses whenever it is impossible or inconvenient for the insurance company's staff or other types of adjusters to do so. Independent adjusters include both individuals and adjusting firms that are in the business of providing claims adjusting services for a fee. National adjusting firms include rather sizable organizations.

Independent adjusters work for the insurers who purchase their services. A typical use is in auto insurance when the insurer has only a small volume of business in an area. Independent adjusters are also used frequently to

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supplement staff adjusters when catastrophic events, such as a major hurricane, give rise to a large number of separate claims. Independent adjusters can also be used by insurers to settle claims in highly technical areas in which the staff adjusters lack the necessary skills or expertise. Independent adjusters often develop continuing working relationships with particular insurers, in addition to accepting infrequent adjusting assignments from other insurers.

Although routine life, medical expense, disability, and long-term care claims are typically handled by insurance company employees, insurers may also outsource some or all of their claims-handling process to persons or organizations that specialize in this activity, especially when more complex claims, large disability claims, or long-term care claims are involved.

Consumer Advocates

public adjuster

In contrast to staff adjusters and independent adjusters, who represent insurers, a *public adjuster* represents members of the public in settling property insurance claims against an insurer. Even though most insurers do their utmost to settle claims fairly, people sometimes assume that adjusters who represent the insurer are biased in favor of the insurer and will make borderline decisions to the insurer's advantage. Claimants who wish to have somebody represent their interests sometimes turn the claim over to a public adjuster, who charges a fee for his or her services.[17]

Attorneys sometimes perform a similar function with property insurance and often represent claimants with liability insurance claims.

Claims assistance professionals often assist individuals and families in keeping track of their claims and ensuring that they are properly handled and accurately represent the treatments provided. A service of this type can be especially useful to senior citizens who find it difficult to stay on top of complex medical bills and insurance coverages while also battling health problems.[18]

Claims Procedures

The process by which claims are settled varies by line of insurance. Each policy spells out the steps that the policyowner or other claimant must follow, as well as his or her responsibilities following a loss. Those steps and responsibilities are described in other chapters in this book as they relate to certain specific types of insurance. In general, however, there are four main steps in the claims adjustment process:

- the policyowner furnishes a notice of loss to the insurer

17. For further information on public adjusters, see the National Association of Public Insurance Adjusters Web site at www.napia.com
18. For further information on claims assistance professionals, see the Alliance of Claims Assistance Professionals Web site at www.claims.org.

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- the insurer investigates the claim
- the policyowner files a proof of loss with the insurer
- the insurer pays or denies the claim, sometimes after negotiating the amount to be paid

Notification to the insurer must be provided as spelled out in the policy. Often, the time frame is specified as "immediately," "promptly," or "as soon as practicable." A few types of policies may be more specific, such as "within 30 days after the occurrence of a loss."

Claims investigation determines whether a loss occurred and, if so, whether the policy covers it. In life insurance, this process is usually quite simple, but complicating factors can arise in some cases. For example, what if the insured has mysteriously disappeared, so that at best it can only be presumed that he or she is dead? What if there is evidence that the insured died by his or her own hand, in which case the policy's suicide clause might come into play? What if there was a material misrepresentation in the application for the coverage, in which case the incontestable clause may be applicable? Several of these and other clauses that may affect claims settlement are discussed in later chapters.

In other lines of insurance, the investigation phase can be more complex. Some of the questions that may have to be resolved include the following:

- Did a loss actually take place?
- Did the loss occur while the policy was in force?
- Did the loss occur at a location covered by the policy?
- Was the loss caused by a covered peril or activity?
- Do any policy exclusions apply to the loss?
- Do any exceptions to policy exclusions apply to the loss?
- Has the policyowner fulfilled all necessary conditions?
- Is there any evidence of fraud?
- Is the claimant entitled to recover under the policy?
- Does the policy cover the particular type of loss consequence?

The third step in the process of adjusting a claim is filing a proof of loss. In life insurance, the proof of loss may be a death certificate. In many cases, medical expense claims are submitted directly by the health care provider, who also furnishes the necessary proof of loss, often as part of the preapproval process that must be followed before treatment is provided. In other lines, a written and sworn statement may be required that details all the specifics of the loss.

Finally, the amount to be paid must be determined in one of three ways: (1) denial of the claim, (2) payment of the claim in full, or (3) payment of a different amount than the claimant initially seeks. Life insurance claims are usually simple because there are no partial losses. Complicating factors, however, can affect the amount to be paid, including an accidental death benefit provision, a misstatement-of-age clause, or a settlement option the policyowner or the beneficiary selects. Various provisions that affect the amount to be paid are discussed, where appropriate, in later chapters.

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In some cases, the amount to be paid, if any, can involve complex issues. Numerous policy provisions may be applicable. These include provisions that

- deal with other insurance covering the same loss
- provide for a deductible
- specify that recovery will be affected by the amount of insurance carried relative to the value of the covered property
- give the insurer the choice of two or three methods of calculating the amount of the loss
- impose a specific limit on the insurer's liability for certain types of losses

These types of policy provisions are described in later chapters that deal with specific lines of insurance.

RATE MAKING

rate making

Rate making refers to the process of establishing the price to be charged for insurance. Insurance rates are based on the costs of providing the product, plus a margin for profit. The rate-making task is complicated because the insurer does not know the amount or timing of the largest cost element—the claims to be paid—in advance. Claims can only be estimated. Predicting future loss costs—and in long-term contracts (such as life insurance), their timing—and adding necessary margins for expenses and profit to those predictions are all involved in the rate-making process. Rate making is carried out by actuaries, who are specialists in the mathematics of insurance.

Components of the Insurance Premium

rate

The insurance *rate* is the price charged for each unit of coverage, called an exposure unit, the policy provides. Units of coverage differ by line of insurance. For example, in life insurance, the rate is determined using a unit of coverage which is $1,000 of face amount. For long-term disability income insurance, it is usually $100 of monthly income. For medical expense insurance, it is an individual or family. For most property insurance, it is $100 of value. For auto liability insurance, it is one covered vehicle.

premium

The insurance *premium* is the price charged for the amount of coverage the policy provides. The premiums are the rates multiplied by the number of units of coverage. For example, in life insurance, the rate for a particular category of insureds might be $30 per $1,000 of face amount per year. The annual premium for a $50,000 policy, then, is $30 × 50 units, or $1,500. In fire insurance, the

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annual rate might be $.25 per $100 of coverage. Therefore, the annual premium for coverage of a $200,000 building is $.25 × 2,000 units of coverage, or $500.

pure (net) rate

gross rate

How is an insurance rate derived? Usually, the rate is developed by the pure premium method, which first requires an estimate of the future loss costs per unit of coverage during the policy period. The portion of the rate that is designed to cover future loss costs is called the *pure rate* or *net rate*. Then a factor, called a *loading*, is added to cover the insurer's expected operating expenses and to provide a margin for profit and contingencies. The sum of the pure (net) rate and the loading is called the *gross rate*.

Determining the gross rate leads first to an examination of a logical question: How is the pure (net) rate derived? Most lines of insurance use a statistical analysis of past loss data for each class of insureds and a projection of that loss experience into the future time period during which the rate to be charged for each class will be in effect.

The rate-making task is complicated in some lines of insurance by a scarcity of data on past loss experience. This scarcity of data can exist either for all insureds (as in a newer line of coverage, such as long-term care insurance) or for particular classifications of insureds (such as very elderly auto drivers). In most lines of insurance, such as homeowners coverage or disability income insurance, loss data must also be sufficient to allow accurate predictions of both loss frequency and loss severity. An explanation of how actuaries deal with these and other rate-making complexities is well beyond the scope of this introductory text.

Property Insurance As an Example

advisory organization

Property insurance offers insight into the many rate-making factors. Here, insurance advisory organizations play a key role. An insurance *advisory organization* is an organization that assists insurers by collecting and furnishing loss statistics or by submitting rating recommendations. These advisory organizations, such as Insurance Services Office (ISO), are permitted under state statutes in order to allow cooperation for property and liability insurance, subject to state regulation of their activities. Reasonable competition is achieved by permitting individual insurers to file separate rates or to add separate loadings to published loss costs or net rates.

A property insurance contract usually covers more than just the fire peril. The advisory organization develops separate prices for such allied perils as windstorm, hail, smoke, explosion, riot, and others; loss of income, rents, and extra expenses; water damage and sprinkler leakage; and earthquake.

The price of property insurance also varies with the location or territory of the property, the construction of the building, the use or occupancy of the property, the loss prevention or reduction facilities, and the proximity or exposure to other properties from which a peril might spread. The advisory organizations carefully define standards for the classes, so there is a higher rate for a frame building than for a brick or a fire-resistant building.

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Two types of property insurance rates are set: (1) class rates for groups of similar properties and (2) specific rates for individual properties with unique characteristics. Having some rates for groups of applicants with similar characteristics and separate individual rates for applicants that differ widely in their specific characteristics is common to many types of insurance.

Class Rates

class rates

As explained earlier, *class rates* are group rates with an average price per unit of insurance that applies to each category or classification of similar insureds. A common example is class rating of separate dwellings or residential homes. Class-rated dwellings are subdivided into groups according to their construction, and a rate is assigned to such classes as frame or brick and to combustible or noncombustible roofs. The rate also varies as to the fire protection classification of the city or town and the number of families that occupy the property. In addition, many jurisdictions apply class rates to commercial buildings when the elements of construction and occupancy are similar enough to permit a ready grouping into rate classes. ISO filings expand class rating to most smaller buildings in general classes, such as mercantile, churches, schools, warehouses, and offices, and to habitational classes, such as apartments, motels, and boardinghouses. Class rates must be used for properties to which the rates apply.

Class rates provide not only economy and simplicity but also reasonable equity, provided that the individual properties within a given class do not vary too much with regard to potential loss-causing characteristics. Thus, for example, all one-family brick dwellings in a midwestern town of 200,000 in population and with fire hydrants within 1,000 feet might have a 1-year fire insurance rate of $.30 per $100 of insurance.

Specific or Schedule Rates

specific rate

When class rates do not apply, the rate is said to be specific. A *specific rate* is created for one particular insured based on that insured's own risk characteristics. Specific or schedule rates are set for larger mercantile and manufacturing properties, educational institutions, public buildings, and many types of business establishments. Specific rates are determined by applying a schedule that measures the relative fire hazard for the particular loss exposure. Most larger buildings use specific rates developed after a physical inspection of the individual property.

The process of developing a specific rate considers differences in hazards for different properties. This process takes into consideration the various items that contribute to the insured perils, including the construction of the building, its occupancy or use, its protection, and its exposure to nearby buildings. Credits and charges that represent departures from standard conditions for each of these items are incorporated into the rate.

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Life Insurance As Another Example

Life insurers collect voluminous amounts of data on mortality rates. The most important basis for classifying these data are the age and gender of insureds and whether they are smokers or nonsmokers.

net single premium

net level annual premium

A large percentage of life insurance is sold on a level-premium basis. Death rates, on the other hand, rise with increasing age. Most claims on these policies occur years after the policies are issued. To deal with the imbalance of level premiums in traditional life insurance products and rising claim costs, life insurers first compute a *net single premium* per $1,000 of face amount for the policy. This net single premium is an amount that the insurer would need today from all insureds in a classification, together with future investment earnings, to pay all claims within that class of insureds as those claims arise. The net single premium per $1,000 of face amount is then spread or leveled over the policy's premium-paying period on an actuarial basis to produce a *net level annual premium* per $1,000 for each insured. The net level annual premium is a charge that is based on spreading the net level premium over the policy's premium-paying period. Finally, a level annual loading amount is added to cover such insurer expenses as commissions, premium taxes, general administrative expenses, and an allowance for contingencies and profit.

The establishment of rates for nontraditional life insurance products, such as universal life insurance and variable life insurance (see chapter 8), is considerably more complex. A detailed description is well beyond the scope of this book.

Loss Ratio Method for Adjusting Rates

We previously described the pure premium method, which entails development of a pure or net rate plus a loading. For many property and liability insurance lines in which rate changes upward or downward are common, the loss ratio method of rate making is used to adjust rates. Emphasis in the loss ratio method is not on calculating a new rate directly but on determining the necessary change to an existing rate.

loss ratio

Loss ratios can be calculated in various ways, but the most common way is to divide losses incurred plus loss adjustment expenses incurred by earned premiums. The needed change from an existing insurance rate is found by comparing the actual loss ratio experienced with the expected (or desired) loss ratio. The difference is then divided by the expected or desired loss ratio.

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Example: The present rate in a particular auto liability insurance classification is $700 per year. The insurer's expected loss ratio in that classification is 75 percent. During the latest experience period, that classification generated $4.5 million of incurred losses, $400,000 of expenses allocated to settle specific claims, and $7 million of earned premiums. The actual loss ratio was, therefore, 70 percent:

$$\left(\frac{\text{Incurred losses} + \text{Loss adjustment expenses}}{\text{Earned premiums}}\right) \times 100 =$$

$$\left(\frac{\$4,500,000 + \$400,000}{\$7,000,000}\right) \times 100 = 70\%$$

The needed rate change, then, is a reduction of 6.7 percent, determined as follows:

$$\left(\frac{\text{Actual loss ratio - Expected loss ratio}}{\text{Expected loss ratio}}\right) \times 100 =$$

$$\left(\frac{70 - 75}{75}\right) \times 100 = \left(\frac{-5}{75}\right) \times 100 = -6.7\%$$

Therefore, the indicated new rate will be $653, determined as follows:

$$\$700 \times (1 - .067) = \$700 \times .933 = \$653$$

Note, however, that because of expected inflation in the future and other variables, the rate might not be lowered by the full 6.7 percent.

Rate Classifications

The previous discussion implied the use of different rate classifications. Not all applicants for any type of insurance will be charged the same rate. Insurers must establish overall rates so that they have sufficient funds to pay losses and expenses. At the same time, they must provide reasonable equity among policyowners and charge rates that reflect quantifiable characteristics which affect losses. For example, because smokers have shorter life expectancies than nonsmokers, most life insurers have both smoker and nonsmoker rates. Life insurance rates also vary by age and gender. At the

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opposite extreme is auto insurance, where rate classifications may reflect many factors, including age, gender, marital status, geographic location, miles driven, vehicle use, and driving record. In a given state, an insurance company may have more than a thousand classifications when all combinations of these factors are considered.

The degree to which rate classifications are refined depends on available and reliable statistics, the administrative costs of establishing classifications, and government regulations. For example, some states require the use of unisex rates for certain types of insurance even though loss statistics can justify gender-specific rates. The number of exposure units to be insured is also highly relevant in determining how many rating classifications to use. It would be possible to develop a classification plan so detailed that each insured was in his or her own rating category. This would obviously defeat the purpose of having a large number of similar exposure units in each class so that an average rate for that class can be developed. Auto insurance classification plans can be highly refined because each rating territory contains many insured drivers.

INVESTING

Insurers accumulate huge amounts of capital, most of it collected as policyowner premiums. Except for amounts needed for the insurer's operating expenses, those funds will be used primarily to pay claims. Funds not immediately needed are invested, both as a means of lowering the cost of insurance and as a source of profit for the insurer.

As explained in the next chapter, state laws closely regulate the ways an insurer can invest the funds it holds. Emphasis is on safety, both of principal and of income.[19] An additional objective is an adequate yield, or rate of return. Life insurers guarantee a minimum rate of return to policyowners in many of their products, so they must earn at least that much. Perhaps more important, a life insurance company's rate of investment earnings must be high enough to enable its insurance contracts to be competitively priced. In most states, property and liability insurers are not required by law to build investment income into their rate making, but investment income still is essential. In many years and for lines of insurance in which loss experience is unfavorable, investment income is the insurer's only source of profit.

19. These regulations apply to the insurer's general investment account. Life insurers also have substantial amounts of funds in separate accounts, in cases where policyowners choose more aggressive investment goals. Examples of separate accounts are those that underlie a life insurer's variable life insurance business, variable annuities, and much of its pension business.

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Life Insurer Investments

Because life insurance claims are usually paid many years after the policy is put into force, life insurers tend to invest heavily in long-term securities, which produce better yields, all other things being equal. Liquidity of the investments—the ability to convert them into cash quickly without loss of value—is not a major consideration.

Table 4-1 shows the latest data available as this text was being prepared. As indicated, United States life insurers had over $4.6 billion of invested funds. About 51 percent of it was invested in government and corporate bonds. A much smaller percentage was invested in corporate stocks. Other investment assets took the form of cash equivalents, real estate mortgage loans, policy loans, and miscellaneous assets.

Table 4-1

Insurance Company Investments

	Life Insurers	Non-life Insurers
Total amount of invested assets (in millions)	$4,660.4	$2,298.8
Distribution of invested assets		
Cash and cash equivalents	1.2%	8.0%
Bonds		67.0
Government	12.0	
Corporate	39.0	
Stocks	31.7	19.3
Mortgages	6.5	0.3
Policy Loans	2.3	0
Other	3.1	4.2

Totals do not add up to 100 percent due to rounding.
Sources: *Life Insurers Fact Book 2007*, American Council of Life Insurers, Washington, DC, pp. 7–11, and *The Fact Book 2008*, Insurance Information Institute, New York, pp. 34, 36, 37.

Non-Life-Insurer Investments

United States non-life insurers' invested assets show a somewhat different pattern. The aggregate amount invested, $2,298.8 million, is smaller than for life insurers because property and liability contracts are of short duration and do not build up a savings element. Moreover, in many property and liability policies, large reserves are not needed because claims are settled soon

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after they arise.[20] As with life insurers, the invested assets of property and liability insurers heavily emphasize bonds and common stocks, vehicles that are attractive because of their usually generous yields. Government bonds constitute a larger holding, percentagewise, for property and liability insurers than for life insurers.

OTHER FUNCTIONS OF INSURERS

Other departments of insurers perform numerous other important functions that support the primary operating functions of marketing, underwriting, reinsuring, adjusting claims, and investing.

The legal department, for example, often works closely with the property and liability insurers' underwriting and claims departments. The legal department is generally also responsible for meeting general incorporation, licensing, and taxation requirements of the many states in which insurers do business. Often, the legal department helps design insurance contracts, drafts agency agreements, and provides general legal counsel for the insurer. In life insurance, the department offers substantial aid to the sales and underwriting departments by reviewing cases that involve complex tax problems.

The actuarial department is closely related to insurers' rating and underwriting departments. Life insurance companies need a separate actuarial staff to diagnose mortality trends, determine costs for various contracts, and provide research for many phases of their activities. Although separate research departments are not common for most insurers, companies are increasingly realizing the need for economic and social research. Many insurers also maintain public relations departments. Education and training is another important area for insurance companies.

Other functional areas within an insurance company are also critical to the organization's success. The accounting department prepares the insurer's financial statements, both for regulators and for the general public. Accountants also prepare various internal financial reports for managers and in preparation of the company's state and federal tax returns. The information technology department is responsible for automating many of the formerly manual tasks in policy issuance, premium billing, and claims payment, to mention just a few. Loss control departments in property and liability insurance companies provide advice and inspection services in many areas of loss prevention and minimization. Finally, many general administrative functions are performed within an insurance company, such as personnel management and purchasing.

20. An important exception to this general rule exists in some liability lines, such as products liability insurance, where claims may not even arise until long after the period of coverage has expired and ensuing claim payments may be spread over many years.

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MINI-CASE: AMY AND JOHN SCHULTZ

Case Facts

As explained in chapter 1, Amy Schultz, aged 28, and her husband John, aged 33, are both engineers employed by SKH, Inc. John earns an annual salary of $95,000; Amy's annual salary is $55,000. SKH provides group benefits that include life insurance of two times their salary.

Amy's and John's late-model compact cars, which they purchased before they were married, are completely paid for. They carry separate auto insurance policies, partly because of John's bad driving record, with the minimum coverages required by law. They also purchased a homeowners insurance policy to satisfy one of the conditions of their mortgage.

Case Analysis

1. After reading a magazine article, Amy and John decided to upgrade their insurance by buying a $100,000 whole life insurance policy on John and to increase the $50,000 limits of liability coverage on their auto insurance policies to $300,000. Explain why they were able to buy more than $100,000 in auto insurance coverage by telephone, but they could not purchase $100,000 in life insurance without answering a number of questions and undergoing physical exams.
2. Two months after they moved into their house, the fuel oil tank for their furnace ran dry while they were at work, and cold temperatures in the house caused a pipe to freeze and burst with resulting water damage. Describe in general terms the process Amy and John and their insurance company will follow in pursuing a homeowners insurance claim.

Case Solution

1. The process involved in John's life insurance application is known as underwriting, a term that refers to the selection and pricing of insurance applications. The insurance company underwriter wants to ascertain John's physical condition because it can price his coverage appropriately if the company knows that John's life insurance risk is comparable to the risks of the pool of applicants on whom its class rates are based. An insurer that does not underwrite its life insurance applicants would be the victim of "adverse selection," meaning that people in poor health, who on average die at a younger age, would take advantage of the insurer's competitive rates designed for people with average mortality. Underwriting is especially important with individual life insurance, because the policy is likely to be in force for

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many years.John's and Amy's auto insurance companies had already decided to accept them as policyowners and apparently did not need to underwrite their applications all over again to process a relatively minor change in coverage.

2. Amy and John's duties as policyowners who have suffered a loss are spelled out in their homeowners policy, along with the duties of the insurance company. The Schultzes should report the claim either to the agent who sold them the policy or to the insurance company's claims department. The insurer will probably send a staff adjuster (an employee of the insurance company) to examine the damage, determine whether a loss occurred while the policy was in force at a covered location, confirm that the loss was caused by a covered peril under circumstances where no exclusion applied, make sure the policyowners have fulfilled all relevant conditions, and ascertain that there is no evidence of fraud. After determining that the Schultzes are entitled to recover under the policy, the adjuster will determine the value of the damage and pay the claim.It is possible the insurer will instead pay an independent adjuster to settle the claim rather than assigning a staff adjuster. Chances are the Schultzes and their insurer will settle the claim with no problems, but if the situation becomes sticky, the Schultzes could also hire a public adjuster, for a fee paid by them, to represent their interests.

SOURCES FOR FURTHER IN-DEPTH STUDY

- For details of the underwriting process and the investing function:
  - Graves, Edward E. (editor), *McGill's Life Insurance,*7th ed., chapters 17–19 (underwriting), chapter 26 (investing), Bryn Mawr, PA: The American College Press, 2009. Phone 888-263-7265. Web site address www.theamericancollege.edu.
- For details on the underwriting process, rate making, and investment with emphasis on property and liability insurance:
  - Myhr, Ann E., and Markham, James J., *Insurance Operations, Regulation, and Statutory Accounting,* 2d ed., chapters 4–6 (underwriting), chapter 7 (rate making), and chapter 14 (investing), Malvern, PA: American Institute for Chartered Property Casualty Underwriters, 2004. Phone 800-644-2101. Web site address www.aicpcu.org.
- For more on reinsurance, see the Reinsurance Association of America web page at reinsurance.org. A "Quick Link" to "Fundamentals of Reinsurance" leads to a short primer on reinsurance.

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CHAPTER REVIEW

Key Terms and Concepts

underwriting
field underwriting
reinsurance
treaty (automatic) reinsurance
facultative reinsurance
independent adjusters
public adjuster
rate making
rate
premium
pure (net) rate
gross rate
advisory organization
class rates
specific rate
net single premium
net level annual premium
loss ratio

Review Questions

Review questions are based on the learning objectives in this chapter. Thus, a [4-3] at the end of a question means that the question is based on learning objective 4-3. If there are multiple objectives, they are all listed.

4-1. As a financial planner, you are working with a client, Bill Jackson, on meeting his various protection needs. Answer the following questions asked by Bill:
a. Bill asks, "Why can't insurance companies insure every applicant since they seem to charge pretty high premiums?" [4-1]
b. After you answer that question, Bill asks, "Even if you qualify for insurance, sometimes companies charge a much higher rate than they charge other similar insureds. Why?" [4-1]

4-2. Your client, Nancy Hall, asks how an underwriter obtains the information necessary to evaluate her insurance application. What sources of underwriting information do insurers typically use? [4-1]

4-3. Although reinsurance is transparent to the client, it is often helpful to explain the extra security it provides. What are the key purposes of reinsurance? [4-2]

4-4. What is the difference between facultative and treaty reinsurance? [4-2]

4-5. Contrary to the opinion of some clients, it is *not* the purpose of the claims department to minimize claims payments. What is the purpose of the claims (loss) settlement process? [4-3]

4-6. How does the role of the agent in property insurance compare with that of the life insurance agent regarding the claims settlement process? [4-3]

4-7. What are the four main steps in the claims settlement process, and how does their implementation differ in life insurance versus other lines of insurance? [4-3]

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4-8. During a discussion of insurance needs with a financial planning client, Sally Johnson, she asks the following questions:
a. What is the difference between an insurance rate and an insurance premium? [4-4]
b. How is an insurance rate derived? [4-4]

4-9. Financial planning client Penny Wise observes that the insurance company that provides her coverage holds huge amounts of capital.
a. From what sources do insurers receive the huge amounts of capital they hold as assets? [4-5]
b. How do insurers use the funds they hold? [4-5]

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