A Regulator's Introduction to the Insurance Industry

Prepared for the
National Association of Insurance Commissioners

Robert W. Klein, Ph.D.

A Regulator's Introduction to the Insurance Industry

2nd Edition

Robert W. Klein, Ph.D.

Georgia State University

© Copyright 2005 by National Association of Insurance Commissioners
All rights reserved.

National Association of Insurance Commissioners
Insurance Products & Services Division
816-783-8300
Fax 816-460-7593
www.naic.org
prodserv@naic.org

Printed in the United States of America

No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any storage or retrieval system, without written permission from the NAIC.

Executive Headquarters
2301 McGee Street
Suite 800
Kansas City, MO 64108
816-842-3600

Securities Valuation Office
48 Wall Street
6th Floor
New York, NY 10005
212-398-9000

Government Relations
Hall of States Bldg.
444 North Capitol NW
Suite 701
Washington, DC 20001
202-624-7790

Acknowledgements

The author expresses his deep appreciation to the National Association of Insurance Commissioners (NAIC) and Catherine J. Weatherford, Executive Vice President and CEO, for their support of the production of the second edition of this text. A number of NAIC staff members provided considerable assistance. Judy Lee, Chief Operations Officer, patiently coordinated the project from its inception through its completion. Eric Nordman, Trish Schoettger and Heidi Robertson reviewed the entire text, significantly improving its content and presentation. Various NAIC staff members provided valuable comments and corrections: Andrew J. Beal, Carolyn Johnson Speck, Tim Mullen, Jeff Johnston, David Vacca, Brett Palmer, Mary Beth Senkewicz, Chris Evangel, Joseph Prakash and Thomas Kindred. The author thanks all of these individuals for their efforts in helping ensure this book continues to be a valuable resource to regulators and others interested in the insurance industry and its supervision.

The author and the NAIC express their appreciation to George E. Rejda and Addison-Wesley Educational Publishers, Inc., for their permission to use a portion of the glossary contained in the *Principles of Risk Management and Insurance*, 6th ed., by George E. Rejda. (Reading, Mass.: Addison-Wesley, 1998). The Rejda book served as the primary reference for the chapters on insurance principles and institutions in this text. Any remaining errors and omissions are the sole responsibility of the author of this text.

Table of Contents

Chapter 4: Insurance Lines and Products

Chapter 5: Insurer Organizational Forms and Distribution Systems

Chapter 6: Conceptual Framework for Analyzing Insurance Markets

Chapter 7: The Structure and Performance of the Insurance Industry

Chapter 8: Principles of Insurance Regulation

Chapter 9: Institutions of Insurance Regulation

Chapter 10: Financial Regulatory Functions

Chapter 11: Market and Other Regulatory Functions

Boxes, Figures and Tables

Boxes

Figures

Tables

Chapter 1

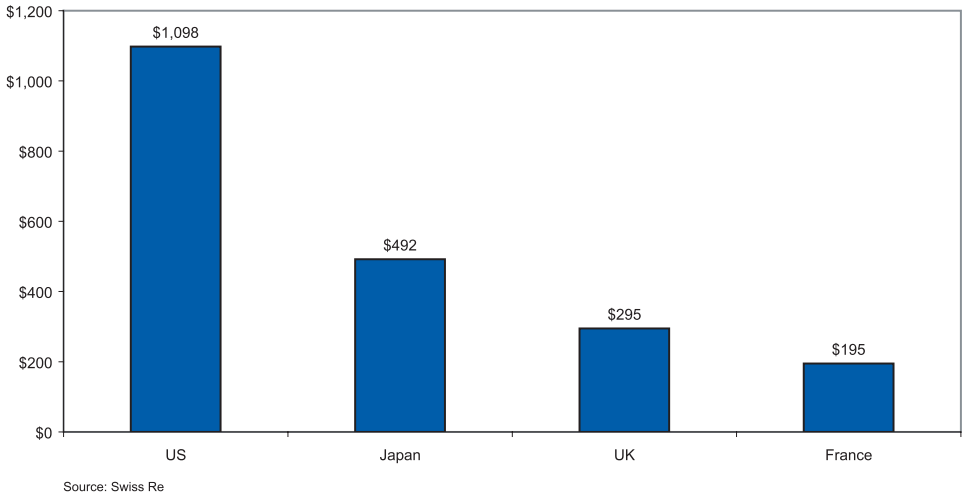
Introduction

A. Context

Everyone in society is affected by risk in one way or another. Risk arises when there is the possibility of more than one outcome and one of these possible outcomes has negative consequences; e.g., a financial loss. Individuals, businesses and other organizations face various risks in their different activities, and insurance helps protect them against these risks. Even if someone does not purchase insurance, they may still be the beneficiary of insurance purchased by another. Hence, risk and insurance are pervasive throughout the world. More insurance is purchased in the United States than in any other country, although some insurance markets in other countries are growing rapidly (see Figure 1.1). Private systems generated $1.1 trillion in premiums in the United States in 2004.

Because of its important and pervasive role in the economy, insurance is an industry that is vested with public interest. The economic well-being of every citizen is strongly affected by the adequacy of their insurance protection and how much they pay for it. Consequently, the government has become closely involved in mandating, providing and regulating insurance.

Figure 1.1
Insurance Premiums in Leading Countries in 2004
($ Billions)



The development of the insurance industry in the United States is closely integrated with its regulation. This regulatory system is largely a function of the structure of the industry and public goals, and the structure of the industry, in turn, has been influenced heavily by its regulation. To understand one, it is necessary to understand the other.

The business of insurance is regulated principally by the states. Each state has an insurance official who is charged with overseeing the solvency of insurance companies doing business in the state, as well as their rates and market practices. A considerable institutional framework has been developed over the years to assist insurance commissioners in performing these regulatory responsibilities. This framework consists of the laws, regulations, policies, procedures, personnel, knowledge and physical facilities designed to oversee this important financial industry.

Insurance regulation has been subject to increasing external and internal pressures in recent years that have forced the states to respond. Fundamental changes in the structure and performance of the insurance

industry have complicated regulators' jobs. Competitive forces have caused insurers to assume increased risk in order to offer more attractive prices and products to consumers. Insurance markets have increasingly become national and international in scope as insurers have widened the boundaries of their operations. High costs in some lines of insurance and the economic impact of natural and man-made disasters have focused greater public attention on regulatory decisions.

These forces have had a dramatic effect on insurance regulatory institutions. Over the past two decades, the states have engaged in an unprecedented program to revamp the framework for insurance regulation. A good share of this effort has been directed at strengthening solvency regulation by establishing higher capital standards for insurers, expanding financial reporting, improving monitoring tools and accrediting insurance departments. A second wave of initiatives has focused on improving the effectiveness and efficiency of market regulation. The states have significantly enhanced the resources devoted to insurance regulation in terms of people, technology and systems to support these efforts. The National Association of Insurance Commissioners (NAIC) has played a central role in state regulators' efforts to coordinate, strengthen and streamline their oversight of the insurance industry.

The purpose of this text is to provide regulators and others with a basic introduction to the insurance industry and its regulation, written from a regulatory perspective. Specifically, this book explains key insurance concepts and products, outlines the industry's economic structure and reviews the important elements of the system of regulation. In addition, this book provides readers with a basic conceptual framework for understanding and evaluating regulatory activities and the relationship between the evolving structure of the industry and regulatory policy. The goal is to help readers understand how the industry functions and how regulatory mechanisms and policies are designed and implemented to foster the industry's development and protect consumers.

B. Approach and Organization of Text

The text is organized into 12 chapters: 1) an introduction; 2) insurance concepts; 3) insurers' functions; 4) insurance products; 5) insurer organizational forms; 6) a conceptual framework for insurance markets; 7) the economic structure of the insurance industry; 8) principles of insurance regulation; 9) insurance regulatory institutions; 10) financial regulatory activities; 11) market regulatory activities; and 12) significant industry trends and implications for regulation. Each chapter begins with a list of objectives and ends with a synopsis of key points and suggested references for further study. Appendices provide a glossary of terms and a list of important information sources on insurance. A comprehensive list of references and a subject index also are provided.

These different topics are integrated into a cohesive framework to help readers organize the information and relate the economics of the industry to how it is regulated. The text provides a "high-level" overview of each area and citations to more detailed material for readers who wish to delve more deeply into a particular topic. The presentation is intuitive and non-technical to appeal to readers that are relatively new to the insurance industry and its regulation. The text serves a secondary objective of providing a good reference for other information sources on the industry and its regulation. The discussion of important industry trends also will help readers think about their implications for regulatory institutions and policies.

Chapter 2

Important Insurance Concepts

Chapter Objectives

1. Illustrate how insurance is used to manage risk and reduce uncertainty.
2. Explain the importance of efficiency and equity as key criteria for evaluating the performance of insurance systems.
3. Identify the conditions for insurability of risk exposures and their significance.
4. Discuss the problems of adverse selection and moral hazard and the need to mitigate these problems in designing and selling insurance contracts.
5. Explain the key concepts of indemnity and insurable interest underlying insurance contracts.

A. Risk and Uncertainty

Risk is endemic to life and business and something that risk-averse individuals and firms have good reason to manage. Broadly defined, **risk** is a condition in which more than one outcome is possible. **Uncertainty** refers to the *perception of risk*, which may or may not correspond closely to reality. That is, situations in which the possibility of one or more negative outcomes may or may not occur. Individuals and firms face a number of perils that threaten them with financial losses and other adverse consequences. A **peril** is an event that causes a loss, such as hostile fires, earthquakes, windstorms and premature death.

Insurance texts distinguish between "pure risk" and "speculative risk." **Pure risk** involves no chance of economic gain and uncertainty about whether a financial loss will occur and possibly how much that financial loss will be. **Speculative risk** involves the chance of gain or loss and, in theory, is not insurable. Gambling is an example of speculative risk.

The chance of damage to one's home from a fire or storm is an example of a pure risk. The cause of such a loss is accidental and uncertain. Homeowners do not know whether they will have such a loss, when it would occur and how severe it would be. Homeowners only know that a loss might occur because of a random act of nature or other event outside of their control. Moreover, homeowners have nothing to gain from losing their home.

B. Pooling and Diversification of Risk through Insurance

Individuals and firms can reduce the pure risks they face through insurance mechanisms designed to transfer and diversify risk across a wider base of exposures and/or over time. This is accomplished by **pooling** losses for a group of individuals or firms in some manner. Members of the group share all losses that are incurred by its members. In effect, members of the group exchange a smaller, more certain financial contribution for protection against a larger, uncertain loss. Combining losses for a group and sharing them in some manner among group members makes this possible.

Uncertainty and the **law of large numbers** make insurance valuable, as well as feasible. As the number of members of an insurance pool increases, the random or uncertain aspect of the occurrence of accidents and claims for benefits is reduced, and there is greater certainty about the total losses that the pool will suffer. This allows the pool to allocate its costs among members in the form of smaller, certain premiums or assessments. In essence, pool members exchange their fair share of total pool costs in return for protection against the risk of a potentially much larger loss that they would otherwise face individually.

Risk and uncertainty is reduced through sharing all losses among the group members and the greater predictability of losses achieved by increasing the number of members of the pool. As the size of a pool increases, its actual losses will tend to come closer to its expected or predicted losses based on the risk levels of its members. Assuming that pool members are risk averse — i.e., they value greater certainty and the reduction of risk — pool members will be willing to pay some additional premium over their expected loss to cover the costs of administering the pool in return for the reduction in risk. This is called a **risk premium**.[1]

It should be stressed that pooling losses does not necessarily mean that every pool member will make an equal contribution to the pool. In theory, equal contributions only make sense if every member of the pool has the same risk of loss. In practice, most pools contain members whose risk varies. Individual pool contributions can be based on each member's relative degree of risk, so that individuals with greater risk pay higher premiums. As explained below, this maintains low-risk pool members' incentives to remain in the pool. Pools can be organized in various ways (e.g., group self-insurance, insurance companies, etc.), but the basic concept is the same.

---

1 The expected loss is essentially equal to the probability that a loss will occur, multiplied times the amount or severity of the loss. A premium equal to the expected loss but that contains no provision for expenses or profit is sometimes called the "actuarially fair premium."

C. Efficiency and Equity

Efficiency is a concept that is more often discussed by economists than insurance experts, but it is relevant to all markets and insurance systems. The highest level of efficiency is achieved when resources are used in the best way possible to maximize social welfare (i.e., the combined utility of all members of society). In other words, there is no other possible allocation of resources that would produce a higher level of social welfare. This implies that the benefits of an activity should at least equal its cost or the activity should not be undertaken and that all activities are performed at the lowest cost possible. When this occurs, society reaps the maximum value from the employment of its resources. With respect to insurance, this means individuals and firms are managing risk in the best manner possible from their perspectives, as well as society's perspective. Managing risk efficiently requires selling and purchasing optimal insurance contracts, as well as retaining and controlling losses to the extent that it is cost-effective to do so.

Equity is another word for "**fairness**," and both terms can imply different things to different people. Some might interpret equity to mean that all insureds should pay the same premiums or receive the same benefits from insurance contracts, regardless of their relative risk. A variation of this view of equity is based on ability to pay; i.e., those with greater resources would be expected to pay more than those with fewer resources. Alternatively, others define equity to mean that individuals should pay costs according to the benefits they receive. Based on this interpretation, equity in insurance markets is achieved when individuals pay premiums commensurate with their relative risk; i.e., high-risk insureds pay higher premiums than low-risk insureds.

There is a tradeoff between the first interpretation of equity and efficiency. Equal premium payments among insureds with different levels of risk will reduce efficiency. Low-risk insureds will be induced to buy too little insurance and high-risk insureds will be induced to buy too much. Incentives to mitigate losses also will be distorted by equalizing premium payments. Individuals who do not pay the full cost of their insurance will have less incentive to reduce their risk to lower their premiums.

The second interpretation of equity is consistent with maximizing economic efficiency. Allocating the full costs of activities to their beneficiaries will encourage insurance and loss-control expenditures that maximize social welfare. Individuals and firms will be induced to reduce their risk of loss if the resulting savings (from lower insurance premiums or retained losses) exceeds their cost of reducing risk (e.g., investing in loss prevention). Consequently, there is no tradeoff between this notion of equity and efficiency.

D. Conditions for Insurability

In theory, risk exposures should meet several conditions to be insurable in a private market. In reality, few risks meet these conditions exactly, but the further they diverge the less insurable they become. The four conditions for insurability are:

- Many independent and identically distributed exposure units;
- The premium should be economically feasible;
- Losses should be unintentional and accidental; and
- Losses should be easily determinable.

Independence means that there is no correlation between an event causing a loss to one exposure and an event causing a loss to another. Identically distributed means each exposure faces the same probability distribution of potential losses. The law of large numbers works most effectively in the pooling and diversification of risk exposures when they are independent and identically distributed. This condition is violated when a significant number of exposures could suffer losses because of one or a series of related events, such as a hurricane or a deadly epidemic. Insurers can use devices such as reinsurance or catastrophe bonds to cope with this problem, but there are practical limits to how much risk can be diversified through these instruments.

An economically feasible premium is sufficient to cover an insurer's cost of providing insurance (i.e., expected loss, necessary expenses and cost of capital), but still low enough to be attractive to potential insureds. Economically feasible premiums are most achievable when the probability of loss is relatively low and insurers' loading for expenses and profit would

not exceed the risk premium that an insured would be willing to pay. When the probability of loss reaches higher levels, the corresponding premium will approach or exceed the potential loss. In such a situation, the cost of insurance is so high that a person would be better off if he or she kept the money to pay for a loss that is very likely to occur or find other ways to avoid the loss.

The third condition for insurability is that losses should be unintentional and accidental. There are several reasons for this. One is that insuring intentional losses may give rise to moral hazard, a problem explained further below. When moral hazard is present, losses are more likely to occur. Also, from a social point of view, insuring intentional losses would encourage deliberate destruction of property or loss of life (Skipper, et. al., 2006). In addition, losses that occur naturally over time (e.g., the depreciation of an automobile) and are not accidental tend not to be insurable. Such losses are essentially certain and it would be more efficient to budget for them than to purchase insurance.

The final condition is that losses should be easily determinable. If it is impossible to determine whether a loss has occurred or its severity, then the insurer will have no objective information to determine if a claim should be paid or how much the payment should be. If determining a loss is difficult but not impossible, the cost of adjusting a claim may be so high that it is not possible to offer insurance at an economically feasible premium.

E. Asymmetric Information Problems

1. Adverse Selection

Adverse selection occurs when high-risk individuals are more likely to purchase insurance than low-risk individuals (Harrington and Niehaus, 2003). This can happen when insureds have better knowledge of their risk than insurers. If everyone is charged the same premium based on the average (expected) loss of all insureds combined, then low-risk insureds will pay more and high-risk insureds will pay less than their actuarially fair premiums. This could prompt low-risk individuals to leave the pool and

high-risk individuals to join the pool. When this happens, an insurance pool tends to shrink to a smaller and smaller group of high-risk insureds until the pool eventually collapses.[2]

Insurers seek to avoid adverse selection through accurate risk classification and by charging a premium that is commensurate with an insured's true risk level. Efficient or risk-based insurance pricing discourages adverse selection, but insurers may face constraints in obtaining adequate information and accurately assessing an individual's risk (Phillips, 1998). This leads to potential adverse selection because insurers cannot accurately distinguish between insureds' risk levels and are subject to selling insurance to high-risk insureds at a price less than their expected cost.

Adverse selection represents a "market failure" in that the informational constraints faced by insurers can cause the market to provide a less than optimal amount of insurance and eventually collapse in the extreme case. Consequently, insurers strive to increase information on insureds' risk and then employ pricing, underwriting and policy-design measures that discourage adverse selection and help the market function more effectively. Regulators and other government officials may or may not approve certain measures to avoid adverse selection, depending on their perceptions of what is efficient and equitable.

2. Moral Hazard

Moral hazard is another type of market failure that occurs when having insurance causes insureds to change their behavior; i.e., either to intentionally cause losses or expend less effort to avoid losses. Insurance experts draw a distinction between "moral hazard" and "morale hazard." In this lexicon, moral hazard occurs when the insured stands to gain from

---

2 In theory, insurers might attempt to get individuals to reveal their risk level by offering policies that provide full protection and others that do not. High-risk individuals will have a greater preference for full insurance coverage at an appropriate price. However, in practice, there are impediments to the success of such a strategy and it does not appear that most insurers employ it.

causing an accident and filing a claim. For example, this could occur if a homeowner could insure a home for more than its market value and gain financially from its loss. Morale hazard arises when an insured has diminished incentives to prevent losses but would not gain financially from an insured event; for example, an insured homeowner who is more careless in preventing losses, such as failing to repair faulty electrical wiring. Economists tend to use the term moral hazard to cover both phenomena, which will be the convention used in this text.

Insurance is impractical in the extreme case of moral hazard, as losses would be intentional and certain. In the less severe case, moral hazard can create significant problems but is not necessarily fatal to a market. If insurers must assume that insureds will act less safely, then they will charge a higher premium to cover higher expected losses. This is still an inefficient result if the cost to insureds of taking more precautions (e.g., fixing faulty wiring in their home) is less than the extra premiums they are charged for not taking the precautions. This problem can be remedied if insurers can restore insureds' incentives to avoid losses.

Insurers combat moral hazard through cost-sharing with insureds, offering premium discounts or credits for safety measures, setting certain policy terms and conditions, and declining to provide coverage in situations where moral hazard is a serious concern. Cost-sharing can take the form of deductibles, policy limits and co-insurance provisions that cause the insured to bear some portion of his or her loss. Retaining some portion of the potential loss increases the insured's incentive to decrease the chance of loss. While such measures have a desirable effect on insureds' incentives, they result in incomplete insurance and diminish the amount of protection. Alternatively, insurers may seek to improve incentives by offering discounts for loss-prevention measures and declining to sell insurance to individuals who do not demonstrate a commitment to safety. Again, regulators may find some of these measures acceptable and others to be problematic.

F. Principles of Indemnity and Insurable Interest

The principles underlying risk and insurance are reflected in the design of insurance contracts. Two key concepts are the **principles of indemnity** and **insurable interest**. Under the principle of indemnity, insureds should not profit from a covered loss but should be restored to no better than their financial position prior to the loss (Rejda, 2005).[3] The objective is to ensure that insureds do not gain financially from losses and, in turn, reduce moral hazard. If insureds could profit from insurance coverage of a loss, they would have an incentive to cause losses and a disincentive to take precautions to avoid losses. Most property and liability contracts are contracts of indemnity. Losses in such contracts are typically settled on the basis of actual cash value (i.e., replacement cost less depreciation) or fair market value.

However, there are some insurance contracts that constitute exceptions to the indemnity principle. A **valued policy** pays the face amount of insurance regardless of the actual cash value of the loss. Valued policies are sometimes used to insure items for which it would be difficult to determine the actual cash value or fair market value, such as rare antiques. Some states have valued policy laws that require payment of the face amount of insurance in the instance of total losses to real property from certain perils. Some insurers offer **replacement cost** contracts, where the cost of replacing the insured property is paid with no deduction for depreciation. For such contracts, insurers typically require a minimum ratio of the market value to replacement cost (e.g., 70 percent) be met to diminish moral hazard. Finally, life insurance contracts are not contracts of indemnity, but rather are valued policies that pay a stated benefit in the event of the insured's death.

---

3 If an insured was fully indemnified, he or she would be restored exactly to his or her prior financial condition. In practice, many insurance contracts do not provide full indemnification; i.e., the insured will retain some portion of a loss or related costs that are not covered by insurance.

The second important concept is the **principle of insurable interest**. According to this principle, the insured must suffer some form of loss or harm if the insured event occurs (Rejda, 2005). The nature of the loss or harm could be financial or psychological, as in the case of the death of a family member. Insurable interest is necessary to prevent gambling, reduce moral hazard and measure the insured loss. Otherwise, individuals could purchase insurance contracts as a matter of speculation (e.g., insuring another's home in which the insured does not have a financial interest) and/or gain from causing a loss. The same principle applies to life insurance contracts: Purchasing a life insurance policy on a person with whom they have no family relationship or pecuniary interest raises obvious questions about the insurance buyer's intentions.

Insurance contracts reflect a number of other concepts and contain certain standard provisions. Rejda (2005) provides a more detailed discussion of these concepts and provisions for the interested reader.

Synopsis of Key Concepts

1. Insurance serves an essential role in diversifying risk and reducing uncertainty by pooling losses among a group of individuals or firms.
2. Social welfare is maximized when insurance markets function efficiently and the costs of different activities are equal to their benefits.
3. Equity can be defined in different ways, but it is consistent with economic efficiency when individuals pay insurance premiums commensurate with their relative risk of loss.
4. Risk exposures may not be insurable if they fail to meet four conditions: 1) many independent and identically distributed exposure units; 2) economically feasible premiums; 3) losses are unintentional and accidental; and 4) losses are easily determined.
5. Adverse selection arises when high-risk individuals are more likely and low-risk individuals are less likely to buy insurance. Adverse selection can be diminished by risk-based pricing, proper underwriting selection and policy design.

6. Moral hazard arises when insureds stand to gain from causing a loss and/or have diminished incentive to prevent losses. Insurers combat moral hazard by having insureds bear a portion of their losses and declining to offer insurance in situations where the insured would gain financially from having a loss.
7. Insurance contracts embody various concepts, including the principles of indemnity and insurable interest. Under the principle of indemnity, in the event of a loss, insureds should not gain financially from insurance and should be restored to no better than their prior position. Under the principle of insurable interest, the insured must suffer some harm or loss if the insured event occurs.

Suggested References

Harrington, Scott E. and Gregory R. Niehaus, 2003, *Risk Management and Insurance*, 2nd ed. (Boston, Mass.: McGraw-Hill/Irwin).

Phillips, R.D., 1998, "The Economics of Risk and Insurance: A Conceptual Discussion," in Harold D. Skipper, ed. *International Risk and Insurance: An Environmental-Managerial Approach* (Boston, Mass.: McGraw-Hill Companies).

Rejda, George E., 2005, *Principles of Risk Management and Insurance*, 9th ed. (Reading, Mass.: Addison-Wesley).

Skipper, Harold D., Jr., and William R. Feldhaus, *Perspectives on Risk and Insurance* (forthcoming in 2006).

Chapter 3

Functions Performed by Insurers and Intermediaries

Chapter Objectives

1. Explain the basic functions performed by insurers and intermediaries and their essential roles in insurance markets.
2. Discuss the interaction between the various insurer and intermediary functions in contributing to efficient insurance markets and consumer welfare.
3. Outline the basic principles and practices involved in each of the basic industry functions.

Insurance companies, other insurance providers and intermediaries (i.e., agents and brokers) perform a number of important functions in the insurance system. The functions described in this chapter are inherent to insurance, regardless of whether they are provided by insurance companies or other types of firms or organizations. These functions include: product or contract design; pricing; production/distribution; underwriting; loss settlement; investment; and reinsurance. It is important to understand these basic functions in evaluating the efficiency of different insurance arrangements and regulatory policy.

A. Product Design

The insurance process starts with creating **products** (i.e., policies or contracts) that specify the obligations between insurers and insureds. The various types of insurance products are discussed in Chapter 4, but it is important here to recognize the product-creation process. 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 discussed in Chapter 2. 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.

Insurance contracts typically include provisions for covered perils, coverage amounts and limits, deductibles/retentions, co-insurance provisions, coverage exclusions, the basis of loss settlement and additional coverages. These provisions provide coverage for losses, administrative efficiencies and loss mitigation incentives in response to insureds' desired level of risk retention. From another viewpoint, an 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.

B. Pricing

Pricing involves determining the amount the insured must pay to finance the loss protection or the potential insurance benefits the insured will receive, as well as necessary administrative expenses and the insurer's cost of capital. For the most part, insurance pricing is **prospective**, because it is necessary to determine in advance what insureds must pay to cover losses incurred and benefits that will be paid in the future, in addition to insurers' expenses.[1] Because of its prospective nature and the uncertainty associated with predicting future events and losses, insurance pricing is complex. Insurers must use extensive data and various actuarial methods to determine appropriate rates or premiums. At the same time, the competitive nature of insurance markets introduces additional strategic considerations into insurers' decisions on what to charge insureds.[2]

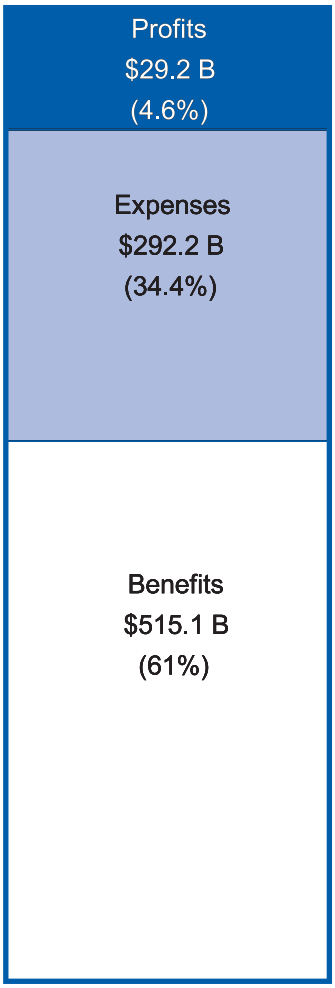
For the purposes of this discussion, the price of insurance or the **gross premium** is divided into two components: the **pure premium** and **expenses**. Figure 3.1 provides a breakdown of the key components of the insurance premium or price based on insurers' financial data. The pure premium is the amount of losses or benefits that insurers expect to pay, on average, on a given insurance contract. Expenses comprise all of the additional costs incurred by insurers in providing coverage and servicing a policy. These costs include provisions for acquisition of business; administering policies; adjusting and paying claims; taxes, assessments and fees; general overhead; and profit or the cost of capital.

---

1 Some commercial insurance products use "loss-sensitive" pricing, in which at least part of the premium ultimately paid by the insured depends on actual losses during the policy period.

2 In theory, insurers might attempt to get individuals to reveal their risk level by offering policies that provide full protection and others that do not. High-risk individuals will have a greater preference for full insurance coverage at an appropriate price. However, in practice, there are impediments to the success of such a strategy and it does not appear that most insurers employ it.

Figure 3.1
Components of Insurance Premiums*



*Property/liability data for 1996; life/health data for 1995.
Source: A.M. Best Aggregates and Averages

Allocating expenses to specific insurance contracts and determining an appropriate profit-loading require considerable analysis and judgment, as does projecting expected loss or benefit payments. Setting a profit margin necessitates calculating a fair rate of return on invested capital. A fair rate of return should be equivalent to what insurers could earn on alternative risk-free investments, plus a provision for the risk that insurers' actual earnings will be less than expected. Because insurers collect premiums in advance of paying claims, they must discount premiums for anticipated investment income on funds held in reserve, net of any expected investment expenses. Determining the appropriate discount rate requires projecting the timing of cash inflows and outflows and earnings on investments.

The above principles generally apply to all forms of insurance, but different approaches are employed for the major types of insurance products. Property-liability insurance pricing and accident-health insurance pricing are somewhat similar in concept, although they use different types of data and specific methods. The pricing of life insurance and annuity contracts is approached differently because of the different nature of the risk that is insured and the structures of these contracts.

1. Property-Liability and Accident-Health

Rates can be determined for groups or classes of risks as well as individual risks. For property-liability insurance, **class rating** involves applying various rating factors to a base rate according to the insured's characteristics that are reflected in the rating structure.[3] For auto insurance, for example, an insurer determines the appropriate average premium for all drivers that it insures and adjusts this premium for a particular insured using factors for the insured's selection of coverage provisions, type and value of vehicle, geographic location, use of vehicle, age, marital status, driving record and other variables. Table 3.1 provides a simplified example of class rating for private passenger auto bodily injury/property damage

3 Readers may wish to consult Long and Gregg (1965) for a more detailed discussion of property-liability insurance pricing.

liability insurance.[4] Rating factors are expressed in terms of relativities to a base rate so that the class rate or premium paid by each insured sum to the total premiums required to fund the expected losses and expense costs for all insureds.

Table 3.1

Simplified Class Rating Plan Example
Private Passenger Auto Insurance

Hypothetical BI/PD Premium by Class
50/25/10 Limits, Married Female, Gotham City

Driving Violations	Age		
	16-24	25-35	35-65
0-1	$300	$150	$100
1-2	$400	$200	$150
3 or more	$500	$300	$225

Various adjustments may be applied to class or "manual" rates to further customize the premiums for an insured. These adjustments include experience rating, schedule rating, discounts, retrospective rating, dividend plans and judgment rating. Experience rating adjusts an insured's premium based on the insured's historical claims experience. Schedule rating provides credits or debits for certain qualitative factors, such as whether the insured has an established loss-prevention program. Discounts may be offered to larger risks to reflect the fact that some insurer expenses to service a policy increase less than proportionately with the amount of the premium. Retrospective rating effectively adjusts an insured's premiums after the policy period based on the losses that the insured actually incurred. Judgment rating, as the term suggests, involves a subjective determination of an insured's premium when standard rating plans and other objective information are insufficient to determine an appropriate price. All of these

[4] This is a simplified hypothetical example based on a limited set of rating factors. In practice, auto insurers use a larger number of factors in class rating.

measures represent attempts to refine insurance prices to reflect the underlying costs of a policy as closely as possible. Rates also must be changed over time to reflect new experience, as well as anticipated changes in factors affecting future benefit payments.

Alternatively, **individual risk rating** involves developing premiums for specific risks based on their particular characteristics and policy provisions without the use of a class rating plan. In effect, the insurer determines the necessary premiums to fund the expected losses for a particular insured rather than a group of risks. Individual risk rating tends to be used for large commercial risks of sufficient size and experience to develop an individualized premium without reference to the expected losses for like risks.

A property-liability insurer typically uses a combination of its own historical data and industry historical data in the rating process. Insurers with a larger volume of business in a particular line will tend to place greater reliance on their own data, while insurers with less volume use industry experience more heavily, as their data alone is less statistically credible (i.e., more subject to random fluctuations) because it is based on fewer exposures. Insurers also may use a combination of data from different sources in class rating, employing credibility weighting to determine the relative effect of each source on determining the rate for a particular class.[5]

State regulators authorize statistical and advisory organizations to collect and analyze pooled data from insurers and disseminate this information to assist the rating process. Advisory organizations also may file full rates or loss costs for approval by regulators and use by insurers.

---

[5] This reflects that the volume of data for some risk categories may not be sufficient, from a statistical standpoint, to develop accurate or credible loss-cost indications.

2. Life Insurance and Annuities

Life insurance policies can be purchased with a single premium payment or periodic premium payments.[6] The net single premium is not common, but it provides a basis for understanding how life insurance pricing works. The net single premium can be defined as the present value of the future death benefit (Rejda, 2005). The premium, combined with compound interest, must be sufficient to pay all death claims. The gross premium is equal to the net single premium, plus a provision for expenses.

More common is the net level premium, which consists of a periodic premium payment that remains the same throughout the duration of the policy or some other defined period. The calculation of the premium must consider the probabilities that death benefits will be paid and when they will be paid, as well as the premium payments that will be made and that will cease if the insured dies during the policy period. The premium calculation also must consider the compound interest that will be earned on accumulated reserves. It is anticipated that, for the average policy or a group of policies, premium payments in the early years of a policy will exceed the death benefits paid. In the later years of a typical policy, death benefits paid are expected to exceed the premium payments received. Hence, insurers must establish a reserve that reflects the accumulated difference between premium payments received and death benefits paid. This reserve is used to pay death benefits when they begin to exceed the premiums received.

In order to calculate appropriate premiums, insurers must rely on mortality tables and other information to determine the probabilities associated with if and when death benefits will be paid and premium payments will cease. In essence, insurers must project cash inflows and outflows, as well as investment income on accumulated reserves, to determine the proper premium for a given insured. The probability of death increases with age.

---

6 See Rejda (2005) and Black and Skipper (1994) for a more detailed review of life insurance pricing.

Consequently, the net premium for a given death benefit increases with the age of the insured at the time the policy is purchased, as well as the length of the policy period. Other factors, such as gender and whether the insured is a smoker, also affect mortality projections and premiums. Various provisions, such as the accumulation of a cash value, renewability guarantees, etc., also have cost and pricing implications for life insurance contracts.

The pricing of an annuity contract is based on similar concepts, except the insurer must determine the amount of annuity payments it will likely pay over the duration of the policy, given its specific provisions. Consequently, premiums for annuities that cease payments when the annuitant dies will be lower than premiums for annuities that continue to make payments to the annuitant's spouse or other beneficiaries after the annuitant dies. As with life insurance policies, various other annuity contract provisions affect their cost to insurers and their price to consumers.

C. 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.[7] 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,

[7] Although agents legally represent insurers, they also have a duty to consumers. Further, they may choose to advise and assist consumers in the consumers' best interest.

such as assisting in the filing and adjusting of claims and changing policy provisions.

Independent agents can represent more than one insurer and "own" their book of business.[8] 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.

A few insurers transact business directly with buyers without the services of an agent. Generally, insurers that use exclusive agents or direct-marketing systems are called **direct writers**. Some insurers also are beginning to use a mixture of distribution systems and, hence, cannot be classified purely as independent agency companies or direct writers.

Agents receive a commission (typically a percentage of the premium) or a salary to perform these functions. Acquisition costs are generally lower for exclusive agency insurers and direct writers, who maintain greater control of their sales force and the compensation they receive. Agents for these insurers also may provide fewer services directly to buyers and receive more logistical support from their insurers, requiring additional expenditures by these insurers.

Alternatively, **brokers** represent and advise buyers and seek coverage from insurers on behalf of buyers. Brokers are more common in commercial lines of insurance; however, there are brokers who sell personal lines coverage.[9] Brokers typically provide a broader range of services, including

---

8 Effectively, this means that an independent agent's book of business moves with the agent if he or she no longer sells insurance for a particular company.

9 Personal lines insurance is sold to individuals and households; commercial lines insurance is sold to businesses and other organizations.

risk-management advice, for their clients. Brokers are compensated by their clients on a commission or fee-for-service basis.[10]

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; and collecting premiums. Insurers also must establish and maintain distribution systems and provide information to their agents. These activities tend to be more extensive for direct writers, who undertake more responsibility and costs in supporting agents and sales offices.

D. Underwriting

The **underwriting** function is critical to the efficient operation of insurance markets. It 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.[11] To the extent that an insurer's rating plan does not fully accommodate all variations in risk, the insurer must decline risks for which its rating plan will not generate an adequate premium or for which its products are unsuitable. In addition, some risks may not meet basic requirements for insurability; i.e., the probability of loss is too high or uncertain to charge an economically feasible premium and provide insurance. 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.

---

[10] Some brokers may also receive "contingent commissions" paid by insurers to whom they bring business. The practice of paying contingent commissions has recently become a matter of considerable debate and regulatory attention. This issue is discussed further in Chapter 11.

[11] Some insurer groups may have preferred, standard and non-standard companies with varying rate structures and use the underwriting process to place an insured with the appropriate company and rate structure.

Several principles guide proper underwriting: 1) selection according to standards; 2) proper balance within classifications; and 3) equity among policyholders (Rejda, 2005). 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. The appropriateness and fairness of some underwriting guidelines and risk classifications have been a matter of public debate.

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.[12] 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.

It is important that insureds are treated fairly from an actuarial or 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.

E. 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

[12] Insurers who specialize in high-risk insureds presumably will charge higher prices to reflect their greater risk and make other provisions to control losses and ensure their solvency.

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.

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. Otherwise, the insured may file a complaint with the insurance department and/or sue the insurer in court. It is in the interest of an insurer to resolve claim disputes amicably and maintain a positive reputation among its insureds and potential insureds. Hence, insurers may use their discretion to pay benefits that are not clearly required under a policy if they believe it will avoid disputes and increase goodwill.

Insurers may provide other services related to loss settlement if they are effective in reducing loss costs or are otherwise valued by insureds. Companies may provide advice and additional assistance (e.g., temporary housing) to an insured struck by a calamity, using their experience in similar matters and contact with the insured to ease the insured's adjustment. Some insurers will provide case-management services, such as in workers' compensation insurance, to help speed the recovery of individuals who have been injured and encourage the efficient use of medical and rehabilitation services. In some areas, insurers work closely with insureds in managing claims.

F. 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.[13] These functions require prudent investment policies that match liabilities and assets, manage cash flows and achieve an appropriate balance of risk and return.

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. For example, an insurer that writes property insurance predominantly, for which claims are paid relatively quickly in relation to the policy period, will invest more heavily in short-term bonds and blue-chip stocks. These investments can be liquidated quickly to pay claims without incurring substantial losses due to fluctuations in interest rates and the economy. On the other hand, life insurers tend to invest in a greater portion of long-term bonds and other securities to match the long-term nature of their contracts.

G. Reinsurance

Efficient insurance markets require insurers to further diversify their risk through reinsurance, investments and other vehicles to lower the risk of insolvency and increase their capacity to write insurance on a primary basis. Reinsurance is the purchase of insurance by an insurer to cover all or a portion of its loss payments on its insurance contracts. The insurer buying reinsurance, in effect, cedes premiums and losses from its book of business to a reinsurer. The reinsurer assumes these premiums and losses and pays a commission to the ceding insurer to cover transaction costs incurred by the

[13] Investment policies will differ between insurance products offering a guaranteed rate of return and products where the rate of return varies with investment performance.

primary insurer. The reinsurer, in turn, may cede premiums and losses to a retrocessionaire, which is a company that sells reinsurance to reinsurers. In this way, the reinsurance market helps to further diversify risk and allows ceding insurers to retain higher amounts and concentrations of exposures. This yields efficiencies for primary insurers in terms of economies of scale and scope.[14] Insurers purchase reinsurance to reduce their risk and drain on surplus from unearned premium and loss reserves, increasing their capacity to write more business. This is particularly helpful to rapidly growing insurers. Reinsurance also helps protect an insurers' surplus against higher than anticipated underwriting losses and benefit payments and the impact of catastrophes on underwriting results.

There are several types of reinsurance contracts, which are all designed to reduce or limit the ceding insurer's risk. **Facultative** reinsurance contracts are used on specific risks on a case-by-case basis when the primary insurer wants to write a risk that exceeds the amount of exposure that it wishes to retain. Facultative contracts are most frequently used for a large amount of insurance on a single risk. This type of contract is flexible in that it can be tailored to a specific risk. However, it is negotiated and written on a case-by-case basis, which delays issuing the primary policy.

The alternative is an automatic reinsurance **treaty** contract under which the reinsurer agrees in advance to assume a portion of the business of the primary insurer. The primary insurer also is obligated to cede this business. This type of contract offers efficiencies in terms of timing and lower transactions costs. It is most suitable for a large number of small risks that are more homogeneous in terms of their characteristics and coverage than large, more unique risks.

Reinsurance is used in the life-health and property-liability insurance sectors, but the nature of their contracts in these sectors differ somewhat, reflecting the different types of coverage that are provided. Property-

[14] Economies of scale mean that an insurer's average costs decline with the amount of insurance it provides. Economies of scope imply that an insurer can achieve efficiencies by producing several related products or services at a lower cost than if the same products and services were produced by different insurers.

liability reinsurance agreements may require the reinsurer to share every loss with the ceding insurer or only pay after a loss reaches a certain dollar amount. A ceding insurer may arrange several different contracts on the same risk or group of risks with different reinsurers.

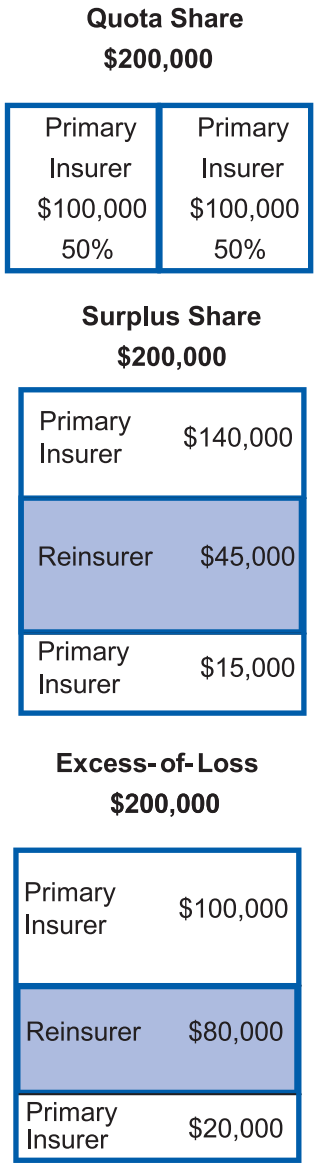
In a **quota share** treaty, the assuming and ceding insurers share losses and premiums according to some agreed proportion. In the example shown in Figure 3.2, the assuming and ceding insurers each pay 50 percent (or $100,000) of a $200,000 loss. The reinsurer and primary insurer share premiums at the same rate, but the reinsurer also pays a ceding commission to the primary insurer to compensate for the first-year acquisition expense incurred on writing the primary policy.

In a **surplus share** treaty, the reinsurer assumes some amount of insurance on each risk in excess of a specified retention limit. The amount of insurance under the limit is retained by the primary insurer. Typically, the reinsurer agrees to assume some multiple of the retention limit or "line" that establishes a maximum amount the reinsurer is obligated to pay. Using the example shown in Figure 3.2, if the line is $15,000 and the multiple is three: On a $200,000 loss, the reinsurer will pay $45,000 and the ceding insurer will pay $155,000. Primary insurers may purchase several layers of this type of reinsurance in order to reduce their risk of large losses.

Under **excess-of-loss** contracts, the reinsurer pays losses in excess of the retention limit, up to specified maximums for a specific risk and occurrence; e.g., a hurricane. For example, if a primary insurer suffers losses of $200,000, with a retention limit of $20,000 and a maximum of $80,000, the reinsurer would pay $80,000. Again, the primary insurer may purchase additional layers of this type of reinsurance beyond $80,000 from other reinsurers for large risks.

Life insurers use a term insurance or a co-insurance approach to reinsurance. Under the former, the primary insurer purchases yearly renewable-term insurance on the difference between the face value of a policy and the reserve. This approach can be used on either one large policy or a number of policies to avoid large losses or fluctuating operating results. Under the co-insurance approach, the primary insurer cedes a portion of the

Figure 3.2
Example of Reinsurance Arrangement



face amount of the policy, as well as the reserve, for a death claim.[15] This allows the ceding insurer to reduce its policy reserves and write additional business.

Synopsis of Key Concepts

1. Insurers design and sell insurance contracts (i.e., policies) intended to cover insureds against insurable perils or contingencies.
2. Pricing involves determining an appropriate premium for a given risk and insurance policy. For property-liability insurance and accident-health insurance, premiums may be based on a rating manual or be determined and negotiated individually for certain risks. For life insurance and annuities, insurers use mortality tables and other information to determine the necessary premiums to cover their projected premium and investment income receipts and benefit payments over the duration of their policies.
3. Production and distribution involves marketing and selling insurance contracts to consumers. Insurance contracts can be sold through independent agents, exclusive agents and brokers or marketed directly to buyers.
4. Underwriting entails the risk assessment, classification and selection of insureds to appropriately match insurance products and price to the risk.
5. In settling losses and paying benefits, the insurer determines whether a covered loss has occurred or a benefit is payable and the appropriate benefit payment under the terms of the insurance contract.
6. Insurers invest their reserves for liabilities and surplus to manage their cash flow and recover the time-cost of money, which enables them to offer policyholders greater value for the premiums they pay. Insurers' investments tend to be conservative with respect to credit risk and should be coordinated with the timing of their liabilities.
7. Reinsurance is the purchase of insurance by an insurer and is intended to further diversify risk, support growth and cushion surplus against larger than anticipated losses or benefit payments.

[15] The reserve reflects accumulated premiums or funds held to pay future death claims. Typically, in the early years of life insurance policies, the premiums paid exceed the death benefits paid.

Suggested References

Black, Kenneth, Jr., and Harold D. Skipper, Jr., 2000, *Life and Health Insurance*, 13th ed. (Englewood Cliffs, N.J.: Prentice Hall).

Long, John D. and David W. Gregg, 1965, *Property and Liability Insurance Handbook* (Homewood, Ill.: Richard D. Irwin, Inc.).

Myhr, A.E. and J.J. Markham, 2003, *Insurance Operations, Regulation and Statutory Accounting* (Malvern, Pa.: Insurance Institute of America).

Rejda, George E., 2005, *Principles of Risk Management and Insurance*, 9th ed. (Reading, Mass.: Addison-Wesley).

Chapter 4

Insurance Lines and Products

Chapter Objectives

1. Discuss the principal features of the major types of insurance contracts.
2. Outline the basic types of insurance products sold by insurers and the perils they cover.
3. Explain how insurance products have evolved to respond to changing consumer needs and market competition.

Insurers sell a diverse array of products and services to consumers, including property-liability insurance; health insurance, accident and disability insurance; and life insurance, annuities and other investment-related products. Insurance contracts not only provide financial reimbursement for covered losses and scheduled benefits, but also an array of other services as discussed in earlier chapters. In some cases, insurers may enhance these services as an aspect of their product offerings to consumers or unbundle and sell some of these services separately, such as

claims management and loss prevention, to customers who self-insure. Insurance products and services continue to evolve in response to changing consumer needs and competition from alternative risk-transfer devices and other financial institutions. This section outlines the primary products sold by insurers, which lays a foundation for a discussion of how insurance markets are structured and regulated.

A. Property-Liability

Property-liability insurance policies protect insureds against losses stemming from damage to or loss of property and legal liability. Many lines of property-liability insurance have evolved over time to meet the needs of a growing and increasingly diverse economy. These lines can be divided into four basic categories: fire, marine, casualty and surety. Property-liability insurance covers direct losses from damage to property, indirect losses resulting from direct losses (e.g., loss of income due to damages to a business facility) and loss of possession. Homeowners multi-peril insurance and commercial multi-peril insurance package various property and liability coverages for homeowners and businesses, respectively. Box 4.1 summarizes the basic types of property-liability insurance contracts and the perils they cover.

1. Fire and Homeowners Multi-Peril Insurance

Fire insurance covers losses to buildings and personal property from fire. Individual homeowners can purchase dwelling or residential fire insurance or, more commonly, buy fire protection for their home as part of a homeowners multi-peril policy. Homeowners insurance provides protection for a person's home and belongings against a specified number of perils. Four basic types of coverages are typically included in a homeowners policy: 1) property damage to the dwelling, other structures and personal property; 2) additional living expenses; 3) personal liability; and 4) medical payments. Policyholders can choose to insure their home and contents for either replacement cost or actual cash or market value, as well as choose different deductible amounts and coverage limits. Dwelling fire insurance covers damage to the structure of a home caused by a more limited set of perils, including fire. Homeowners also can buy extended coverage on the contents of their home as a supplement to coverage of the structure.

Box 4.1

Property-Liability Insurance	
Fire	General Liability
Allied Lines	Products Liability
Earthquake	Aircraft
Ocean Marine	Boiler and Machinery
Inland Marine	Burglary and Theft
Crop Multiperil	Glass
Auto	Mortgage Guaranty
Homeowners Multiperil	Fidelity
Farmowners Multiperil	Surety
Commercial Multiperil	Nuclear
Medical Malpractice	Title

There are several different **homeowners package forms** offered to owners of single-family owner-occupied homes that vary in terms of the perils covered. The basic form (HO-1) provides coverage on dwelling and contents for the perils of: fire and lightning; windstorm or hail; explosion; riot or civil commotion; aircraft; vehicles; smoke; vandalism; theft; and glass breakage. The broad form (HO-2) covers all HO-1 perils plus a number of other perils, including falling objects; weight of ice, snow or sleet; collapse of buildings; damages caused by plumbing and heating systems; and freezing of plumbing, heating and air conditioning systems. The special form (HO-3) extends dwelling coverage to all perils except flood, earthquake, war, nuclear accident and others specified. The comprehensive form (HO-3 with HO-15, or HO-5) covers both home and contents for every peril that is not specifically excluded.

Generally speaking, HO-3 policies provide replacement cost coverage on the dwelling and other structures, and actual cash value coverage on contents. Insureds can add replacement cost coverage on contents as an endorsement to their HO-3 policy. HO-5 policies often offer replacement cost coverage on contents (as well as on the dwelling and other structures) as a standard provision.

The modified coverage form (HO-8) provides package coverage for homes that do not meet all the requirements applicable to other homeowners policy forms and is more restrictive than that of the other forms that include a replacement cost clause. HO-8 policies cover the lesser of replacement costs or actual cash value up to the policy limit. It is only when insureds elect not to rebuild that an HO-8 policy will provide the lesser of replacement cost, actual cash value or market value.

In addition, renters can purchase a tenants form (HO-4) policy that insures household contents and personal property against the same perils covered by HO-2 policies and that also provides additional living expenses and personal liability coverage. Condominium insurance (HO-6) provides coverage similar to that of a tenants form policy and also covers wall, floor and ceiling coverings.

Businesses can insure against fire and other property risks through a commercial fire policy, with or without extended coverage. Small businesses also can obtain fire protection as part of a **businessowners multi-peril policy** (BOP). Commercial fire insurance is class-rated or individually rated depending on the size and value of the structure. This coverage protects against damages to buildings, machinery and equipment, inventories and other goods. Supplementary coverages can be purchased to protect against indirect losses from fire, such as those stemming from business interruption.

2. Marine Insurance

Marine insurance covers losses from damage to property resulting from perils associated with transportation. Ocean marine policies cover all types of ocean-going ships and their cargoes. Inland marine insurance was

originally developed to cover goods transported by land, but over time it has been expanded to cover various kinds of property, regardless of whether it moves. Marine insurance covers transportation structures — such as bridges, pipelines, and communication facilities — as well as goods transported by land, inland waterways and air. Floater inland marine policies cover a broad range of other property that can be moved, such as jewelry.

3. Casualty Insurance

Casualty insurance provides protection against damages to property and losses from legal liability that are not covered under the policies describe above. A wide range of lines of insurance fall into this category, including:

- Auto insurance;
- Commercial multi-peril;
- Medical malpractice;
- Workers' compensation;
- General liability;
- Mortgage and financial guaranty;
- Aircraft;
- Glass;
- Burglary and theft; and
- Boiler and machinery.

a. Automobile Insurance

A detailed description of each of these coverages is beyond the scope of this text, but it is useful to describe several of the more prominent lines of casualty insurance that occupy a good share of regulators' attention. Of these lines, **personal auto insurance** often receives considerable attention. In states in which accident victims can sue in tort to collect damages, auto liability insurance typically covers liability for bodily injury (BI) and property damage (PD), as well as uninsured/underinsured motorists losses (UM/UIM). **Bodily injury liability** coverage indemnifies the insured against claims for damages to others from accidents caused by the insured. These damages include medical expenses, lost wages and pain and suffering. **Property damage insurance** covers damages caused by the

insured to the property of others. Uninsured and underinsured motorists coverage protects the insured directly for damages the insured suffers because of accidents caused by other drivers who do not have sufficient liability insurance. These coverages are subject to specified benefit limits and many states mandate minimum limits for these coverages.

In the 1970s, a number of states enacted **no-fault** auto insurance laws intended to lower costs and expedite benefit payments to accident victims. Under the purest form of no-fault, insureds would have no legal right to sue in tort for damages caused by another driver. In this system, accident victims would be covered by their own insurance policy for medical expenses and wage loss, regardless of who was at fault. In actuality, no state has implemented a pure no-fault system, and restrictions on lawsuits vary widely among the states. For those states that restrict lawsuits, damages are required to meet a certain threshold — verbal or monetary (more common) — in order for the victim to sue.[1] In states with some form of no-fault law, drivers purchase personal injury protection (PIP) insurance to cover their medical expenses and wage losses from auto accidents. They also purchase residual liability insurance to cover any damages they are obligated to pay to others for accidents caused by their own negligence. In some states, it is also possible to buy personal injury protection (PIP) coverage even though there are no or very limited restrictions on lawsuits (these are typically referred to as "add-on" systems). More recently, a few states have experimented with choice no-fault systems whereby the insured, at the time of purchase, elects the type of system they wish to have govern their rights and obligations.

Collision coverage pays for physical damage to the insured's vehicle caused by its collision with another vehicle or object. **Comprehensive coverage** pays for damages to the insured's auto from most other causes, including weather, theft and vandalism. These property insurance coverages are purchased with various deductibles that lower the required

1 Verbal thresholds refer to the types or severities of injuries required to file a lawsuit.

premiums. Other incidental coverages can be purchased for items such as medical payments, rental reimbursement and towing.

b. Workers' Compensation Insurance

Workers' compensation insurance differs from other insurance lines in that benefits are set by state law and most employers are required to have coverage. Insurance texts classify workers' compensation as a form of social insurance because of its compulsory nature and other characteristics. The workers' compensation system is designed to provide a statutory-based set of benefits that must be accepted by employees as their **exclusive remedy** for work-related injuries. The basic benefit structure is the same among the states but there are differences in the types of injuries covered and the amount of benefits paid. In all states, workers' compensation will pay for accidental injuries and occupational diseases that arise in the course of employment.

Medical benefits are essentially unlimited and are not subject to deductibles or co-insurance provisions. Indemnity or disability benefits cover wage loss from work-related injury, subject to limits and co-insurance provisions intended to give injured workers an incentive to return to work. Coverage requirements for rehabilitation expenses vary among the states. More recently, some states have experimented with allowing insurers and risks to coordinate workers' compensation insurance with medical insurance plans through variations of managed care, medical fee schedules and 24-hour coverage. Insurers also sell excess risks liability coverage for suits that workers are still allowed to file against employers.

Because workers' compensation benefits are set by law, insurers compete on price and different services associated with workers' compensation coverage, such as loss prevention and case management. Insurers also offer different pricing arrangements that vary the amount of risk retained by the insured in return for lower premiums or make other adjustments to reflect variations in risk. These pricing arrangements include retrospective rating plans, experience-based dividend plans, schedule rating and large-deductible policies.

c. Medical Malpractice Insurance

Medical malpractice insurance covers health providers' liability for medical accidents caused by their negligence. The scope and cost of medical malpractice insurance has expanded over time as medical care has become more complex and given rise to more adverse outcomes for which providers have been sued. Severe injuries have resulted in large court awards and legal settlements for malpractice, which have tightened the supply of insurance and raised rates. Premiums have escalated, especially for high-risk specialties and procedures such as obstetrics and surgery. Recent market conditions and issues in medical malpractice insurance were examined in an NAIC report (see Nordman, Cermak and McDaniel, 2004).

d. Commercial Multi-peril Insurance

Commercial multi-peril insurance utilizes a package policy that combines two or more commercial property and liability coverages into a single policy. Coverages can be added in a modular form to customize a policy to meet the needs of a particular insured. A package policy offers the advantages of fewer gaps in coverage and lower costs/premiums because individual policies are not purchased.

The typical commercial package policy contains a common policy declarations page, a common policy conditions page and two or more coverage parts. The different coverage parts available are listed below:

- Commercial property
- Commercial general liability
- Crime
- Boiler and machinery
- Inland marine
- Auto
- Farm

e. Other Liability Coverages

Various other coverages have been developed to protect individuals and businesses against their liability exposures from their activities. Individuals can purchase personal liability insurance separately or as part of their homeowners coverage. They also can buy umbrella policies that provide broad liability coverage at relatively high limits (e.g., $1 million) in excess of the liability coverage provided by their auto and home policies.

Different business liability coverages also are available to cover specific risks, such as product liability, professional liability or errors and omissions, directors and officers liability, and employment practices liability. Commercial general liability policies offer broad coverage for liability exposures arising from commercial activities. Coverage can be purchased on an occurrence basis or a claims-made basis. The trigger for occurrence policies is bodily injury and property damages that occur during the policy period. The trigger for claims-made policies is the filing of a claim during the policy period. Insureds also can purchase tail coverage separately if they purchase a claims-made policy. Tail coverage provides insurance against claims reported after the end of the policy period.

4. Surety, Financial Guaranty and Title Insurance

Surety bonds require one party to ensure that obligations of a second party are met. Surety bonds are most often used for contract construction, court actions, and licenses and permits. The surety bond guarantees that the principal is honest and is able to carry out his or her obligations to a third party. It also possible to purchase **financial guaranty insurance** that can be used to secure the interests of lenders and other creditors.

Title insurance protects against the financial loss from defects in insured titles. Lenders typically require the purchase of title insurance in conjunction with a home loan to protect the principal of the loan. Actual losses from title defects are rare and the primary service provided by title companies is research to find title defects before transactions are completed. Consequently, loss ratios for title insurance are relatively low and expense ratios are fairly high.

B. Life Insurance and Annuities

An important distinction between life insurance and other types of insurance is that the event that life insurance covers (death) is uncertain in any given year, but certain in the long term. The risk of premature death poses undesirable financial consequences for the insured's survivors. The probability of death generally increases over the term of life insurance policies (i.e., the insured ages) and, hence, insurers must accumulate funds to pay claims that will eventually occur. Life insurers use mortality tables to chart the probability of a death claim over time based on the age and gender of the insured and set appropriate reserves to pay the claims expected to occur from the insurers' portfolio of policies during a given period. There are five basic types of life insurance contracts: term, whole life, universal life, endowment and annuities (see Box 4.2).

Box 4.2

Life Insurance Products

Life Insurance	Indeterminate Premium Whole Life
Term	Modified Life - Insurance
Ordinary	Family Income
Variable	Second-to Die Life Insurance
Universal	Vanishing Premium
Variable Universal	Savings Bank Life Insurance
Current Assumption Whole Life	Industrial Life

1. Term Life

Term life provides protection for a finite number of years. The premium can increase over the term of the policy or remain level. The face value of the policy is paid if death occurs, but nothing is paid if no death occurs. In other words, the insured does not accumulate rights to a non-forfeiture or cash value in the policy that is refunded if death does not occur. Insurers accumulate only enough funds to pay death claims. Renewable term policies can be purchased for periods of one, five, 10, 15 or 20 years. The renewable feature allows the insured to renew the policy without evidence

of insurability. Although premiums will increase as the insured gets older, this feature ensures that the insured can still get insurance even if they have developed a life-threatening condition that would cause insurers to otherwise decline the insured. Term policies also often allow the insured to convert to a permanent policy without evidence of insurability. The face value of term policies can stay level throughout the policy term or increase or decrease according to the financial needs of the insured. Term insurance is the least expensive form of life insurance for a given face value and is the most suitable for individuals who need to buy the maximum amount of protection for the lowest cost (e.g., young parents).

2. Whole Life

Whole life policies pay the face value of the contract when the insured dies regardless of when this occurs. Straight life policies assume that equal premiums will be paid throughout the life of the insured. This means that premiums in the early years of the policy will exceed that required to pay death claims that occur during this period. Conversely, the level premium will be less than that necessary to cover death claims in the later years of the insured's life. The annual premium is set so that sufficient extra funds are accumulated in the early years to compensate for death claims that will exceed premiums in later years.

Because of this build-up feature, the insured accumulates rights to a **cash value** or savings element in addition to the death protection they receive. The insured or policyowner can exercise a number of options in utilizing this cash value. The policyowner can receive the cash value by surrendering the policy — or convert the cash value into a paid-up whole life policy for a reduced face value, a term policy for the full face value or an annuity. In addition, policyowners can borrow from the cash value at interest and receive a reduced death benefit during the course of the loan.

Some whole life policies have limited payment plans that allow the insured to pay all the required premiums during a limited numbers of years at the beginning of the policy. Obviously, these premiums must be higher than what the insured would pay if premiums were paid throughout the course of the policy. The higher premiums increase the savings element of the policy in its early years.

One variation of this type is the **single-premium whole life** insurance policy, which allows the policyowner to pay an initial lump sum to fund the policy. The cash value of the policy increases over time on a tax-deferred basis, which is the primary advantage of this type of policy. Policyowners can borrow the earnings on the policy at a relatively low interest rate and death benefits are tax-free.

3. Interest-Sensitive Life Insurance Policies

The policies described above use fixed interest rate assumptions. In the 1980s, **interest-sensitive** policies were developed to respond to rising market interest rates and increasing competition from other types of investments. **Universal life** policies combine elements of term and whole life insurance. After paying an initial set premium, policyowners can vary the premiums they pay. A mortality charge is extracted from the premiums paid to cover the death protection provided for a one-month period and is based on the age and expected mortality of the insured. The remainder of the premium is used to fund the cash value of the policy. Insurers guarantee a minimum crediting interest rate for the cash value but typically increase this rate if competitive interest rates rise and are reflected in the insurers' investment performance. The interest earnings on the cash value are tax-deferred, which increases the rate of accumulation and makes it a more attractive investment for policyowners who can benefit from the tax deferral. Universal policies also may be structured so the death benefit may stay level during the course of the policy or increase as the cash value increases.

Other interest-sensitive policies include **variable life**, **adjustable life** and **variable premium** life. In variable life policies, the assets (typically equities) underlying the policies are held in separate accounts. The death benefit changes according to investment results, subject to a minimum benefit. Adjustable life insurance allows the policyowner to switch between term life and whole protection and adjust other policy provisions. Variable premium policies vary premium levels according to what is needed to fund the policy as interest rates change.

4. Endowment Policies

Endowment policies pay a death benefit only upon the death of the insured during a fixed period of time or at the end of the policy period, whichever comes sooner. If the insured does not die by the end of the policy period, the face value of the policy typically goes to the policyowner rather than the stated beneficiaries, who otherwise would receive payment if the insured were to die. The primary advantage of endowment policies is their accumulation of a specific cash value that can be used by the policyowner with the savings element protected by the benefit paid upon the premature death of the insured. However, this type of policy is the most expensive in terms of providing a given level of death protection.

5. Annuities

Annuities are designed to systematically liquidate a principal sum. Under an annuity contract, the insurer agrees to pay the annuitant a certain sum for a specified period of time that could be a number of years or the life of the annuitant. The objective is to protect the annuitant against the contingency that he or she will outlive other sources of income. Box 4.3 categorizes the different kinds of annuities offered by insurers. Immediate annuities are paid with the commencement of the contract, while deferred annuities are paid after some specified period of time has elapsed. Annuities with life contingencies only obligate the insurer to pay benefits as long as the annuitant is alive. Annuities without life contingencies require payment of the benefit to the annuitant or the annuitant's beneficiary for a specified period of time, regardless of when the annuitant dies.

Immediate annuities are always funded by single premiums, while deferred annuities can be funded by single or flexible premiums. The single premium is equal to the present value of the anticipated benefit payments that will be paid under the contract plus a provision for the insurer's expenses and profit.

Guaranteed investment contracts (GICs) are a form of single-premium deferred annuities that provide a guaranteed return to the policyowner or contract holder without exposing the insurer to any mortality or morbidity

risk. The contract only guarantees a rate of return for a specified period of time and pays the accumulated contract value on the death of the contract holder, minus appropriate charges.

Box 4.3

Types of Annuities

1. Time When Payments Begin
   - Immediate
   - Deferred

2. Nature of Insurer's Obligation
   - Life Annuity
   - Life Annuity with Guaranteed Payments
   - Installment or Cash Refund Annuity
   - Joint-and-Survivor Annuity

3. Fixed or Variable Benefits
   - Fixed
   - Variable

Variable annuities pay the current value of a fixed number of annuity units. The current, or dollar, value of each annuity unit depends on the investment earnings of a special account, which is typically invested in equity securities. This type of contract is intended to provide a more stable value or purchasing power in response to inflation.

C. Disability and Health Insurance

A broad range of coverages is available to protect individuals against the wage loss and medical costs associated with illness and disability. These coverages have many similarities with property-liability coverages, including the application of the indemnity principle. There are two primary types of health insurance: disability income insurance and medical expense insurance.

A significant proportion of health insurance is sold under group contracts. Under a group contract issued to someone other than the insured, coverage is

provided to a number of persons affiliated by employment or some other association. Large groups are often rated at least partially on their own experience. Members of groups are generally not subject to individual underwriting and the underwriting is focused on the characteristics of the group. This is intended to minimize adverse selection and administrative costs.

1. Disability Income

Disability income insurance provides periodic payments when the insured is unable to work because of illness, disease or injury. This coverage is intended to replace a significant portion, but not all, of the income lost from the incapacity to work. The partial replacement reflects the expectation that a worker's income needs are reduced when they are not working. It also guards against moral hazard and gives an incentive to incapacitated workers to return to work. Short-term disability policies typically provide benefits for periods of less than a year. Long-term disability policies provide benefits for longer periods (e.g., one to two years), up to age 65.

2. Medical Expense Insurance

Medical expense coverage, also referred to as **indemnity plans**, provides benefits for various medical services, including physician services, nursing serves, hospital services, supplies and equipment. Typically, benefits are structured along the lines of these services, supplemented by major medical benefits that cover costs for hospital and surgical services that exceed the benefits provided for these specific services. These benefits are subject to a number of limits to encourage insureds to use these services judiciously and contain costs. These limits typically take the form of deductibles, co-insurance provisions and maximum caps. Medical expense policies also limit reimbursement of provider charges to what are considered customary and reasonable fees for different procedures.

Health insurers also offer managed care programs that utilize **preferred provider organizations** (PPOs) or **health maintenance organizations** (HMOs). HMOs provide their members defined health care services in return for fixed periodic premiums. The enrolled members usually live within a given geographic area. Managed care providers used by the HMO

are carefully screened. Contract terms specify the services to be rendered and the form of compensation. HMO providers also are subject to quality assurance programs, case-management and utilization-review procedures. Providers can either be an employee (or facility) of the HMO or contract with the HMO as a separate entity.

HMOs require members to choose a primary care physician who serves as a gatekeeper to specialists and other health services for which there must be a referral in order for the member to be covered. The primary care physician typically receives a salary if directly employed by the HMO or, if retained on a contractual basis, a capitated reimbursement on a per-member and per-month basis, regardless of the amount of actual services provided. Other providers are paid on a fee or capitated rate basis. Providers receive the capitated rate regardless of the amount of services provided to the insured. This is intended to give providers an incentive to minimize expenditures by treating patients in the most cost-efficient way, with an emphasis on preventive care, to avoid more costly services if illness occurs or worsens.

PPOs combine some features of a standard indemnity policy with some features of HMO plans. PPOs contract with screened groups of providers selected by the insurer who have agreed to a negotiated fee schedule in return for prompt payment and a larger volume of patients. Insureds can obtain care from non-affiliated providers but may be subject to additional charges if they do so. PPO providers also are subject to quality monitoring and utilization controls.

HMOs and PPOs also offer **point-of-service** (POS) plans that allow enrollees to choose providers outside the plan, with the imposition of larger deductibles and co-pays — thereby increasing the cost to insureds who exercise this option. This arrangement allows insureds greater flexibility in choosing providers while maintaining some incentive to use in-plan providers.

Some insurers market special limited-benefit or "dread disease" policies. These policies only provide limited reimbursement for medical expenses (e.g., $10 a day for hospital expenses) or cover only certain illnesses, such

as cancer. While these policies may appear attractive to consumers because of their low premiums, they are expensive relative to the amount of coverage they provide, which is generally inadequate to meet the full health-care needs of consumers. Hence, they tend not to be a good buy and their aggressive marketing, especially to low-income and elderly consumers, is a matter of regulatory concern. Still, there has been resurgence in the sale of disease-specific policies — labeled as "catastrophic" or "critical illness" policies — that provide a lump sum benefit for a limited list of serious, life-threatening medical conditions.

A recent development is the introduction of consumer-directed health plans. These plans come in two varieties: First, is a high-deductible health plan issued with a health savings account; second, is a high-deductible health plan issued with a health reimbursement account. The health savings account and health reimbursement accounts allow the consumer to use tax-free dollars for health care expenses. The consumer-directed health plans are generally less expensive for employers, but more costly for employees.

3. Medicare, Medicare Supplement and Long-Term Care Insurance

The federal Social Security system provides basic medical insurance, **Medicare**, which covers many of retirees' medical insurance needs — but not all. Medicare imposes certain deductibles, co-insurance provisions and limits on approved charges. Certain expenses also are excluded, such as dental care, foot care and hearing aids. Consequently, private insurers have developed **Medicare supplement insurance** to provide additional coverage for expenses that Medicare does not cover. Medicare supplement insurance is strictly regulated by federal and state law. Federal law establishes 12 standard types of policies that insurers are allowed to offer and also imposes minimum loss ratio requirements that must be considered in pricing these contracts. Insurers' and agents' marketing practices are closely regulated to prevent consumers from purchasing duplicate or unnecessary coverage.

Beginning in 2006, Medicare will offer voluntary prescription drug coverage. These plans will be available from private companies, such as insurers and pharmacy benefit managers. The companies have to be approved by the federal government and will be regulated primarily by the federal government, with assistance from the states.

Long-term care (LTC) insurance is another form of coverage that is becoming increasingly important as the population ages and more individuals require extended medical or custodial care at home or in a more formal setting. One study has found that 40 percent to 45 percent of persons reaching age 65 will stay in a nursing home at least once during their lifetime (EBRI, 1996). Nursing home care is expensive and Medicare and Medicaid will cover the cost of this care for only a fraction of the individuals that will need it.

The LTC market is evolving and insurers offer a variety of plans at different rates. LTC policies typically cover skilled nursing care, immediate nursing care, assisted living care, adult day care and home health care. However, policies differ in terms of aggregate benefits, elimination periods, eligibility for benefits and inflation protection. Insurers' financial solidity is an important consideration given the length of time than can elapse between when premiums are paid and benefits are received. LTC insurance also can be expensive, with rates sometimes increasing dramatically with the age of the insured when the policy is purchased. Because of these issues and the concern about consumer protection, LTC insurance is a significant area of regulatory attention.

Synopsis of Key Concepts

1. Insurers provide a diverse range of products and services that are continuing to evolve to serve consumers' needs.
2. Property-liability insurance policies protect insureds against losses stemming from damage to or loss of property and legal liability. The principal lines are fire, marine, casualty and surety.
3. Life insurance covers an event — death — that is uncertain in any given year, but certain in the long term.
4. Term life insurance pays the face value of the policy upon the death of the insured during a specified number of years, but does not accumulate a cash value or pay anything if death does not occur during the policy term.
5. Whole life policies pay the face value of the contract when the insured dies, regardless of when this occurs. Whole life policies accumulate a cash value, which the insured might utilize in different ways.
6. For certain other types of life insurance policies, such as universal life and variable life, the rate of cash accumulation will depend, at least in part, on the investment earnings of supporting assets, and offer various options to policyowners to adjust their coverage.
7. Annuities are designed to systematically liquidate a principal sum over a specified period of time, with or without a life contingency. The value of variable annuities is based on the investment earnings of assets supporting the contract.
8. Disability income insurance provides periodic payments when the insured is unable to work.
9. Medical expense coverage provides benefits for physicians' services, nursing services, hospital services, and supplies and equipment. Many medical expense plans are implementing managed-care approaches, such as health maintenance organizations (HMOs) and preferred provider organizations (PPOs). At the same time, managed care plans are offering more flexibility to insureds in choosing providers through point-of-service (POS) plans.
10. Medicare supplement insurance covers retirees for certain medical expenses that are not covered by Medicare. Long-term care insurance provides extended medical or custodial care that is not typically covered by medical expense insurance.

Suggested References

Black, Kenneth, Jr. and Harold D. Skipper, Jr., 2000, *Life Insurance*, 13th ed. (Englewood Cliffs, N.J.: Prentice Hall).

Harrington, Scott E. and Gregory R. Niehaus, 2003, *Risk Management and Insurance*, 2nd ed. (New York, N.Y.: McGraw-Hill/Irwin).

Nordman, Eric, Davin Cermak and Kenneth McDaniel, 2004, *Medical Malpractice Insurance Report: A Study of Recent Conditions and Potential Solutions to the Recent Crisis* (Kansas City, Mo.: NAIC).

Rejda, George E., 2005, *Principles of Risk Management and Insurance*, 9th ed. (Reading, Mass.: Addison-Wesley).

Chapter 5

Insurer Organizational Forms and Distribution Systems

Chapter Objectives

1. Summarize key organizational forms used by insurers and their relative predominance in the industry.
2. Explain how different organizational forms can result in different incentive structures and behaviors for insurers.

Insurers are characterized by different organizational forms in response to the needs of insureds, the cost of raising capital, regulatory requirements and competitive pressures (see Box 5.1). It is helpful to understand how these different organizational forms originated and have evolved over time. An insurer's form of organization affects its incentives and behavior and, ultimately, the functioning of insurance markets.

Box 5.1

Insurer Organizational Forms

Stock
Mutual
Fraternal
Reciprocal
Lloyd's
Health Expense Associations
Risk Retention Groups

A. Stock Insurers

A stock insurer is a profit-making company funded by an initial capital investment by the owners or stockholders of the insurer. The price charged by a stock insurer is final, and there is no contingent liability to the policyholder if the premiums charged prove to be inadequate to fund the insurer's losses. However, under the corporate form of ownership (the typical form in the United States), the owners' liability is limited to their economic stake in the insurance corporation and their personal assets are not at risk.[1] The insurer's board of directors is elected by the stockholders and earnings are distributed to shareholders as dividends on their stock.

1 This leads to a problem in the event of insolvency if an insurer's liabilities exceed its assets.

Research suggests that stockholders tend to monitor and control the actions of management more closely than policyholder-members of mutual companies (Mayers and Smith, 1988). To the extent stockholders are willing to accept greater risk in return for greater profits, stock insurers, on average, may incur greater financial risk than mutual insurers. Also, because stockholders are able to diversify their investments, they are able to diversify the firm-specific risk associated with their investments in an insurance company. Hence, stock company managers may be more focused on increasing profits and the market value of their companies than their mutual counterparts.

Stock insurers are predominant in the property-liability sector and tend to be larger and write more lines of insurance than other organizational forms. In fact, stock insurers represented 71.6 percent of the companies and 70.5 percent of the premiums written in property-liability lines for companies reporting data to the NAIC for 2004. One reason for this is that the first property-liability insurers were formed as stock companies. Also, stock insurers can raise additional capital more easily at a lower cost than other insurers to fund growth and expansion into new lines. There are some exceptions to this rule, reflected by large mutual property-liability insurers that have achieved significant growth in personal lines and workers' compensation.[2]

Stock insurers also are much more numerous in the life-health insurance sector than mutuals but tend to be smaller than their property-liability counterparts. Stock insurers accounted for 90.0 percent of the companies and 86.7 percent of the assets held by life-health insurers in 2004. In the early 1900s, many of the larger stock life insurers converted to mutuals. One motivation for this movement was the desire to avoid transfer of ownership and control of companies. In recent years, some large mutual life insurers have demutualized in order to more easily raise capital to fund expansion. The significance of the mutual form of organization has been declining in both the property-liability and life-health insurance sectors.

---

2 Mutual insurers also may own stock companies.

B. Mutual Insurers

Mutual insurers are owned by their policyholders rather than stockholders. Mutual insurers do not earn profits per se, as their earnings are returned to their respective policyholders as dividends, which reduce premiums or are retained to finance growth.

Mutual insurers use several different methods to fund their operations. Pure assessment mutuals assess their members retroactively after the policy period to pay their proportionate share of any losses incurred by the mutual. This mechanism was used by many of the early mutuals, but proved to be impractical because of the volatile nature of assessments from year to year.

An alternative form of mutual insurer charges advance premiums for assessable policies. If the premiums paid are more than sufficient to cover the costs of the insurer, the residual is returned to policyholders in the form of dividends. On the other hand, if premiums are insufficient, the insurer has the ability to assess its policyholders to cover the deficit, within certain legal limits.

Although this form of mutual insurer still creates some uncertainty for its policyholders with respect to their ultimate premium obligations, it is necessary until the insurer accumulates enough surplus to establish its financial stability. All states permit mutual insurers to issue non-assessable policies once they have acquired sufficient surplus to ensure their financial stability. Further, most of the premiums written by mutual insurers are written on a non-assessable basis.

As discussed above, mutual insurers are not motivated by profits but, rather, to serve their policyholder-members. This may be reflected in lessened incentives to incur risk in return for greater income, although growth may still be an important objective for some mutual insurers. On the other hand, mutual insurers have greater difficulty raising capital to fund growth and, hence, must rely to a greater extent on accumulated surplus and income from new members to support growth. Scholars also believe that

managers of mutual insurers tend to exercise more discretion, which tends to favor long-term stability over greater risk.[3]

Fraternals represent a special form of mutual insurer organized as a non-profit association or corporation, organized solely to provide benefits to its members. Fraternals tend be associated with organized groups or societies. Fraternals primarily write life insurance and are regulated much like other mutual life insurers.

C. Reciprocal Insurers

A reciprocal insurer is an unincorporated group of individuals or subscribers who exchange risk. Each member serves as both insurer and insured. An attorney-in-fact is granted the power of attorney by each subscriber to administrate the companies. To the extent that reciprocals are non-profit entities organized to serve their members, their incentives and behavior may be more akin to that of mutual insurers than stock companies. Reciprocals are not common and primarily write auto insurance. Only 75 reciprocals reported data to the NAIC in 2004, representing only 4.8 percent of total industry property-liability premiums.

D. Lloyd's Associations

Lloyd's associations are for-profit proprietary organizations in which the underwriter-member is always an individual insurer. Individual members (referred to as "names") write risks on a cooperative basis. Each member assumes risks personally and the organization bears no obligation. Members are individually liable for the risks they assume to the full extent of their personal assets.

---

[3] Of course, there are exceptions to this general observation. It is possible for the organizers/managers of a mutual company to undertake excessive risk and find ways to extract funds from the insurer for their personal benefit.

Lloyd's of London is the oldest and the most prominent insurance organization. Lloyd's writes property-liability insurance throughout the United States, primarily on a non-admitted basis. The New York Insurance Exchange is a U.S.-based Lloyd's association, which is comprised of groups of underwriters formed into syndicates. Syndicate members' liability is limited to their investment in the syndicate. Only a few states, such as Texas, license U.S. Lloyd's associations that also sell property-liability insurance.

Historically, Lloyd's associations have tended to write larger, unique and higher-risk insurance policies. This orientation is partly historical, but also may stem from the high potential returns from such business and the flexibility offered by recruiting a number of underwriters to share in the coverage of a particular risk. However, the unlimited liability of Lloyd's of London "names" exposes them to a higher risk. This became an issue in recent years, when Lloyd's recruited a large number of new names, some of whom did not fully understand their high exposure until their claims obligations became apparent.

This problem is related to financial difficulties Lloyd's suffered in the 1990s due to its accounting procedures and higher-than-anticipated losses from some of the liability coverages it sold, including coverage of U.S. environmental and health liabilities. Hence, it implemented a number of procedural and structural reforms to rectify identified flaws and secure its long-term viability as an alternative source of insurance.

In 1996, Lloyd's moved 1992 and prior business into a new U.K. reinsurance company, Equitas. If Equitas is unable to pay its liabilities in full, the U.K. government will require it to pay a reduced percentage of its total liabilities without being placed in receivership. In response to concerns from U.S. regulators, Lloyd's is required to maintain two $100 million joint asset trust funds, which allow Lloyd's to continue to write business in the United States. U.S. insurance regulators also have required Lloyd's syndicates to provide actuarial reports on their overall losses, as well as the losses represented in their U.S. trust funds. Lloyd's began requiring its syndicates to file actuarial opinions with their U.K. regulatory filings in 1998.

E. Health Expense Associations

Hospital and medical expense associations include Blue Cross and Blue Shield plans and health maintenance organizations (HMOs). A Blue Cross association is a health care membership group organized by hospitals in a geographic area to provide hospital expense prepayment plans. Blue Shield associations offer analogous prepayment coverage for surgical and medical services performed by physicians. "Blues" organizations may be organized on a for-profit or not-for-profit basis. Blues plans must belong to the national Blue Cross and Blue Shield Association (BCBSA) in order to use the Blue Cross and Blue Shield name. The national association imposes certain requirements for membership.

The Blues were formed under state legislation that gave them a special "public service" status. Consequently, they were exempt from normal state insurance regulations and taxes. At the same time, they were closely regulated with respect to rates, underwriting and financial condition, either by the insurance department or another state agency. In recent years, the Blues have been under increasingly competitive pressure from traditional insurers and HMOs, which has subjected them to increased adverse selection. Hence, some Blues have merged to increase their economies of scale and financial strength. Others have reorganized as mutual insurance companies to increase their flexibility to respond to competition from other health insurers.

HMOs emphasize preventive medicine and managed care to contain costs. HMOs can be either for-profit or not-for-profit, which depends, in part, on the nature of the sponsoring group. HMOs grew steadily since their inception in the early 1970s through the 1990s. However, their share of the health insurance industry has since declined: In 2003, HMOs insured 24.9 percent of the population, compared to 30.1 percent in 1999 (BLS, 2004). The nature of HMO insurance products and their role as an alternative risk-bearing mechanism for health insurance is discussed in Chapter 4. Also, as discussed in Chapter 4, there a number of other managed care organizations, such as preferred provider organizations (PPOs) and provider-sponsored organizations (PSOs).

In recent years, some HMOs have relaxed some of their traditional controls in order to respond to high consumer demand for greater provider choice. In turn, other forms of health insurers have incorporated more aspects of managed care into their health plans in order to control costs. Hence, while the different forms of health insurers have retained their organizational characteristics, their practices have moved closer together to achieve the balance of cost and choice that most consumers prefer. There also has been a trend toward mergers of HMOs to achieve greater economies of scale in providing health services. In response, insurance regulators have been carefully considering merger applications, weighing projected efficiency gains against potential adverse effects from increased market consolidation.

F. Risk-Retention Groups and Purchasing Groups

In response to the "liability crisis" of the mid-1980s, when some businesses had difficulty obtaining liability insurance, Congress amended the Product Liability Risk Retention Act by enacting the Liability Risk Retention Act (LRRA) of 1986. The most important provision of this legislation was the creation of **risk-retention groups** (RRGs) and **purchasing groups** (PGs), which enjoy special treatment under federal and state law. The purpose of LRRA was to increase the availability of commercial liability insurance but it has led to some tensions between federal law and state regulation.[4]

An RRG is a risk-bearing entity that must be chartered and licensed as an insurance company in one state. The principal purpose of the RRG is to assume and diversify the commercial liability risk of its members. An RRG is required to obtain a license in only one state and may operate in other states without a license. The ability of other states to regulate the activities of an RRG underwriting risks in their jurisdictions is significantly constrained by federal law. Consequently, its regulation is primarily left to the domiciliary regulator. The market practices of RRGs and the relatively

---

4 See the NAIC's *Risk Retention and Purchasing Group Handbook* (1998) for a detailed discussion of RRGs and PGs and related state regulatory issues.

high frequency of RRG insolvencies have been matters of state regulatory concern. In 2003, 115 RRGs reported financial data to the NAIC, representing only 1.2 percent of total property-casualty premiums.

The LRRA also established purchasing groups, which may only purchase commercial liability insurance for their members. The members of a PG must have a common purpose and bear a common risk. Federal law requires that the PG be domiciled in at least one state and that the insurer providing coverage to the PG must be a licensed insurer, eligible surplus lines insurer or an RRG registered or operating in the state where the PG is located. PGs also benefit from certain exemptions from state insurance laws, but these exemptions are not as broad as those provided to RRGs. While RRGs and PGs may have expanded the supply of liability insurance, the exemptions from state regulation provided by federal law can lead to instances where market abuses slip through the cracks between federal and state authorities.

G. Captives

A captive insurance company is not a distinct organizational form, but reflects the use of a company to provide self-insurance for the entity that owns the company. A pure captive is an insurer that is formed by a large corporation to insure that corporation's risks. Not all states allow businesses to form captives. Another form of insurer is the group captive. A group captive is similar to a risk-retention group in that it is owned by several businesses that pool their risks and insure each other's loss exposures. Regulation of captives is generally less restrictive than for other types of insurers. If a pure captive becomes insolvent, only the assets of its parent corporation are at risk. For group captives, the assets of the group members are at risk in the event of insolvency. Unlike risk-retention groups, captives cannot sell insurance in a state without becoming licensed.

Synopsis of Key Points

1. Stock insurers are for-profit companies owned by their stockholders, with their liability limited to the extent of their investment in the company. Stock insurers are the predominant organizational form in property-liability insurance.

2. Mutual insurers are not-for-profit organizations that are owned by their policyholders. There tend to be more mutual insurers in the life insurance market than in property-liability insurance market.
3. Reciprocals are unincorporated groups of individuals or subscribers who exchange risk and are administered by an "attorney-in-fact." There are a relatively small number of reciprocals and they tend to be concentrated in personal lines.
4. Lloyd's associations are for-profit proprietary organizations in which the members represent individual insurers and are typically liable for the risks they assume to the extent of their assets.
5. Health expense associations are primarily represented by Blue Cross and Blue Shield plans and health maintenance organizations (HMOs). "Blues" are not-for-profit associations of member insureds organized by medical providers to provide prepaid hospital and physicians' services. HMOs may be not-for-profit or for-profit and also offer prepaid hospital and other medical services, with a strong emphasis on preventive and managed care. Other managed care organizations, such as preferred provider organizations and provider-sponsored organizations, also have assumed a major role in the financing and delivery of medical services.
6. In 1986, federal legislation established risk-retention groups and purchasing groups to increase the supply of commercial liability insurance. These entities benefit from certain exemptions to state regulatory authority, which have raised some enforcement issues between the federal government and the states.
7. Captive insurers are sometimes formed by businesses or association to insure the risks of the business or of the members of an association.

Suggested References

Mayers, David and Clifford W. Smith, Jr., 1988, "Ownership Structure Across Lines of Property-Casualty Insurance," *Journal of Law and Economics*, 31: 351–378.

National Association of Insurance Commissioners, 1998, *Risk Retention and Purchasing Group Handbook* (Kansas City, Mo.: NAIC).

Rejda, George E., 2005, *Principles of Risk Management and Insurance*, 9th ed. (Reading, Mass.: Addison-Wesley).

Chapter 6

Conceptual Framework for Analyzing Insurance Markets

Chapter Objectives

1. Explain the structure-conduct-performance framework used to analyze markets and explain its relevance to insurance regulation.
2. Provide an overview of the supply and demand for insurance.
3. Summarize the basic alternative market structures and their implications for competition, market performance and regulation in insurance.

Understanding the economics of insurance markets is essential to understanding how they are regulated and the potential effects of different regulatory policies. This chapter provides a high-level overview of the concepts underlying the analysis of insurance markets. In addition, the theory of competition and alternative market structures are examined in terms of their implications for market efficiency and social welfare in insurance.

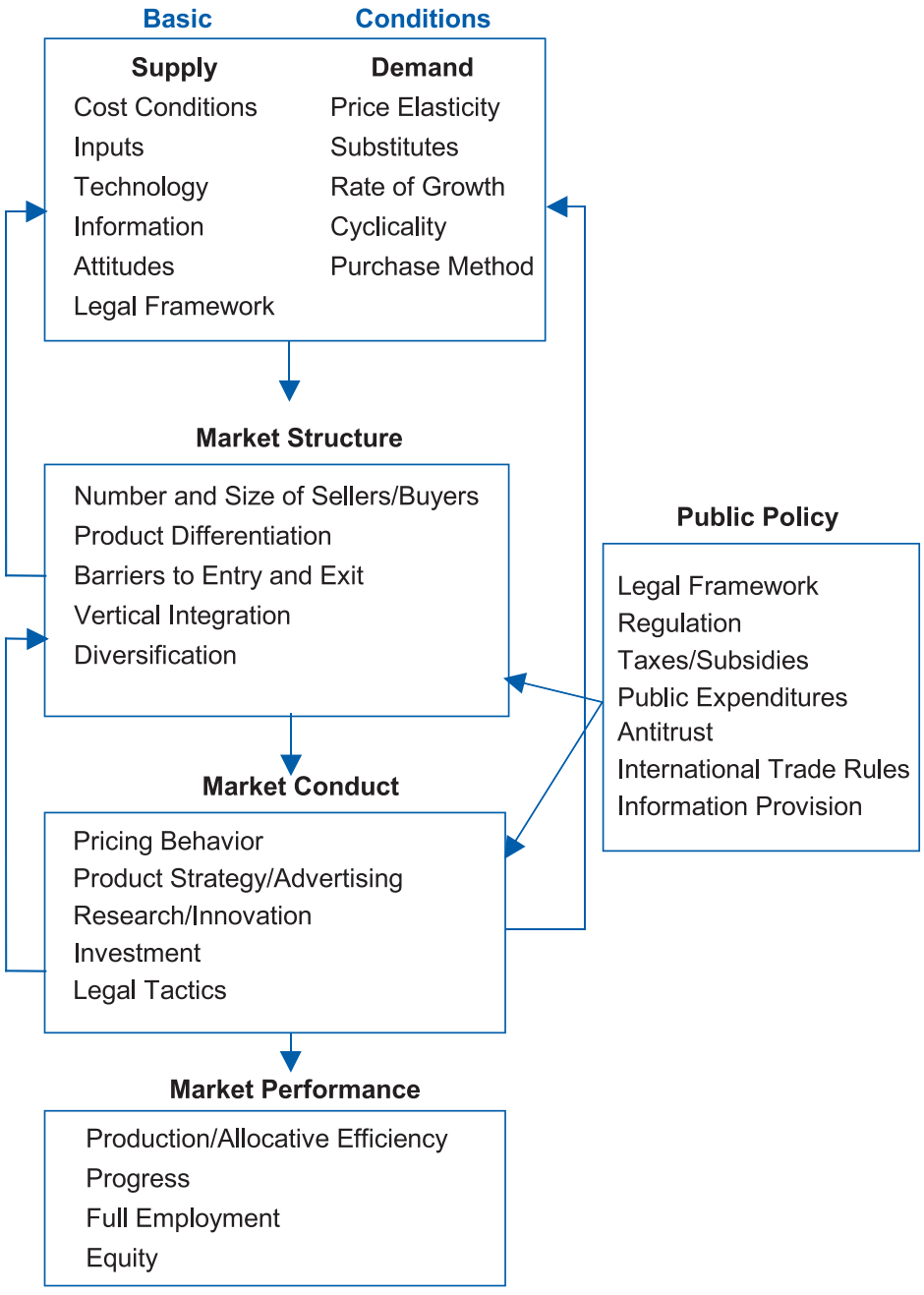
A. The Structure-Conduct-Performance Framework

The insurance industry is described here according to principles of market function commonly used by industrial organization economists. Economists postulate a theoretical relationship between market structure and market outcomes that is labeled the **structure-conduct-performance hypothesis** (Scherer and Ross, 1990). The basic hypothesis is that market structure determines market conduct, which determines market performance. A market with easy entry and exit and a relatively large number of firms causes firms to behave independently and competitively, which, in turn, leads to good market performance. Exceptions to these conditions and other structural flaws can cause market problems that require regulation or other remedies, if feasible, to protect consumers and produce market outcomes more consistent with the public interest.

Regulators need to be familiar with these concepts in assessing whether market forces and competition are working in the best interest of consumers, particularly under competitive-rating systems where regulators are required to monitor competition as a substitute for prior review and approval of rates.

The structure-conduct-performance framework is depicted in Figure 6.1. **Market structure** encompasses the number of buyers and sellers and their size distribution, the height of barriers to entry into (and exit from) the market, cost structures, the degree of vertical integration, the character of buyer and seller information, and the degree of product differentiation. **Market conduct** refers to the actual behavior (e.g., degree of independence) of firms in setting prices and output levels, product design, advertising, innovation and capital investment. **Market performance** comprises price, profit and output levels; the efficiency of production and allocation; the rate of technological progress; and equity. The solvency of firms and the availability of coverage also are important aspects of performance in insurance markets.

Figure 6.1
Structure-Conduct-Performance Framework



Source: Scherer and Ross (1990)

Analyzing industries like insurance is complicated by the presence of regulation and other forms of government intervention that affect market conditions. Hence, it is important to identify and evaluate government institutions and policies that may significantly influence market behavior, along with other factors. For example, regulatory requirements for admission and exit can have a significant impact on the number, type and size of insurers in a market and their behavior. Analyzing government's influence on the market is often a difficult task, given the complex interaction between regulation and market forces, but it is necessary to understanding all of the relevant determinants of market outcomes.

B. Supply of and Demand for Insurance

The economics of insurance markets are driven by the **supply** of and **demand** for insurance coverage (see Varian, 1992). Insurance markets, like other markets, tend to settle at a price and quantity where the amount of insurance that insurers are willing to supply equals the amount that consumers demand at a price agreeable to both. Changes in the supply of and/or the demand for insurance will change this point of equilibrium. Regulation or other external interventions in the market also can affect supply and demand, changing the point of market equilibrium or causing an imbalance between the amount of insurance that insurers are willing to sell and the amount that consumers would like to purchase.

When economists use the term **supply**, they think in terms of a schedule of the quantities of a product that firms are willing to supply at different prices. The supply function for a market is the sum of the supply functions of individual firms. The supply of insurance is determined primarily by the cost of providing coverage (i.e., the present value of expected claim costs or benefits paid to insureds, expenses and the cost of capital). Insurers' costs include a "risk load" or "risk premium" to reflect the cost of uncertainty about their future liabilities. In the short run, the supply function for insurance is likely to be upward sloping; i.e., insurers require higher prices to provide larger quantities of insurance coverage, because their per-unit costs increase with the quantity of insurance they provide.

In the long run, the supply function for most insurance markets should be relatively flat, or **price elastic**. That is, the quantity of insurance that insurers are willing to supply should expand to meet increased demand without a significant increase in average cost that would require an increase in the market price. In the long run, insurers' costs are generally variable; i.e., fixed investments in their facilities can be adjusted to produce a given amount of insurance at the most efficient scale of operation. This assumes that, ideally, there are no significant barriers to entry and that capital can flow easily into a market to meet increased demand for insurance without an increase in per-unit costs.[1]

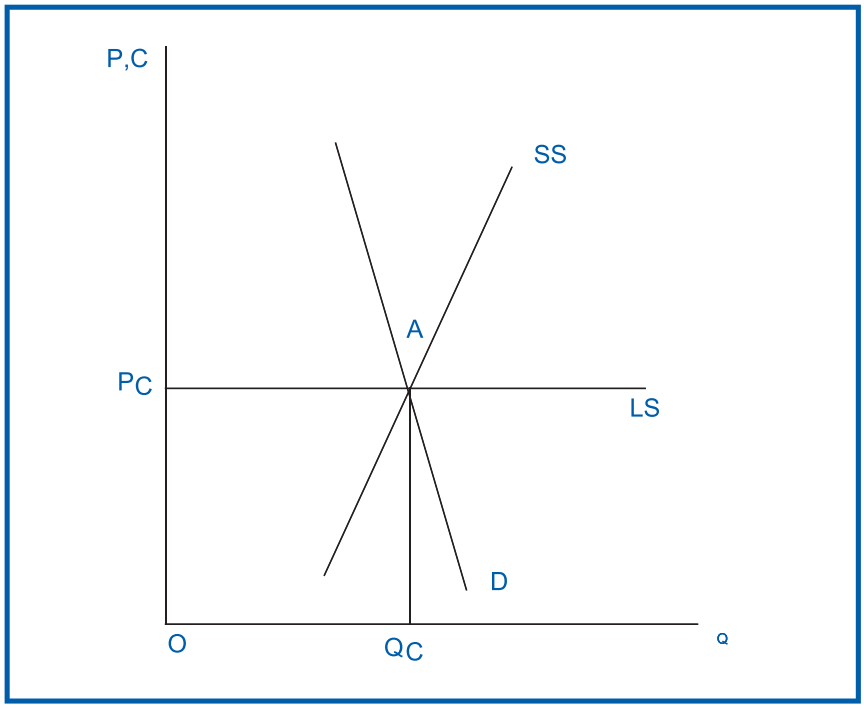
The **demand** for insurance is determined principally by consumers' risk (actual or perceived), degree of risk-aversion, income and assets, other options for managing risk and compulsory insurance requirements. Generally, the greater risk an individual or firm faces, and the lower their ability to reduce or finance potential losses using other means, the greater will be their demand for insurance. To the extent that consumers are risk-averse (i.e., they gain additional utility from reducing their risk), they will be willing to pay a premium that exceeds their expected loss (without insurance) that is necessary to cover insurers' expenses, transaction costs and cost of capital. The demand for insurance would be expected to be somewhat sensitive to price; i.e., the higher the price, the less insurance consumers will want to purchase, all else being equal. At the same time, this price sensitivity or elasticity may be somewhat low for certain coverages that consumers perceive to be essential or are mandated by governments or lenders (e.g., auto and homeowners insurance).

---

1 The demand for and supply of catastrophe reinsurance illustrate these principles. When the demand for catastrophe reinsurance significantly increased after Hurricane Andrew in 1992, the price of reinsurance rose significantly because of short-term capacity constraints. However, the increased demand and price attracted additional capital into the market and the price of catastrophe reinsurance subsequently fell.

Figure 6.2 depicts the determination of the price and quantity of insurance sold in the long run in a given market. The price (P) and cost (C) of a unit of insurance are plotted on the vertical axis and the quantity of insurance (Q) is plotted on the horizontal axis. The downward-slanted line D represents the market demand curve for insurance, indicating the total number of policies or amount of insurance demanded at various premium levels.[2] The downward slope of the demand curve indicates that less insurance is demanded at higher prices. In other words, higher premiums cause some buyers to drop out of the market or buy less insurance. The short-run supply curve is indicated by the line SS. The long-run market supply curve is represented by the flat line LS, which assumes that, in the long run, insurers can provide increased insurance without increasing its price.

Figure 6.2
Insurance Market Equilibrium Under Perfect Competition



2 It can be somewhat difficult to define and measure the quantity of insurance. Possible measures might include the "amount of insurance" (i.e., the policy limit minus any losses retained by the insured) or the expected losses for a block of policies.

Under perfect competition, in the long run, the market price or rate, P_C, will equal average and marginal cost, and the number of policies or amount of insurance sold will equal Q_C. In other words, the market price will be just sufficient to cover insurers' costs, operating at an efficient level, and the quantity of insurance sold will equal the quantity of insurance that consumers demand at that price. Total premiums will equal total cost, which is equal to the area OP_CAQ_C and "economic profits" will be zero.[3] This means that consumers will receive any "surplus utility" reflected in the difference between the price of insurance and what they would be willing to pay for it. The income earned by insurers will be just sufficient to cover their costs, including the cost of capital, and no more.

The impact of market competition is reflected in the market loss ratio. The loss ratio is equal to total losses divided by total premiums, which is equivalent to average loss, C_l, divided by market price, P. The loss ratio reflects the dollar amount of loss-protection policyholders receive for a dollar's worth of premiums. Under perfect competition, the loss ratio will equal the ratio C_l/P_C; i.e., average loss divided by competitive market price.

It should be noted that if insurers' claims costs or expense costs rise (e.g., due to higher accident rates), this will push up the supply curve, LS, and result in a higher market price and less insurance being purchased.

C. Competition and Alternative Market Structures

1. Theory of Competition

The characteristics of a competitive market provide a benchmark for comparing alternative market structures and evaluating markets in the real world. Competition is considered desirable from society's standpoint

---

3 The term "economic profits" refers to profits in excess of insurers' cost of capital.

because it ensures resources are being used in the best way possible. An industry is considered perfectly competitive when the number of firms selling a homogeneous commodity is so large, and each firm's share of the market is so small, that no firm is able to affect the price of the commodity by varying its output. In addition, perfect competition requires that there be no barriers to the entry and exit of firms and resources be perfectly mobile in and out of the market. The long-run equilibrium outcome of a competitive market possesses three desirable properties:

1. The incremental or marginal cost of producing the last unit of output will be equal to the price that consumers are willing to pay for it.

2. There will be no "excess" or "economic" profits. Investors will receive a return just sufficient to induce them to maintain their investment at the level required to produce the industry's equilibrium output efficiently.

3. Each firm will be producing at an output level where its average cost will be at a minimum; i.e., maximum efficiency.

In essence, a large number of firms and the lack of barriers to entry and exit lead to independent and competitive pricing, which results in optimal market performance.[4] Conversely, high market concentration and entry barriers will tend to constrain competition and cause suboptimal performance.

Perfect competition also requires complete and perfect knowledge (Martin, 1988). All firms should know the relevant technologies, and buyers and sellers should be fully informed about all aspects of the product and the

4 This principle is taken to its logical limit under the theory of contestable markets, which argues that even high concentration may not permit firms to maintain a price above the competitive price if entry and exit are costless and can occur rapidly. However, the reality may be that very few markets, if any, have costless entry and exit; empirical support for the theory of contestable markets has not been forthcoming. Still, the disciplinary effect of potential entry into markets cannot be disputed. For a discussion of the theory of contestable markets, see Baumol, Panzar and Willig (1982).

market. Conditions with respect to consumer information and consumer choice may be more relevant when other conditions for perfect competition are violated. When entry is significantly constrained, the fact that buyers lack information about prices and/or are forced by law to buy a product, could result in higher prices or diminished product quality or service.

2. Workable Competition

The conditions for perfect competition are never satisfied in reality. Many industries are characterized by a limited number of firms, considerable product diversity among firms, entry barriers, information limits, externalities and other structural impediments to competition. Hence, competition will always be something less than perfect. For this reason, the concept of "workable competition" has been developed as a practical standard to evaluate the structure and performance of industries (Scherer and Ross, 1990). Arguably, workable competition exists when the structural characteristics of a market reasonably approximate the conditions for perfect competition and government intervention cannot improve the performance of the market. This view appropriately focuses analysis on the question of whether regulation or other forms of government intervention can make a market work better.

Insurance markets are subject to a number of imperfections, which compels the use of a model of workable competition to analyze their structure and performance in a dynamic context. If a market is relatively unconcentrated, entry barriers are low, profits appear to be in line with other industries of similar risk and there is no evidence of gross inefficiency, then it is unlikely that government intervention could significantly improve performance. On the other hand, if a market is highly concentrated, entry is restricted and long-run profits substantially exceed those in other industries, then some form of regulatory action may be beneficial. Workable competition does not require that all firms in the market operate at maximum efficiency at all times or that no sale is ever made at a price above the "competitive price" or insurers' average cost. What is relevant is whether the market, over the long run, rewards efficient firms and punishes inefficient firms. When this occurs, then a market will be driven to greater efficiency over time to the maximum benefit of consumers.

3. Alternative Market Structures

The main alternatives to a structurally competitive market are monopoly and oligopoly. A monopoly occurs when there is only one seller of a commodity for which there are no close substitutes. A monopolist possesses market power that allows it to constrain the quantity of a good supplied in order to raise the market price. In other words, under a monopoly, the quantity of a good sold and purchased is lower — and the price paid is higher — than under perfect competition. The monopolist sets quantity and price to maximize profits and consumer surplus is reduced to zero. Hence, consumers are disadvantaged by a monopoly and social welfare is less than what would be achieved under perfect competition. For this reason, governments seek to break up monopolies or regulate them closely if they offer significant economies of scale or other advantages.

Oligopoly occurs when there are only a few relatively large sellers and each possesses a share of the market sufficient to cause them to recognize the interaction of their decisions in determining the market price and output. This recognition creates a basis for cooperative behavior and limits on competition, explicit or implicit, for the purpose of increasing profits. Entry barriers further facilitate explicit and implicit cooperative behavior by preventing new firms from entering the market and undermining existing price and output agreements among firms already in the market. Entry also can be deterred if exit from the market would be costly.

Monopolistic competition is another possible market structure. Under monopolistic competition, there are numerous firms, but they do not sell a homogenous commodity. Their products are sufficiently differentiated so that each firm effectively faces a separate demand curve for its product. At the same time, the firms' products are highly substitutable, so they must compete on price as well as the features of their products. Because consumers will switch for a small difference in price or quality in such a situation, firms are forced to compete, be efficient and charge prices that just cover their costs, as is the case with perfect competition. The market for home loans might be a good example of monopolistic competition. Because insurers vary their products and quality of service to some degree but also compete aggressively on price, insurance markets also might be compared

to monopolistic competition. The above comments with respect to workable competition also would apply to monopolistic competition. In other words, a monopolistically competitive market also could be workably competitive.

4. Cyclical and Excessive Competition

There are circumstances where the structure of an insurance market may lead to too much competition and negative profits for insurers. Unexpected increases in claim costs and aggressive price competition can also adversely affect operating results. In the standard competitive model, economists assume that firms will not price below variable costs in the short run and average total costs in the long run. Economists also assume that firms know what their costs are when they set prices. In reality, however, insurance rates have to be set prospectively based on projected costs. Absent any regulatory constraints, if insurers underestimate future costs, economic profits will be negative.

There have been significant concerns about underpricing and cyclical pricing in long-tail liability lines of insurance — a phenomenon often called the "underwriting cycle" (see Cummins, Harrington and Klein, 1991; Klein, 2004). Recent "hard markets" in commercial insurance and homeowners insurance renewed these concerns. "Soft markets" and economic losses are more likely if insurers systematically underestimate loss costs, take excessive risks or engage in underpricing strategies aimed at trading short-run losses for long-run market share gains. Indeed, the speculative and subjective nature of insurance pricing could serve to facilitate deliberate or systematic underpricing if insurer managers are inclined to make optimistic assumptions to support lower prices and increase short-term profits.

Several factors might contribute to systematic underestimation of costs and prices by insurers. An increase in the rate of cost inflation is one factor. To the extent that insurers tend to project costs based on historical information, they may not appropriately account for the effect of significant changes in the economic environment or other cost drivers. For that matter, insurers' measurement of historical costs may be understated, particularly in long-tail lines such as workers' compensation, where ultimate liabilities may not

be determined until several years after the close of the policy period. Under-reserving is a serious concern in many long-tail lines. Underestimates of historical costs contribute to underestimates of future costs. Because the long-term adverse effects of underpricing may not be revealed for some time, insurers are not forced to confront the implications of their pricing decisions until after those decisions are made.

Since the market cannot sustain economic losses in the long run, prices below cost or the competitive price must eventually rise. This is a possible explanation for the cyclical movement of prices observed in long-tail lines. Prices eventually rise as insurers suffer excessive losses that force them to reduce the amount of insurance they supply. The long tail of claims in certain lines may delay the reconciliation of the market price and loss costs, but it cannot ultimately prevent it.

Insurance buyers and regulators may be willing to tolerate some cyclicality in the supply of insurance as a reasonable price to pay for the benefits or cost savings obtained from aggressive competition among insurers. However, severe underpricing may raise solvency concerns for regulators, and "hard" markets may increase pressure on regulators to restrict price increases and take steps to expand the availability of insurance. Also, insurance buyers may find the instability in the supply and price of insurance difficult to manage. Unfortunately, experience indicates that it is difficult for regulators to control cyclicality in the supply of insurance and their actions can worsen market conditions. The most effective regulatory approach may be to intervene against insurers who are engaging in severe under-reserving and underpricing.

Synopsis of Key Points

1. The structure-conduct-performance hypothesis provides a basic framework for analyzing insurance markets.
2. The supply of insurance is determined largely by the cost of providing coverage and should be relatively price-elastic over the long run.
3. The demand for insurance is determined principally by consumers' risk and degree of risk-aversion and will be somewhat less sensitive to price, particularly for essential or mandatory insurance coverages.

4. The concepts of perfect competition and workable competition provide a benchmark for evaluating the structure and performance of insurance markets. A competitive market structure leads to competitive conduct and good market performance that maximizes the value of insurance to consumers.
5. Market power reflected in monopolistic or oligopolistic market structures can result in higher insurance prices, excessive profits or inefficiency, and the purchase of less than an optimal amount of insurance.
6. Many insurance markets may be characterized by a monopolistically competitive structure, where insurers compete on price and product features. This structure will generally be efficient, assuming that consumers value the product differentiation provided by insurers.
7. There are instances where insurers may engage in excessive competition, underpricing and cyclical pricing. Underpricing should be a short-run phenomena but may require regulatory intervention if it persists and threatens insurers' solvency.

Suggested References

Baumol, William J., John C. Panzar and Robert D. Willig, 1982, *Contestable Markets and the Theory of Industry Structure* (New York: Harcourt Brace Jovanovich).

Cummins, J. David, Scott E. Harrington and Robert W. Klein, eds., 1991, *Cycles and Crises in Property/Casualty Insurance: Causes and Implications for Public Policy* (Kansas City, Mo.: NAIC).

Klein, Robert W., 2004, "The Underwriting Cycle," *Encyclopedia of Actuarial Science*, Jozef Teugels and Bjorn Sundt, eds. (Hoboken, N.J.: John Wiley & Sons, Inc.).

Martin, Stephen, 1988, *Industrial Organization* (New York: MacMillan).

Scherer, F. M. and David Ross, 1990, *Industrial Market Structure and Economic Performance,* 3rd ed. (Chicago: Rand McNally).

Varian, Hal R., 1992, *Microeconomic Analysis*, 3rd ed. (New York: W.W. Norton & Co.).

Chapter 7

The Structure and Performance of the Insurance Industry

Chapter Objectives

1. Describe the structure and performance of the U.S. insurance industry and its most important segments.
2. Discuss the historical context for the development of the insurance industry and insights into its future evolution.
3. Illustrate the use of standard economic indicators of structure and performance of insurance markets.
4. Explain the relative roles of traditional and alternative insurance markets.
5. Describe the key characteristics of the most important property-liability, life-annuity, and accident-health insurance markets.

A. Evolution of the U.S. Insurance Industry

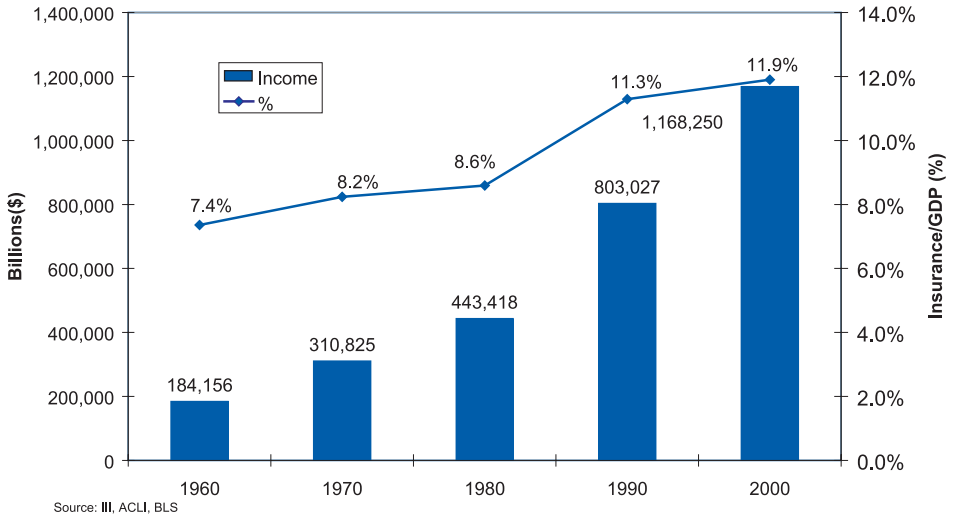
Dramatic changes have occurred in the U.S. insurance industry since its beginnings in the late 1600s (Hanson, et al., 1974). In its early years, small local and regional carriers, writing primarily fire and traditional life insurance, dominated the industry. Since then, it has grown tremendously in terms of the amount and variety of insurance products and the number of insurers. Today, companies of various sizes selling a vast array of products across state and national boundaries populate the industry. A wide range of insurance services has become available to buyers, reflecting the growing national economy and diversity of buyer needs and tastes for insurance protection. Industry changes have compelled the evolution of regulatory institutions. Regulatory evolution, in turn, has facilitated the development of the insurance industry. That development continues as the industry consolidates, insurers restructure their product lines and companies extend their global operations.

The tremendous growth of the private insurance industry in the United States is reflected in Figure 7.1, which plots industry income (premiums and investment income), in constant dollars, relative to gross domestic product (GDP) over the period 1960 to 2000. Total industry income increased from $184 billion (measured in 2000 dollars) in 1960 to $1,168 billion in 2000, a 534 percent rise in real terms. The industry grew considerably faster than the overall U.S. economy. Insurance represented approximately 7.4 percent of GDP in 1960, compared to 11.9 percent in 2000.[1] The number of insurance companies also increased from 4,580 in

[1] The comparison of industry income with GDP should be qualified because they are defined differently. Industry income essentially reflects all revenues flowing through the industry, while GDP only reflects the value added by each industry. Hence, the value added by the insurance industry, i.e., the value of the actual services provided by the insurance industry, is less than its revenues which include benefit payments. However, the comparison does provide a crude indicator of the relative growth of insurance in terms of its control of resources.

1970 to 6,094 in 1990 (III, 1998; ACLI, 1998).[2] This figure has since dropped to 4,406 in 2002, reflecting the consolidation of the industry (III, 2004; ACLI, 2004). The fact that the number of insurers has not increased as rapidly as their real income indicates that the average size of an insurer has increased, which has been furthered spurred by mergers and acquisitions. Industry growth also is reflected in the rise in industry employment from 1.5 million in 1970 to 2.2 million in 2002 (III, 2004).

Figure 7.1
Insurance Income in Relation to GDP

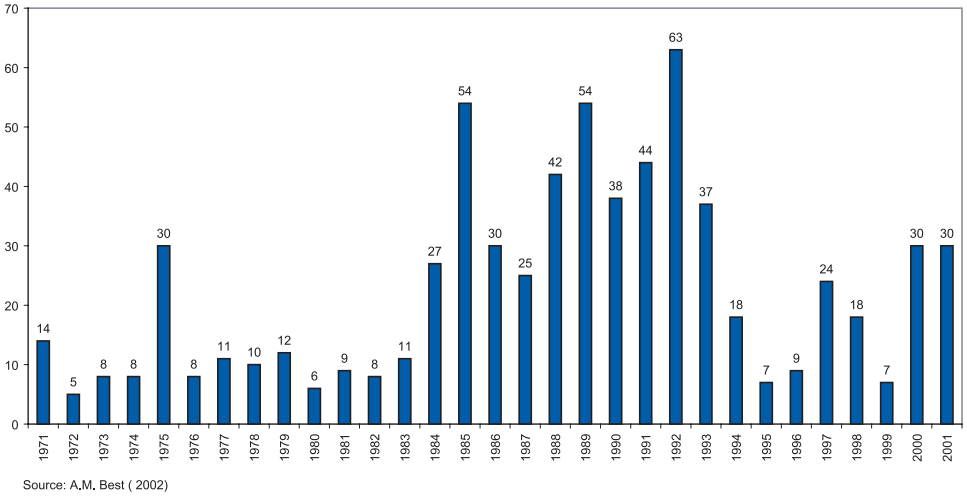


Structural trends affecting the insurance industry are discussed in some detail below for each sector, as well as in Chapter 12. One trend common to all sectors is increasing financial risk. This increased risk, combined with other economic events, caused the number and size of insurer failures to increase significantly in the early 1980s until the early 1990s, as shown in Figures 7.2 and 7.3. Only 20 insurers failed every year, on average, over the

2 This estimate of the number of insurance companies may be somewhat conservative and does not include non-traditional insurers.

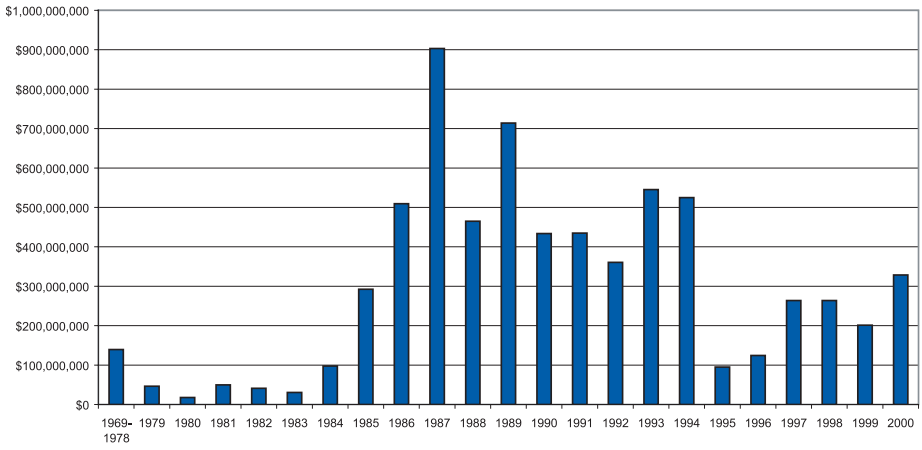
period 1976–1984, compared to 70 failures per year for the period 1984–1993. The number of property-liability insolvencies began increasing in 1983 (as the commercial lines market softened) and did not begin to drop until 1993. Life-health insolvencies did not begin their rise until 1986 and began to decline in 1992. Life-health insolvencies were particularly frequent in the years 1989–1992, when life-health insurers struggled with asset problems. Both property-liability and life-health guaranty fund assessments increased significantly in the latter half of the 1980s, as the number and size of insolvencies increased.

Figure 7.2(a)
Property-Casualty Insurer Insolvencies
1971–2001



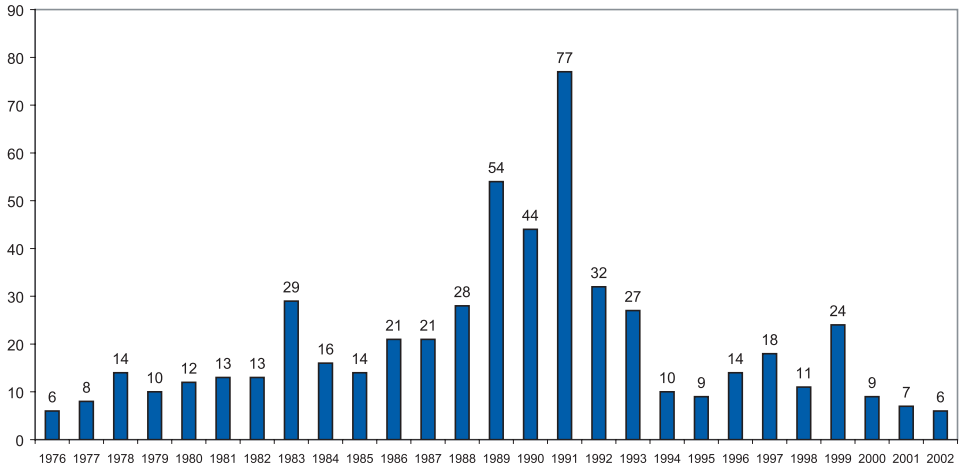
Source: A.M. Best (2002)

Figure 7.2(b)
Property-Casualty Guaranty Fund Net Assessments
1969–2000



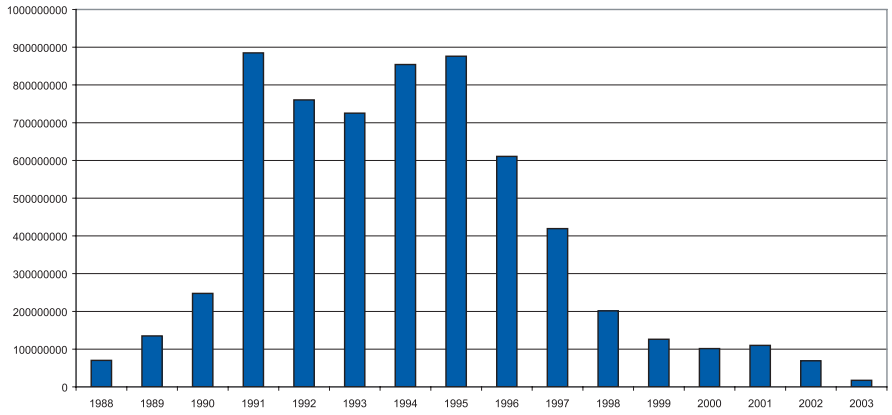
Source: NCIGF

Figure 7.3(a)
Life-Health Insurer Insolvencies
1976–2002



Source: A.M. Best (2004)

Figure 7.3(b)
Life-Health Guaranty Association Assessments
(1988–2003)



Source: NOLGHA

It should be noted that these figures are fairly small relative to the size of the industry. The number of insurer failures per year has generally remained less than 0.5 percent of the total companies in operation and annual guaranty fund assessments has not risen above 0.3 percent of total industry premiums in any given year. Still, the increased frequency and severity of insurer failures, coming on the heels of problems in banking and thrift industries, raised concerns about the potential for a more serious crisis and led to the strengthening of insurer solvency regulation in the late 1980s and early 1990s. This is important to understanding the restructuring of insurance regulatory institutions.

After 1994, insurer insolvencies decreased dramatically to prior levels – only to rise again in 2000 in the property-liability sector as a consequence of soft market conditions in the last half of the 1990s and early 2000s. Still, this rise has been fairly moderate and the numbers of insolvencies in both the property-liability and life-health sectors remain considerably below their highs in the early 1990s.

It is difficult to determine precisely why the number of insolvencies fell, but there are several potential contributors, including regulatory reforms, improved rating agency procedures, improved financial management of insurers, a generally strong economy and increasing asset values. At the

same time, contingencies, such as natural and man-made catastrophes, uncertain asbestos and pollution liability obligations, soft pricing, competition from other financial institutions and cyclical downturns in the economy continue to pose a threat to insurers' financial health. Hence, regulators must be vigilant in detecting and responding to adverse trends to maintain the industry's financial solidity.

B. Property-Liability Insurance Markets

The nature of the property-liability insurance business is quite different today than it was 50 years ago. In the industry's infancy, local stock companies and mutual protection associations formed to provide property and fire insurance in a particular community (Hanson, et al., 1974). Over time, property-liability companies have expanded the types of insurance they offer and the geographic area of their operations. Property-liability insurers now cover a wide range of exposures, from residential fire to managerial liability. The industry continues to innovate in developing new products, as well as retuning old ones. This has increased the complexity of the business and, in some instances, its risk and uncertainty.

One of the significant factors causing increased risk in property-liability insurance is the long payout pattern for commercial liability lines, which makes proper pricing and reserving difficult and subject to manipulation. Shifting liability rules also increase the margin for error and insolvency risk. Cyclical pricing and periodic crises, prompted by severe loss shocks, have plagued the industry (Cummins, et al., 1991). Significant cost inflation in certain commercial lines has induced some buyers to purchase coverage from alternative sources, such as surplus lines insurers and risk retention groups or become self-insured. Another alternative available to some businesses is the formation of a captive insurer or affiliating with other similar businesses to form a group captive insurer. These developments have increased competitive pressure on traditional insurers. Weather changes, severe storms, earthquakes, terrorist risks and extensive building in high-exposure areas have increased catastrophe hazards in property lines. Insurers' profits increased in 2002–2004 due to hard market conditions, but in the long term, greater risk and low profits will continue to pose significant challenges for property-liability insurers.

1. Standard Market

a. Market Structure

Table 7.1 provides historical trends on the portion of the property-liability insurance industry represented by traditional or standard insurers (i.e., insurers domiciled and licensed in the United States). There are still a significant number of small, independent insurers selling property-liability insurance in a limited geographic area. However, large national carriers now account for a larger share of many markets, relegating other insurers to niches they are better positioned to serve. The top 10 property-liability insurers accounted for 46.9 percent of direct premiums written in 2004, compared with 34.4 percent in 1960. Foreign companies also are making increasing inroads into the U.S. domestic market while some U.S. insurers are establishing a significant presence overseas. Fierce competition has forced insurers in all sectors to streamline their operations and abandon unprofitable lines. A number of insurers have sold marginal segments of their business and are concentrating on areas where they believe their core competencies and best opportunities lie. This is reflected in increased market concentration in certain lines of business.

The growth and generally robust financial strength of the property-liability insurance sector also are reflected in Table 7.1. The assets of property-liability insurers increased from $30.1 billion in 1960 to $1.2 trillion in 2002. Commensurately, total premium and investment income increased from $15.7 billion to $411.4 billion over this same period. At the same time, the industry's leverage, reflected by the ratio of net premiums to surplus, declined from 210.2 percent in 1970 to 99.8 percent in 2002.[3]

Figures reflecting the structure of property-liability lines on a countrywide basis are shown in Table 7.2. Personal auto and homeowners insurance

---

3 Note that insurers' asset values and leverage ratios are affected by shifts in the markets for investments.

Table 7.1

Property-Liability Insurance Trends 1960-2002

	1960	1970	1980	1990	1995	2000	2002
No. of Companies	NA	2,800	2,953	3,899	3,358	3,215	3,330
Assets ($M)	30,132	55,315	197,678	556,314	765,230	1,034,090	1,152,237
Revenues ($M)	15,741	36,524	108,745	252,991	296,637	341,590	411,396
Net Premiums Written (%)	95.1	94.3	89.6	86.9	87.6	87.7	90.3
Investment Income (%)	4.9	5.7	10.4	13.1	12.4	12.3	9.7
Market Share of 10 Largest Insurer Groups (%)	34.4	36.8	38.2	40.3	40.0	43.7	43.8*
Premiums/Surplus (%)	125.5	210.2	183.4	157.6	113.0	75.6	99.8
Return on Net Worth (%)	NA	11.6	13.1	8.5	9.0	6.5	-2.3*

* Figures for 2001
Source: NAIC, A.M.Best, and Insurance Information Institute

Table 7.2

Property-Liability Insurance Market Structure (2003)

Line	Number of Insurers	Pct. of Sector DPW	CR10(%)	HHI	Since 1998 Entries(%)	Since 1998 Exits(%)
Personal Auto	395	34.9%	62.2%	649	20.1	38.2
Commercial Auto	392	7.1%	49.4%	238	21.2	34.7
Homeowners	438	10.8%	63.5%	791	16.9	33.0
Fire & Allied	554	3.9%	53.5%	465	16.3	31.1
Commercial MP	375	7.1%	5.6%	334	81.2	36.4
General Liability	666	11.1%	60.9%	723	24.1	30.8
Medical Malpractice	155	2.5%	50.3%	361	52.1	41.4
Workers' Compensation	315	8.7%	52.1%	419	22.0	38.6
Other	702	14.3%	46.6%	324	15.1	42.3
All Lines Combined	1,139	100.0%	38.0%	344	23.8	31.6

Source: NAIC Data and A.M. Best's Key Rating Guide

represent approximately one-half of total property-liability premiums. More than 2,400 insurance companies sold property-liability insurance in 2003, with more than 1,000 insurers competing in most major lines.[4] Despite recent market consolidation, most property-liability insurance markets have retained a competitive structure. Two principal measures of market concentration, the 10-firm concentration ratio (the market share of the top 10 insurers) and the Herfindahl-Hirschman Index (the sum of the squared market shares of all insurers) also reflect competitive market structures in these lines.[5] The top 10 insurers accounted for less than 40 percent of the premiums in any given line (with the exception of homeowners), and 20 percent to 25 percent in many lines. Similarly, HHI values ranged from 72 to 367, with most lines falling between 100 and 200. These levels of concentration are considerably below levels that most economists consider necessary for firms to begin acquiring market power.[6] Entry and exit barriers also appear to be low. State fixed minimum capital requirements average in the area of $2 million, which most insurers easily meet. An insurer's risk-based capital (RBC) requirement will often exceed a state's fixed minimum requirement, but the data indicate that all but a few insurers substantially exceed their RBC requirements, as well (see Table 10.1). Low entry and exit barriers are reflected in the high percentage of entries into and exits out of these lines since 1990.

Table 7.3 offers a perspective on the relative shares of premiums written by domiciliary and non-domiciliary insurers in each state in 2003. In most states, non-domestic companies write from 60 percent to 90 percent of the

---

4 These numbers do not include single-state and non-licensed insurers that do not file financial statements with the NAIC. The numbers for medical malpractice also may exclude specialty insurers that do not report data to the NAIC.

5 The HHI is a summary measure of market concentration that is commonly used by economists. Potential values of the HHI range from near zero to 10,000, the value if there is only one firm in the market. The higher the HHI, the greater the degree of market concentration.

6 The U.S. Department of Justice has established merger guidelines that consider markets with HHIs in excess of 2,000 to be highly concentrated and, hence, mergers in such markets are subject to closer scrutiny.

Table 7.3
Direct Premiums Written by Non-Domestic Property-Liability Insurers By State in 2004

State	Premiums Written by		Non-Domestic Market Share (%)
	Domestic Companies	Non-Domestic Companies	
Alabama	955,920,879	5,003,769,287	84.0
Alaska	198,839,424	1,207,984,671	85.9
Arizona	1,167,350,161	6,717,173,960	85.2
Arkansas	227,603,633	3,469,891,115	93.8
California	25,831,295,194	39,215,581,533	60.3
Colorado	852,871,509	7,237,460,133	89.5
Connecticut	1,038,927,210	5,842,945,657	84.9
Delaware	252,974,029	1,837,979,965	87.9
Dist. Columbia	46,141,113	1,367,867,625	96.7
Florida	8,165,206,737	24,206,397,940	74.8
Georgia	1,461,821,131	11,147,514,235	88.4
Hawaii	672,025,982	1,343,764,037	66.7
Idaho	461,950,030	1,415,929,909	75.4
Illinois	9,745,787,624	11,477,823,133	54.1
Indiana	3,162,206,470	6,959,725,732	68.8
Iowa	1,109,666,728	3,301,342,910	74.8
Kansas	474,097,301	3,944,201,333	89.3
Kentucky	931,170,824	4,824,136,398	83.8
Louisiana	1,531,300,274	5,912,310,378	79.4
Maine	517,933,479	1,378,585,578	72.7
Maryland	1,426,508,137	7,160,504,859	83.4
Massachusetts	5,279,958,500	6,569,088,102	55.4
Michigan	8,178,453,573	8,050,828,326	49.6
Minnesota	1,077,409,371	7,660,250,242	87.7
Mississippi	482,546,547	3,124,958,662	86.6
Missouri	1,348,936,533	7,363,918,446	84.5
Montana	26,691,389	1,394,802,202	98.1
Nebraska	377,369,700	2,706,445,643	87.8
Nevada	221,915,136	3,650,192,365	94.3
New Hampshire	327,318,105	1,837,611,170	84.9
New Jersey	5,279,494,956	11,699,823,745	68.9
New Mexico	146,154,933	2,162,546,733	93.7
New York	9,767,535,943	25,138,434,642	72.0
North Carolina	1,625,066,587	9,011,450,999	84.7
North Dakota	158,871,213	1,046,593,799	86.8
Ohio	5,404,727,731	8,498,653,119	61.1
Oklahoma	765,203,910	4,117,134,445	84.3
Oregon	1,268,775,791	3,816,778,310	75.1
Pennsylvania	5,039,133,421	14,228,863,212	73.8
Rhode Island	381,330,102	1,522,565,732	80.0
South Carolina	434,214,873	5,339,758,462	92.5
South Dakota	139,041,582	1,299,938,592	90.3
Tennessee	1,149,321,730	6,796,006,972	85.5
Texas	14,630,013,588	17,698,939,537	54.7
Utah	338,068,973	2,559,544,380	88.3
Vermont	120,248,267	953,510,731	88.8
Virginia	350,860,510	9,535,561,960	96.5
Washington	1,613,561,503	6,786,452,737	80.8
West Virginia	149,785,172	2,205,910,747	93.6
Wisconsin	3,572,134,667	4,284,581,136	54.5
Wyoming	57,104,664	706,776,808	92.5
Guam	97,716,225	10,835,927	10.0
Puerto Rico	1,737,283,254	294,990,401	14.5
U.S. Virgin Islands	30,140,111	39,754,111	56.9
Total	**131,807,986,429**	**337,086,392,783**	**71.9**

Source: NAIC

total property-liability premiums, with the weighted average at just under 80 percent. This reflects the interdependence of states in regulating insurers that cross state boundaries and the need to coordinate their oversight.

b. Market Performance

Some indicators of insurers' profitability, one of the principal measures of market performance, are provided in Figure 7.4 and Table 7.4. Insurers' return on net worth has generally ranged between 5 percent and 10 percent, which is below the rate of return earned in other industries (see Figure 7.4). This indicates that insurers generally have not been earning excessive profits. Figures on loss ratios and historical profits on insurance transactions by line (see Table 7.4) show fairly low profit margins in many lines. Profits also fluctuate in certain markets, with insurers experiencing some "good" years and some "bad" years. These fluctuations reflect the effects of market cycles and other factors affecting these specific lines.

Figure 7.4
Rate of Return on Net Worth

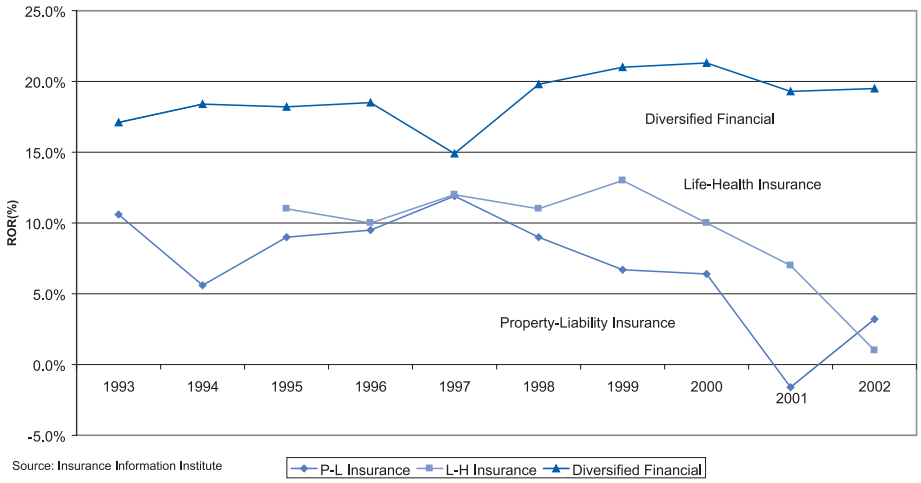


Table 7.4
Property-Liability Insurance Market Performance
1994–2003

Line	As a Percent of Net Premiums Earned			
	Losses Incurred		Profit on Insurance Transactions	
	2003	1994-2003	2003	1994-2003
Private Passenger Auto	62.3	66.2	3.7	2.2
Commercial Auto	56.7	67.5	6.8	-0.1
Homeowners	58.9	68.6	3.2	-4.3
Farmowners	60.8	69.2	3.8	-4.3
Commercial Multi-Peril	50.0	61.9	4.4	-1.7
Fire	49.9	60.2	15.7	2.1
Allied Lines	59.1	74.1	12.1	-4.5
Inland Marine	45.3	52.5	13.2	5.1
Medical Malpractice	83.2	69.2	-12.4	3.2
Other Liability	69.5	67.8	-1.4	5.1
Workers' Compensation	71.6	66.7	2.1	6.3
All Other	62.4	68.1	9.9	6.1
All Lines	62.2	66.4	4.3	2.3

Source: NAIC *Report on Profitability by Line by State*

2. Alternative Markets and Self-Insurance

One of the most significant developments in the commercial lines market has been the emergence of what is generally described as the "alternative market." In reality, the alternative market is not a single market, but a collection of risk-management and financing options that offer commercial buyers an alternative to traditional commercial insurers. These options include surplus lines or non-admitted insurers, direct purchase from non-licensed foreign insurers, risk-retention groups and purchasing groups, captive insurers and self-insurance. These options are attractive to some commercial insurance buyers, because they allow unique risk-management arrangements that are less costly than traditional insurance and more responsive to the buyers' needs. At the same time, these options compete with traditional insurance products and impose market pressures that affect regulation. Indeed, the ability to avoid certain state regulatory restrictions,

taxes and assessments has been one of the drivers behind the growth of the alternative market.

The nature and significance of the alternative market has led to a great deal of speculation as to the size of this market. In one study of the alternative market, it was estimated that alternative premiums in 1997 had grown to $69.4 billion, representing 34 percent of the total risk-financing market for commercial lines (Conning, 1999). The principal lines of commercial insurance that have flowed to alternative markets have been workers' compensation, general liability and professional liability insurance.

C. Accident-Health Insurance Markets

As in the property-liability insurance markets, dramatic changes have occurred in the accident-health insurance markets. Medical cost inflation and competition have led buyers to search aggressively for savings in their health insurance bills. The sales of standard indemnity policies have declined as insurers have been compelled to redesign their products and services to allow buyers more cost-containment options. Many carriers now offer managed care programs and integrated service networks that involve alliances with doctors and hospitals. The provision of third-party administrative services also is an important market for insurers with the growing number of self-insured risk plans. The traditional dividing lines between insurance companies and other entities in the financing and delivery of health care have become blurred as different firms take on specialized functions and form partnerships to take best advantage of their relative strengths.

1. Standard Market

a. Market Structure

Table 7.5 provides information on the standard accident-health insurance markets served by licensed insurers reporting data to the NAIC. The definitions of lines used in the annual statement are fairly general and provided limited detail with respect to relevant accident-health insurance markets. Group policies represent the predominant share, 68.5 percent, of

all premiums written by licensed insurers. HHI values for these broad lines are generally low and reflect competitive market structures, despite consolidation. There has been a strong trend of consolidation in accident-health insurance as carriers seek economies of scale in operating managed care networks and group insurance plans. These economies of scale can pose a greater barrier to entry than that found in other lines of insurance, but the evidence does not indicate that this has diminished competition.

Table 7.5
Accident-Health Insurance Market Structure (2003)

Line	Pct. of Sector DPW	Number of Insurers	CR10(%)	HHI	Since 1998 Entries(%)	Since 1998 Exits(%)
Group Policies	68.7	223	75.7	134.6	18.9	67.8
Credit	2.9	25	95.2	185.1	36.0	60.0
Collectively Renewable Policies	0.1	9	100.0	499.3	75.0	58.3
Other Individual Policies	28.4	218	92.4	127.9	27.5	44.1
All Lines Combined	100	317	73.2	107.7	21.9	49.5

Source: NAIC

b. Market Performance

Table 7.6 provides information on the performance of traditional accident-health insurers. The table shows accident-health insurers' premiums, total income and net gain after tax in dollars and as a percentage of premiums. The net gain for group and other accident-health insurance has ranged between -0.9 percent and 5.3 percent. Profits rebounded somewhat in the years 2001–2003, reflecting increased premiums and perhaps greater efficiencies from consolidation. Still, these profit levels would not be considered excessive.

Table 7.6
Accident-Health Insurance Operating Results
(in $000s)

Year	Premium Income	Total Income	Net Gain After Tax	Net Gain/ Premiums
		Group A&H		
1994	57,289,309	62,598,370	1,679,675	2.9%
1995	60,305,224	66,869,910	1,562,541	2.6%
1996	62,453,346	68,937,397	548,139	0.9%
1997	61,600,533	67,567,803	411,535	0.7%
1998	62,829,805	68,744,768	-423,382	-0.7%
1999	66,002,782	72,859,672	-615,640	-0.9%
2000	69,580,238	76,879,047	1,899,239	2.7%
2001	68,093,106	74,908,573	670,830	1.0%
2002	71,197,678	77,261,391	2,298,357	3.2%
2003	77,668,340	83,770,005	4,135,048	5.3%
		Other A&H		
1994	22,722,519	26,576,793	504,822	2.2%
1995	24,627,497	28,858,291	391,049	1.6%
1996	24,198,328	28,522,734	465,920	1.9%
1997	24,662,370	29,378,703	595,634	2.4%
1998	25,433,963	30,489,739	520,190	2.0%
1999	27,007,205	32,931,404	487,178	1.8%
2000	29,650,035	37,463,806	-260,608	-0.9%
2001	28,374,366	37,102,242	1,144,432	4.0%
2002	33,289,978	41,210,146	1,314,994	4.0%
2003	36,501,587	45,457,975	1,903,631	5.2%

Source: A.M. Best

2. Alternative Health Insurance Entities

The explosion in medical costs over the past two decades has prompted a number of alternatives to traditional health insurers as a source of medical coverage. These options include health maintenance organizations (HMOs), preferred provider organizations (PPOs) and provider-sponsored organizations (PSOs), in addition to various self-funding arrangements. A number of employers have taken advantage of federal Employee Retirement Income Security Act (ERISA) preemptions of state regulation

to set up their own group health plans and contract with various providers and vendors for certain services to help them administer their plans. These developments have occurred within the context of a general movement toward managed care and away from traditional fee-for-service or indemnity insurance contracts. Insurance companies have responded by establishing their own managed care plans and contracting with HMOs and PPOs to lower costs. As discussed in Chapters 4 and 5, there appears to be some convergence of the different types of health insurance plans, as HMOs have relaxed some of their controls while other insurers have incorporated more elements of managed care into their plans.[7] These trends will continue to challenge the regulators who track and oversee health insurance markets.

D. Life Insurance and Annuities Markets

For many years, life insurers' "bread and butter" were standard term and whole life policies that emphasized death benefits and offered a modest savings component (for whole life policies). That environment has dramatically changed, as life insurers now offer an expansive menu of life insurance policies, annuities and other interest-sensitive contracts with different risk-return characteristics. This shift is reflected in the fact that life insurers' reserves for retirement-related products (individual and group annuities and supplemental contracts with life contingencies) grew from 27.2 percent of life insurance reserves in 1950 to 69.1 percent in 2000 (see Table 7.7).[8] This figure fell to 62.4 percent in 2002 but still represents the bulk of life insurers' policy reserves.

The increased significance of interest-sensitive products and insurers' greater exposure to **disintermediation** (i.e., policy loans, surrenders and

---

7 It is difficult to assess the structure and performance of the alternative health insurance market because of the lack of a consistent and comprehensive database on alternative health care financing providers. Hopefully, over time, data on all heath care financing mechanisms will be become available to develop a more comprehensive picture of the overall market for health insurance.

8 Wright (1991) provides an insightful review of structural changes in the life insurance industry.

lapses) has increased the importance of appropriate asset-liability matching strategies. At the same time, competitive pressures have induced insurers to maintain high crediting interest rates on their policies. In the 1980s, company investment officers were pressured to increase investment yields and preserve profit margins by lengthening bond maturities and investing in lower-grade securities. Many life insurers assumed greater financial risk while their profitability dropped. Fortunately, life insurers' profitability rebounded by the mid-1990s as their asset values increased. However, the low market interest rates of the past few years have squeezed the guaranteed interest rates provided in many cash value life insurance contracts, as well as affected the market-linked rates in contracts with interest-sensitive components. Hence, life insurers will continue to face these pressures until market rates rebound to higher levels.

In the 1980s and early 1990s, some insurers invested heavily in non-investment grade bonds, mortgage loans and real estate to increase their investment returns. When the values of these assets declined in the early 1990s, it created problems for some life insurers and a "flight-to-quality" by some consumers. Insurers were compelled to decrease their holdings of "risky" assets to preserve their financial strength ratings and avoid policyholder runs.

Within the past decade, some life insurers have invested in derivative securities, either to hedge risk or increase investment returns. In concept, the informed and proper use of derivatives should increase insurers' ability to manage their financial risk more efficiently. This is especially important for contracts with embedded options that allow contract owners to withdraw funds for other types of investments. However, regulators are concerned that some insurers might not have sufficient expertise to use derivatives appropriately and could be exposed to increased financial risk. Consequently, this area has received increased regulatory scrutiny.

General information on the development of the life-health insurance sector is provided in Table 7.7. The number of life-health insurance companies increased from 649 in 1950 to 2,195 in 1990, but then fell to 1,076 in 2002. This parallels the consolidation trends in the property-liability and accident-health sectors. Over this same period, life insurers' assets

increased from $64 billion to $3.4 trillion. Total annual income increased from $11.3 billion to $734 billion. The dramatic shift in traditional life to annuity business is evident in the relative shares of income and reserves for these two segments. Hence, the industry has continued to grow in terms of the funds under its control, albeit at a slower pace than other non-bank financial intermediaries.

Table 7.7
Life-Health Insurance Market Trends
1950–2002

	Year							
	1950	1960	1970	1980	1990	1995	2000	2002
No. of Companies	649	1,441	1,780	1,958	2,195	1,715	1,268	1,076
Assets ($M)	64,020	119,576	207,254	479,210	1,408,208	2,143,500	3,185,945	3,380,000
% 10 Largest Insurer Groups	na	62.4	57.7	52.5	36.7	36.1	41.7	45.9
Income ($M)	11,337	23,007	49,054	130,888	402,200	512,198	826,660	734,013
% Life Insurance Premiums	55.1	52.1	44.2	31.2	19.1	19.3	15.8%	18.3%
% Annuity Considerations	8.3	5.8	7.6	17.1	32.1	31.2	36.7%	36.7%
% Health Insurance Premiums	8.8	17.5	23.2	22.4	14.5	15.7	12.8%	14.8%
% Investment Income	18.3	18.7	20.7	25.9	27.8	27.4	25.2%	24.6%
% Other	9.5	5.8	4.4	3.3	6.5	6.4	9.5%	5.5%
Policy Reserves ($M)	54,946	98,473	167,779	390,339	1,196,967	1,812,325	2,711,420	2,507,314
% Life	na	71.9	68.8	50.7	29.1	28.2	27.4%	33.2%
% Annuities	na	27.2	29.1	46.5	68.1	68.3	69.1%	62.4%
% Health	na	0.9	2.1	2.8	2.8	3.5	3.5%	4.4%
Net Rate of Investment Income (%)[1]	3.1	4.1	5.3	8.1	9.3	7.9	7.1	5.4
Capital Ratio (%)[2]	na	na	9.7	9.2	8.5	10.7	11.2	9.3
Return on Equity (%)	na	na	na	13.9	10.7	11.0	10.0	7.0[3]

1 Net investment income divided by mean invested assets (including cash) less half of net investment income.
2 Capital plus surplus plus Asset Valuation Reserve divided by general account assets.
3 Figure for 2001

Source: American Council of Life Insurers, A.M. Best, Fortune Magazine, and Forbes Magazine.

1. Market Structure

Table 7.8 presents 2003 data on the structure of different segments of the life and annuity sectors, according to financial information reported by life insurers to the NAIC. As in the property-liability sector, there are numerous insurers selling various life and annuity products. A total of 937 life insurer groups (including stand-alone companies) reported data to the NAIC and several hundred insurers offer products in each of the various lines. The only exception to this is **industrial life**, which is a relatively small market.

In general, market concentration is relatively low in the other broad lines and entry and exit activity relatively high. Exits have exceeded entries, consistent with industry consolidation and the decline in the number of life insurance companies and groups.[9]

Table 7.8
Life Insurance Market Structure (2003)

Line	Pct. of Sector Reserves	Number of Insurers	CR10	HHI	Since 1990 Entries(%)	Since 1990 Exits(%)
Life						
Industrial	0.6	78	90.7	1,744	24.4	37.8
Ordinary	39.6	431	53.6	411	17.5	37.2
Credit	0.1	170	72.8	1,067	22.0	52.7
Group	2.3	255	63.0	628	15.5	45.0
Annuities						
Individual	39.4	303	57.5	584	26.3	34.7
Group	17.6	155	62.0	509	46.0	32.8
Other	0.4	199	56.4	441	17.6	72.8
All lines combined	100.0	515	50.6	340	31.1	89.4

Source: NAIC Data

The data on the relative market penetration by domiciliary and non-domiciliary life-health insurers (see Table 7.9) also reflects a pattern similar to that for property-liability insurers, with an even greater predominance of non-domestic insurers in each state.

2. Market Performance

Data on the profitability and overall financial performance of life insurers is difficult to calculate on a by-line basis, but figures on the general performance of the industry are provided in Table 7.7. Since 1980, the estimated return on equity for the largest life insurers has remained generally within competitive parameters. The 7 percent rate of return on

9 Many exits may represent mergers and acquisitions of life insurers into large holding companies.

Table 7.9
Premiums Written by Non-Domestic Life-Health Insurers By State in 2003

State	Premiums Written by Domestic Companies	Premiums Written by Non-Domestic Companies	Non-Domestic Market Share (%)
Alabama	390,489,565	2,134,328,343	84.5
Alaska	-	547,214,452	100.0
Arizona	72,451,799	3,066,760,947	97.7
Arkansas	59,182,935	1,312,291,241	95.7
California	1,891,580,069	16,689,612,047	89.8
Colorado	126,171,697	3,437,889,155	96.5
Connecticut	680,592,547	2,365,189,689	77.7
Delaware	129,797,428	1,209,583,409	90.3
Dist. Columbia	247,864	751,663,865	100.0
Florida	2,645,532,182	10,482,738,949	79.8
Georgia	163,674,059	5,332,800,053	97.0
Hawaii	45,813,278	661,233,626	93.5
Idaho	878,938,469	557,734,185	38.8
Illinois	4,797,761,164	7,969,106,277	62.4
Indiana	439,042,132	3,568,608,390	89.0
Iowa	1,734,219,138	1,489,434,896	46.2
Kansas	1,047,291,590	1,715,358,815	62.1
Kentucky	46,433,678	1,926,501,235	97.6
Louisiana	202,275,207	2,429,844,990	92.3
Maine	47,146,301	569,498,738	92.4
Maryland	101,933,924	3,048,442,380	96.8
Massachusetts	701,403,627	3,403,567,522	82.9
Michigan	563,348,543	4,822,651,808	89.5
Minnesota	464,265,588	2,596,819,520	84.8
Mississippi	761,508,476	1,581,980,165	67.5
Missouri	1,109,093,494	3,462,935,071	75.7
Montana	15,838,117	451,540,299	96.6
Nebraska	219,792,212	1,330,616,855	85.8
Nevada	3,723,456	1,179,774,312	99.7
New Hampshire	3,953,812	719,224,307	99.5
New Jersey	802,818,499	5,934,230,745	88.1
New Mexico	102,764	915,914,803	100.0
New York	7,413,507,278	5,915,542,628	44.4
North Carolina	132,365,652	5,257,037,804	97.5
North Dakota	18,158,568	344,438,217	95.0
Ohio	1,053,136,751	6,252,822,440	85.6
Oklahoma	124,436,551	1,700,721,373	93.2
Oregon	252,032,021	1,392,910,356	84.7
Pennsylvania	614,844,227	6,727,525,207	91.6
Rhode Island	5,263,570	628,975,818	99.2
South Carolina	162,915,128	2,321,142,577	93.4
South Dakota	266,294,656	525,994,170	66.4
Tennessee	288,224,950	3,287,857,818	91.9
Texas	981,368,013	14,937,762,964	93.8
Utah	115,575,073	966,853,683	89.3
Vermont	14,726,844	356,112,544	96.0
Virginia	2,200,871,926	4,340,103,597	66.4
Washington	90,170,129	2,638,179,094	96.7
West Virginia	0	950,784,251	100.0
Wisconsin	1,469,512,732	2,659,416,714	64.4
Wyoming	0	306,526,658	100.0
American Samoa	-	3,747,921	100.0
Guam	63,932,114	45,073,178	41.3
Puerto Rico	448,140,717	296,751,157	39.8
US Virgin Islands	-	113,043,689	100.0
Total	**35,349,827,683**	**159,175,799,002**	**81.8**

Source: NAIC Data

equity (ROE) earned by major life insurers in 2001 indicates the sector's vulnerability to changes in the economy and financial markets. Capital/asset ratios also have moderately increased, indicating greater financial strength. Life insurers will need to operate from a position of strength to compete with the penetration of other financial institutions into some of their traditional markets, as well as expand into new markets.

Synopsis of Key Points

1. The U.S. insurance industry has grown and evolved considerably since its inception in the early 1600s. Total industry income was $1.2 trillion in 2000, representing almost 12 percent of gross domestic product.
2. Insurers now market a diverse array of products to cover various risks and face greater financial risk.
3. Property-liability, accident-health and life-annuity markets have all grown and offer a broader range of products and services.
4. Insurance markets appear to be competitively structured. All major industry segments and markets are generally served by a large number of insurers, with low market concentration and relatively easy entry and exit. However, there has been a strong trend of consolidation in each industry sector.
5. Profitability in the insurance industry and in most markets also appears to be lower than profits in other industries and within competitive parameters.
6. Traditional licensed insurers face increasing competition from alternative sources of insurance, including non-admitted and foreign insurers, HMOs, risk retention groups, other financial institutions and self-insurance.

Suggested References

American Council of Life Insurers, 2004, *2003 Life Insurance Fact Book* (Washington, D.C.: ACLI).

Conning & Company, 1999, *Alternative Markets: An Ever-Evolving Mosaic* (Hartford, Conn.: Conning & Company).

Cummins, J. David, Scott E. Harrington and Robert W. Klein, eds., 1991, *Cycles and Crises in Property/Casualty Insurance: Causes and Implications for Public Policy* (Kansas City, Mo.: NAIC).

Cummins, J. David and Mary A. Weiss, 1991, "The Structure, Conduct and Regulation of the Property-Liability Insurance Industry," *The Financial Condition and Regulation of Insurance Companies*, Richard W. Kopcke and Richard E. Randall, eds., (Boston, Mass.: Federal Reserve Bank of Boston).

Hanson, Jon S., Robert E. Dineen and Michael B. Johnson, 1974, *Monitoring Competition: A Means of Regulating the Property and Liability Insurance Business* (Milwaukee, Wisc.: NAIC).

Insurance Information Institute, 2004, *The III Insurance Fact Book 2004* (New York: III).

Klein, Robert W., 1995, "Insurance Regulation in Transition," *Journal of Risk and Insurance*, 62: 363–404.

Joskow, Paul L., 1973, "Cartels, Competition and Regulation in the Property-Liability Insurance Industry," *Bell Journal of Economics*, 4: 375–427.

National Association of Insurance Commissioners, 2003, *Profitability by Line by State* (Kansas City, Mo.: NAIC).

Wright, Kenneth M., 1991, "The Structure, Conduct and Regulation of the Life Insurance Industry," *The Financial Condition and Regulation of Insurance Companies* Richard W. Kopcke and Richard E. Randall, eds., (Boston, Mass: Federal Reserve Bank of Boston).

Chapter 8

Principles of Insurance Regulation

Chapter Objectives

1. Summarize the alternative theories of regulation.
2. Define regulation for purposes of discussion.
3. Outline the principles of insurance regulation in addressing market failures and protecting consumers.
4. Discuss the potential effects of regulation on insurance market structure and performance.

Ideally, insurance regulatory institutions and policies should be based on a foundation of principles with respect to the purpose of regulation and the benefits it can provide to consumers and the general public. Economists and legal scholars have developed a set of general principles for government regulation and applied them to various activities and industries

(Kahn, 1988; Spulber, 1989). This has not been done in a rigorous and comprehensive way for insurance, but it is possible to apply general regulatory concepts to the specific circumstances of insurance. These principles can help guide insurance regulators in developing policies that promote market efficiency and equity, as well as protect consumers. Of course, the application of regulatory principles to any specific problem requires a healthy respect for the "real world" — and not every problem is amenable to "textbook" solutions. Moreover, it must be recognized that insurance regulators function in a bureaucratic and political context that affect their motivations and ability to implement policies that serve the public interest.

A. Theories of Regulation

Economists, political scientists and legal scholars have offered various theories to explain regulation and regulatory behavior. Some of these theories are normative in nature (i.e., what regulation should be) and some are positivistic (i.e., how regulators actually behave). Traditional **public interest theory** analyzes the role of regulation in correcting market failures (defined below) and improving economic performance (Kahn, 1988; Spulber, 1989).[1] This traditional view has been challenged by **economic and political theories of regulation** that examine how economic interests, bureaucracy, political elites and ideology affect regulatory policy (Peltzman, 1976; Meier, 1985 and 1988).[2]

It is not necessary here to provide a comprehensive review of the different theories of regulation, but the reader should know that there is such a literature. The emphasis here will be the on principles governing insurance regulation that serve the public interest, rather than on other factors that influence insurance regulatory policy.

---

1 Klein and Skipper (2000) apply principles of regulation to insurance.

2 See Klein (1995) for a more detailed summary of these theories in the context of insurance.

B. Regulation Defined

The term "regulation" is often used as if there is a common understanding of its meaning, but it can often be defined differently. Most analysts use the term narrowly to refer to government restriction of private actions to achieve particular public goals. With respect to insurance, the scope of regulation so defined might encompass such areas as licensing of companies and agents, other entry and exit restrictions, solvency, prices, trade practices and products. However, the full scope of government involvement with insurance markets is not confined to these areas. Other areas of government action that affect insurance include public insurance programs; antitrust policy; taxes; public expenditures; property, contract and tort law; and international trade policy, among others. The narrower concept of regulation is the primary frame of reference for this text, but it is important to note the interrelationship between various areas of public policy that affect insurance. Regulators' efforts to achieve particular market outcomes in insurance can be affected by other government actions.

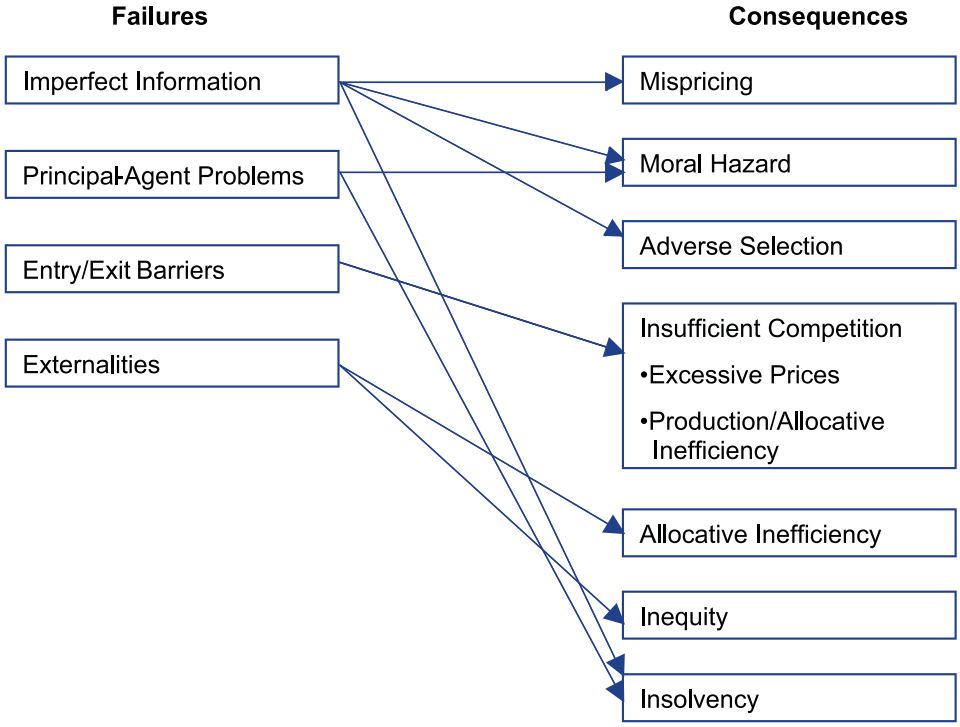
C. Principles of Insurance Regulation

1. Market Problems and Market Failures

The economic foundation for regulation is based on the concept of **market failure**. Market failures constitute violations of the conditions of workable competition outlined in Chapter 6, such as entry and exit barriers, firm market power and lack of information. **Market problems** (e.g., high prices, unavailability of coverage, insolvencies) can be a consequence of a market failure or other factors that affect a market that is structurally competitive. In other words, not all conditions perceived as market problems are necessarily caused by a market failure. For example, high insurance prices may be the natural result of increasing risk driven by external factors, and not the malfunctioning of the market per se. It is important to determine the underlying cause of market problems to determine the appropriate regulatory response. Figure 8.1 summarizes potential insurance market failures and their consequences.

Figure 8.1

Insurance Market Failures



Under public interest theory, regulation is primarily intended to remedy market failures — not necessarily market problems caused by other external forces. The basic premise underlying the need for regulation is that market failures can diminish the efficiency and equity of market outcomes and harm the public interest. The purpose of regulation, then, is to correct market failures, or at least minimize their negative effects, and improve allocative efficiency and equity. This assumes that regulators have perfect information and can determine and implement the correct market solutions. The principal market imperfections that regulation is intended to address are barriers to entry and exit, externalities (where transactions create costs for third parties) and internalities (where the costs and benefits of transactions are not reflected in the terms of exchange) (Spulber, 1989). To correct or counteract these problems, regulators may impose controls on entry, exit, prices, product quality, inputs to production, refusal to serve and other private activities.

2. Regulatory Remedies for Insurance Market Failures

Insurance regulation is principally targeted toward correcting market failures that would otherwise cause insurers to incur an excessive risk of insolvency and/or engage in market abuses that hurt consumers. The public interest argument for the regulation of insurer solvency derives from inefficiencies created by costly information and principal-agent problems (Munch and Smallwood, 1981).[3] Owners of insurance companies have diminished incentives to maintain a high level of safety to the extent that their personal assets are not at risk for unfunded obligations to policyholders that would arise from insolvency. It is costly for consumers to properly assess an insurer's financial strength in relation to its prices and quality of service. Insurers also can increase their risk after policyholders have purchased a policy and paid premiums. This represents what economists call a "principal-agent problem," in that the principals (policyholders) have difficulty in monitoring and controlling the behavior of their agents (insurers) when there is a conflict between their interests/incentives.

Thus, in the absence of regulation, imperfect consumer information and principal-agent problems would result in an excessive number of insolvencies. Solvency regulation is intended to limit insurers' insolvency risk in accordance with society's preference for safety. Regulators limit insolvency risk by requiring insurers to maintain a minimum amount of capital and meet other financial requirements.

Limiting insolvency risk is a different objective than preventing insolvencies. Limiting insolvency risk implies that some insurers will become insolvent. This is inherent in a competitive market where firms

---

[3] Costly information refers to the fact that it is costly for consumers to acquire information about the financial condition of an insurer and the relative value of its products in relation to its prices. Principal-agent problems refer to the difficulty that a consumer (the principal) faces in monitoring and controlling the activities and financial risk of an insurer, once the consumer has signed a contract with the insurer and paid premiums for coverage of future claims and benefit obligations.

must have the opportunity to fail. In order to guarantee that no insolvencies would occur, the government would have to impose extremely high capital requirements and significantly constrain insurers' investments and other transactions to reduce the probability of insolvency to zero. The result would be high insurance prices and inefficient markets. This is impractical, and public officials have chosen a more reasonable objective to reduce the cost of insolvencies to some acceptable minimum that represents an acceptable tradeoff with the cost and availability of insurance.

The traditional explanation for regulation of insurance prices also involves costly information and solvency concerns (Joskow, 1973; Hanson, et al., 1974). Insurers' incentive to incur excessive financial risk and even engage in "go-for-broke" strategies may result in inadequate prices. Some consumers will buy insurance from carriers that charge inadequate prices without properly considering the greater financial risk involved. In this scenario, poor incentives for safety could induce a wave of "destructive competition" in which all insurers are forced to cut their prices below costs in order to retain their market position. Thus, it is argued that regulators must impose a floor under prices to prevent the market from imploding. This view essentially governed insurance rate regulation until the 1960s, when states began to disapprove or reduce price increases in lines such as personal auto and workers' compensation.

The rationale that some might offer for government restrictions on insurance price increases is that consumer search costs impede competition and lead to excessive prices and profits.[4] Further, constraints on consumer choice and unequal bargaining power between insurers and consumers, combined with inadequate consumer information, can make some consumers vulnerable to abusive marketing and claims practices of insurers and agents. It also might be argued that it is costly for insurers to ascertain consumers' risk characteristics accurately, giving an informational advantage to insurers already entrenched in a market and, therefore, creating barriers to entry that diminish competition (Cummins and Danzon,

4 Harrington (1992) explains but does not advocate this view.

1991). According to this view, the objective of regulation is to enforce a ceiling that will prevent prices from rising above a competitive level and to protect consumers against unfair market practices. In addition, the public may express a preference for regulatory policies to guarantee certain market outcomes consistent with social norms or objectives.[5]

D. Potential Effects of Insurance Regulation

1. Solvency Regulation

One of the objectives of this text is to explain how differences in regulatory policies can affect market structure and performance. As noted above, more stringent solvency requirements will tend to limit entry into insurance markets, as well as the range of prices and products that insurers can offer. For example, regulators would not allow an insurer to invest 100 percent of its assets in high-risk non-investment grade bonds to support life and annuity products with relatively high crediting interest rates. Consumers, presumably, are willing to accept some solvency restrictions on insurers' financial risk to protect their interest in insurers' ability to meet their obligations.

2. Market Regulation

Direct regulation of insurers' prices, products and market practices also can affect market conditions, positively or negatively. If insurers are able to exercise market power to raise the market price above the competitive price, then regulators can improve market performance by setting a price ceiling at the competitive level. In practice, this is rarely necessary as the

---

5 For example, most states have determined that drivers should carry some form of liability or no-fault auto insurance. Because of this requirement, some policymakers believe the government should ensure insurance coverage is reasonably available and affordable for those who are required to purchase it. This argument has been used to justify strict controls on auto insurance rate increases in some jurisdictions.

competitive structure of most insurance markets prevents insurers from acquiring significant market power. If regulators set a price ceiling below the competitive market price, then insurers will offer less insurance than consumers will want to buy, causing availability problems. In the long run, insurers will be induced to leave the market if they cannot charge a premium that covers their costs and believe that they will sustain losses for the foreseeable future.

The rate structure (i.e., the relative rates between different risks) and the rate level are regulated in some property-liability lines, such as auto insurance, workers' compensation insurance and health insurance. Ideally, the premium should approximate the expected cost of insuring a given risk, but there are inherent limitations to the precision of any insurance-pricing system, regardless of regulatory constraints. Regulators seek to ensure that rate differentials are not unfairly discriminatory. However, that principle may be interpreted and applied differently among states.

In practice, insurers may perceive regulatory price constraints to be more binding for some risks than others. Insurers will be disinclined to discount rates that are already perceived to be inadequate for a given risk and may decline to offer coverage for such risks. Consequently, the more binding regulatory price constraints are perceived to be for a given group of risks, the less likely those risks will be able to obtain coverage in the voluntary market.

This principle also applies to the regulation of residual market rates. If residual market rates are insufficient to cover residual market costs, the operating deficit will be assessed back to the voluntary market, forcing a subsidy from voluntary market risks to residual market risks. This, in turn, further discourages insurers from accepting risks in the voluntary market, which increases the growth of the residual market.

Holding rates below cost can have other adverse effects on the market besides causing insurers to exit and decreasing the availability of coverage. Insurers might lower the quality of service they provide by increasing the stringency of their claims-settlement policy. A tighter claims policy will result in fewer claims being paid as well as lower settlements on some

claims that are paid. This is more difficult to do in lines where benefits are set by law. Alternatively, insurers might lower quality and their costs by delaying claims payments, premium refunds and dividends to policyholders. Also, insurers might lower their expenses by reducing other services they provide to insureds.

Regulators can potentially assist consumers by increasing the information they have and preventing market abuses by insurers and producers. For example, if an insurer fails to meet its obligation to pay a claim under an insurance contract, the insured can sue the insurer, but such action can be costly in terms of time and money. An insurer may have more resources to sustain litigation than the insured. Regulators can help balance the relative positions of the insurer and insured by taking enforcement action against the insurer. Similarly, regulators may find it more efficient to simply disallow policy provisions they believe to provide inadequate coverage or are misleading, rather than rely on consumers to determine this for themselves.

Increasing consumer information offers an effective substitute or complement to regulatory activities. Greater information enables consumers to make better insurance decisions, which increases competition among insurers and market efficiency. Regulators improve consumer information by educating consumers on how to purchase insurance and publishing information on insurers' prices, products and quality of service.

3. Implications for Costs and Residual Markets

Another adverse effect of inadequate rates is diminished incentives to contain costs. If insureds do not pay the full cost of their coverage, they will have diminished incentives to control that cost through accident prevention and minimizing costs following an accident. The consequence is higher accident rates, more expensive claims and higher loss costs, which place greater pressure on the market and force prices to increase.

There are also incentive problems under some residual market mechanisms. Presently, under systems where residual market deficits are assessed back to the entire market, servicing carriers have a disincentive to make more

than minimum expenditures on loss-prevention and claims-adjustment activities. While servicing carriers bear the full cost of those activities, any cost savings are effectively distributed among all insurers in proportion to their voluntary market share. The greater the proportion of the market that is insured through the residual market, the greater the significance of this incentive problem. This phenomenon, along with regulatory rate restrictions, contributed to the near collapse of workers' compensation markets in several states in the early 1990s.

Synopsis of Key Points

1. The public interest theory of regulation provides a foundation for the principles that should govern insurance regulatory policies intended to serve consumers and the general public.
2. Regulation, narrowly defined, is the government restriction of private action to achieve public goals.
3. Regulation is intended to remedy market failures, which represent violations of the conditions for workable competition.
4. Solvency regulation is intended to limit some insurers' tendency to incur excessive financial risk because of consumers' limited information and difficulty in controlling insurers' actions.
5. Market regulation of insurers' prices, products and trade practices is intended to prevent prices from rising too high (because of insurers' market power) or too low (because of overly aggressive price competition) and other abuses that might arise from consumers' lack of information and unequal bargaining power.
6. Solvency regulation will necessarily restrict market entry and may limit the range of insurers' prices and products, which constitutes a tradeoff with reduced insolvency risk.
7. Regulation can improve market performance if insurers exploit any market power that they are able to acquire. However, in most instances, competition prevents insurers from acquiring significant market power. Regulation also can distort market forces and hurt efficiency if it suppresses prices below costs.

Suggested References

Cummins, J. David and Patricia M. Danzon, 1991, "Price Shocks and Capital Flows in Liability Insurance," *Cycles and Crises in Property/Casualty Insurance: Causes and Implications for Public Policy*, Cummins, J. David, Scott E. Harrington and Robert W. Klein, eds. (Kansas City, Mo.: NAIC).

Cummins, J. David, ed., 2002, *Deregulating Property-Liability Insurance* (Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies).

Hanson, Jon S., Robert E. Dineen and Michael B. Johnson, 1974, Monitoring Competition: *A Means of Regulating the Property and Liability Insurance Business* (Milwaukee, Wisc.: NAIC).

Harrington, Scott E., 1992, "Rate Suppression," *Journal of Risk and Insurance*, 59: 185–202.

Joskow, Paul L., 1973, "Cartels, Competition and Regulation in the Property-Liability Insurance Industry," *Bell Journal of Economics*, 4: 375–427.

Kahn, Alfred E., 1988, *The Economics of Regulation: Principles and Institutions* (Cambridge, Mass.: The MIT Press).

Klein, Robert W. and Harold D. Skipper, 2000, "Insurance Regulation in the Public Interest: The Path Towards Solvent, Competitive Markets," *The Geneva Papers: Issues and Practice*, 25: 482–504.

Meier, Kenneth J., 1985, *Regulation: Politics, Bureaucracy and Economics* (New York: St. Martin's Press).

Meier, Kenneth J., 1988, *The Political Economy of Regulation: The Case of Insurance* (Albany. N.Y.: SUNY Press).

Munch, Patricia and Dennis E. Smallwood, 1981, "Theory of Solvency Regulation in the Property and Casualty Insurance Industry), *Studies in Public Regulation*, Gary Fromm, ed. (Cambridge, Mass: The MIT Press).

Peltzman, Sam, 1976, "Toward a More General Theory of Regulation," *Journal of Law and Economics*, 19: 211–240.

Spulber, Daniel F., 1989, *Regulation and Markets* (Cambridge, Mass.: The MIT Press).

Chapter 9

Institutions of Insurance Regulation

Chapter Objectives

1. Provide an overview of the historical origins and development of state insurance regulation.
2. Explain the role and authority of state insurance regulators.
3. Describe the typical functional structure of state insurance departments.
4. Outline the role of other political institutions in affecting insurance regulatory policy.
5. Present empirical data on the resources of state insurance departments.
6. Explain the role of the National Association of Insurance Commissioners in coordinating and serving state insurance regulators.

An extensive institutional structure has been developed to perform the insurance regulatory functions in the United States. This institutional

structure is primarily based within the insurance departments of each state and their respective laws and regulations, policies and procedures, personnel and physical facilities. In addition, the National Association of Insurance Commissioners (NAIC) serves as a vehicle for the individual state regulators to coordinate their activities and share resources to achieve mutual objectives. This chapter describes these various institutions and the important roles they play.

A. Brief History of Insurance Regulation in the United States

The current state regulatory framework for insurance has its roots in the early 1800s when insurance markets were generally confined to a particular community.[1] For fire insurance companies, the high concentration of risk and the occurrence of large conflagrations led to highly cyclical pricing and periodic shakeouts when a number of companies would fail after a major fire (Hanson, et al., 1974). Life insurers became notorious for high expenses, shaky finances and abusive sales practices (Meier, 1988). The local orientation of insurance markets at the time led municipal and state governments to establish the initial regulatory mechanisms for insurance companies and agents to address these problems and abuses.

Government control of insurers was initially accomplished through special legislative charters and discriminatory taxation, but this proved to be an inefficient mechanism as the number of companies grew and the need for ongoing oversight became apparent (Meier, 1988). Insurance commissions were formed by various states to license companies and agents, regulate policy forms, set reserve requirements, police insurers' investments and administer financial reporting.[2] Price regulation in the early 1900s was essentially confined to limited oversight of property-liability industry rate cartels.

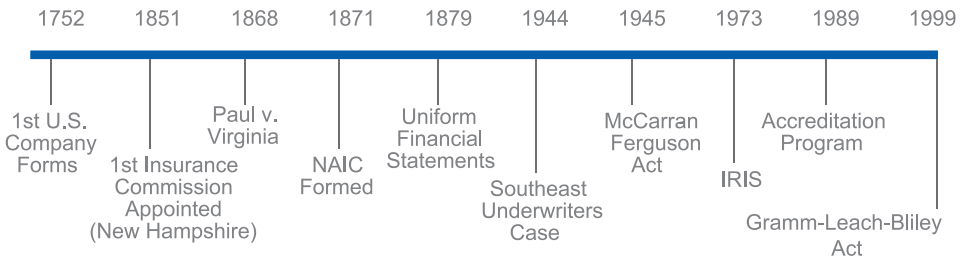
---

1 See Hanson, et. al., 1974; Lilly, 1976; and Meier, 1988 for reviews of the history of insurance regulation.

2 New Hampshire appointed the first insurance commissioner in 1851.

Through the years, insurance department responsibilities grew in scope and complexity as the industry evolved. Figure 9.1 provides a timeline of insurance regulation, identifying key developments. Two major forces appear to have heavily influenced the evolution of insurance regulatory functions and institutions. One factor has been the increasing diversity of insurance products and the types of risks insurers have assumed. The other factor is the geographic extension of insurance markets with a number of carriers operating on a national and international basis. These trends are discussed at greater length in Chapter 12.

Figure 9.1
Insurance Regulation Timeline



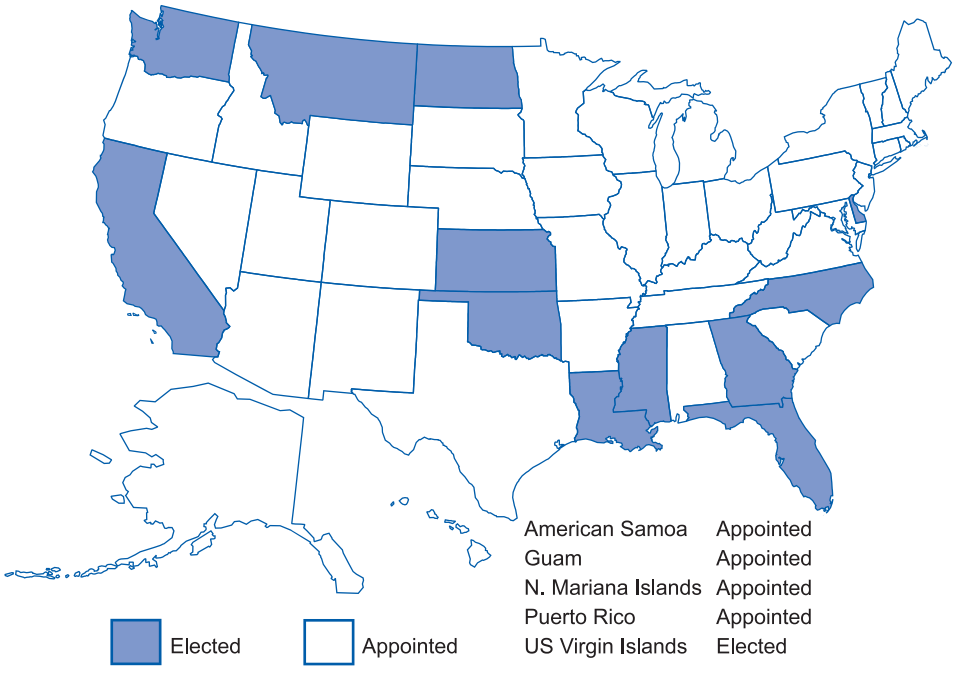
B. Role and Authority of State Insurance Regulators

Each of the 50 states, the District of Columbia and five of the U.S. territories has a chief government official who is responsible for regulating insurance companies and markets. This individual has the authority and responsibility to ensure that insurance companies do not incur excessive insolvency risk, nor treat policyholders unfairly. More specifically, insurance commissioners govern insurers' admission and licensing; solvency and investments; reinsurance activity; transactions among affiliates; products; prices; underwriting; claims handling; and other market practices. Regulators also control producer licensing and market practices, along with certain other areas related to insurance company and market

functions. However, it should be understood that insurance commissioners' authority is limited in some respects and that various other public and private institutions are part of the insurance regulatory system. Regulators operate within a broader governmental framework that influences and constrains their actions. The role of other institutions is discussed in greater detail below.

Most commissioners are appointed by the governor (or by a regulatory commission) for a set term or "at will," subject to legislative confirmation. Twelve states and one territory elect their insurance commissioners, who are autonomous in the sense that they do not take orders from the governor; however they must still cooperate with the administration in order to achieve their objectives (see Figure 9.2). Elected commissioners directly seek voters' political support, while appointed commissioners do this indirectly as part of the governor's administration.

Figure 9.2
Insurance Commissioner Manner of Selection



Commissioners can exert considerable control over insurers' conduct through the admission and licensing process. Insurers who fail to comply with regulatory requirements are subject to losing their authorization to sell insurance through the suspension or revocation of their license or certificate of authority. Commissioners may exact fines for regulatory violations that serve as a further financial inducement to compliance. Commissioners also may intervene and seize companies that are deemed to be in hazardous financial condition. These measures give regulators considerable leverage in forcing insurers to comply with insurance laws and regulations. In addition, insurance commissioners can exercise public and political influence in their visible role as consumer protectors and insurance experts. The governor and legislature typically look to the insurance commissioner for guidance on key policy issues and legislation.

At the same time, insurance commissioners are not autonomous and face a number of constraints in exercising their authority. Most important, regulators must act within the framework of insurance laws enacted by the legislature. Regulations promulgated by the commissioner are subject to review and approval by the legislature. Regulatory actions are also subject to review and enforcement by the courts. In addition, resource constraints and the difficulties of supervising companies operating in multiple jurisdictions have caused states to defer primary financial regulatory authority to the domiciliary commissioner (i.e., the commissioner in the state where an insurer is domiciled or incorporated). Meanwhile, non-domiciliary regulators can exert considerable influence on non-domiciliary insurers through the regulators' ability to deny entry into their markets.[3] Hence, while regulators can exert considerable power and influence over insurers, producers and insurance markets, regulators are subject to various checks that prevent regulatory actions that are inconsistent with or extend beyond what is provided by law and the interests of policyholders and the general public.

---

[3] The high degree of interdependence among states in regulating multistate insurers is caused by the significant amount of business written in each state by non-domestic companies, as discussed in Chapter 7.

C. Principal Insurance Regulatory Responsibilities

For the purpose of this text, insurance regulatory responsibilities are divided into two primary categories: 1) financial regulation; and 2) market regulation. These areas are discussed in greater detail in Chapters 10 and 11, respectively. Financial regulation seeks to protect policyholders against the risk that insurers will not be able to meet their financial obligations. Market regulation attempts to ensure fair and reasonable insurance prices, products and trade practices. Financial and market regulation are inextricably related and must be coordinated to achieve their specific objectives. Regulation of rates and market practices affects insurers' financial performance; financial regulation constrains the prices and products insurers can reasonably offer.

All U.S. insurers are licensed in at least one state and are subject to financial and market regulation in their state of domicile, in addition to other states in which they are licensed to sell insurance. Reinsurers domiciled in the United States also are subject to the financial regulation of their domiciliary state.

In markets that are not adequately served by licensed insurers, some U.S. insurers and non-U.S. insurers write certain specialty and high-risk coverages on a non-admitted, or surplus lines, basis. These types of coverage are not subject to price and product regulation, because it is presumed that buyers in the surplus lines markets are more sophisticated and, therefore, better able to protect themselves. The lack of availability of coverage from admitted carriers also makes the higher risk of surplus lines carriers more acceptable from a public policy perspective. States control the entry of surplus lines carriers by imposing minimum solvency and trust requirements and supervising surplus lines brokers. Other alternative market mechanisms, such as risk retention groups and captives, are not subject to these requirements.

With the exception of financial oversight by their domiciliary jurisdiction, reinsurers are not generally subject to direct financial and market

regulation. Reinsurers are, however, regulated indirectly through the states' regulation of the primary insurers that are ceding risk to reinsurers. Regulators control whether a ceding insurer can claim credit for reinsurance on its balance sheet, which is conditioned on whether the reinsurer meets certain financial and/or trust requirements imposed by regulators.

Insurance producers (i.e., agents and brokers) also are subject to regulation. State laws require insurance transactions to be conducted by licensed producers. Therefore, producers must be licensed by each state in which they would like to sell insurance and must comply with the respective state laws and regulations governing their activities. Regulators monitor producers' compliance with regulatory requirements and can rescind or suspend a producer's license or exact fines if the producer fails to comply.

D. Structure of State Insurance Departments

The organizational structures of insurance departments vary somewhat, but there are certain functional divisions that are common within most departments. Most departments tend to have separate divisions that are responsible for financial-related and market-related matters. The financial division is typically responsible for ensuring that insurers comply with financial laws and regulations, financial reporting and monitoring, desk audits and examinations. Admission and licensing and receivership functions may be housed within the financial division or organized as separate units.

The market regulation division is typically responsible for review and approval (where required) of rates and policy forms. Market conduct and consumer services may be encompassed in this area or placed in separate units.

There are other miscellaneous functions that could be handled in variety of ways from an organizational standpoint. These functions include administration, research and policy analysis, media and public relations, legislative liaison and premium tax calculations.

E. Other Institutions That Affect Insurance Regulation

As indicated in Figure 9.3, the insurance regulatory system is influenced by various entities, in addition to the insurance department, including 1) the courts; 2) the legislature; 3) the executive branch; 4) insurers; 5) producers; 6) consumers; and 7) other interest groups. Insurance has the additional complexity of both federal and state government authorities, which are involved in the regulation of the industry. Not shown in Figure 9.3, but also important, are other insurance departments and the NAIC, which affect insurance regulation in a given state. Regulatory policy is formulated collectively by the insurance commissioner, the legislature and the courts.

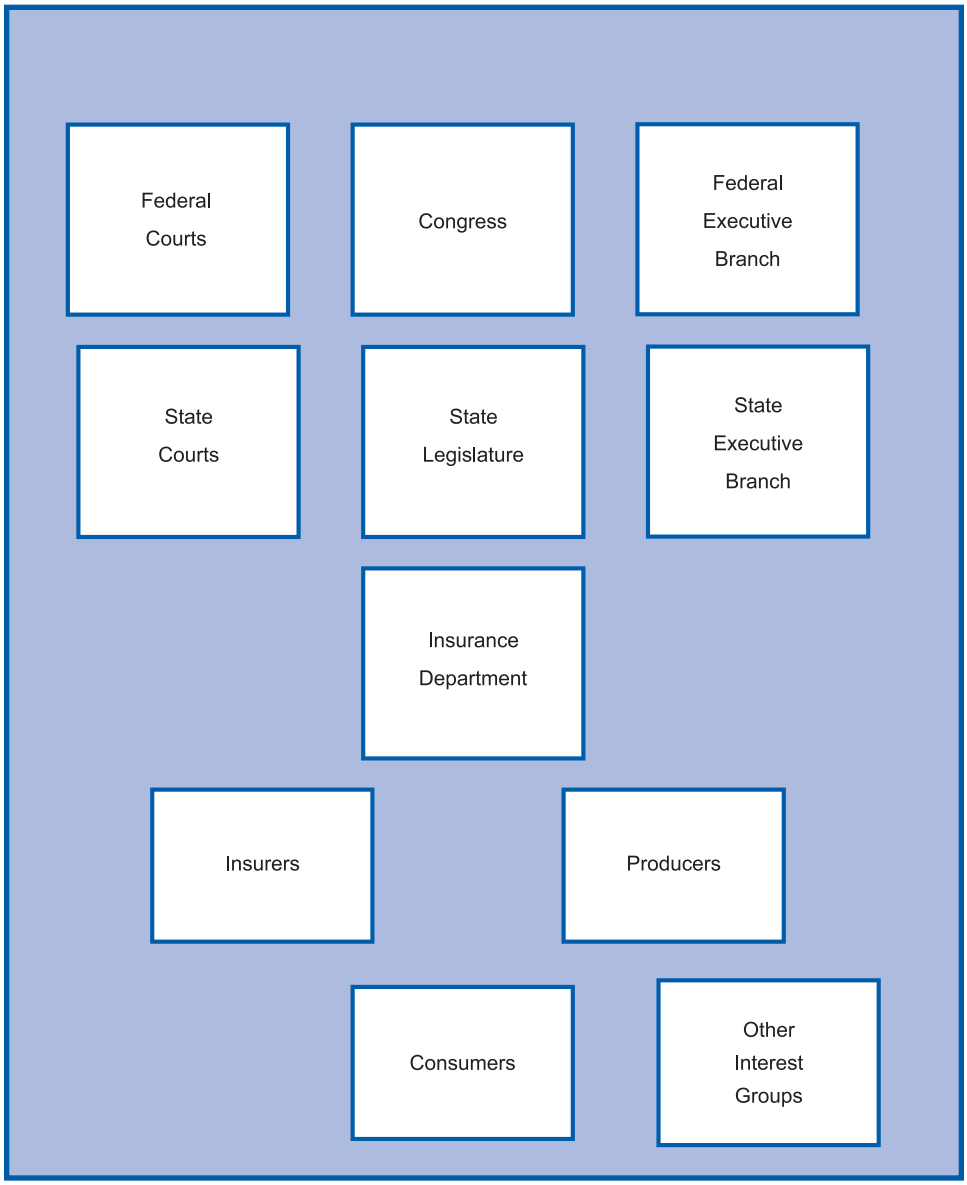
The state legislature establishes the insurance department, enacts insurance laws and approves the regulatory budget. Commissioners must often use the courts to help enforce regulatory actions, and the courts, in turn, may restrict regulatory action. Insurers and producers are the principal subjects of regulation, whose activities, in turn, affect consumers and other parties. All interested parties seek to influence regulatory policy through the insurance department, as well as other government authorities. The insurance department coordinates with other state insurance departments in regulating multistate insurers and relies on the NAIC for advice and some support services. The federal government overlays this entire structure, delegating most regulatory responsibilities to the states, while retaining an oversight role and intervening in specific areas.[4]

F. The Federal Government

Tension between the federal government and the states over the regulation of insurance dates back to the mid-1800s (Kimball and Heaney, 1995). This tension is created by the interstate operation of many insurers and their

[4] In practice, the federal government has left the principal regulatory functions for insurance to the states.

Figure 9.3
The Insurance Regulatory System



significant presence in the economy. On numerous occasions, the federal government has sought to exert greater control over the industry and the states have fought back aggressively to retain to their authority.[5] The primacy of the states' authority over insurance was essentially affirmed in various court decisions until the Southeastern Underwriters case in 1944. In that case, the U.S. Supreme Court ruled that the commerce clause of the U.S. Constitution did apply to insurance and that the industry was subject to federal antitrust law. This decision prompted the states to support the enactment of the McCarran-Ferguson Act in 1945, which delegated regulation of insurance to the states, except in instances where federal law specifically supersedes state law.

The federal government has affected state insurance regulatory policy and institutions in several ways. In a number of instances, Congress has instituted federal control over certain insurance markets or aspects of insurers' operations that were previously delegated to the states. In other cases, the federal government has established insurance programs that are essentially exempt from state regulatory oversight (e.g., crop insurance). Even the threat of such interventions has spurred the states to take actions to forestall an erosion of their regulatory authority.[6]

Another approach involves the federal government setting regulatory standards that the states are expected to enforce. In the case of Medicare supplement insurance, Congress enacted loss ratio standards that the states were required to adopt to avoid relinquishing their oversight authority to the federal government. Congress also has significantly constrained state regulatory control over certain types of insurance entities, such as risk retention groups and employer-funded health plans, in order to increase coverage options in markets where the cost of traditional insurance is high.

---

5 See Meier, 1988, and Advisory Commission on Intergovernmental Relations, 1992, for a review of various attempted federal interventions into insurance regulation.

6 For example, when the failure of a number of substandard auto insurers prompted the introduction of federal legislation to create a national guaranty fund system in 1969, the NAIC moved quickly to adopt model guaranty fund acts for property-casualty and life-health insurers, which were subsequently enacted by many states.

This has made market regulation more difficult when bogus groups claim federal pre-emption to avoid state oversight. Finally, federal policies in a number of other areas, such as antitrust, international trade, law enforcement, taxation and the regulation of banks and securities, have significant implications for the insurance industry and state regulation.

G. Regulatory Resources

The adequacy of state insurance department resources has been an area of considerable concern, with allegations that departments lack sufficient experienced staff to effectively regulate the industry. The size of insurance departments varies significantly depending on the size of their markets and other factors. In 2003, the number of state insurance department personnel ranged from 25 in Wyoming to 1,308 in California (see Table 9.1). The insurance departments of the five U.S. territories have smaller staffs than the states. Total full-time equivalent staff for all departments combined in 2003 amounted to 10,821, in addition to 2,137 contract/intergovernmental staff (NAIC, 2003). Insurance department staff persons include actuaries, financial examiners and analysts, rates and forms analysts, market conduct examiners, attorneys, fraud investigators and systems analysts.

For fiscal year 2005, state department budgets ranged from $1.8 million in South Dakota to $170.4 million in California, with a total combined budget for all departments of approximately $1.1 billion. The size of state insurance departments tends to vary with the volume of business they regulate, although there is not a perfect correlation. States that have more domiciliary companies, that regulate more intensively or that provide special services (e.g., in-house liquidators) also tend to have larger staffs and budgets. Public and legislative support for insurance regulation also affects department resources.

Table 9.1
Insurance Department Resources (2003)

State	Number of Insurers Licensed Domestic	Number of Insurers Licensed Non-Domestic	Direct Premiums Written	Revenues	FY 2005 Budget	FTE Staff
Alabama	56	1,351	$14,427,415,783	$244,394,743	$18,471,172	149
Alaska	9	748	$2,583,710,191	$44,807,507	$5,317,300	57
American Samoa	0	11	$3,764,985	N/A	N/A	N/A
Arizona	357	1,509	$28,959,824,000	$260,607,401	$13,691,600	142
Arkansas	72	1,463	$7,977,067,373	$143,299,584	$9,508,556	202
California	200	1,230	$120,260,530,849	$1,926,328,125	$170,365,000	1,307.80
Colorado	70	1,397	$24,462,417,938	$179,992,775	$7,932,739	78
Connecticut	110	1,137	$27,397,484,745	$130,133,232	$19,228,898	134
Delaware	145	1,302	$5,799,984,672	$80,261,700	$6,043,000	79
District of Columbia	33	1,376	$7,325,128,576	$55,304,629	$7,734,255	89
Florida	1,438	1,830	$80,244,141,750	$123,356,635	$77,904,149	1,128.00
Georgia	104	1,491	$29,939,384,984	$636,095,611	$16,609,672	149
Guam	7	103	$251,165,638	N/A	N/A	N/A
Hawaii	147	913	$6,075,528,889	$83,187,326	$8,284,866	76
Idaho	25	1,503	$4,905,700,462	$79,283,200	$6,251,200	72.5
Illinois	419	1,408	$52,485,096,420	$369,790,118	$29,008,000	338
Indiana	180	1,643	$22,313,692,056	$185,617,855	$5,778,600	76
Iowa	209	1,411	$11,370,758,921	$165,450,428	$6,767,663	95
Kansas	49	1,589	$11,694,236,297	$103,146,198	$10,500,000	140.75
Kentucky	55	1,495	$13,731,317,077	$238,044,787	$24,535,400	199
Louisiana	131	1,474	$15,840,008,825	$241,066,538	$26,459,452	273
Maine	30	986	$4,876,799,497	$155,998,948	$8,228,952	78
Maryland	86	1,400	$20,357,888,688	$250,412,929	$21,970,845	284
Massachusetts	89	1,106	$42,511,102,941	$67,181,393	$11,445,690	130.93
Michigan	139	1,367	$44,003,736,914	$28,954,724	$44,724,867	124.5
Minnesota	168	1,443	$25,495,677,006	$252,329,261	$10,944,000	83
Mississippi	59	1,414	$7,151,942,445	$175,935,039	$7,802,564	81
Missouri	230	1,384	$23,401,377,833	$226,920,446	$14,359,933	226.5
Montana	34	1,397	$2,744,292,039	$54,822,160	$3,656,435	48.5
Nebraska	112	1,463	$8,520,024,617	$79,979,355	$8,538,204	92.75
Nevada	56	1,694	$9,667,915,444	$186,652,282	$7,096,362	65
New Hampshire	45	921	$5,944,408,290	$82,160,934	$7,873,181	71
New Jersey	108	1,159	$50,326,349,859	$452,671,459	$27,700,000	345
New Mexico	17	1,480	$6,147,625,778	$112,030,179	$6,544,200	79
New York	528	949	$115,726,940,479	$924,766,854	$162,087,100	903
North Carolina	94	1,279	$29,101,823,909	$459,437,328	$29,161,207	406.9
North Dakota	43	1,393	$2,752,852,950	$39,182,658	$3,197,206	45.5
Ohio	277	1,539	$45,180,807,798	$449,452,064	$31,119,126	284
Oklahoma	102	1,474	$11,356,375,632	$197,900,780	$8,631,000	134
Oregon	142	1,566	$15,283,236,648	$70,105,379	$8,301,216	93
Pennsylvania	307	1,477	$66,593,001,847	$366,358,000	$24,171,000	388
Puerto Rico	45	203	$5,306,071,149	N/A	N/A	N/A
Rhode Island	35	1,263	$5,860,975,721	$86,022,012	$4,054,863	44
South Carolina	119	1,433	$11,551,205,434	$155,732,636	$7,680,112	107
South Dakota	49	1,397	$3,024,327,673	$63,074,045	$1,800,000	28
Tennessee	74	1,470	$10,647,601,263	$359,749,766	$10,223,883	140
Texas	490	1,555	$76,633,184,655	$1,238,871,189	$50,133,667	986.6
U.S. Virgin Islands	3	142	$213,222,676	N/A	N/A	N/A
Utah	54	1,410	$7,941,913,880	$122,155,175	$6,273,900	80
Vermont	531	957	$2,311,208,000	$55,620,044	$6,647,412	52.25
Virginia	77	1,434	$27,157,943,595	$381,614,083	$22,854,166	210
Washington	64	1,371	$22,386,357,000	$343,461,485	$17,490,493	188
West Virginia	21	1,333	$5,217,854,270	$142,489,000	$7,085,388	80
Wisconsin	371	1,540	$24,699,950,686	$144,868,000	$12,145,800	131
Wyoming	4	1,369	$1,646,907,059	$23,826,670	$1,863,957	25
Total	**8,419**	**70,152**	**$1,229,791,264,106**	**$13,040,904,669**	**$1,066,198,251**	**10,820.5**
Mean	**153**	**1,275**	**$22,359,841,166**	**$255,704,013**	**$20,905,848**	**212**

Source: 2003 Insurance Department Resources Report (NAIC)

Insurance departments draw their funding, directly or indirectly, from fees; assessments; and premium, retaliatory and other business and income taxes. These sources accounted for 97.8 percent of the $13 billion in revenues that states received from the industry in 2003 (NAIC, 2003).[7] The relative "burden" of state insurance taxes and fees as a percentage of total premiums was 1.0 percent.[8] This figure has steadily declined since 1988, when it was 1.7 percent.

Regulatory budgets represent only about 7.7 percent of the revenues collected from insurers, the remainder of which support other state services from which insurers and their policyholders benefit. This figure has increased steadily since 1986 (when the NAIC began tracking it), when it was 4.5 percent. Some insurance departments have partial or full dedicated funding that allows them to fund their operations directly from fees and assessments (NAIC, 2003). Other departments are funded solely from general fund appropriations; this tends to impose greater budget constraints, as these departments are forced to compete with other state agencies for scarce resources.

Despite tight fiscal constraints, the states have significantly increased the resources devoted to insurance regulation in recent years. From fiscal year 1988 to fiscal year 2005, funding for state insurance departments has more than tripled, which is a little less than three times the pace of inflation over this same period (see Figure 9.4). The increased funding has been used primarily to raise staffing levels, boost salaries to attract and retain more qualified staff, and improve office automation to enhance staff productivity. Full-time equivalent department staff personnel have increased 36.8 percent over the period 1988–2003, with the greatest increases in financial examiner/analyst and consumer service personnel. Insurance departments also have significantly enhanced their use of computers and upgraded their information systems. The increase in staff and enhanced

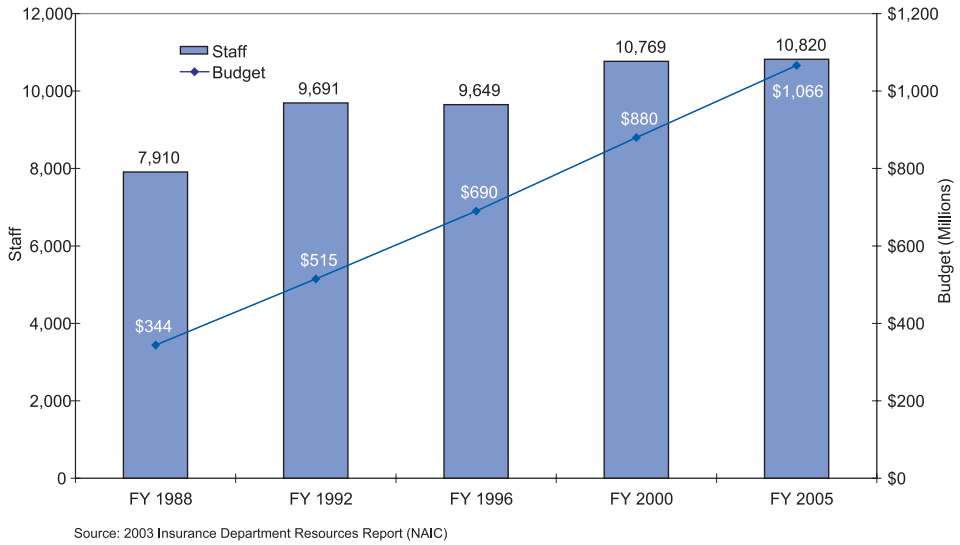
---

7 This figure does not include payroll, sales or property taxes paid by insurance companies to state and local governments.

8 Most state premium-tax rates fall in the range of 2 percent to 3 percent, but various premium-tax exclusions and credits reduce effective tax rates below nominal rates.

automation has allowed regulators to substantially boost the quality and intensity of their financial oversight of insurers, as well as expand consumer-protection activities.

Figure 9.4
Insurance Department Staff and Budget Trends
1988–2005



Source: 2003 Insurance Department Resources Report (NAIC)

H. National Association of Insurance Commissioners

1. Role and Structure

Regulating a large and diverse insurance industry, operating on an interstate basis, is challenging for individual states. Insurance commissioners have used the NAIC extensively in coordinating their regulatory activities. The NAIC is a private, not-for-profit association of the chief insurance regulatory officials of the 50 states, the District of Columbia and five U.S. territories. It was established in 1871 to coordinate the supervision of multistate companies within a state regulatory framework, with special emphasis on

insurers' financial condition. The NAIC functions in an advisory capacity and as a service organization for state insurance departments.

Some critics of state insurance regulation have pointed out that the NAIC is a voluntary organization and cannot compel states to adopt its model laws or take any other action for that matter. Other critics argue that the NAIC operates as a quasi-governmental entity that exercises too much influence. The reality is that the NAIC is the states acting together. In other words, the NAIC provides a vehicle by which the individual states can exercise their specific regulatory authorities collectively. Commissioners use the NAIC to pool resources, discuss issues of common concern and align their oversight of the industry. Collective action can enhance, as well as constrain, the power of individual states. The credence given to NAIC policy positions and its ability to organize its members are substantial levers that help standardize and strengthen insurance regulatory policy across the country. At the same time, given its voluntary nature, the NAIC has had to be relatively circumspect with regards to when and how it uses these levers. Ultimately, each state determines what actions it will take.

The NAIC supports state regulatory efforts in a number of ways, including:

- Maintaining an extensive insurance database and computer network linking all insurance departments.

- Providing systems that assist regulators, insurers and intermediaries in performing/navigating regulatory processes.

- Analyzing and informing regulators as to the financial condition of insurance companies.

- Coordinating examinations and regulatory actions with respect to troubled companies.

- Establishing and certifying states' compliance with minimum financial regulation standards.

- Providing financial, reinsurance, actuarial, legal, computer and economic expertise to insurance departments.

- Valuing securities held by insurers.
- Analyzing and listing non-admitted alien insurers.
- Developing uniform statutory financial statements and accounting rules for insurers.
- Conducting education and training programs for insurance department staff.
- Developing model laws and coordinating regulatory policy on significant insurance issues.
- Conducting research and providing information on insurance and its regulation to state and federal officials and the general public.

The NAIC develops model legislation and coordinates regulatory policy through a system of committees, task forces and working groups that functions much like a legislature. The primary standing committees are divided along major areas of insurance regulation: life insurance and annuities; health insurance and managed care; property and casualty insurance; market conduct and consumer affairs; financial condition; financial regulation standards and accreditation; international insurance relations; and information resources management. Other standing committees deal with internal NAIC issues, and special committees are formed as needed to address specific topics such as health care reform and the use of credit information to underwrite insurance.

Only NAIC members (i.e., regulators) may serve and vote on NAIC committees, but consumers, industry representatives and other interested parties provide input into NAIC deliberations. Formal advisory groups were eliminated in 1992, but NAIC committees may still use "technical resource persons" for assistance. Seeking technical assistance from the industry and other groups is essential in developing regulations governing complex areas, such as risk-based capital and life insurance nonforfeiture benefits. The NAIC also seeks input from consumer groups on significant

issues and regulatory policy. It has structured the advisory process to avoid undue industry influence and to ensure that regulators direct the process. A program was started in 1992 that provides funding for consumer representatives to participate in NAIC meetings.

State regulators are able to achieve considerable efficiencies by pooling resources through the centralized facilities provided by the NAIC. For example, it is much more efficient to have one central repository of insurer financial data than for every department to capture the same data from the same insurer. The objective is to allow states to focus their resources on the regulation of their respective markets and the solvency of their domiciliary companies, relying on support services from the NAIC. The NAIC has a staff of 400 and its budget for 2005 was approximately $56.3 million. Approximately 40 percent of NAIC revenues come from fees paid by insurers, with most of the remainder coming from the sale of database products, publications/services, educational programs, investment income and meeting registration fees. Insurance departments also pay member fees to the NAIC proportionate to the premiums written in their jurisdictions.

A principal NAIC function is the maintenance of an extensive financial database on insurance companies that is accessible to state insurance departments and other users through a computer information network. The NAIC's online database contains eight years of annual and quarterly financial information for approximately 4,800 insurance companies, as well as annual data archived back to the mid-1970s. In addition to financial statement data, detailed information on insurers' risk-based capital results are compiled in the NAIC database. Development of the database is closely related to the NAIC's development of the financial statement blanks and accounting rules, as well as the related specifications for electronic financial data filings.

2. Services to Insurance Departments

The NAIC's financial database serves as the core of the financial surveillance and other analysis activities of state insurance regulators and the NAIC. State regulators and NAIC staff access the database through a variety of application systems that allow them to review data on specific

companies, generate standard reports on an individual or a group of companies, or generate custom reports to suit specific needs. Regulators also have access to the NAIC database via various computer media, which lessens the pressure on costly mainframe computer systems. Increasingly, state insurance departments have relied on the NAIC as their primary financial data source, avoiding the cost of duplicative data entry systems. In addition, portions of the insurance database are provided to federal agencies, academics, rating organizations, insurers and various other users. The information contained in the database also is made available to the public in a variety of statistical reports and special studies.

The NAIC maintains a number of other databases that state regulators and NAIC staff use for financial analysis and other regulatory functions. The Market Information System Database contains more than 2.3 million closed consumer complaints and more than 161,000 regulatory actions, in addition to special activities and relationship information regarding various insurers and producers, updated continuously. This system significantly enhances regulators' ability to share information on individuals or companies suspected of illegal or questionable activities and help prevent their infiltration into new areas. Information on complaints and other data can be used to target companies for market conduct and financial examinations. Consumers can access the Consumer Information Source (on the NAIC's public Web site) to see complaints ratios and key financial statement schedules for domestic insurers, as well as summary company consumer profiles for life, property and health insurers. The NAIC also maintains the System for Electronic Rate and Form Filing (SERFF), which is designed to enable companies to send — and states to receive, comment on and approve or reject — insurance industry rate and policy form filings. The National Insurance Producer Registry (NIPR), an NAIC affiliate, helps the states streamline and coordinate producer-licensing regulation.

Further, state regulators and NAIC staff use the NAIC's computer network and systems to communicate and coordinate their activities with respect to examinations, regulatory actions, troubled companies, other entities and areas of regulatory concern, in addition to a variety of other matters. The NAIC continues to move forward in developing and upgrading regulatory support systems. Its 2003 Annual Report and action plan, *A Reinforced*

Commitment: Insurance Regulatory Modernization Action Plan, outline these systems and various initiatives.

Two adjunct NAIC offices perform other important regulatory services. The NAIC's Securities Valuation Office (SVO), based in New York City, determines uniform accounting values of insurers' securities investments, including government, municipal and corporate bonds, and common and preferred stocks. The SVO database contains approximately 250,000 securities for almost 36,000 issuers. Each security in the database is reviewed and valued annually by the SVO staff or from an independent third-party (i.e., any nationally recognized statistical rating organization) and published in the *Valuations of Securities on CD-ROM*.

The International Insurers Department (formerly called the Non-Admitted Insurers Information Office) maintains the NAIC's *Quarterly Listing of Alien Insurers*, which states may use to determine surplus lines carriers eligible or approved to operate in their jurisdiction. To qualify for the listing, an alien company must submit financial information, pass a financial and operational review, meet certain capital and surplus requirements, and establish a U.S. trust fund.

Further, the NAIC's Government Relations Office in Washington, D.C., assists state regulators with communicating their views to and interacting with the Congress and federal agencies, as well as associations of other state officials. A key responsibility of the Government Relations division is to coordinate NAIC activities on health issues, given the heavy federal involvement in this area. The NAIC also works with federal officials on other significant issues involving state-federal coordination, such as the regulation of financial institutions involved in insurance and terrorism insurance.

The NAIC also has played an active role in promoting greater communication and coordination among insurance regulators in different countries and helped to establish the International Association of Insurance Supervisors (IAIS). In addition, NAIC members and staff have provided considerable assistance to U.S. negotiators on insurance issues in the development of the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT).

Synopsis of Key Points

1. Insurance regulatory institutions have evolved considerably since the first state insurance commissioner was appointed in 1851. Each of the 50 states, the District of Columbia and five U.S. territories have chief regulatory officials for insurance and agencies that support them.
2. Insurance regulators have broad authority to regulate insurer solvency and protect consumers. At the same time, they must function within a governmental framework, which also affects insurance regulatory policy.
3. The organizational structures of insurance departments vary, but most divide financial and market regulatory functions.
4. There has been tension between the federal government and the states over the regulation of insurance, but the states have retained principal regulatory authority over insurance except in instances where federal law specifically supersedes state law.
5. State insurance departments have significantly increased their budgetary and staff resources in recent years, but this trend has begun to plateau as the states reach their resource goals.
6. The NAIC plays an important role as a vehicle that individual insurance commissioners use in coordinating their activities and sharing certain resources.

Suggested References

Hanson, Jon S., Robert E. Dineen and Michael B. Johnson, 1974, *Monitoring Competition: A Means of Regulating the Property and Liability* Insurance Business (Milwaukee, Wisc.: NAIC).

Kimball, Spencer L. and Barbara P. Heaney, 1995, *Federalism and Insurance Regulation: Basic Source Materials* (Kansas City, Mo.: NAIC).

Lilly, Claude C., 1976, "A History of Insurance Regulation in the United States," *CPCU Annals*, 29: 99–115.

Meier, Kenneth J., 1988, *The Political Economy of Regulation: The Case of Insurance* (Albany, N.Y.: SUNY Press).

National Association of Insurance Commissioners, 2003, *A Reinforced Commitment: Insurance Regulatory Modernization Action Plan* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Insurance Department Resources Report* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004b, 2003 *Annual Report* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2005, 2005 *Regulatory Initiatives: Goals, Action Plans & Deadlines for States, Committees & NAIC Staff* (Kansas City, Mo.: NAIC).

Chapter 10

Financial Regulatory Functions

Chapter Objectives

1. Outline the basic objectives and areas of insurance financial regulation.
2. Explain the role of minimum capital and surplus requirements and the development of risk-based capital requirements.
3. Describe other key financial requirements imposed on licensed insurers.
4. Emphasize the role of financial monitoring in ensuring that insurers meet regulatory requirements and initiating intervention when insurers incur excessive risk or encounter financial difficulty.
5. Outline the strategies and tools available to regulators to deal with troubled and insolvent companies and the role of guaranty associations.
6. Discuss the history and purpose of the NAIC financial accreditation program.
7. Discuss other significant financial regulatory initiatives.

Protecting policyholders and the general public against excessive insurer insolvency risk is the primary goal of insurance regulation. Regulators protect policyholders' interests by requiring insurers to meet certain financial standards and take corrective action when necessary. To accomplish this task, insurance regulators are given authority over insurers' ability to form and conduct business in the various states. State statutes set forth the requirements for formation and licensing to sell insurance.

These statutes require insurers to meet certain minimum capital and surplus standards and financial reporting requirements and authorize regulators to examine insurers and take other actions to protect policyholders' interests. Solvency regulation polices a number of aspects of insurers' operations, including 1) capitalization; 2) pricing and products; 3) investments; 4) reinsurance; 5) reserves; 6) asset-liability matching; 7) transactions with affiliates; and 8) management.

A. Financial Requirements

1. Capital Standards

Capital standards are the linchpin of solvency regulation. **Capital and surplus** provide a cushion against unexpected increases in liabilities and decreases in the value of assets. Capital also is intended to fund the expenses of a rehabilitation or liquidation of an insurer with minimal losses to policyholders and claimants. Insurers are required to have a certain amount of capital and surplus to establish and continue operations. When an insurer's capital and surplus falls below the minimum standard, it is considered to be legally **impaired**. When an insurer's liabilities exceed the value of its assets (i.e., its capital and surplus is negative), it is **insolvent**. Regulators also may seize a company if they can show that it is in hazardous condition and will ultimately be unable to meet its obligations to

policyholders.[1] All states have fixed minimum capital and surplus requirements, as well as risk-based capital (RBC) requirements, as discussed below.

a. Fixed Minimum Capital and Surplus Requirements

The states' fixed minimum capital and surplus requirements range from $500,000 to $6 million, depending on the state and the lines that an insurer writes. Multi-line insurers are generally required to hold more capital than monoline insurers. Capital requirements also tend to be higher for insurers writing casualty lines. The typical fixed minimum capital requirement for a multi-line insurer is approximately $2 million.

Fixed minimum capital requirements have been generally intended to ensure that a company has adequate surplus to initiate operations and fund receivership expenses in the event of an insolvency. As insurers grew over time and incurred increasing risk, it became apparent to regulators that fixed minimum requirements were inadequate to provide an adequate cushion for most insurers. Some states responded by increasing their fixed capital requirements when the number of insolvencies rose in the late 1980s. However, the most important development was the development of variable RBC requirements.

---

1 All states have a battery of laws and regulations similar to NAIC models that authorize the insurance commissioner to take action against companies deemed to be in hazardous condition. The relevant NAIC model acts are the Insurers Rehabilitation and Liquidation Model Act, the Administrative Supervision Model Act and the Model Regulation to Define Standards and Commissioners Authority for Companies Deemed to Be in Hazardous Financial Condition. Insurers may institute legal challenges to regulatory actions under these statutes, imposing costs on regulators and possibly discouraging regulators from taking action without strong proof that action is warranted.

b. Risk-Based Capital

The concept of risk-based capital recognizes that insurers range in size and the types of risks they assume, which makes fixed minimum capital standards inadequate for many companies. In practice, regulators can and do take action against troubled insurers before they fall below the minimum standard, but such actions are subject to legal challenges and regulators must convince a court that an insurer is in unsafe condition. The NAIC adopted model minimum RBC requirements for life-health insurers in 1992 and for property-liability insurers in 1993 that were intended to help correct the deficiencies of fixed standards. The NAIC developed RBC requirements specific to health insurance in 1997.

RBC is intended to be a minimum regulatory capital standard and not necessarily the full amount of capital that an insurer would want to hold to meet its safety and competitive objectives. The stated objectives of the NAIC's RBC requirements are to provide a standard of capital adequacy that 1) is related to risk; 2) raises the safety net for insurers; 3) is uniform among states; and 4) provides authority for regulatory action when actual capital falls below the standard.

The NAIC's life-health RBC formula encompasses four major categories of risk: 1) asset risk; 2) insurance or pricing risk; 3) interest rate risk; and 4) business risk. The risks addressed by the NAIC's property-liability formula are similar in some respects and different in others, and include 1) asset risk; 2) credit risk (uncollectible reinsurance and other receivables); 3) underwriting (pricing and reserve) risk; and 4) off-balance sheet risk (e.g., guarantees of parent obligations, excessive growth). The health insurance RBC requirements developed by the NAIC are intended to provide more refined RBC amounts that reflect the relative risks involved with different types of health insurance.

Each formula applies factors to various amounts reported in (or related to) the annual statement to determine RBC charges for each type of risk. A covariance adjustment is made to the accumulated RBC charges to account for diversification in major risk categories. The resulting adjusted total RBC amount is compared to an insurer's actual **total adjusted capital**

(TAC) to determine its RBC position.[2] Insurers are required to report their RBC and TAC in their annual statements, but the details of their calculations are filed in a confidential report.

Under the RBC model, certain company and regulatory actions are required if a company's TAC falls below a certain level of risk-based capital. Four RBC levels for company and regulatory action are established, with more severe action required at lower levels (see Box 10.1). An insurer falling between the highest and second-highest levels is required to explain its financial condition, and how it proposes to correct its capital deficiency, to the insurance commissioner. When an insurer slips below the second level, the commissioner is required to examine the insurer and institute corrective action, if necessary. Between the third and fourth levels, the commissioner is authorized to rehabilitate or liquidate the company. If an insurer's capital falls below the lowest threshold, the commissioner is required to seize control of the insurer. Most insurers, as indicated in Table 10.1, have TAC that exceeds their RBC requirements.

Box 10.1

RBC Action Levels

Action Level	Percent of ACL	Requirements
Company Action	200	Company must file plan.
Regulatory Action	150	Commissioner must examine insurer.
Authorized Control	100	Commissioner authorized to seize insurer.
Mandatory Control	70	Commissioner required to seize insurer.

2 In the life-health formula, certain reserves (asset valuation reserve, voluntary investment reserves and 50 percent of its dividend liability) are added to reported capital and surplus to determine an insurer's TAC. In the property-liability formula, any discount of loss and loss-adjustment expense reserves reflected in Schedule P is added back to reported capital and surplus to calculate TAC.

Table 10.1

Insurer RBC Results in 2002

RBC/TAC (%)	Property-Liability		Life-Health	
	Number of Insurers	Percent of Insurers	Number of Insurers	Percent of Insurers
0-70%	34	1.4%	6	0.5%
70-100%	5	0.2%	1	0.1%
100-150%	27	1.1%	6	0.5%
150-200%	46	1.8%	11	1.0%
200-250%	88	3.5%	14	1.2%
250%+	2,307	92.0%	1,090	96.6%
All Insurers	2,507	100.0%	1,128	100.0%

Source: NAIC Database

The NAIC continues to monitor and consider refinements to insurers' capital requirements through the Capital Adequacy (E) Task Force. There are occasional adjustments to certain RBC factors, consideration of more refined breakouts of certain items for the purpose of applying RBC charges, and evaluation of emerging issues that may warrant changes to RBC formulas and rules. Also, the Task Force and its working groups offer guidance to regulators and insurers on the application of RBC requirements; e.g., adding a trend test to the health and property-casualty RBC formulas.

2. Reserve Requirements

In addition to capital requirements, insurers are subject to other regulations with respect to their financial structure and operations. A principal requirement is the reserves that insurers are mandated to set aside for future benefit payments and potential losses on investments. Historically, life insurers were required to maintain mandatory reserves for potential losses on stocks and bonds based on regulatory valuations and credit ratings; i.e., the mandatory securities valuation reserve (MSVR). No mandatory cushion for losses existed for other major investments, which became a problem when the economy soured. These requirements were significantly enhanced with the adoption of asset valuation reserve (AVR) and interest

maintenance reserve (IMR) requirements, which became effective in 1993 for the 1992 reporting year. The AVR extended and refined reserve requirements for all major asset classes, including real estate and mortgage loans. The IMR requires insurers to amortize interest-related gains and losses over the remaining life of the disposed asset. Insurers are required to file special schedules detailing the calculations of these reserves.

Insurers also are required to maintain adequate reserves for their liabilities for future claims and benefit payments. The rules for life insurers' reserves tend to be more prescriptive based on standard actuarial procedures and assumptions. Increasing insurer and regulatory attention to asset-liability matching has encouraged actuaries to employ more dynamic methods in setting reserves and managing various financial risks (Swiss Re, 2000). The NAIC's adoption and revision of the "Triple X" actuarial guidelines for valuing life insurance policy reserves was a significant development.

With the exception of statutory formulas for workers' compensation reserves, the requirements governing property-liability insurers are less prescriptive. The primary challenge for property-liability insurers is to determine reserves for claims that have been incurred but not yet paid. The factors affecting property-liability insurers' obligations for future claims payments tend to vary and are more subjective (than for life insurers), particularly for long-tail lines where claims obligations can extend many years beyond the termination of policy. The increased danger of large catastrophes from natural disasters and acts of terrorism also has required insurers to use sophisticated modeling techniques to manage the risk of low-frequency, high-severity loss events, which may include setting aside additional capital. Regulators must evaluate the financial statements and actuarial opinions filed by property-liability insurers to assess whether insurers are establishing adequate reserves.[3] If regulators believe an insurer

---

3 One way regulators can assess the accuracy of an insurer's reserves is to examine reserve development patterns reflected in the insurer's financial statement. If regulators determine that an insurer's initial estimates of its reserves are significantly and consistently below its ultimate claims payments, they will be more likely to force the insurer to increase its reserves.

is shorting its reserves, they may require the insurer to increase its reserves or take other action. Although specific laws or regulations governing property-casualty insurer reserves were not proposed, their regulatory oversight has been enhanced through the use of actuarial opinions and RBC penalties for reserve deficiencies.

3. Investment Restrictions

The high-risk investment strategies of some insurers and the casualties that occurred when the "bottom dropped out" of the junk bond and real-estate markets in the early 1990s led regulators to reconsider their oversight of insurers' investments. Historically, state laws regulating insurers' investments were relaxed over the years to allow insurers to take advantage of high-yield investments to support new products. This changed when the junk bond problems of Executive Life Insurance Co. and several other insurers prompted the NAIC, in 1990, to adopt a model restricting an insurer to no more than 20 percent of its assets in non-investment grade bonds, with additional restrictions on the proportions of assets in the lower-rated categories (the Investments in Medium Grade and Lower Grade Obligations Model Regulation). Several states adopted the model or similar restrictions on junk bonds. This was accompanied by the refinement and strengthening of the process for assigning SVO credit designations or categorization of insurers' bonds and preferred stocks.

Yet, regulators were still concerned about other high-risk assets and investment diversification issues. In 1996, the NAIC adopted a comprehensive model covering all insurer investments, called the Investments of Insurers Model Act (Defined Limits Version). This model is a good illustration of the prescriptive approach to financial regulation. Its intended objectives are to preserve principal, ensure reasonable diversification and require insurers to allocate investments prudently to meet obligations to insureds and maintain sufficient financial strength to cover reasonably foreseeable contingencies. The model seeks to attain these objectives through relatively detailed and specific limitations on, and requirements for, various types of assets. These include certain limits on the

amounts or relative proportions of different assets insurers can hold to ensure adequate diversification and limit risk. These provisions vary somewhat between life-health and property-liability insurers, recognizing differences in their liability structures and investment needs.

The first investment model act prompted criticisms that it was too prescriptive and arbitrary. Several states persuaded the NAIC to adopt a second investment model that uses what is known as the "prudent person" approach; this model is called the Investments of Insurers Model Act (Defined Standards Version). Conceptually, this approach allows insurers greater discretion in terms of their allocation of investments if they can demonstrate that they have a sound investment plan and then adhere to that plan. Regulators are authorized to intervene if an insurer fails to meet this more general requirement. Every state has adopted one of the NAIC investment models, or has passed similar or related legislation and/or regulations.

Continuing innovation in insurance products and financial instruments will challenge insurance regulators, particularly those using a prescriptive approach, to keep pace with new types of investments. The regulatory and accounting treatment of derivatives is one of the more complex areas regulators and the industry are negotiating. Balancing the need for proper oversight with the desire to enable efficient financial innovations will continue to challenge regulators. Financial convergence will increase pressure for maintaining a level playing field among different financial institutions with respect to asset management.

4. Other Financial Requirements

Other statutes and regulations pertain to different aspects of insurers' operations. Holding company laws control transactions between affiliated companies, including the payment of dividends from a subsidiary to a parent. Insurers are prohibited from improper delegation of authority to managing general agents (MGAs) in the areas of pricing, underwriting and

paying claims.[4] In general, insurance company managers are required to act prudently in protecting policyholders' interests and regulators are authorized to seize control if management actions threaten a company's solvency.

A number of other financial requirements were enhanced to address abuses and regulatory gaps that arose during the 1980s. In 1984, the NAIC adopted a model that tightened requirements for insurers to receive financial credit for ceded reinsurance, called the Credit for Reinsurance Model Act. In order for the ceding insurer to receive credit, the reinsurer must be authorized or post security to cover its obligations should it fail. To be authorized, a reinsurer must be licensed in at least one state and have capital and surplus of at least $20 million, as well as meet other requirements. The credit that a ceding carrier receives also is reduced for uncollectible and overdue reinsurance payments.

Model regulations prohibiting "surplus relief" schemes and limiting fronting arrangements were adopted by the NAIC in 1991 and 1993, respectively. Additional models were adopted that regulate the activities of reinsurance intermediaries and managing producers. Further, increasing use of securitization as an alternative or complementary risk transfer device has prompted the states to consider the regulatory and accounting treatment of securitization transactions, vis-à-vis traditional reinsurance (Grace, Klein and Phillips, 2001).

---

4 More specifically, the NAIC's Managing General Agents Act sets forth required contract provisions between an insurer and an MGA to ensure there are proper controls on the MGA's activities on behalf of the insurer. These contract provisions govern 1) proper accounting of transactions and remission of funds; 2) deposit of funds; 3) business records; 4) reassignment of the contract (this is prohibited); 5) underwriting guidelines; 6) claims settlement; 7) sharing of interim profits; 8) loss reserving; and 9) reinsurance transactions. The model act also establishes duties of the insurer, including 1) financial examinations of the MGA; 2) loss-reserve opinions; 3) on-site review of MGA underwriting and claims processing operations; 4) binding authority for reinsurance contracts; and 5) notification to the insurance commissioner of MGA contracts.

The states and the NAIC also have significantly boosted antifraud efforts by establishing fraud divisions within a number of insurance departments, tracking companies and individuals of potential concern, and increasing coordination with federal law enforcement authorities.[5] States are able to access special databases at the NAIC to get information on regulatory actions and persons involved in questionable activities. Stringent insurance-fraud provisions developed by the NAIC were enacted as part of the federal omnibus crime bill in 1994. The provisions established tough penalties for false financial reporting, embezzlement, theft and misappropriation of insurance company funds.

B. Solvency Monitoring

Regulatory requirements are of little value if there is no mechanism to monitor insurers' compliance with those requirements. Fundamentally, the objective of solvency monitoring is to ensure that insurance companies meet regulatory standards and alert regulators if actions need to be taken against a company to protect its policyholders. Solvency monitoring encompasses a broad range of regulatory activities, including financial reporting, early-warning systems, financial analysis and examinations. The annual and quarterly financial statements filed by insurers serve as the principal source of information for the solvency monitoring process, but there are a number of other special reports that are filed and used in regulatory monitoring. Insurance commissioners also may require insurers to provide other information as necessary to assess their financial condition.[6]

---

5 See Derrig (1994) for a comprehensive bibliography on insurance fraud.

6 State laws authorizing the insurance commissioner to conduct examinations of insurers generally authorize the commissioner to review all books and records of a company at any time. For example, Section 4 of the NAIC's Model Law on Examinations requires insurers to provide examiners with "free access to all books, records, accounts, papers, documents, and any or all computer or other recordings relating to the property, assets, business and affairs of the company being examined."

Insurers are required to file annual financial statements for the previous calendar year by March 1 with their domiciliary state, every state in which they are licensed to do business and the NAIC.[7] Statements for the first, second and third quarters must be filed 45 days after the close of the quarter. On a quarterly basis, insurance departments subject statements to a "bench," or "desk," audit by an in-house financial analyst or examiner who assesses the accuracy and reasonableness of the information that is filed and determines whether the insurer requires further investigation before its next regularly scheduled on-site examination. The NAIC, through the Financial Analysis Working Group of the Financial Condition (E) Committee, also scrutinizes insurers' financial statements and disseminates its analysis to insurance departments.

Ideally, regulators should monitor indicators of excessive financial risk and hazardous financial condition and mitigate the causes of insolvency. Studies indicate that the most common causes of property-liability insurer failures are deficient loss reserves, inadequate rates and rapid growth (A.M. Best, 2004). Other factors involved in property-liability insolvencies include fraud, overstated assets, significant changes in business, reinsurance failure and catastrophe losses. The most frequent causes of life-health insurer failures have been inadequate pricing and rapid growth, followed by problems of affiliates, overstated assets, fraud, significant changes in business, reinsurance failure and new management (A.M. Best 2005; ACLI, 1990).

1. Financial Reporting

Insurance companies are required to maintain records and file annual and quarterly financial statements with regulators in accordance with statutory accounting principles (SAP), which differ somewhat from generally accepted accounting principles (GAAP). Statutory accounting seeks to

[7] States may exempt from this requirement those companies that operate only in their respective state of domicile. For example, some smaller and specialty single-state insurers (e.g., workers' compensation state funds, county mutuals, Blue Cross and Blue Shield plans, etc.) are not required to file statements with the NAIC.

determine an insurer's ability to satisfy its obligations at all times, whereas GAAP measures the earnings of a company on a going-concern basis from period to period. Under SAP, most assets are valued conservatively and certain non-liquid assets (e.g., furniture and fixtures) are not admitted in the calculation of an insurer's surplus. Statutory rules also govern such areas as how insurers should establish reserves for invested assets (life insurers only) and claims and the conditions under which they can claim credit for reinsurance ceded.

Statutory accounting has been criticized over the years for reliance on amortized book or historical cost values rather than market values for bonds. Proponents of market valuation argue that it would provide regulators, policyholders and others with a more accurate picture of the true risk and net worth of an insurer (Cummins, et al., 1995). It also is argued that market value accounting would improve insurer investment decisions, which can be distorted by historical cost accounting.[8] Regulators have tended to oppose a move to market value accounting because of concerns about the potential difficulty in estimating the market values of some securities and liabilities. In 1993, the Financial Accounting Standards Board adopted market value reporting requirements for bonds for purposes of GAAP financial statements. While this has increased the pressure on insurance regulators to reconsider the SAP approach, they are reluctant to implement any changes until there is greater consensus on allowing insurers to discount liabilities to present value.

SAP rules for insurance companies are fairly similar among the states, but there are some differences. Historically, statutory accounting principles were not articulated in a way that consistently clarified their interpretation and application on a comprehensive basis. In addition, many states had statutes that required accounting practices different from those promulgated by the NAIC. Some insurance departments also permitted accounting practices that differed from those of the NAIC. Consequently,

---

8 A historical cost system induces insurers to sell (hold) assets when market values are greater (less) than book values to improve their reported financial position (Cummins, et al., 1995).

an insurer's compliance with SAP sometimes could be a matter of interpretation and could vary among the states depending on the practices permitted by each state.

Recognizing the need to clarify statutory reporting requirements, in 1994, the NAIC embarked on a project to "codify" SAP so insurers, regulators and independent auditors would have comprehensive statutory accounting guidance. The project was intended to achieve greater standardization in accounting guidelines across the states, as well as provide definitions where they had been lacking.[9] In September 1994, the NAIC's Financial Condition (EX4) Subcommittee adopted a Statement of Concepts to provide guidance on the codification project. The statement used GAAP as a general framework and addressed objectives exclusive to SAP. The idea was to use the extensive guidance available in GAAP when consistent with insurance regulatory objectives and provide comprehensive guidance for statutory principles that differed from GAAP.

The Codification of Statutory Accounting Principles Working Group under the NAIC's Accounting Practices and Procedures (EX4) Task Force directed the project and the work of NAIC staff and independent consultants on a series of approximately 100 issue papers that addressed the numerous technical accounting issues. Most of the papers have been completed and adopted by the NAIC. Work continues on a few unresolved issues and new issues as they emerge. The adoption of the accounting requirements contained in the issue papers by the working group and the NAIC effectively established a set of codified statutory accounting principles. The guidelines are intended to meet the American Institute of Certified Public Accountants (AICPA) requirements to be deemed a comprehensive basis of accounting other than GAAP such that auditors may opine on that basis.

---

9 The NAIC publishes several references that provide information on statutory reporting requirements: the *Annual Statement Blanks*, the *Annual Statement Instructions*, the *Accounting Practices and Procedures Manual* and the *Financial Condition Examiners Handbook*. There are separate volumes of the annual statement and accounting practices materials for the different types of insurers.

Financial reporting requirements have been expanded within the past 15 years to provide more detailed and accurate information for assessing insurers' financial condition. Schedules dealing with reinsurance, bonds, real estate and mortgage loan investments, and loss reserves have been significantly enhanced. Statements of actuarial opinion (property-liability insurers) and asset adequacy analysis (life-health insurers) and independent CPA audit requirements also were instituted. Regulators have used the enhanced information to increase the depth and scope of their monitoring activities and better detect excessive financial risk and emerging problems. Most recently, considerable effort has focused on improving regulatory analysis methods and techniques to better assess the financial risk of insurers.

2. Financial Analysis and Early-Warning Systems

States typically prioritize the review of their domiciliary companies and any companies that require expedited scrutiny. Most insurance departments use some system of financial ratios or other tools to screen and prioritize insurers for analysis. Regulators also use NAIC financial information systems, including the Financial Analysis Solvency Tools (FAST), which encompasses the Insurance Regulatory Information System (IRIS), the Scoring System, the Insurer Profiles System and other reports. Additional sources of information may be tapped, including Securities and Exchange Commission (SEC) filings; claims-paying ability ratings; complaint ratios; market conduct reports; correspondence from competitors and agents; news articles; and other sources of anecdotal information. The NAIC's Internet-State Interface Technology Enhancement (I-SITE) provides regulators with online access to NAIC database information and a wide array of reports pertinent to solvency and market conduct regulation.

Regulators have enhanced their solvency monitoring activities to facilitate more timely regulatory action against troubled insurers. These actions include more effective remedial measures and the timely removal of "bad" companies to lower insolvency costs. This has the advantage of focusing regulatory sanctions against insurers that attempt to "go for broke" or that are simply unlucky, incompetent or fraudulent, without imposing unnecessary restrictions on the activities of financially sound companies.

Effective monitoring also increases insurers' incentives to comply with regulatory requirements and increases the cost of incurring excessive risks.

Since the early 1970s, the NAIC has provided IRIS to states to help monitor insurers' financial condition and identify those insurers that might require further regulatory attention. Companies' financial data are first processed through a statistical phase, consisting of a series of 12 to 13 financial ratios that differ among property-casualty, life-health and fraternal insurers (see Box 10.2). In the second phase, the analytical phase, companies' IRIS results and other solvency tools are analyzed further by a select team of state financial examiners and financial analysts, called the Analyst Team. The Analyst Team identifies insurers that appear to require immediate regulatory attention and recommends a level of regulatory attention (priority) to guide the appropriate domiciliary regulators in their review process. Insurers' IRIS ratio results and Analyst Team results are available to regulators through NAIC's I-SITE network. IRIS ratio results are also available to the public through a published report. The insurers' priority status of the analytical phase is not published for public use. The IRIS ratios continue to be refined over time based on regulators' experience with troubled insurers.

In 1990, the Financial Condition (E) Committee created a working group to facilitate peer review of the domiciliary regulation of "nationally significant" insurers. The objective of the NAIC's peer review process, as exercised through its Financial Analysis (E) Working Group, is to ensure domiciliary regulators are taking effective action with respect to larger, multistate insurers that are or might be in financial difficulty. Currently, nationally significant insurers are deemed to be those companies that are licensed in or write business in 17 or more states and have gross premiums (direct plus assumed) written in excess of $50 million for life-health companies and $30 million for property-liability insurers.

The NAIC's Financial Regulatory Services Division subjects insurers' financial statements to a computerized analytical routine (the Scoring System), which prioritizes property-casualty, life and health companies for further analysis. The Scoring System consists of a series of approximately 20 financial ratios based on annual and quarterly statement

Box 10.2

IRIS Ratios

Property/Casualty		**Range**
1. Gross Premiums Written to Policyholders' Surplus	900	----
2. Net Premiums Written to Policyholders' Surplus	300	----
3. Change in Writings	33	-33
4. Surplus Aid to Policyholders' Surplus	15	----
5. Two-Year Overall Operating Ratio	100	----
6. Investment Yield	6.5	3.0
7. Change in Adjusted Policyholders' Surplus	50	-10
8. Net Change in Adjusted Policyholders' Surplus	25	-10
9. Liabilities to Liquid Assets	105	----
10. Gross Agents' Balances to Policyholders' Surplus	40	----
11. One-Year Reserve Development to Policyholders' Surplus	20	----
12. Two-Year Reserve Development to Policyholders' Surplus	20	----
13. Estimated Current Reserve Deficiency to Policyholders' Surplus	25	----
Life/Health		**Range**
1. Net Change in Capital and Surplus	50	-10
2. Gross Change in Capital and Surplus	50	-10
3. Net Income (incl. Realized Capital Gains & Losses) to Total Income	----	0
4. Adequacy of Investment Income	900	125
5. Non-Admitted to Admitted Assets	10	----
6. Total Real Estate & Total Mortgage Loans to Cash and Invested Assets	30	---
7. Total Affiliated Investments to Capital and Surplus	100	----
8. Surplus Relief		
a. > $5 million capital/surplus	30	-99
b. < $5 million capital/surplus	10	-10
9. Change in Premium	50	-10
10. Change in Product Mix	5	----
11. Change in Asset Mix	5	----
12. Change in Reserving Ratio	20	-20

Fraternal ratios are not listed.

data, but, unlike the IRIS ratios, it assigns different point values for different ranges of ratio results (see Box 10.3). A cumulative score is derived for each company, which is used to prioritize it for further analysis. Annual and quarterly scores are computed and reviewed. Each state interprets the results and considers classifying their domiciled companies as priority based on the score. Like the IRIS ratios, the Scoring System ratios continue to be refined over time.

Other FAST components include a set of annual and quarterly Insurer Profile reports and the *Financial Analysis Handbook*. The Insurer Profiles analyze various aspects of property-casualty, life-health and health insurers' financial statements over a five-year period. Regulators can generate customized reports and worksheets to evaluate areas of special interest indicated by the ratio analysis and five-year profiles. The *Financial Analysis Handbook* (with separate editions for property-casualty, life and health insurers) suggests analytical methods regulators can use to assess insurers' financial risk and the potential need for further regulatory attention. The Handbook is closely linked to the array of regulatory reports and analysis tools provided by the NAIC. These and other tools have been integrated into I-SITE and are available to all state insurance regulators.

Separate Scoring System ratios exist for life, health and property-casualty insurers (see Box 10.3). The Scoring System uses some IRIS ratios but it also includes a number of additional ratios and scoring criteria not encompassed in IRIS. For example, the Scoring System has ratios that consider other invested assets, affiliated investments, various leverage concerns and cash flow from operations. In addition, considerations regarding the amount of long-tailed line of business are factored into the Scoring System when providing a score on gross premiums written to policyholders' surplus and net premiums written to policyholders' surplus.

While the specifications of IRIS ratios have been public knowledge since their inception, and companies' ratio results have been public since 1989, information about the Scoring System and companies' scoring results generally have not been available outside the regulatory community. The reason for this is that FAST has been used primarily to focus intensive

Box 10.3

FAST Ratios

Property/Casualty

1. Investment Yield
2. Change in Combined Ratio
3. Gross Expenses and Commissions to Gross Premiums
4. Change in Gross Expenses and Commissions
5. Gross Premiums to Surplus
6. Net Premiums to Surplus
7. Change in Gross Premiums Written
8. Change in Net Premiums Written
9. Surplus Aid to Surplus
10. Reinsurance Recoverable on Paid Losses to Surplus
11. Reinsurance Recoverable on Unpaid Losses to Surplus
12. Reserves to Surplus
13. Two Year Reserve Development to Surplus
14. Affiliated Investments to Surplus
15. Affiliated Receivables to Surplus
16. Miscellaneous Recoverables to Surplus
17. Non Investment Grade Bond Exposure
18. Other Invested Assets to Surplus
19. Change in Liquid Assets
20. Change in Agents Balances
21. Cash Flow From Operations
22. Change in Policyholders Surplus

Life

1. Change in Capital & Surplus
2. Surplus Relief
3. Change in Net Premiums & Annuity Cons. And Deposit Type Funds
4. A&H Bus. to Net Premiums and Annuity Cons. & Deposit Type Funds
5. Change in Dir. & Ass. Annuities & Deposit Type Funds
6. Change in Net Income
7. Trend of Net Income
8. Surrenders to Premiums & Deposit Type Funds
9. Grp. Surr. to Grp. Premiums & Grp. Dept. Type Funds
10. Change in Liquid Assets
11. Affiliated Investments to Capital & Surplus
12. Non Inv. Gr. Bonds & St. Inv. to Capital & Surplus & AVR
13. Collateralized Mortgage Obligations to Capital & Surplus & AVR
14. Problem Real Estate and Mortgages to Capital & Surplus & AVR
15. Sch. BA Assets to Capital & Surplus & AVR
16. Total Real Estate and Mortgages to Capital & Surplus & AVR

Health

1. Change in Capital & Surplus
2. Surplus Relief
3. Gross A&H Premiums to Capital & Surplus
4. Net A&H Premiums to Capital & Surplus
5. Gross A&H Res. to Capital & Surplus
6. A&H Reserve Deficiency
7. Change in Net Prems. & Annuity Cons. and Deposit Type Funds
8. Stockholders Divs. to Prior Year Capital & Surplus
9. Change in Net Income
10. Trending of Net Income
11. Comm. & Incurred Exp. to Prem. & Ann. Dep.
12. Change in Liquid Assets
13. A&H Reserves/Liquid Assets
14. Affiliated Investments to Capital & Surplus
15. Sch. BA Assets to Capital & Surplus & AVR
16. Total R.E. and Mortgages to Capital & Surplus & AVR

regulatory attention on insurers of particular concern. Because the Scoring System effectively ranks insurers according to the need for regulatory review, there is a greater potential for public misunderstanding and misuse of a company's Scoring System results. As with any financial screening model, the Scoring System results for a given company may not provide an accurate indication of its financial condition relative to other companies. While regulators can use further analysis to sort out "false positive" scores, agents and consumers do not have that same capacity and could be misled by anomalous Scoring System results. The Scoring System also is less subject to "gaming" by insurers if they do not have complete information about the system.

A number of states also have developed their own solvency screening systems. Some of these systems can be quite sophisticated, such as systems developed by California, New York, Ohio, Pennsylvania and Texas. Insurance department systems have served as a source of innovation and provided ideas for NAIC ratios. Wisconsin and New York, for example, implemented risk-based capital early-warning mechanisms prior to their consideration by the NAIC. Departments with their own extensive warning systems tend to supplement their results with IRIS ratio and Scoring System results. The states' use of NAIC monitoring systems has increased with their improvement and the establishment of accreditation standards requiring the use of screening systems.

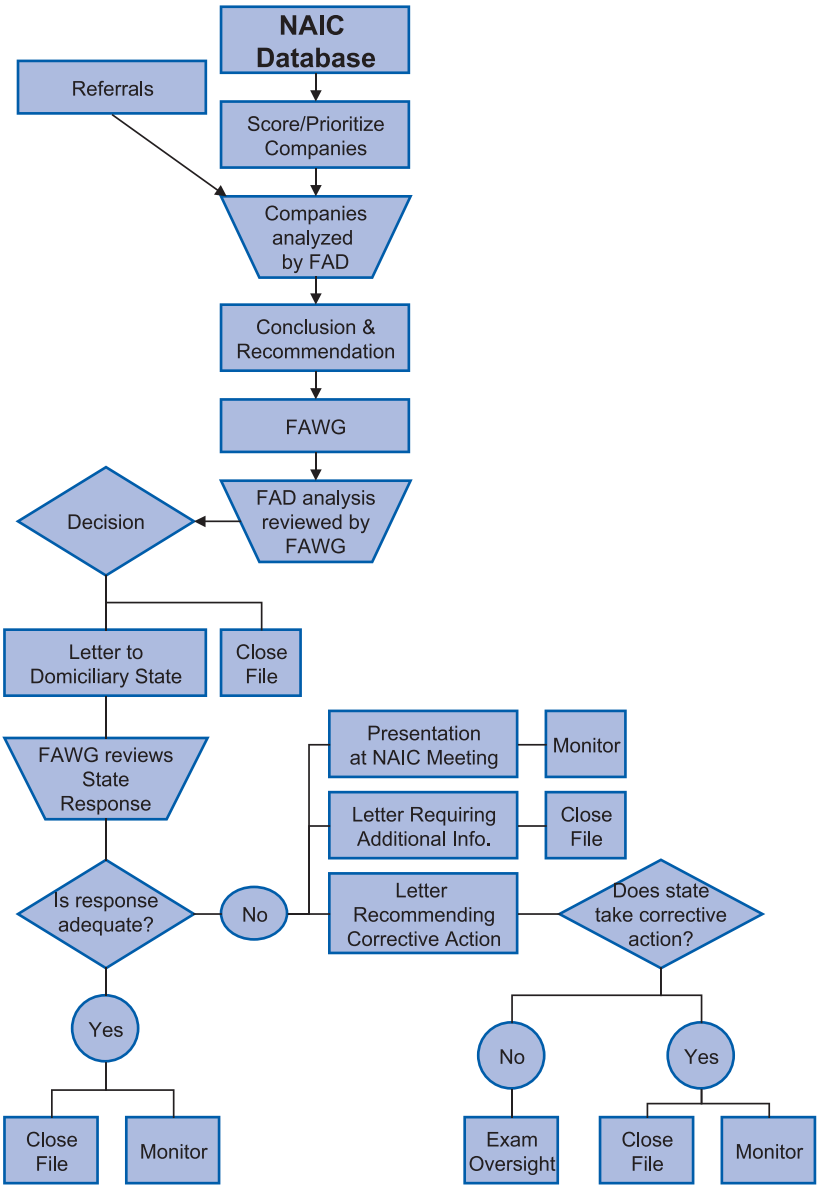
Empirical research on the Scoring System indicates that it is a reasonably effective system for early-warning purposes. Grace, Harrington and Klein (1998a, 1998b) performed the first study of the Scoring System and found that it identified approximately 80 percent of insurers that would fail in three years using a cutoff point that offers a reasonable trade-off between false positive and false negative indications. At the same time, they noted some improvements could be made to the Scoring System to increase its accuracy, as well as the inherent limitations of any static ratio system using statutory accounting data. A subsequent study by Cummins, Grace and Phillips (1999) demonstrated that predictive accuracy could be further improved with a system combining Scoring System ratios, financial strength ratings and dynamic financial modeling to identify troubled insurers.

With respect to peer review, the Financial Analysis (E) Working Group (FAWG) examines the analysis performed by the NAIC's Financial Regulatory Services Division and identifies those insurers it will subject to further study. For these insurers, FAWG queries the domiciliary state on various aspects of the insurers' financial condition and regulatory actions taken. If FAWG determines that the domiciliary regulator has taken appropriate actions, then FAWG may close the file or continue to monitor the company. If FAWG determines that further measures are needed, it will recommend the appropriate corrective action to the domiciliary state. If the domiciliary regulator fails to follow FAWG's recommendation, FAWG will alert the Financial Condition (E) Committee that, in turn, may alert other states accordingly and coordinate their actions against the troubled company. Figure 10.1 provides a schematic diagram of the Financial Analysis Working Group's process.

There is little doubt that this peer review process can apply substantial leverage on domiciliary states. It forces the decision on the appropriate degree of regulatory forbearance to consider the interests of all states in which an insurer does business, not just the domiciliary state. Non-domiciliary states can exert pressure on the domiciliary state by threatening to restrict an insurer's ability to write business. If non-domiciliary states restrict a troubled insurer's activities, the domiciliary regulator could have little choice but to implement other actions requested by the non-domiciliary state(s). The collective resources and expertise of the various state insurance departments and the NAIC also are more efficiently coordinated and focused on a troubled company through this process.

As much as financial statements have been expanded and basic solvency tools have been enhanced, regulators have recognized the inherent limits to these devices. Not all factors affecting an insurer's financial condition can be incorporated into financial statements, and the impact of certain actions on an insurer's financial results may take some time to become apparent. Hence, as noted above, regulators are continually looking for other sources of information to supplement standard financial reporting in order to more quickly detect problems that may jeopardize a company's long-term viability. An increase in consumer complaints, for example, may reveal that an insurer is delaying the payment of claims because of financial problems.

Figure 10.1
Schematic Diagram of FAWG Process



An insurance department's rate analysts can advise its financial section if an insurer's pricing appears to be overly aggressive and potentially inadequate, or if it enters into a new line of business. Consequently, insurance departments have made greater efforts to coordinate information from their market conduct and solvency units.

The NAIC has placed strong emphasis on enhancing the risk-based approach to regulatory solvency surveillance through the activities of the Risk Assessment Working Group of the Financial Condition (E) Committee. The scope of its activities includes regulatory methods and systems, handbooks and manuals, regulator instruction and training, specialized reports and more.

3. Examinations

Examinations are a fundamental component of the solvency monitoring process. Traditionally, primary reliance has been placed on the comprehensive triennial examination, although regulators have the authority to examine companies whenever they deem necessary. Some insurers may need to be examined more frequently than every three years, while others may need to be examined less frequently. State regulators have increased their reliance on the use of targeted examinations, which are limited in scope and may be called because of special circumstances or in lieu of a regular comprehensive examination. The NAIC also encourages the use of "association," or "zone," examinations, in which several states participate in order to consolidate efforts and avoid duplicative and redundant examinations of the same company. The NAIC's Financial Condition (E) Committee may encourage non-domiciliary states to call a special association examination if an examination conducted by a company's domiciliary state is inadequate or if the domiciliary state fails to conduct an examination when financial ratio results or other information indicate the need.

In the late 1980s, the efficacy of insurance company examinations had been called into question by insurance regulators, Congress and the industry. In 1990, the NAIC established a Special Committee on Examinations to conduct a comprehensive review of the examination process. The Committee concluded that periodic examinations should be supplemented by limited

scope, or targeted, examinations of insurers based on well-defined selection criteria (NAIC, 1990). It also recommended a number of measures to enhance the efficiency of examination conduct and to improve the training and qualifications of examiners. Greater emphasis on pre-examination preparation, financial analysis and risk-based examinations, which focus on particular areas of concern, has been encouraged. Subsequent to the Committee's report, the NAIC revised its *Financial Condition Examiners Handbook* to incorporate the Committee's recommendations.

One important component of improved examination procedures is the use of automated, or electronic data processing (EDP)-assisted, examinations. The NAIC helped develop automated exam systems and provides consulting support to assist state examiners in the pre-examination and on-site phases. The NAIC's Examination Jumpstart system generates a series of analytical reports from the NAIC database that allow the supervising examiner to pinpoint problem areas and allocate resources accordingly before going on-site. The system also performs many routine, time-consuming tasks the examiner would otherwise perform at the company. Special audit software is used at the company to retrieve, check and analyze information from its electronic files. The software allows the examiner to test for a particular condition for every policy or transaction. This substantially expedites the examination and allows the examiner to conduct more in-depth analysis of important areas.

Independent audit requirements also represent a significant development designed to improve the quality of financial reporting and monitoring. Annual statement instructions require all insurers to have an annual audit performed by an independent certified public accountant and file an audited financial report as a supplement to their annual statement on or before June 1 for the preceding calendar year. The required audited financial report must cover the financial position of the insurer and the results of its operations, cash flows and changes in capital and surplus in conformity with statutory accounting principles. If the independent auditor determines that the insurer has materially misstated its financial condition, as reported to its state of domicile, or does not meet the minimum capital and surplus requirement of its domiciliary state, the auditor is required to report this finding to the insurer's board of directors. The board of directors must forward this report

to the domiciliary commissioner and, if it fails to do so, then the auditor is compelled to file the report with the domiciliary commissioner. The auditor also is required to notify the domiciliary commissioner of any significant deficiencies in an insurer's internal control structure. This independent audit requirement is an important adjunct to periodic regulatory examinations that helps ensure the veracity of insurers' annual financial reporting and the effectiveness of the solvency monitoring process.

C. Intervention and Guaranty Funds

1. Intervention and Receivership

The nature of the appropriate regulatory action for a troubled insurer varies depending on the circumstances, but the essential objective is to prevent or minimize losses and to provide protection for policyholders. There are two levels of regulatory actions with respect to troubled companies: 1) actions to prevent a financially troubled insurer from becoming insolvent; and 2) delinquency proceedings against an insurer for the purpose of conserving, rehabilitating, reorganizing or liquidating the insurer (NAIC, *Troubled Insurance Company Handbook*, 1992). Actions within the first category include hearings/conferences, corrective plans, restrictions on activities, notices of impairment, cease and desist orders, and supervision. Some of these actions may be conducted informally; others require formal measures. Similarly, some actions against companies may be confidential and others may be publicly announced. Sales or mergers of troubled insurers are often negotiated by regulators in order to avoid market disruptions. Regulators indicate that a large number of troubled insurers subject to regulatory action are never publicly identified because their problems are resolved before more drastic action is required.

However, if preventive regulatory actions are too late or otherwise unsuccessful and an insurer becomes severely impaired or insolvent, then formal delinquency proceedings will be instituted. These measures can encompass conservation, seizure of assets, rehabilitation, liquidation and dissolution. For many insurers, these actions are progressive. A regulator may first seek to conserve and rehabilitate a company to maintain availability of coverage and to avoid adverse effects on policyholders and

claimants, as well as lower insolvency costs. However, the regulator may ultimately be forced to liquidate and dissolve the company if rehabilitation does not prove to be feasible. Regulators typically need court approval for such actions, which may be challenged by the troubled insurer.[10]

State insurance regulators have been criticized for exercising excessive forbearance in seizing troubled insurers (e.g., Mission Insurance Company), which can ultimately inflate the cost of the insolvency when an insurer is liquidated (see *Failed Promises*, 1990; and GAO, 1991). However, it also must be pointed out that it can be costly for a commissioner to initiate an insolvency action, particularly if the insurer fights the action in court, and there is no guarantee the commissioner will prevail. Regulators also face some uncertainty about the prospects for a troubled insurer, given different types of regulatory intervention that might be taken. Precipitous regulatory action could create an unnecessary run on the company. The regulator, therefore, must determine an appropriate intervention strategy, given the circumstances surrounding the insurer, the information available and the constraints present at the time. Ideally, regulators will follow an optimal intervention strategy that may not prove to be successful in any single case, but that, on average, minimizes insolvency costs, plus costs arising from unnecessary or premature regulatory action.

2. Guaranty Associations

State guaranty associations have been established to protect policyholders, claimants and beneficiaries against financial losses due to insurer insolvencies. The purpose of an insolvency guaranty law/association is to cover an insolvent insurer's financial obligations, within statutory limits, to

[10] For example, the liquidations of Security Casualty Company (Washburn v. Dyson, 127 Ill. 2d 434) and Main Insurance Company (Schacht v. Main Insurance Company, 122 Ill. App. 3d 826) in Illinois were contested by the owners of these companies

policyowners, annuitants, beneficiaries and third-party claimants.[11] Most states limit coverage of property-liability claims and death benefits to $300,000. Health insurance claims and cash values on life insurance policies and annuities are typically limited to $100,000. There are no limits on workers' compensation claims. All licensed insurance companies are required to be members of the state guaranty association in which the company is domiciled. Guaranty funds are financed by assessments on member insurers' premiums written in covered lines of business in a state subject to an annual cap (usually 1 percent or 2 percent of premiums). With the exception of New York's property-liability guaranty fund, assessments are made after an insolvency occurs to cover the claims of the insolvent insurer. New York has a pre-insolvency assessment property-liability guaranty fund. Assessments also are made to cover the administrative expenses of guaranty funds. The burden of guaranty fund assessments are ultimately shared by 1) all policyholders through higher insurance rates; 2) taxpayers, because of state premium tax offsets (in some states) and deductions for federal income taxes; and 3) owners of insurers (Barrese and Nelson, 1994).

Guaranty associations have been criticized for reducing buyers' incentives to avoid high-risk insurers, which encourages excessive risk-taking and leads to higher insolvency costs. Proper incentives from the buyers' perspective could be maximized by totally removing guaranty fund protections, but state legislatures have rejected that approach. The fact that even an optimal regulatory structure will still result in a residual number of insolvencies might be offered as a rationale for retaining some sort of safety net for policyholders. Some have suggested, however, that safety incentives could be improved by having policyholders share a greater portion of

[11] Most states have separate property-liability and life-health guaranty associations, although several states have combined associations with separate assessments. Klein (1992) provides an overview of the structure and provisions of and key policy issues affecting state guaranty funds. Current information on property-liability guaranty funds can be obtained from the National Conference on Insurance Guaranty Funds (NCIGF). Information on life-health guaranty funds can be obtained from the National Organization of Life and Health Guaranty Associations (NOLGHA).

insolvency costs or by imposing some form of risk-based assessment scheme on insurers if such a system proved to be feasible (see Cummins, 1988; Feldhaus and Barth, 1992; and Feldhaus and Kazenski, 1998). It also is important to coordinate the degree of regulatory stringency with the extent of guaranty fund protection. Lax controls combined with extensive guarantees would be a recipe for disaster, as savings and loan regulators found.

Concerns about the adequacy of state insurance regulation also extend to the state-based systems for administering receiverships and guarantying policyholders' funds. Issues have been raised about coverage differences between states, the capacity of the system to handle major insolvencies and the efficiency of receivership administration (see Grace, Klein and Phillips, 2002). There are different opinions about whether states should be allowed some flexibility in determining the amount of guaranty association coverage for their residents, but there is general support for minimum standards and improved efficiency. The NAIC has developed a series of reforms to address acknowledged weaknesses in the current system for administering receiverships and guaranty fund coverage. These reforms include eliminating coverage gaps between states, improving communication and coordination between state guaranty funds and receivers, and enhancing consumer information about guaranty funds.

Most recently, the NAIC has embarked on a broad set of initiatives to improve the efficiency of receiverships and their interaction with guaranty associations. These initiatives include substantial changes to the Insurer Receivership Model Act (incorporating Uniform Receivership Law provisions), upgrading the standardized data available on receiverships, updates and improvements to the *Receivers Handbook for Insurance Company Insolvencies*, and white papers on significant issues, such as the application of accreditation in receiverships. This activity reflects the NAIC's inclusion of receiverships in its roadmap to modernize insurance regulatory standards.

D. Financial Regulation Standards and Accreditation

The growing interdependence of the states in regulating multistate insurers, coupled with the varying quality of regulation among the states in the face of increased insurer financial risk, prompted the NAIC to develop a certification program for insurance departments. The goal of the program is to ensure that a state's solvency regulation meets certain minimum requirements so that other jurisdictions can have a degree of confidence in the state's oversight of its domiciliary companies. The NAIC Policy Statement on Financial Regulation Standards, adopted in June 1989, represents a comprehensive set of standards designed to establish consistent and effective regulation of the financial condition of insurance companies. The standards go beyond model laws by establishing a composite list of legislative and administrative prerequisites for an effective solvency regulatory program in three areas: 1) laws and regulations; 2) regulatory practices and procedures; and 3) organizational and personnel practices.

In order to provide guidance to the states regarding the minimum standards and an incentive to put them in place, in 1990 the NAIC adopted a formal accreditation program, called the Financial Regulation Standards and Accreditation Program. Under this program, each state's insurance department is reviewed by an independent review team that assesses the department's compliance with the NAIC's financial regulation standards. State insurance departments meeting the NAIC standards are publicly acknowledged, while departments not in compliance are given guidance by the NAIC on how to bring the department into compliance.

The accreditation program has significant implications for the effectiveness and efficiency of state solvency regulation of insurance companies. By certifying that a state's regulatory program meets certain minimum requirements, there is greater assurance that the oversight of its domestic insurers is adequate. This promotes efficiency by allowing each state to focus its resources on its own domiciliary insurers, which improves the quality of that regulation while avoiding duplicative analysis and

examinations of insurers by non-domiciliary states. Efficiencies also are achieved by using the NAIC as an accrediting body, as it would be costly for each state to independently review and certify the regulatory quality of every other state.

As the accreditation program matured and concerns were expressed that its requirements remain reasonable, in 1995 the Financial Regulation Standards and Accreditation (F) Committee initiated an in-depth review of the relevance and effectiveness of the standards and accreditation program. In 1997, the NAIC adopted revisions to the financial regulation standards and accreditation process to better distinguish those laws and other standards believed to be critical to effective financial regulation.

While it's difficult to quantify the impact of the NAIC accreditation program, there is evidence to suggest it has had a significant positive effect on the infrastructure for state solvency regulation. Every state has enacted a legislative package designed to achieve compliance with the NAIC standards. As discussed in Chapter 9, insurance department budgets and staffing have steadily increased, despite state fiscal constraints. There also is considerable anecdotal evidence that a number of insurance departments improved their internal procedures and increased the sophistication of their analysis tools in order to pass muster under the NAIC's accreditation program. As the criteria for good financial regulation continue to evolve and are incorporated into the standards and accreditation program, states must continue to upgrade their resources and practices to retain their accreditation.

Synopsis of Key Points

1. The principle objective of insurer financial regulation is to limit insurers' financial risk and intervene against troubled insurers to protect consumers.
2. Capital and surplus standards (fixed minimums and risk-based capital) establish a basic financial cushion to protect an insurer against unexpected increases in its liabilities or declines in the value of its assets.

3. Other financial requirements, such as investment restrictions and reserve requirements, are intended to further limit insurer financial risk and trigger regulatory action if insurers fail to comply with these requirements.
4. Regulators employ various tools to monitor the financial condition of insurers, including financial reporting, early warning systems, desk audits, examinations and the review of other quantitative and qualitative information that can provide insights into an insurer's financial condition.
5. If an insurer encounters financial difficulty, regulators will intervene in an attempt to resolve problems through informal action. If this does not resolve the situation, regulators will place an insurer into formal receivership and either rehabilitate or sell the insurer, or liquidate it. Guaranty funds exist in all states to cover the financial obligations of insolvent licensed insurers to their policyholders within certain limits.
6. The NAIC implemented the Financial Regulation Standards and Accreditation program for insurance departments to provide benchmarks by which departments could judge the adequacy of their financial regulatory programs and demonstrate their achievement of these standards.

Suggested References

A.M. Best Company, 2004, *Best's Insolvency Study, Property/Casualty U.S. Insurers*, 1969–2002 (Oldwick, N.J.: A.M. Best).

A.M. Best Company, 2005, *Best's Insolvency Study, Life/Health U.S. Insurers*, 1976–2002 (Oldwick, N.J.: A.M. Best).

American Council of Life Insurers, 1990, *Report of the ACLI Task Force on Solvency Concerns* (Washington, D.C.: ACLI).

Barrese, James and Jack M. Nelson, 1994, "Some Consequences of Insurer Insolvencies," *Journal of Insurance Regulation*, 13: 3–18.

Cummins, J. David, 1988, "Risk Based Premiums for Insurance Guaranty Funds," *Journal of Finance*, 43: 823–839.

Cummins, J. David, Scott E. Harrington and Gregory R. Niehaus, 1995, "Risk-Based Capital Requirements for Property-Liability Insurers: A Financial Analysis," *The Financial Dynamics of the Insurance Industry* Edward I. Altman and Irwin T. Vanderhoof, eds., (New York: Irwin Professional Publishing).

Cummins, J. David, Martin F. Grace and Richard D. Phillips, 1999, "Regulatory Solvency Prediction in Property-Liability Insurance: Risk-Based Capital, Audit Ratios, and Cash Flow Simulation," *Journal of Risk and Insurance*, 66: 417–458.

Feldhaus, William R. and Michael M. Barth, 1992, "Risk-Based Pricing Factors for Property and Casualty Insurance Guaranty Funds," *CPCU Journal*, 45: 239–249.

Feldhaus, William R. and Paul Kazenski, 1998, "Risk-Based Guaranty Fund Assessments: An Allocation Alternative for Funding Insurer Insolvencies," *Alternative Approaches to Insurance Regulation*, Robert W. Klein, ed., (Kansas City, Mo.: NAIC).

Grace, Martin F., Scott E. Harrington and Robert W. Klein, 1998a. "Risk-Based Capital and Solvency Screening: Hypotheses and Empirical Tests," *Journal of Risk and Insurance*, 65: 213–243.

Grace, Martin F., Scott E. Harrington and Robert W. Klein, 1998b. "Identifying Troubled Life Insurers: An Analysis of the NAIC FAST System," *Journal of Insurance Regulation*, 16: 249–290.

Grace, Martin F., Robert W. Klein and Richard D. Phillips, 2001, "Regulating Onshore Special Purpose Reinsurance Vehicles," *Journal of Insurance Regulation*, 19: 551–590.

Grace, Martin F., Robert W. Klein, and Richard D. Phillips, 2002, "Managing the Cost of Property-Casualty Insurer Insolvencies," Report to the NAIC, December.

Klein, Robert W., 1992, *Issues Concerning Insurance Guaranty Funds* (Kansas City, Mo.: NAIC).

Klein, Robert W., 1995, "Insurance Regulation in Transition," *Journal of Risk and Insurance*, 62: 363–404.

National Association of Insurance Commissioners, 1990, "Committee on Examination Processes: Background, Findings, and Recommendations," in *NAIC Proceedings 1991* Vol. I (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 1992, *Troubled Insurance Company Handbook* (Kansas City, Mo.: NAIC).

Swiss Re, 2000, "Asset-Liability Management for Insurers," *Sigma*, 6: 1–36.

U.S. General Accounting Office, 1989, *Insurance Regulation: Problems in the State Monitoring of Property/Casualty Insurer Solvency* (Washington, D.C.: Government Printing Office).

U.S. General Accounting Office, 1991, *Insurance Industry: Questions and Concerns About Solvency Regulation*, Statement of Johnny C. Finch before the Committee on Commerce, Science and Transportation, U.S. Senate (Washington, D.C.: Government Printing Office).

U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, 1990, *Failed Promises: Insurance Company Insolvencies.*

U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, 1994, *Wishful Thinking: A World View of Insurance Solvency Regulation*.

Chapter 11

Market and Other Regulatory Functions

Chapter Objectives

1. Outline the principal areas of insurance market regulation and regulators' objectives.
2. Explain the different approaches that states use to regulate insurance rates and policy forms.
3. Describe the focus of market conduct regulation and the various tools that regulators use to prevent market abuses.
4. Outline other market regulatory functions performed by insurance commissioners, including monitoring competition, consumer information, producer licensing, residual market administration and antifraud activities.
5. Discuss important consumer-protection initiatives.

Market regulation encompasses a diverse set of areas and is approached somewhat differently by the various states. The fundamental objective is to promote the proper functioning of insurance markets to serve the interest of consumers and the general public. Rates and policy forms are subject to some form of regulatory oversight in nearly every state. The way in which this oversight is exercised in a particular state varies by line or market. Also, the approaches used to regulate a particular area (e.g., personal auto insurance rates) sometimes vary among the states.

State laws typically require that property-liability rates not be inadequate, excessive or unfairly discriminatory and that life-health rates should be reasonable in relation to the benefits provided. In addition, insurers must generally obtain approval for the products they sell and, specifically, the policy forms they use. Regulators seek to ensure that policy provisions comply with state law, are reasonable and fair and do not contain major gaps in coverage that might be misunderstood by consumers and leave them unprotected. Market practices also are subject to regulation in that commissioners police insurers' and agents' sales and underwriting activities to ensure their adherence to certain standards and that claims are paid according to the provisions of insurance contracts. The intention is to prevent abusive practices (e.g., false sales illustrations or the failure to pay legitimate claims on a timely basis) that take unfair advantage of consumers.

A. Rate and Form Regulation

For the personal property-liability lines, approximately half of the states require rates to be filed and receive prior approval before they go into effect (see Table 11.1). These laws often have "deemer" provisions that limit a regulator's ability to delay taking action on a filing. A typical "deemer" provision would state that a filing is considered approved within a stated period of time (typically ranging from 30 to 60 days) if the insurance department fails to act on the filing. Other states allow insurers to implement personal lines rates without prior approval, placing greater reliance on competition to regulate prices. These systems typically are "file and use" or "use and file" systems that allow the regulator to subsequently

disapprove the rates if they fail to meet regulatory requirements.[1] Several states also have "flex-rating" laws that do not require prior approval for rate changes unless they exceed certain parameters with respect to the relative magnitude of a change (e.g., 10 percent). With the exception of workers' compensation and medical malpractice, commercial property-liability lines in many states also are subject to a competitive-rating approach. Under such a system, regulators typically retain authority to disapprove rates if they find that competition is not working; although, in practice, such a finding has rarely occurred.

Research on the effects of rate regulation in property-liability insurance have generally found that prior-approval systems do not have a significant effect on premium levels or profitability (Klein, 1995). In other words, markets with competitive-rating and prior-approval systems tend to perform similarly. This is consistent with the evidence that most insurance markets are workably competitive. The only exception to this observation on the effects of rate regulation is when regulators have applied tight price ceilings when claim costs are escalating rapidly. This can lead to insurance availability problems until legislative or regulatory reforms are implemented to reduce costs and premiums.

Premiums for life insurance and annuity products are generally not subject to regulatory approval, although regulators may seek to ensure that policy benefits are commensurate with the premiums charged. Many states also subject health insurance rates to prior approval, with the rest using a file-and-use system or no provisions for review (see Table 11.2). Typically, the states enforce minimum loss-ratio requirements for Medicare supplement insurance, long-term care insurance[2] and credit insurance products.[3]

---

1 Many of the laws governing competitive-rating systems require the commissioner to show a lack of competition in order to subsequently disapprove a filed rate. State rating laws tend to be based on NAIC model prior-approval and competitive-rating laws.

2 States are moving away from use of loss ratios on long-term care insurance and instead are relying more on standards for premium increases.

3 The NAIC maintains charts on the rate regulatory systems of the various states for the different lines.

Table 11.1
Summary of State Rate Filing Requirements - Property-Liability
As of June 2004

State	Personal Lines			Commercial Lines					Comments
	Auto	Other Property	Other Casualty	Work Comp	Med Mal	Property	Other Casualty	Title	
Alabama	PA	PA	PA	PA	PA	PA	PA	FU	
Alaska	PA	PA	PA	PA	PA	PA	PA	PA	
Arizona	UF	UF	UF	FU	FU	UF	UF	FU	
Arkansas	FU	FU	FU	PA	FU	FU	FU	NP	
California	PA	PA	PA	PA	PA	PA	PA	FU	FU - surety
Colorado	FU	FU	FU	FU	FU	FU	FU	FU	
Connecticut	FU	FU	FU	FU	FU	FU	FU	PA	
Delaware	FU	FU	FU	FU	FU	FU	FU	FU	
District of Columbia	FU	FU	FU	PA	FU	FU	FU	NP	
Florida	UF	UF	UF	PA	UF	UF	UF	SR	FU - optional for insurers
Georgia	PA	FU	FU	FU	FU	FU	FU	NP	
Hawaii	PA	PA	PA	PA	PA	PA	PA	NP	
Idaho	UF	UF	UF	PA	UF	UF	UF	PA	
Illinois	UF	UF	UF	UF	UF	NF	NF	NF	FU - group inland marine
Indiana	FU	FU	FU	FU	FU	FU	FU	E	
Iowa	UF	UF	PA	PA	PA	PA	PA	PA	
Kansas	FU	FU	FU	PA	FU	FU	FU	FU	
Kentucky	FR	FR	FR	FR	FR	FR	FR	FU	
Louisiana	FR	FR	FR	FR	FR	FR	FR	FR	
Maine	FU	FU	FU	PA	FU	FU	FU	FU	FU - for lines designated as competitive
Maryland	FU	FU	FU	FU	FU	FU	FU	FU	
Massachusetts	FU/SR	FU	FU	FU	SR	FU	FU	FU	Requirement for auto depends on finding of competition.
Michigan	FU	FU	FU	FU	FU	FU	FU	FU	
Minnesota	FU	FU	FU	PA	FU	FU	FU	FU	
Mississippi	PA	PA	PA	PA	PA	PA	PA	NP	
Missouri	UF	UF	UF	UF	UF	UF	UF	FU	

Montana	FU	FU	FU	FU	FU	FU	FU	FU
Nebraska	PA	PA	PA	FU	FU	FU	FU	PA
Nevada	PA	PA	PA	PA	PA	NF	NF	FU
New Hampshire	FU	FU	FU	UF	UF	UF	UF	PA
New Jersey	PA	PA	PA	PA	UF	UF	UF	PA
New Mexico	PA	PA	PA	PA	PA	PA	PA	SR
New York	FU	FU	FU	PA	PA	PA	FR	PA
North Carolina	PA	PA	PA	FU	PA	PA	PA	FU
North Dakota	PA	PA	PA	PA	PA	PA	PA	PA
Ohio	FU	FU	FU	FU	FU	FU	FU	PA
Oklahoma	FU	FU	FU	FU	FU	FU	FU	FU
Oregon	FU	FU	FU	PA	FU	FU	FR	PA
Pennsylvania	PA	PA	PA	PA	FU	FU	FU	PA
Rhode Island	FU	FU	FU	PA	FU	FU	FU	FU
South Carolina	PA	PA	PA	PA	PA	PA	PA	PA
South Dakota	PA	PA	PA	PA	PA	PA	PA	PA
Tennessee	PA	PA	PA	PA	UF	UF	UF	FU
Texas	FR	PA	FR	FU	PA	FU	FU	SR
Utah	UF	UF	UF	FU	UF	UF	UF	FU
Vermont	UF	UF	UF	FU	UF	UF	UF	UF
Virginia	FU	FU	FU	PA	FU	FU	FU	E
Washington	PA	PA	PA	PA	UF	UF	UF	FU
West Virginia	PA	PA	PA	PA	PA	PA	PA	NP
Wisconsin	UF	UF	UF	PA	UF	UF	UF	UF
Wyoming	NF	NF	NF	NF	PA	NF	NF	PA

Prior Approval (PA): Rates must be filed and approved before they can be used.
Flex Rating (FR): Prior approval only required if rates exceed (and sometimes fall below) previously filed rates by a certain percentage.
File and Use (FU): Rates must be filed before they are used; may be subsequently disapproved.
Use and File (UF): Rates must be filed within a specified period after they have been put into use.
No File (NF): Rates not required to be filed or approved by department.
No Provision (NP): No provision for rate filing or approval.
Exempt (E): Rates exempt from filing or approval requirement.
State Rate (SR): Commissioner sets rate.
Source: NAIC

Table 11.2
Summary of State Rate Filing Requirements - Accident-Health
As of June 2005

State	Individual Health	Group Health	Med. Supp.	Long-Term Care
Alabama	NP	NP	NP	NP
Alaska	FU	FU	PA	FU
Arizona	FR	FR	FR	FR
Arkansas	PA	NP	NP	NP
California	FI	NF	FI	FI
Colorado	FU	FU	PA	PA
Connecticut	PA	FU	PA	FU
Delaware	FU	FU	FU	FU
District of Columbia	FU	FU	FU	FU
Florida	PA	PA	PA	PA
Georgia	PA	NP	NP	NP
Hawaii	NP	NP	NP	NP
Idaho	FU	NP	NP	NP
Illinois	FU	FU	FU	FU
Indiana	PA	FU	NP	NP
Iowa	PA	PA	PA	PA
Kansas	FU	FU	NP	NP
Kentucky	PA	PA	PA	PA
Louisiana	FU	FU	PA	FU
Maine	PA	FU	PA	PA
Maryland	FU	FU	FU	FU
Massachusetts	PA	NF	PA	PA
Michigan	PA	NP	NP	NP
Minnesota	PA	PA	PA	PA
Mississippi	FR	FR	PA	PA
Missouri	NP	NP	NP	NP
Montana	NP	NP	PA	NP

Nebraska	FU	FU	FU	FU
Nevada	PA	FU	NP	NP
New Hampshire	PA	PA	PA	PA
New Jersey	PA	NP	NP	NP
New Mexico	PA	PA	PA	PA
New York	FU	NP	NP	NP
North Carolina	FU	FU	FU	FU
North Dakota	PA	PA	PA	PA
Ohio	PA	PA	PA	PA
Oklahoma	FU	NP	NP	NP
Oregon	PA	NP	NP	NP
Pennsylvania	FU	FU	FU	FU
Rhode Island	PA	PA	PA	PA
South Carolina	PA	NP	NP	NP
South Dakota	FU	NP	NP	NP
Tennessee	PA	PA	PA	PA
Texas	FU	FI	PA	FU
Utah	FU	NP	NP	NP
Vermont	PA	PA	PA	PA
Virginia	PA	FI	PA	NP
Washington	PA	PA	PA	PA
West Virginia	PA	PA	PA	PA
Wisconsin	UF	NP	NP	NP
Wyoming	FU	NP	NP	NP

Prior Approval (PA): rates must be filed and approved before they can be used.
File for Information (FI)
File for Review (FR)
File and Use (FU): rates must be filed before they are used; may be subsequently disapproved.
Use and File (UF): rates must be filed with specified period after they have been put into use.
No File (NF): rates not required to be filed or approved by department.
No Provision (NP): No provision for rate filing or approval.
Source: NAIC

The nature of the review of rates, rating rules and policy forms varies somewhat among the states depending on their laws and regulations and the specific requirements that must be met, as well as the resources available to perform the review. Analysts typically assess the reasonableness of the rates/forms being filed against regulatory and industry benchmarks and supporting documentation provided by the insurer. Some regulators tend to give more attention to filings by advisory organizations and large insurers that will have the greatest impact on the market.[4] Rate filings for residual market mechanisms also get special attention.

Historically, many property-liability insurers adopted rates filed by an advisory organization (e.g., the Insurance Services Office and the National Council on Compensation Insurance) or filed deviations from advisory rates. In the early 1990s, the states moved to a system in which advisory organizations file developed and trended loss costs (including loss-adjustment expense) only. Insurers are allowed to file multipliers to these loss costs, which include provisions for expenses, profit and investment income, or full rates as before. The intent of such a system is to promote independence and competition among insurers by removing advisory rates as a potential focal point for prices.

A few jurisdictions have garnered considerable attention for stringent price regulation but, as a practical matter, the majority of states rely heavily on competition to regulate insurance prices — even those states with prior-approval systems. The reliance on market forces is necessitated by the large number of insurers and the frequency and complexity of their rate filings. An NAIC survey of state insurance departments indicated that the majority of rate filings under prior-approval laws are approved by regulators with no modifications.[5]

---

4 In a 1994 NAIC rate regulation survey of state insurance departments, 12 of the 25 states responding to the survey indicated that they gave greater scrutiny to the rates of larger writers.

5 The 1994 NAIC rate regulation survey obtained statistics on the disposition of rate filings in 1993 for 18 states for personal auto and 15 states for workers' compensation. Responding prior-approval states indicated that they approved 62.3 percent of the rate filings filed for personal auto and 71.6 percent of the rate filings for workers' compensation with no modification.

In effect, regulators tend to apply a range of reasonableness to filed rates, disapproving rates that fall outside that range and compelling insurers to reduce the premiums they charge. Some states regulate the prices of large carriers in significant lines more stringently and may impose a ceiling on rate increases.[6] Rate regulation tends to receive more political attention and be more stringent in markets subject to severe cost inflation, such as private passenger auto insurance and workers' compensation insurance. In a few cases, state legislatures have mandated rate freezes or rate reductions, typically in combination with legislative reforms intended to reduce costs. Regulation of residual market prices also can effectively place a cap on voluntary market prices.

Regulators require insurers to file their policy forms and may require their prior approval before they can be implemented. In this area, regulators typically look for policy provisions that do not comply with regulatory requirements, provide inadequate coverage or may be misunderstood by consumers. In such instances, regulators will require policy forms to be revised before an insurer can introduce them into the market or continue selling them if they have already been introduced.

In the late 1990s, a number of states eased their regulation of rates and policy forms for insurance purchased by "large commercial buyers." The notion underlying this development was that large buyers have greater resources and sophistication to protect their interests in insurance transactions and favor greater flexibility in contract terms. The states vary somewhat in their criteria for "exempted buyers" and the provisions that apply to transactions for these buyers.

In 2004, New York State Attorney General Eliot Spitzer and the New York State Department of Insurance discovered that certain insurers and large insurance brokers were engaged in bid-rigging and payment of contingent commissions without adequate disclosure to buyers. These investigations

---

6 Four of the 25 states responding to the 1994 NAIC survey indicated that they were more likely to disapprove the rate filings of large insurers.

led to the firings of several individuals and the resignation of a couple of CEOs of major insurers and insurance brokers. They also resulted in an amendment to the NAIC's Producer Licensing Model Act that required enhanced disclosure to policyholders and greater transparency of insurance transactions. These developments may affect regulators' views on whether large commercial buyers are truly able to fend for themselves when dealing with insurers and large insurance brokers in an unregulated environment.

B. Market Practices

Responding to consumer complaints, conducting market analysis and performing market-conduct examinations are the primary ways in which insurance departments regulate market practices. Departments reported a total of 466,902 consumer complaints and approximately 1,648 market conduct exams (including combined financial/market conduct exams) in 2003. Most departments have established toll-free consumer hotlines, Web sites, forms and special consumer services units to receive and handle complaints against insurers and agents, as well as communicate directly with consumers. Department analysts attempt to determine whether a complaint has merit and may possibly constitute a violation of state laws or regulations. Most complaints are resolved without resorting to formal administrative or legal actions that could result in fines — or even license suspensions or revocations — against an insurer or agent.[7]

Market conduct examinations were traditionally conducted on a routine basis or could be triggered by complaints against an insurer and other indicators. Routine or periodic exams tended to be comprehensive in nature, while triggered exams may be targeted to investigate particular areas of concern. In recent years, states have been evolving toward the use of targeted examinations to address known market problems in lieu of the traditional comprehensive market conduct examination. Routine or periodic exams tend to cover the following areas: 1) company

[7] Complaint statistics on individual insurers can be obtained directly from most insurance departments, as well as from the NAIC's Web site, www.naic.org.

operations/management; 2) complaint handling; 3) marketing and sales; 4) underwriting and rating; 5) policyholder service; 6) producer licensing; and 7) claims processing. Targeted exams focus on one or more particular areas of concern. Examinations and financial penalties serve to increase insurers' incentives to comply with the law. Examiners review a company's policy files, claims files and other internal records to ensure that the company is acting in compliance with state laws and regulations. Market conduct examiners utilize electronic exam tools to increase their efficiency and effectiveness. These tools allow examiners to review all relevant records in an insurer's database (rather than just a sample) and generate specialized reports as needed.

Generally, examiners check to see that the rates charged are consistent with the rates that have been filed and approved (if approval is required) and that claims covered under a policy are paid within a reasonable period of time and conform with promised coverage as stated in the policy form. Unfair marketing and underwriting practices are more difficult to police, as documented evidence of such abuses may be lacking. Examiners review policy declinations, cancellations and non-renewals to ensure that a company is not engaging in unfair discrimination and that it is providing proper notice to applicants and insureds. Examiners also may review company correspondence and training materials to detect illegal behavior.
The various market regulatory functions interact with each other and with financial regulatory functions. Market conduct examiners ensure that the rates and policy forms used by insurers have been filed with the insurance department in compliance with state laws and regulations. Regulators in the rates and forms area and the market conduct area alert each other to possible violations or problems that may require changes in regulations and review procedures.

Market regulators also play an important role in assisting solvency regulation. Because market regulators monitor insurers' prices, products and trade practices, they can alert financial regulators to potential solvency problems. Market regulators can draw attention to several indicators of potential financial trouble, including inadequate rates, rapid expansion into risky lines or products, a high number of consumer complaints, excessive delays in paying claims and the lack of good internal controls on

underwriting and sales activities. Insurance departments have enhanced the coordination of the financial and market regulation units to expand and quicken the detection of potentially troubled insurers.

In addition, the NAIC has been leading an initiative to increase the efficiency and effectiveness of market conduct regulation through market analysis, uniformity and interstate collaboration. In 2004, in coordination with National Conference of Insurance Legislators (NCOIL), it adopted the Market Conduct Surveillance Model Law to provide a statutory framework for better market regulation. The broad purpose of the model is to establish a framework for insurance department market regulation, including a process and system for prioritizing problems, various means other than market conduct examinations by which insurance regulators can remedy problems, and procedures to coordinate and communicate regulatory actions among states. It requires states to report market data to the NAIC's Market Information Systems, which encompass the Complaint Database, the Exam Tracking System, the Regulatory Information Retrieval System and the Special Activities Database.

The NAIC has also implemented the Market Analyst's Checklist (developed in 2003) to help state regulators coordinate their market analysis activities. In 2004, state market analysts and NAIC staff completed 1,865 "Level 1" checklists on insurers, accounting for 85 percent of business written in five key lines. The results of this effort led to the referral of certain insurers to an NAIC subgroup for further coordinated investigation.

C. Monitoring Competition and Statistical Reporting

An important regulatory function is the monitoring of competition in various insurance markets, particularly those subject to a competitive rating system. In the 1970s and early 1980s, the NAIC developed a suggested system for monitoring competition to supplement other regulatory functions (see Hanson, et al., 1974). The foundation for a monitoring competition system is the structure-conduct-performance framework

discussed in Chapter 6. Some states, such as Illinois, Michigan and Virginia, have formal systems for monitoring competition and publish periodic reports. Other states approach this more informally as part of the general oversight of insurance markets. Some of the basic indices that might be used in monitoring competition are outlined in Box 11.1.

Box 11.1

Market Indicators for Monitoring Competition

Structure

Number of Insurer Groups/Stand-Alone Companies
Concentration Ratios
Herfindahl-Hirschman Index
Entry and Exit Barriers
Numbers of Entries and Exits
Consumer Knowledge of Market

Conduct

Price Dispersion
Product Variation
Market Conduct Violations

Market Performance Indicators

Loss Ratios
Expense Ratios
Profit Rates
Price and Cost Trends
Complaint Ratios
Consumer Satisfaction Surveys

The main sources of information for monitoring competition are data from insurers' financial statements and detailed statistical data on insurance transactions reported to statistical agents and insurance departments. The NAIC's *Statistical Handbook of Data Available to Insurance Regulators* provides recommended statistical reporting requirements and standard report formats for the various product lines. The principal statistical agents, generally utilized by regulators for reporting purposes, have modified their

systems and reports to meet the standards outlined in the *Statistical Handbook*. Some states, such as Illinois and Missouri, require insurers to file additional statistical information with their departments.

In 2004, the NAIC introduced the Commercial Lines Competition Database to assist state regulators with monitoring competition in their markets. It includes information that allows an analyst to review several factors to determine the competitiveness of a market: 1) market concentration; 2) entries and exits; 3) market growth; 4) availability of insurance; and 5) profitability.

D. Residual Market Administration

Residual markets play an important role in certain insurance markets, such as automobile, homeowners and workers' compensation insurance. Because of the "essential" nature of these coverages and the fact that many states (lenders in the case of property insurance) impose compulsory insurance requirements in these areas, the states have established mechanisms to provide coverage to those who cannot obtain it through the voluntary market. Different mechanisms are employed, including assigned risk plans, Fair Access to Insurance Requirements (FAIR) plans and windstorm/beach pools, joint underwriting associations, state insurance funds and reinsurance pools. While the industry is often given the principal responsibility for supporting and administering these arrangements, they are typically closely regulated by the insurance commissioner, which includes oversight of their rate structures. If a residual market's premiums are insufficient to cover its costs, the deficit is typically assessed back to insurers in proportion to their voluntary market shares.

Residual market rates are commonly set in relation to voluntary market rates. The intent is to provide an alternative source of coverage without attracting insureds that otherwise could obtain voluntary market coverage. This principle works in most cases and minimizes the size of these mechanisms, but there have been cases where the market becomes unbalanced and a significant share of the market is insured through the residual market, particularly if its rates are too low. This can result in large deficits that, when imposed on insurers' voluntary market policies, further

encourage the shrinking of the voluntary market and exacerbate the problem. Cyclical or short-term fluctuations in the supply of voluntary coverage also can expand residual markets. When residual mechanisms become too large and unbalance the market, reforms are typically implemented to depopulate the residual market and end large deficits.

E. Other Market Regulatory Functions

State insurance departments perform various other functions that are part of or related to their regulatory functions. Insurance commissioners are generally held accountable for the overall performance of insurance markets under their jurisdiction and this leads to a number of activities designed to support market operations.

1. Consumer Information and Services

Enhancing consumer information about insurers' prices, products and financial strength is a critical function, given the heavy reliance on competition to ensure good market performance. Regulators enhance consumer information by publishing brochures, speaking to schools and community groups, answering consumer inquiries and distributing information on insurers' prices, complaint experience and financial ratings. All departments have some form of a consumer telephone "hotline," and regulators answered 2.9 million such inquiries from consumers in 2003. Also, as noted above, many insurance departments have established Web sites and are increasing their use of the Internet to disseminate information and communicate directly with consumers.

2. Producer Licensing and Enforcement

All insurance intermediaries (agents, brokers, solicitors, etc.) involved in selling insurance in a state are required to be licensed and meet certain minimum requirements. States issue licenses to both resident and non-resident producers. In 2003, there were nearly 2 million licensed resident agents in the various states. Most states require agents to pass a test demonstrating sufficient knowledge of insurance and state regulations to be

allowed to serve insurers and consumers. All states also require agents to meet continuing education requirements to ensure they keep pace with insurance and regulatory developments. Applicants for agents' and brokers' licenses also are subject to a background check to screen out applicants who have been guilty of fraud or other regulatory violations. The Federal Omnibus Crime Bill of 1994 (18 U.S.C. 1033 and 1034) makes it a crime for a company to appoint an agent who has committed a felony involving dishonesty or breach of trust. As noted in Chapter 9, the NAIC has enhanced its databases and systems to aid regulators in the review of producer license applications.

If a producer commits fraud or violates other regulations, regulators can employ various sanctions, including license suspensions, revocations and cancellations, as well as impose fines. In 2003, the states reported 18,934 regulatory actions (suspensions, revocations, cease and desist orders, and denial orders) against producers, $8.7 million in producer fines and $11.9 million in restitutions to policyholders and claimants.

3. Antifraud Enforcement

Within the past two decades, a number of insurance departments increased their resources and efforts devoted to detecting and combating insurance fraud. As mentioned in Chapter 10, strict insurance antifraud provisions developed by the NAIC were enacted in the Federal Omnibus Crime Bill of 1994. The primary emphasis has been fraud committed by insurers, producers and service providers, but enforcement actions also have been targeted toward consumer fraud. Many experts estimate that at least 10 percent or more of insurance costs stem from fraudulent claims. Insurance departments have established separate fraud investigation units and coordinate with federal, state and local law enforcement officials in prosecuting insurance fraud. The development of comprehensive databases on insurance claims and other information, combined with sophisticated analytical tools, have aided the detection of fraud. The NAIC is now in the process of developing a Web-based, uniform fraud-reporting system through which consumers and insurance companies can electronically report suspected fraud to the appropriate state insurance department

In addition, the public can report suspected fraudulent activity anonymously via the NAIC's Web site. Allegations of fraud are forwarded by NAIC staff to the appropriate state authorities for further action.

4. Other Activities

Other functions that may be performed by insurance departments include coordinating market-assistance plans, collecting premium taxes and providing public information. In addition, insurance commissioners are frequently involved in developing legislation affecting public policy on insurance, such as tort reform and insurance requirements. Generally, insurance commissioners are expected to identify and help respond to various developments that affect the function of insurance markets, regardless of whether they fall within the scope of their formal authority.

F. Consumer Protection Initiatives

The NAIC and the individual states have strengthened consumer protections in a number of areas to respond to specific market abuses and unfair trade practices that arose or intensified during the 1980s and 1990s. Regulation has been tightened in areas such as policy terminations, assumption reinsurance, life insurance sales illustrations, health insurance rating and underwriting, credit insurance and claims-settlement practices. More recently, the NAIC and the states have focused on issues involving the use of credit information in underwriting, the protection of senior citizens in annuity transactions and the implications of contingent commissions paid to brokers.

These activities have been accompanied by steps to enhance consumer education and information about purchasing insurance and other issues or problems they may encounter. Early efforts included the development of NAIC consumer guides for auto, homeowners, long-term care and Medicare supplement insurance. This has been expanded to a consumer services component on the NAIC's Web site, called the Consumer Information Source, that enables consumers to access financial and complaint data on specific insurance companies, as well as other kinds of insurance consumer-related information. These NAIC services augment

consumer information and other services provided by state insurance departments. The NAIC also has sought to increase public input into its deliberations with a program that funds the expenses of consumer representatives to participate in NAIC meetings.

1. Urban and Rural Insurance Problems

Considerable attention has been focused on the issue of insurance availability and affordability in urban areas. The NAIC established a special task force to look at this issue after the 1992 Los Angeles riots renewed allegations that insurers were redlining against minority communities. Concerns about fair access to insurance confronted established industry business practices in underwriting selection and pricing. The NAIC and a number of states compiled ZIP code level data and conducted studies of conditions in urban insurance markets. Cost and availability problems in certain rural areas also have been noted, but most of the attention has focused on urban markets.

While the NAIC and state regulatory studies have found problems in urban insurance markets, the evidence from these and other research does not indicate that they are the result of widespread redlining or unfair discrimination.[8] A variety of factors could explain adverse market conditions in the inner-city, including high costs due to poor quality housing and higher crime rates. The functioning of insurance markets in these areas is complex and requires detailed analysis to identify problems, their causes and appropriate remedies.

In 1996, the NAIC task force issued a final report and a handbook that outlined a continuum of policy options to address urban insurance problems that starts with measures that rely primarily on market forces and

---

8 There is some debate about whether insurer underwriting guidelines based on the age and value of homes and the relationship between the market value and replacement cost of home, unfairly discriminate against some urban consumers. There are different points of view on this issue, but some insurers have refined their underwriting guidelines to address the concerns raised.

moves to greater regulatory intervention if market forces fail to work. Since then, the Market Regulation and Consumer Affairs (D) Committee has held periodic hearings on specific issues affecting the cost and availability of insurance in urban and rural areas (e.g., credit scoring). Many insurers and community groups also are involved in cooperative efforts to reduce risk and barriers to urban insurance markets.

2. Health Insurance Reform

The states have been active in the area of health care reform and the federal government has enacted limited legislation to deal with the most significant problems. Rapidly rising health care costs caused insurers to move away from broad pooling of risks for rating purposes. This led to greater segmentation in both group and individual health insurance markets as, in response to market demand, carriers sought to lower rates for younger, healthier groups and increase rates or reject older, less healthy groups. Some employer groups and individuals were unable to find or afford health coverage because of poor health or claims experience.

State and federal legislation was enacted to address public concerns about these problems. State actions have focused on restricting insurers' ability to reject applicants, constraining rate differentials, and requiring guaranteed renewability and portability of coverage. Underwriting restrictions include prohibiting the denial of coverage on the basis of the claims history or health status of employees and their families. Pricing restrictions range from requiring pure community rating to imposing rating bands on differences based on claims experience or health status.

The NAIC Small Employer Health Insurance Availability Model Act provides a prospective reinsurance mechanism to offset the possible adverse selection problems created by these underwriting and rating restrictions. A number of states also have enacted legislation creating health care purchasing alliances. The states are moving from an entity-based (i.e., traditional health insurance companies, HMOs, etc.) to a function-based regulatory approach, reflecting changes in the structure of the market.

The latest innovation in health care delivery is the emergence of what is known as consumer-directed health care. It is also known as consumer-driven health care. This innovation typically comes in two forms. First, there are health savings accounts (HSAs) associated with the issuance of a high deductible health plan (HDHPs). The second common form is the use of health reimbursement accounts/arrangements (HRAs) associated with an HDHP. The motivation for using consumer-directed health care is the high and rising cost of health care coverage and issues involving who is going to pay for it. In theory, the use of these plans is intended to motivate consumers to select less expensive health care options. The plans are too new to assess their value from a regulatory perspective and their effect on health care outcomes. Consumer advocates generally believe that the new consumer-directed health care plans result in savings for employers and insurers and higher out-of-pocket costs for consumers.

3. Life Insurance Market Conduct

The market conduct of life insurers received increasing regulatory scrutiny as severe abuses were uncovered in agents' sales practices in the early 1990s. Consumer expectations of high rates of return on interest-sensitive products evaporated when insurers' investment performance dropped. This led to numerous consumer complaints and lawsuits against insurers. Several large life insurers received hefty fines from regulators and agreed to refund millions of dollars to policyholders that were victims of sales abuses. These kinds of abuses are not surprising given the complex array of investment-oriented products offered by life insurers that some consumers may find difficult to fully understand. Regulators have wrestled with how to regulate life insurance sales illustrations so that buyers can reasonably compare policies and make informed decisions.

The NAIC went through a lengthy review process — with considerable input from the life insurance industry, software developers and consumer representatives — to design an illustration requirement that would help consumers understand this complex product. In addition, the model regulation developed sets of actuarial limitations on the numbers that may be used in the illustration so they will be closer to reality. The model regulation developed by the NAIC was adopted as a requirement by the

majority of states by mid-1998, and companies are generally following the model format even when it is not required. The intent of the illustration requirement is that companies avoid the use of footnotes and explain terminology used to consumers. Most important, the illustration must not give undue prominence to non-guaranteed elements or imply in any way that these results are guaranteed. Insurers may not talk about "vanishing premiums" or imply a policy will be paid up when, in fact, the cash value is being used to pay premiums.

Another problem that is not new but became more acute in the 1990s is the practice of "churning," "twisting" or the improper replacement of life insurance policies when it is not in the best interest of policyholders. This practice involved persuading consumers to use the cash value of an existing policy to purchase a new policy. However, a real issue existed as to whether the transaction was in the consumer's financial best interest. Consumers' difficulty in ascertaining the financial impact of replacing a policy makes them vulnerable to making choices that favor the insurer and agent at the expense of the policyholder. NAIC model laws and regulations governing sales illustrations and replacement of life and annuity policies are intended to assist consumers' understanding of the financial implications of replacing a policy, as well as notifying the company that issued the policy. In addition, regulators have either implemented or considered several options to further control churning, including: 1) regulation of commissions to decrease agents' incentives to replace policies unnecessarily; 2) institution of a "cooling off" or waiting period to allow consumers to review the replacing policy or reinstate the old policy; 3) mandatory notice to consumers outlining the risk of replacement; and 4) closer regulatory and company monitoring of agents' sales activities.

4. Use of Credit Information in Underwriting

Since the early 1990s, "credit scoring" has become an essential factor in insurers' underwriting and pricing of personal auto and home insurance. Credit scoring takes information on a person's credit history and processes it through an algorithm in a computer model to estimate the consumer's relative risk of filing an insurance claim. An adverse credit score can hamper a consumer's ability to purchase insurance from a preferred carrier

and/or force the consumer to pay higher premiums. Credit scoring has been questioned by regulators and criticized by a number of consumer advocates. The principal concerns involve the validity and fairness of credit scoring as a risk-measurement tool and its potentially adverse effects on certain groups. There are also concerns about the consequences of incorrect or misinterpreted credit-related information and consumers' ability to learn about and correct such misinformation. Insurers and vendors counter with statistical studies showing a correlation between the risk of loss and credit scores, contending that credit scoring is an effective and cost-efficient tool when combined with other risk-assessment methods.

Since the mid-1990s, the NAIC and various states have undertaken a series of investigations of credit scoring and related practices, followed by legislation and regulations in most jurisdictions. In general, the thrust of these efforts has been to impose certain guidelines on and increase the transparency of credit-scoring practices. In 2003, the NAIC adopted a consumer brochure and an analysis of regulatory options that states might adopt.

In 2004, the NAIC adopted an *Insurance Credit Scoring Regulatory Best Practices* white paper. This document made recommendations to regulators related to best practices regarding several areas involving the use of credit scores by insurers. Issues addressed by the document include adverse actions, extraordinary life circumstances, neutral scores related to no hits, scoring model submission standards, sole factor prohibitions and periodic reviews of credit scores.

At the time this text was written, the Federal Trade Commission (FTC) was conducting a study of the use of credit scoring by insurers. The study is intended to investigate the use of credit scoring by insurers and the impact of credits scores on the availability and affordability of insurance.

5. Brokers and Contingent Commissions

In 2004, certain brokers' practices and compensation arrangements became a hot topic following a complaint filed by the New York State Attorney General's Office and the New York State Insurance Department against

insurance broker Marsh & McLennan and several large insurers. The complaint alleged that Marsh and the insurers had engaged in the payment of improper fees and "bid-rigging" in commercial insurance transactions. A number of state insurance regulators also initiated investigations of broker-insurer relationships and transactions. A central issue was insurers' payment of "contingent commissions" to brokers for placing business with the insurers. The concern was that this form of compensation distorted brokers' incentives to solicit bids and negotiate transactions in the best interests of their buyer/clients.

The payment of contingent commissions was a long-standing and well-known practice that regulators had accepted, given proper disclosure to insurance buyers. However, the allegations of bid-rigging and the facts that surfaced in the associated investigations prompted regulators to strengthen disclosure requirements and consider other market reforms. Quickly following the New York complaint, the NAIC formed the Broker Activities (EX) Task Force with a three-pronged action plan in the areas of fraud reporting, inquiry and coordination of state investigations, and greater transparency on broker compensation.

As one of its early steps, the NAIC adopted amendments to the NAIC's Producer Licensing Model Act to address producers' disclosure of compensation. These amendments are intended to ensure consumers are provided the necessary information to understand any potential conflicts of interest a producer may have because of the manner in which the insurance producer is compensated.

In addition, an electronic insurance exchange is being developed by commercial software vendors that would add transparency to the insurance transaction. This vehicle aims to offer an alternative to the paper-based disclosure requirements and might also help with competitive alternatives for American businesses.

Synopsis of Key Points

1. Market regulation encompasses a diverse set of functions that are approached somewhat differently by the various states.
2. Some states intervene more in regulating insurance prices and products, while others states rely more heavily on market competition.
3. Approximately one-half of the states subject personal lines rates and forms to prior approval, while other states employ competitive rating.
4. With certain exceptions (e.g., workers' compensation, medical malpractice, Medicare supplement insurance, etc.) most other property-liability and life-health lines are not subject to prior approval requirements, although policy forms may be.
5. Providing consumer information and monitoring competition are important functions for insurance departments, recognizing the reliance on effective competition to serve consumers' interests.
6. Insurance departments have increased their antifraud resources and efforts in response to identified abuses and concerns about higher costs generated by fraudulent claims.
7. State regulators have recently implemented a number of consumer-protection initiatives, including improving the availability of insurance in urban areas, health insurance reforms, addressing life insurance market conduct abuses, credit scoring and broker compensation and practices.

Suggested References

Hanson, Jon S., Robert E. Dineen and Michael B. Johnson, 1974, Monitoring Competition: *A Means of Regulating the Property and Liability Insurance Business* (Milwaukee, Wisc.: NAIC).

Klein, Robert W., 1995, "Insurance Regulation in Transition," *Journal of Risk and Insurance*, 62: 363–404.

National Association of Insurance Commissioners, 1997, *Statistical Handbook of Data Available to Insurance Regulators* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 1997, *Final Report of the Insurance Availability and Affordability Task Force* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 1997, *The Regulation of Health Risk-Bearing Entities* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Compendium of State Laws on Insurance Topics* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Examiners Handbook Market Conduct* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Insurance Department Resources Report 2003* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Market Analysis Handbook* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Model Laws, Regulations and Guidelines* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Issues 2004* (Kansas City, Mo.: NAIC).

Chapter 12

Significant Trends and Implications for Insurance Regulation

Chapter Objectives

1. Alert the reader to emerging industry trends that will have significant implications for insurance regulation.
2. Discuss the potential implications of these developments for insurance regulation and how regulators may need to respond.

The insurance industry's increasing complexity, risk and geographic scope place additional demands on regulators. Regulators must try to limit insolvency risk while still allowing insurers to continue to innovate and

compete. Regulators also must allow insurance markets to operate relatively freely to meet consumers' needs but prevent abuses and correct market failures. Industry developments have forced public officials to reassess this balance and modify regulatory institutions. Most insurers appear to possess sufficient competence and incentives so that they do not pose a significant solvency risk and serve consumers reasonably well. The problem lies with insurers that do not possess the requisite skills or incentives to survive or treat consumers fairly, as well as failures that affect markets.

The greater complexity of insurance products and investment strategies increases the opportunity for mismanagement, excessive risk-taking and fraud that can lead to costly insolvencies. Consumers, with limited incentives for safety because of guaranty fund protection, are also faced with greater difficulty in discerning the riskiness of insurers. It may often be difficult or relatively costly for them to acquire and analyze information regarding an insurer's financial condition. Lack of information also exposes some consumers to market abuses. The increasing complexity and expanding geographic scope of insurer operations and insurance markets makes state regulators' oversight job more difficult and increases the need for coordination among states.

All of these developments have required regulators to become more sophisticated in policing insurers' financial structure and activities to continue to achieve established public policy goals for safety and consumer protection. These developments also have increased consumer and industry political support for more effective solvency regulation and more efficient market regulation, qualified by many insurers' desire to retain flexibility in developing new products and adjusting their investment strategies.

This chapter reviews some of the more significant trends affecting the insurance industry and its regulation. It is difficult to predict what will happen in the industry for any extended period, but it is possible to discuss the general direction of important developments and their implications. Insurers and regulators need to keep an eye to the future in restructuring their institutions and operations to take advantage of new opportunities and respond to new challenges. Specifically, the developments addressed in this

chapter are 1) industry growth and consolidation; 2) increasing financial risk; 3) integration of financial services markets; 4) globalization of markets; 5) demographic trends; 6) information technology and electronic commerce; and 7) improving regulatory efficiency.

A. Industry Growth, Consolidation and Financial Risk

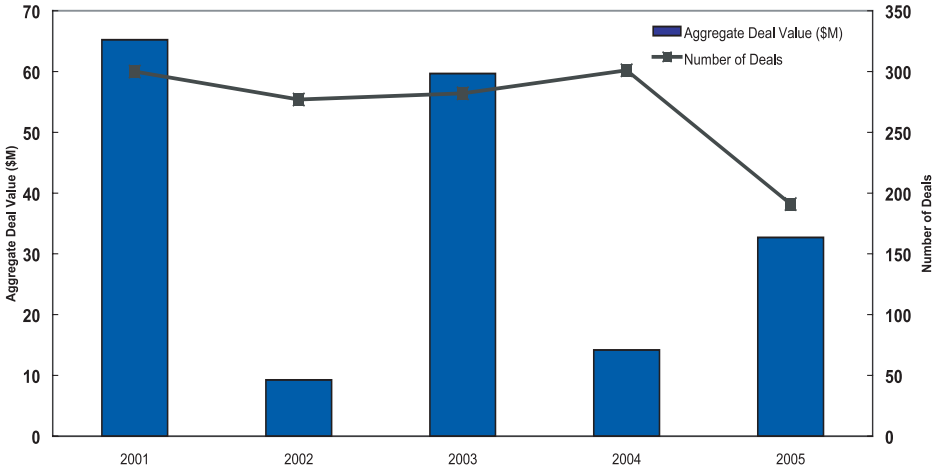
As discussed above, a wide variety of insurance products and services have appeared on the market to respond to a rapidly growing and diverse economy. This increases the demand on regulatory resources, as regulators must monitor and enforce regulations governing a large number of insurers and transactions, as well as more complex products, transactions and investments. Regulators will need to find ways to perform their functions more efficiently, as well as increase their resources when necessary, if they are to respond adequately to this challenge. The restructuring of the industry may require regulators to refocus their energies and technology on core regulatory responsibilities and rely more heavily on competition and market forces to increase market efficiency.

Many analysts predict there will be substantial consolidation within the industry in the next decade as insurers seek to adjust to economic and regulatory changes and improve their efficiency. Figure 12.1 plots insurance acquisition and merger activity over the past decade. Industry consolidation is driven by a number of factors, including 1) the need to reduce expenses to improve profit margins; 2) the need to divest low-return, non-core businesses; 3) restructuring of health insurers to position for reform measures; 4) capital needs; 5) excess capacity; 6) increased liquidity to fund mergers and acquisitions; 7) globalization of insurance markets; and 8) management strategies aimed at improving returns for owners.

The emergence of fewer, larger insurers presents advantages and disadvantages for regulation. To the extent that less efficient and weaker insurers are culled from the market, regulators will be responsible for monitoring a smaller group of more robust insurers. These insurers,

Figure 12.1

TOTAL INSURANCE-RELATED REPORTED MERGERS AND ACQUISITIONS
2001-2005



Whole deals only. Asset sales are not included. Includes terminated deals. Data as of 9/30/2005.
Source: The SNL DataSource.

presumably, will require less oversight with respect to preventing simple management errors and will have more capital to sustain short-term fluctuations in operating results. At the same time, these insurers may still be highly leveraged and are likely to have more complex financial structures. Also, as recent events suggest, even large, "well established" insurers may engage in questionable transactions and accounting practices that could potentially harm the interests of their policyholders.

Consequently, the risk of financial impairment and insolvency will still be present with higher potential losses because of insurers' greater size. Further, even just poor performance and erosion of capacity could have a negative effect on the supply of insurance. Hence, regulators may wish to increase the depth and sophistication of their monitoring activities, with an emphasis on assessing the overall financial risk of a company and uncovering major accounting misstatements, rather than seeking to enforce detailed rules governing every transaction and investment. This risk-based approach is more akin to the "prudential solvency regulation" model employed in some foreign countries with more concentrated markets.

B. Integration of Financial Services Markets

There is a definite trend toward increasing integration of insurance with other financial services markets, although this trend has not been as rapid or pervasive as some had anticipated. Many financial services companies are seeking to provide a broad array of financial products, including banking, credit, investments and insurance. These companies perceive significant economies of scope in cross-marketing various financial products to their customers. Some insurance companies also would like to sell other financial services to their customers. Whether these services are sold by one company or multiple companies, there is no doubt that consumers perceive certain insurance products and investments as substitutes and could value "one-stop shopping" — increasing competition between the providers of these services. At the same time, some financial companies have not yet successfully established themselves as multi-service providers or have retrenched from a multi-product model.

Regardless, economic forces continue to drive the integration of financial services markets, whether aided or impeded by federal and state laws. Historically in the United States, the Glass-Stegal Act had created walls between the selling of various financial services by the same firm. This changed with the enactment of the Gramm-Leach-Bliley Act (GLBA) in 1999, which eased the barriers between the sales of different financial services by the same entity. GLBA allows financial holding companies to own various subsidiaries that sell different financial services, including insurance. It structured regulation along functional (rather than entity) lines, meaning that insurance regulators are responsible for regulating all insurance transactions (regardless of the type of firm), securities regulators are responsible for overseeing securities transactions, etc.

This has had significant implications for state insurance regulation. The states are required to regulate the sale of insurance by non-insurance companies, or insurers that are owned by large financial holding companies. This functional regulatory scheme is being enforced in an environment in which there are increased attempts to cross-market

products; e.g., banks attempting to sell insurance to their banking customers. Competition between insurers and other financial service companies has increased, as has cross-industry mergers and acquisitions.

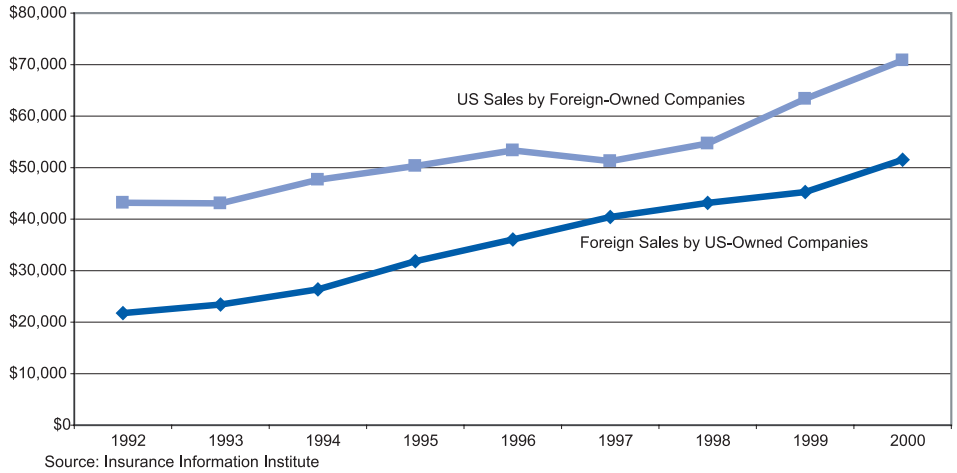
Regulators are pressured to maintain a level playing field, so that no entity — regardless of whether it a licensed insurer — is disadvantaged in its efforts to sell insurance products. At the same time, the attempt to tie the sale of other products with insurance, to the potential detriment of consumers, must be regulated. Insurance regulators also have to regulate the insurance transactions of entities that are not subject to the full scope of their authority in matters such as financial solvency and that are unaccustomed to insurance regulation. Clearly, there is a need for cooperation and coordination between the various regulators of financial services.

C. Globalization of Markets

Many insurers will continue to expand the geographic scope of their operations, and competition from foreign insurers will increase as trade barriers are reduced. Foreign companies are making increasing inroads into the U.S. insurance market. Large European financial holding companies, bolstered by regulatory reforms, are becoming formidable competitors and increasing their penetration in foreign markets, including the United States.[1] At the same time, some U.S. insurers are establishing a stronger presence overseas. Figure 12.2 plots foreign sales of property-casualty insurance by U.S. companies and U.S. sales of foreign-owned companies.

[1] Readers should note that some international conglomerates have sold their U.S. acquisitions when they found that they could not achieve their performance objectives.

Figure 12.2
International Sales of P-C Insurance ($Millions)



Source: Insurance Information Institute

Domestic insurers have sought reduction of U.S. regulatory barriers to increase their competitiveness with foreign insurers. The potential size of some developing markets, such as China, will breed large financial conglomerates that will be able to market an array of services.

The extension of insurers' operations across state and international boundaries has increased the interdependence among regulators in carrying out their responsibilities. This interdependence among regulators creates vulnerabilities, as well as potential levers to induce different jurisdictions to do a good job of regulating. However, it is more difficult for state regulators to control the activities of insurers domiciled outside the United States. Although alien insurers must meet a number of requirements to operate on a licensed or authorized non-admitted basis in the United States, this does not prevent U.S. citizens and firms from purchasing insurance from alien companies on a direct basis. Such transactions are not subject to U.S. regulatory protections. As more insurers extend their operations internationally, it is likely that there will be more of these types of transactions — with increased potential for market abuses.

Ideally, regulators in various countries will increase their cooperation and coordination to facilitate the appropriate supervision of international insurers. This would facilitate international trade in insurance that would work to the advantage of insurance buyers and help prevent unscrupulous insurers from taking unfair advantage of consumers. The development of international accounting standards that include rules for insurance firms is one of the important developments that will help regulators in evaluating alien insurers. Also, many countries are revamping their regulatory structures for financial services, including insurance, which hopefully will improve the quality and consistency of regulatory oversight across countries. Further, the International Association of Insurance Supervisors (IAIS) is playing an important role in facilitating communication and promoting best practices among insurance regulators in different countries.

D. Demographic Trends and Public Opinion

Public opinion has a significant impact on insurance regulatory policy and can cause shifts in regulatory priorities. Several trends in public attitudes toward insurance issues have helped shape changes in regulatory institutions. One important development is the greater saliency of the issue of insurance company solvency. Consumers' exposure to insolvency risk has increased with their appetite for investment-oriented life insurance and annuity products. Many Americans have become dependent on such products for a significant portion of their retirement income. The well-publicized failures of several major life insurers in the early 1990s, coming on the heels of severe fiscal problems among banks and thrifts, focused greater public attention on the solvency of insurance companies. This attention prompted state legislators and Congress to mount inquiries into insurance solvency regulation and increased political support for regulatory reforms.

The general "aging" of the population, combined with the shift of greater choice and risk to individuals and households, have important implications for insurance markets and their regulation. This is readily apparent in the area of savings and retirement: Many consumers will be looking to

investment-oriented insurance products, such as annuities, to provide a substantial source of their retirement income. This development poses significant issues with respect to consumer education and protection and the regulation of market practices. Health and long-term care insurance also will be important areas for market activity and regulatory oversight. Further, the advent of consumer-directed health care will likely give rise to issues that regulators will need to address.

Consumers' difficulty in evaluating the risk-and-return characteristics of different insurance products and their vulnerability to abusive sales practices have increased their demand for regulatory protections. Greater use of alternative distribution systems, such as direct-mail and the sale of insurance products over the Internet, has broken down consumers' long-term personal relationships with their local independent agents. While this has saved consumers money, it also increases the chance for friction between policyholders and their insurers when claims arise. This may have served to further increase public demand for regulatory protections and regulatory assistance in resolving contract disputes.

E. Information Technology and Electronic Commerce

Technology is an important catalyst for change. Developments in information technology are having significant effects on the insurance industry, which relies extensively on information to perform many functions. In theory, improved information technology should benefit consumers and insurers, but the changes raise issues for regulators. One important aspect of this development is the growth of various databases on consumers that insurers and other firms can use for purposes of marketing, risk assessment, pricing and underwriting. The increasing use of consumers' credit histories in the underwriting of homeowners and auto insurance is one such example. The acquisition and use of detailed health, including genetic, information on individuals in health and life insurance is another example. These developments could aid some low-risk consumers in obtaining insurance, but hurt high-risk consumers. Also, to the extent that new information still only provide proxies for risk, some consumers

and regulators may have concerns that some individuals will be affected unfairly by the use of this new information. More recently, security breaches of consumer databases have raised concerns about the misuse of these data, including identity theft and fraud. Insurance regulators will be confronted with the issue of the proper role and use of new databases and information as they are developed.

Insurance transactions conducted over the Internet (i.e., electronic commerce) are a related technological and economic development of great importance to regulation. The use of the Internet as a medium of commerce is growing exponentially. E-commerce is particularly well suited for the marketing of insurance products, particularly those products with standardized contracts, such as term life, auto and homeowners insurance. Many insurers have established Web sites to provide information and several vendors have developed electronic marketplaces for insurance.

To date, the Internet has been used much more as a vehicle to get information about insurance products than to purchase them. The incidence of online insurance transactions has lagged behind expectations, but there is evidence that inroads are being made. Recent studies reveal that an increasing number of consumers use the Internet to obtain insurance product and pricing information. The full consummation of personal insurance transactions electronically is more challenging, but will likely progress as technology improves and buyers become more comfortable with the medium. There is also evidence that online systems are playing an increasingly important role in commercial insurance markets, such as the development of Veritex, an electronic insurance exchange.

The progression of e-commerce raises some interesting issues and challenges for state insurance regulation. Traditionally, the states have exercised their authority over insurance through the geographic location of insurance transactions. However, the geography of commerce loses its traditional meaning when transactions are conducted over a worldwide electronic network. How, for example, does an insurance commissioner regulate the purchase of an auto insurance policy by a resident in a given state over the Internet from an insurer based in Belgium? While the states may seek to oversee such transactions as they have other direct-marketing

activities, the reality is that this is difficult to do in a world of e-commerce. Consequently, consumers who purchase insurance over the Internet will need to take greater responsibility in becoming informed to avoid abuses. State regulators will need to increase their information services to consumers and coordinate with regulators in other jurisdictions to address problems that may arise with insurers and intermediaries selling and servicing insurance over the Internet. The NAIC continues to provide a venue for regulators and the industry to deal with issues posed by e-commerce in insurance.

F. Improving Regulatory Efficiency

Dealing with 56 different market regulatory requirements in the various states and territories can be costly for multistate insurers and agents. Consequently, state insurance regulators and the NAIC have embarked on major initiatives to improve the efficiency of regulatory procedures to facilitate greater competition and concentrate regulatory efforts where they are most necessary to protect consumers. This effort has received renewed emphasis, with some insurers' and brokers' advocacy of a greater federal role in insurance regulation. The state initiatives are intended to make it easier for agents and insurers to operate on a multistate basis, while preserving individual state regulatory authority.

The states' efforts in this area have progressed in several phases. Beginning in the mid-1990s, the NAIC's Special Committee on Regulatory Re-Engineering identified several areas that warranted review, including company admission/licensing; special deposit requirements; countersignature requirements; deregulation of commercial lines; rate and form review; and other measures to improve the regulatory services received by insurance consumers. The committee issued a white paper in 1998 presenting its analysis and recommendations for further action by the relevant NAIC committees and the individual states. This was followed by subsequent NAIC reports in 2000, 2003 and 2005 that assessed the states'

progress and set forth objectives for further improvements in the national system of state-based insurance regulation.[2]

During this period, several initiatives ensued or gained increased momentum, including:

- Enhanced consumer protection, encompassing the Consumer Information Source (CIS) Web site.
- More efficient market regulation, encompassing the *Market Analysis Handbook*.
- "Speed to Market for Insurance Products," encompassing the Interstate Insurance Product Regulation Compact and the System for Electronic Rate and Form Filing (SERFF).
- Uniform forms and processes for producer licensing, encompassing the National Insurance Producer Registry (NIPR).
- Standardized insurance company licensing, encompassing the Uniform Certificate of Authority Application (UCAA).
- Improved solvency regulation, encompassing the Financial Data Repository (FDR).
- Streamlined changes of insurance company's control, encompassing the Form A Database.

In June 2004, the NAIC issued a "roadmap" that identified 15 areas where it believes national standards can be implemented by the states to provide a streamlined and seamless system of effective insurance regulation across

---

2 These reports are *Statement of Intent — The Future of Insurance Regulation* (March 2000), *A Reinforced Commitment: Insurance Regulatory Modernization Action Plan* (September 2003) and *2005 Regulatory Initiatives: Goals, Action Plans and Deadlines for States, Committees and NAIC Staff* (March 2005).

the United States. The areas identified include:

- Market Conduct Uniform Standards
- Company Licensing
- Agent Licensing
- Life Insurance
- Property/Casualty Commercial Insurance
- Property/Casualty Personal Lines
- Surplus Lines
- Reinsurance
- Antifraud Network
- McCarran-Ferguson Antitrust Exemption and Rate Regulation
- State-National Insurance Coordination Partnership
- Viatical Settlements
- Interstate Compact for Health Insurance Products
- Enhancing Financial Surveillance
- Receivership

Clearly, regulators face an exciting and challenging future in developing the initiatives embodied in this roadmap and undertaking further reforms as market conditions continue to evolve.

Synopsis of Key Points

1. Insurance markets will continue to evolve and be subject to developments that will pose challenges for regulators to maintain effective oversight of the industry.
2. Increasing consolidation within the industry is likely to result in fewer, larger insurers, as well as smaller insurers that will serve niche markets.
3. Financial services markets are becoming more integrated, with greater competition between insurers and other financial institutions, such as banks, in selling certain insurance and related products. This poses issues for the financial regulation of entities involved in insurance and other activities, as well as the functional regulation of insurance markets.
4. Insurance markets are becoming increasingly global in nature, with more insurers crossing national boundaries in marketing their products. This will require increased coordination among regulators in different countries.

5. Developments in information technology and e-commerce will have profound changes on the way insurance transactions are handled, as well as other aspects of insurers' services and functions. These changes will raise regulatory issues, including the regulation of market conduct.
6. Demographic trends and public opinion will affect the demand for insurance products and consumer expectations with respect to insurance regulation.
7. The states and the NAIC are implementing reforms to make regulation more efficient and reduce unnecessary barriers to multistate insurance transactions.

Suggested References

National Association of Insurance Commissioners, 2000, *Statement of Intent — The Future of Insurance Regulation* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2003, *A Reinforced Commitment: Insurance Regulatory Modernization Action Plan* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *2004 Issues* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2005, *2004 Annual Report* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2005, *2005 Regulatory Initiatives: Goals, Action Plans & Deadlines for States, Committees & NAIC Staff* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2005, *SMART Act Review Team Findings* (Kansas City, Mo.: NAIC).

References

A.M. Best Company, 2004, *Best's Insolvency Study, Property/Casualty U.S. Insurers*, 1969–2002 (Oldwick, N.J.: A.M. Best).

A.M. Best Company, 2005, *Best's Insolvency Study, Life/Health U.S. Insurers*, 1976–2002 (Oldwick, N.J.: A.M. Best).

American Council of Life Insurers, 1990, *Report of the ACLI Task Force on Solvency Concerns* (Washington, D.C.: ACLI).

American Council of Life Insurers, 2004, *2003 Life Insurance Fact Book* (Washington, D.C.: ACLI).

Barrese, James and Jack M. Nelson, 1994, "Some Consequences of Insurer Insolvencies," *Journal of Insurance Regulation*, 13: 3–18.

Baumol, William J., John C. Panzar and Robert D. Willig, 1982, *Contestable Markets and the Theory of Industry Structure* (New York: Harcourt Brace Jovanovich).

Black, Kenneth, Jr., and Harold D. Skipper, Jr., 2000, *Life and Health Insurance*, 13th ed. (Englewood Cliffs, N.J.: Prentice Hall).

Conning & Company, 1999, *Alternative Markets: An Ever-Evolving Mosaic* (Hartford, Conn.: Conning & Company).

Cummins, J. David and Mary A. Weiss, 1991, "The Structure, Conduct and Regulation of the Property-Liability Insurance Industry," *The Financial Condition and Regulation of Insurance Companies*, Richard W. Kopcke and Richard E. Randall, eds. (Boston, Mass.: Federal Reserve Bank of Boston).

Cummins, J. David and Patricia M. Danzon, 1991, "Price Shocks and Capital Flows in Liability Insurance," *Cycles and Crises in Property/Casualty Insurance: Causes and Implications for Public Policy*, Cummins, J. David, Scott E. Harrington and Robert W. Klein, eds. (Kansas City, Mo.: NAIC).

Cummins, J. David, 1988, "Risk Based Premiums for Insurance Guaranty Funds," *Journal of Finance*, 43: 823–839.

Cummins, J. David, ed., 2002, *Deregulating Property-Liability Insurance* (Washington, D.C.: AEI-Brookings Joint Center for Regulatory Studies).

Cummins, J. David, Martin F. Grace and Richard D. Phillips, 1999, "Regulatory Solvency Prediction in Property-Liability Insurance: Risk-Based Capital, Audit Ratios, and Cash Flow Simulation," *Journal of Risk and Insurance*, 66: 417–458.

Cummins, J. David, Scott E. Harrington and Gregory R. Niehaus, 1995, "Risk-Based Capital Requirements for Property-Liability Insurers: A Financial Analysis," *The Financial Dynamics of the Insurance Industry* Edward I. Altman and Irwin T. Vanderhoof, eds. (New York: Irwin Professional Publishing).

Cummins, J. David, Scott E. Harrington and Robert W. Klein, eds., 1991, *Cycles and Crises in Property/Casualty Insurance: Causes and Implications for Public Policy* (Kansas City, Mo.: NAIC).

Feldhaus, William R. and Michael M. Barth, 1992, "Risk-Based Pricing Factors for Property and Casualty Insurance Guaranty Funds," *CPCU Journal*, 45: 239–249.

Feldhaus, William R. and Paul Kazenski, 1998, "Risk-Based Guaranty Fund Assessments: An Allocation Alternative for Funding Insurer Insolvencies," *Alternative Approaches to Insurance Regulation*, Robert W. Klein, ed. (Kansas City, Mo.: NAIC).

Grace, Martin F., Robert W. Klein and Richard D. Phillips, 2001, "Regulating Onshore Special Purpose Reinsurance Vehicles," *Journal of Insurance Regulation*, 19: 551–590.

Grace, Martin F., Robert W. Klein, and Richard D. Phillips, 2002, "Managing the Cost of Property-Casualty Insurer Insolvencies," Report to the NAIC, December.

Grace, Martin F., Scott E. Harrington and Robert W. Klein, 1998a. "Risk-Based Capital and Solvency Screening: Hypotheses and Empirical Tests," *Journal of Risk and Insurance*, 65: 213–243.

Grace, Martin F., Scott E. Harrington and Robert W. Klein, 1998b. "Identifying Troubled Life Insurers: An Analysis of the NAIC FAST System," *Journal of Insurance Regulation*, 16: 249–290.

Hanson, Jon S., Robert E. Dineen and Michael B. Johnson, 1974, *Monitoring Competition: A Means of Regulating the Property and Liability Insurance Business* (Milwaukee, Wisc.: NAIC).

Harrington, Scott E. and Gregory R. Niehaus, 2003, *Risk Management and Insurance*, 2nd ed. (Boston, Mass.: McGraw-Hill/Irwin).

Harrington, Scott E., 1992, "Rate Suppression," *Journal of Risk and Insurance*, 59: 185–202.

Insurance Information Institute, 2004, *The III Insurance Fact Book 2004* (New York: III).

Joskow, Paul L., 1973, "Cartels, Competition and Regulation in the Property-Liability Insurance Industry," *Bell Journal of Economics*, 4: 375–427.

Kahn, Alfred E., 1988, *The Economics of Regulation: Principles and Institutions* (Cambridge, Mass.: The MIT Press).

Kimball, Spencer L. and Barbara P. Heaney, 1995, *Federalism and Insurance Regulation: Basic Source Materials* (Kansas City, Mo.: NAIC).

Klein, Robert W. and Harold D. Skipper, 2000, "Insurance Regulation in the Public Interest: The Path Towards Solvent, Competitive Markets," *The Geneva Papers: Issues and Practice*, 25: 482–504.

Klein, Robert W., 1992, *Issues Concerning Insurance Guaranty Funds* (Kansas City, Mo.: NAIC).

Klein, Robert W., 1995, "Insurance Regulation in Transition," *Journal of Risk and Insurance*, 62: 363–404.

Klein, Robert W., 2004, "The Underwriting Cycle," *Encyclopedia of Actuarial Science*, Jozef Teugels and Bjorn Sundt, eds. (Hoboken, N.J.: John Wiley & Sons, Inc.).

Lilly, Claude C., 1976, "A History of Insurance Regulation in the United States," *CPCU Annals*, 29: 99–115.

Long, John D. and David W. Gregg, 1965, *Property and Liability Insurance Handbook* (Homewood, Ill.: Richard D. Irwin, Inc.).

Martin, Stephen, 1988, *Industrial Organization* (New York: MacMillan).

Mayers, David and Clifford W. Smith, Jr., 1988, "Ownership Structure Across Lines of Property-Casualty Insurance," *Journal of Law and Economics*, 31: 351–378.

Meier, Kenneth J., 1985, *Regulation: Politics, Bureaucracy and Economics* (New York: St. Martin's Press).

Meier, Kenneth J., 1988, *The Political Economy of Regulation: The Case of Insurance* (Albany. N.Y.: SUNY Press).
Munch, Patricia and Dennis E. Smallwood, 1981, "Theory of Solvency Regulation in the Property and Casualty Insurance Industry), *Studies in Public Regulation*, Gary Fromm, ed. (Cambridge, Mass: The MIT Press).

Myhr, A.E. and J.J. Markham, 2003, *Insurance Operations, Regulation and Statutory Accounting* (Malvern, Pa.: Insurance Institute of America).

National Association of Insurance Commissioners, 1990, "Committee on Examination Processes: Background, Findings, and Recommendations," in *NAIC Proceedings 1991* Vol. I (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 1992, *Troubled Insurance Company Handbook* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 1997, *Final Report of the Insurance Availability and Affordability Task Force* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 1997, *Statistical Handbook of Data Available to Insurance Regulators* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 1997, *The Regulation of Health Risk-Bearing Entities* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 1998, *Risk Retention and Purchasing Group Handbook* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2000, *Statement of Intent — The Future of Insurance Regulation* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2003, *A Reinforced Commitment: Insurance Regulatory Modernization Action Plan* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2003, *Profitability by Line by State* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *2003 Annual Report* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Compendium of State Laws on Insurance Topics* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Examiners Handbook Market Conduct* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Insurance Department Resources Report* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Issues 2004* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Market Analysis Handbook* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2004, *Model Laws, Regulations and Guidelines* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2005, *2004 Annual Report* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2005, 2*005 Regulatory Initiatives: Goals, Action Plans & Deadlines for States, Committees & NAIC Staff* (Kansas City, Mo.: NAIC).

National Association of Insurance Commissioners, 2005, *SMART Act Review Team Findings* (Kansas City, Mo.: NAIC).

Nordman, Eric, Davin Cermak and Kenneth McDaniel, 2004, *Medical Malpractice Insurance Report: A Study of Recent Conditions and Potential Solutions to the Recent Crisis* (Kansas City, Mo.: NAIC).

Peltzman, Sam, 1976, "Toward a More General Theory of Regulation," *Journal of Law and Economics*, 19: 211–240.

Phillips, R.D., 1998, "The Economics of Risk and Insurance: A Conceptual Discussion," in Harold D. Skipper, ed. I*nternational Risk and Insurance: An Environmental-Managerial Approach* (Boston, Mass.: McGraw-Hill Companies).

Rejda, George E., 2005, *Principles of Risk Management and Insurance*, 9th ed. (Reading, Mass.: Addison-Wesley).

Scherer, F.M. and David Ross, 1990, *Industrial Market Structure and Economic Performance*, 3rd ed. (Chicago: Rand McNally).

Skipper, Harold D., Jr., and William R. Feldhaus, *Perspectives on Risk and Insurance* (forthcoming in 2006).

Spulber, Daniel F., 1989, *Regulation and Markets* (Cambridge, Mass.: The MIT Press).

Swiss Re, 2000, "Asset-Liability Management for Insurers," *Sigma*, 6: 1–36.

U.S. General Accounting Office, 1989, Insurance Regulation: *Problems in the State Monitoring of Property/Casualty Insurer Solvency* (Washington, D.C.: Government Printing Office).

U.S. General Accounting Office, 1991, *Insurance Industry: Questions and Concerns About Solvency Regulation, Statement of Johnny C. Finch before the Committee on Commerce*, Science and Transportation, U.S. Senate (Washington, D.C.: Government Printing Office).

U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, 1990, *Failed Promises: Insurance Company Insolvencies*.

U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, 1994, *Wishful Thinking: A World View of Insurance Solvency Regulation*.

Varian, Hal R., 1992, *Microeconomic Analysis*, 3rd ed. (New York: W.W. Norton & Co.).

Wright, Kenneth M., 1991, "The Structure, Conduct and Regulation of the Life Insurance Industry," *The Financial Condition and Regulation of Insurance Companies* Richard W. Kopcke and Richard E. Randall, eds., (Boston, Mass: Federal Reserve Bank of Boston).

Appendix A

Glossary of Terms[1]

Accident A loss-causing event that is sudden, unforeseen, and unintentional.

Actual Cash Value The value of property at the time of its damage or loss, which is equal to its replacement cost minus depreciation.

Adverse Selection The tendency of persons with a higher-than-average risk of loss to seek insurance at standard (average) rates.

Advisory Loss Costs Prospective (fully developed and trended) loss costs filed by advisory organizations for property-liability insurance.

Advisory Organizations Organizations that develop and file advisory loss costs and standard policy forms and provide other services for property-liability insurers, regulators and others.

Agent Someone who legally represents the insurer in insurance transactions and has authority to act on the insurer's behalf.

Alien Insurer An insurance company that is domiciled in a foreign country.

---

1 The author and the NAIC express their appreciation to George E. Rejda and Addison-Wesley Educational Publishers, Inc., for their permission to utilize the glossary in Redja, George E., 1998, *Principles of Risk Management and Insurance*, 6th ed. (Reading, Mass.: Addison-Wesley) as a principal source for this glossary. Readers should note that while many definitions were drawn from the Rejda book, modifications and additions were made by the author for this text. Hence, any errors or omissions are the responsibility of the author.

Alternative Market A term used to generally describe non-traditional markets and risk management mechanisms for various forms of property-liability insurance that encompass non-admitted insurers but not licensed insurers.

Annuitant A person who receives the periodic payment of an annuity.

Annuity A periodic payment to an individual that continues for a fixed period or for the duration of a designated life or lives.

Assessment Mutual A mutual insurance company that is authorized to assess policyowners for losses and expenses.

Asset Valuation Reserve (AVR) A new asset reserve requirement for life-health insurers, instituted in 1993 with the Interest Maintenance Reserve (IMR), that extended and refined reserve requirements for all major asset classes and replaced the prior Mandatory Security Valuation Reserve (MSVR) requirement.

Automobile Insurance A form of insurance that provides liability and physical damage coverage for personal and commercial vehicles.

Automobile Insurance Plan A term used to generally describe the various residual market mechanisms for automobile insurance.

Binder Authorization of coverage by an agent given before the insurer has formally approved a policy. Provides evidence that the insurance is in force.

Blue Cross Plans Non-profit, community-oriented prepayment plans that provide health insurance coverage primarily for hospital services.

Blue Shield Plans Non-profit, community-oriented prepayment plans that provide health insurance coverage primarily for physician services.

Broker Someone who represents the insured in insurance transactions, soliciting or accepting applications for insurance that are not in force until the insurer accepts the policy.

Businessowners Policy (BOP) A package commercial insurance policy containing coverages designed to meet the typical property and liability insurance needs of small businesses.

Captive Insurer An insurance company established and owned by a parent firm (or association) to insure its loss exposures (or those of the association members).

Cash Surrender Value The amount payable to the owner of a whole-life insurance policy if the policyowner decides to terminate the policy.

Casualty Insurance An area of insurance that encompasses risks not covered by fire, marine and life insurance.

Ceding Insurer An insurer that writes an insurance policy or group of policies initially (i.e., on a primary basis) and that subsequently transfers all or portion of the risk to a reinsurer.

Chance of Loss The probability that a loss-causing event will occur.

Choice No-Fault A system under which auto owners can elect to be covered under their state's no-fault law or retain the right to sue under tort liability law.

Claims-Made Policy A liability insurance policy that only covers claims that are first reported during the policy period, provided the loss-causing event occurred after the retroactive date (if any) stated in the policy.

Class Rating A method of insurance pricing in which groups of similar insureds are effectively placed in the same risk classification and each is charged the same rate. In class rating, the rate for a particular insured is determined by the application of a set of class rating factors to specified insured risk characteristics.

Coinsurance An approach to determining insurance claims payments or benefit payments in which the insured is required to retain a certain percentage of the covered losses they incur.

Collision Loss Damages to an automobile caused by upset of the vehicle or its impact with another vehicle or object.

Competitive Market A term used by economists to define markets where the lack of entry and exit barriers and a large number of firms promotes competitive behavior and good market performance.

Competitive Rating A term used to generally describe regulatory systems under which insurers are not required to obtain prior approval for rates before they go into effect. Regulators typically rely on market forces to determine rates under competitive rating systems. The term "open competition" also is used to label such systems.

Compulsory Insurance Law A state law requiring owners and operators of automobiles to carry certain amounts of auto liability insurance to license a vehicle and drive legally within the state.

Concentration Ratio A measure used to quantify the degree of market concentration which is equal to the combined market share of some specified number of the leading firms.

Coordination of Benefits A provision in insurance contracts that prevents an insured from receiving duplicate or excessive claims payments when the insured's losses are covered by more than one policy.

Direct-Response System A marketing system in which an insurer sells insurance directly to consumers without using the services of an agent.

Direct Writer A term typically used to label an insurer that uses a direct-response system or exclusive agents to sell insurance.

Disintermediation The outflow of funds from a financial entity, such as an insurer, in response to changes in interest rates or other developments. This poses a risk to life insurers in that they are forced to sell assets at current market prices (which may be less than their book or amortized value) to cover policyowners' demands on their funds.

Distribution The marketing and sale of insurance.

Diversification of Risk The process of transferring, spreading or pooling risk.

Domestic Insurer An insurance company that is domiciled and licensed in the state in which it sells insurance.

Dwelling Property Insurance A form of residential property insurance that covers dwellings, other structures and contents on a named-perils or open-perils basis. Dwelling property insurance does not include certain insurance coverages, such as liability coverage, that are provided in homeowner multi-peril insurance policies.

Efficiency A term used by economists to characterize market outcomes where resources are employed to their best possible use and social welfare is maximized.

Electronic Commerce Transactions conducted over the Internet or other electronic networks.

Employers Liability Insurance A form of insurance that covers employers for their legal liability stemming from work-related employee injuries and illnesses that are not covered under workers' compensation insurance. Such liability is limited in most states because workers' compensation is intended to be the exclusive remedy for injured workers.

Endorsement A written provision that adds to, deletes, or modifies the provisions of the insurance contract to which the endorsement is attached.

Equity A term used to characterize "fair" or "equal" distributions of the costs and benefits of various activities.

Excess Insurance An insurance arrangement in which the insurer is not obligated to pay any losses that fall below a certain threshold. Typically, a firm will purchase excess insurance to cover large losses above a significant amount retained by the firm.

Exclusions A listing of perils, losses and property that are not covered in an insurance contract.

Exclusive Agent An agent who represents only one insurance company or group of companies under common ownership.

Exclusive Remedy A legal principle which holds that the workers compensation system should be the sole source of compensating work-related injuries and illnesses and that employers should not be subject to tort liability suits for such injuries.

Expenses The costs incurred by an insurer in servicing insurance policies beyond the payments it makes to insureds to cover losses. The cost of capital or "normal" profits can be considered an expense, but is typically distinguished from expenses in analyzing insurers' financial performance.

Expense Ratio The ratio of expenses to premiums.

Experience Rating A method of insurance pricing which determines or adjusts the rate for an insured on the basis of the insured's past loss experience.

Exposure Unit A unit of measurement used to quantify the amount of risk exposure in pricing insurance.

Externality Costs or benefits of an activity borne or received by third-parties who do not control the activity.

Facultative Reinsurance A type of reinsurance contract written on individual risks, on a case-by-case basis.

Fair Access to Insurance Requirements (FAIR) Plan A federal property insurance plan that provides basic property insurance to property owners unable to obtain insurance in the voluntary market. Under this system, such insureds are assigned to insurers through a central placement facility in each state that has a FAIR plan. This is the principal residual market mechanism used for property insurance.

File-and-Use Rating A law for regulating insurance rates under which insurers are required to file their rates with the state insurance department before they go into effect, but prior approval is not required.

Financial Regulation The regulation of insurers' financial risk, financial condition or solvency. Synonymous with the term "solvency regulation."

Fire Insurance A form of property insurance that covers damages to a structure and its contents caused by fire and certain other specified perils such as windstorms.

Flex-Rating Law A law for regulating insurance rates under which insurers are required to obtain prior approval for rates that exceed a certain percentage above or below the rates previously filed.

Foreign Insurer An insurance company that is licensed to do business in a state but is domiciled in another state.

Fraternal Insurer A mutual insurance company that provides life and health insurance to members of a social organization.

Group Insurance A term used to describe various form of insurance provided to the employees of a firm or the members of an association under a single contract.

Guaranteed Investment Contract An investment contract with an insurer under which the insurer guarantees both principal and interest on a pension contribution.

Hazard A condition that creates or increases the risk of loss.

Health Expense Associations A term used to describe organizations that provide pre-paid health services to their members, such as Blue Cross Blue Shield plans and HMOs.

Health Maintenance Organization (HMO) An entity that provides comprehensive health care services to its members for a fixed pre-paid fee and uses managed care measures to control costs.

Herfindahl-Hirschman Index (HHI) A measure of market concentration that is equal to the sum of the squared market shares of firms in the market. A higher HHI indicates higher market concentration.

Homeowners Multi-Peril Insurance Insurance provided through a package policy that combines property and liability coverages for homeowners.

Incurred-But-Not-Reported (IBNR) A term used to label unpaid losses for property-liability insurance from covered events which have occurred but for which claims have not been filed.

Indemnification Compensation to the victim of a loss, in whole or in part, by payment, repair or replacement.

Indemnity Principle The principle that insurance should restore an insured to approximately his or her financial position before a loss, but should not allow the insured to gain financially from the loss.

Independent Agent An insurance agent who represents one or more insurers as an independent businessperson. An independent agent owns the expiration or renewal rights to the business the agent writes and is compensated through commissions.

Inland Marine Insurance Transportation insurance that provides coverage for goods shipped on land, means of transportation, and personal and commercial property floaters.

Insurable Interest The principle that the insured must suffer some form of loss or harm if the insured event occurs.

Insurance The pooling of fortuitous losses through transfer of risk to insurers who agree to indemnify insureds for such losses, to provide other pecuniary benefits on their occurrence, or to render services connected with the risk.

Insurance Services Office (ISO) A major advisory organization that provides various services to property-liability insurers, regulators and others, including standard policy forms and advisory loss costs.

Interest Maintenance Reserve (IMR) A new asset reserve requirement for life-health insurers, instituted with the Asset Valuation Reserve (AVR) in 1993, that requires insurers to amortize interest-related gains and losses over the remaining life of a disposed asset.

Joint Underwriting Association (JUA) A type of residual market mechanism that collects premiums from and pays the losses of its insureds. Operating losses incurred by a JUA are shared by insurers proportionately according to their voluntary market premiums.

Law of Large Numbers The concept that as the number of exposures increases, the closer actual results will approach the probable results expected from an infinite number of exposures.

Legal Reserve The liability life insurers are required to establish on their balance sheet for excess premiums received and interest earned from life insurance policies in their early years under the level-premium method.

Loading The amount that must be added to the pure premium for expenses, profit and contingencies.

Lloyd's Associations A for-profit proprietary organization composed of underwriter-members who cover special risks on a cooperative basis.

Long-Term Care Insurance A form of health insurance that pays benefits for extended medical or custodial care received in a nursing facility, hospital or at the insured's home.

Loss Cost System A system in which advisory organizations file advisory loss costs but not full rates. Insurers may file multipliers which adjust the loss costs to full rates or file full rates.

Loss Frequency The probable (or actual) number of losses that may (or have occurred) during some given time period.

Loss Ratio The ratio of losses to premiums.

Loss Reserve The amount that insurers set aside to cover claims incurred but not yet paid.

Loss Severity The probable (or actual) size of losses that may occur (or have occurred).

Loss Settlement The process by which insurers verify, measure and pay losses covered under their insurance contracts.

McCarran-Ferguson Act A 1945 Federal law that delegates the regulation of insurance to the states except in areas where federal laws specifically supersede state laws and regulations. The Act also provides a limited antitrust exemption to insurers to the extent that they are regulated by the states.

Major Medical Insurance Health insurance designed to pay a large portion of the covered expenses of a catastrophic illness or injury.

Managed Care A general term for medical expense plans that provide covered services to insureds/members with more extensive cost-control measures than found in traditional, fee-for-service indemnity plans.

Manuscript Policy An insurance policy designed for a firm's specific needs and requirements.

Market Conduct The behavior and market practices of firms.

Market Failure A violation of the conditions for perfect or workable competition which results in inefficient or suboptimal market outcomes.

Market Performance The dimensions of market outcomes in areas such as profits, efficiency, equity and quality of service.

Market Power The ability of firms to exercise some influence over the market price and output to increase profits and/or protect inefficiency.

Market Regulation The regulation of firms' products, prices and market practices.

Market Structure Supply and demand functions, the number and size distribution of firms, entry and exit barriers, the quality of information, and other dimensions that affect market conduct and performance.

Merit Rating An insurance pricing method in which class rates are adjusted upward or downward based on the individual insured's loss experience.

Monitoring Competition A process by which regulators monitor market conditions to ensure that competition is working and serving consumers' interests.

Monopolistic Competition A market structure in which numerous individual firms sell differentiated products and each face different market demand functions. Because of a high degree of substitutability among their products and consumers willingness to switch for relatively small differences in price, monopolistically competitive markets are workably competitive and maximize consumer welfare.

Monopoly A market structure in which there is only one seller of a product who is protected from entry and competition from other firms.

Moral Hazard As utilized by insurance experts, this term refers to dishonesty or character defects in an individual that increase the chance of loss. Economists use this term more broadly to refer to the diminished incentives of insureds to avoid or prevent losses because they have insurance.

Morale Hazard As utilized by insurance experts, this term refers to carelessness or indifference to loss because of the existence of insurance.

Mutual Insurer A non-profit insurance company owned by its policyowners.

Named-Perils Policy An insurance policy that only covers perils specifically listed in the policy.

National Association of Insurance Commissioners (NAIC) An association of the chief insurance supervisory officials in each state, the District of Columbia and five U.S. territories.

Negligence The failure to exercise the standard of care required by the law to protect others from harm.

Net Amount at Risk The difference between the face amount and the legal reserve of a life insurance policy priced under the level-premium method.

No-Fault Insurance A concept under which persons injured by the negligence of another collect benefits from their own insurers rather than sue the negligent party to recover their damages under tort law.

Non-Admitted Insurer A term used to characterize insurers who are authorized or permitted to sell certain lines of insurance on a non-licensed based in a state.

Nonforfeiture Law State law requiring insurers to provide at least a minimum nonforfeiture value to policyowners who terminate insurance policies that have accumulated cash values.

Objective Risk The relative variation of actual losses from expected losses.

Occurrence Policy A liability insurance policy that covers claims arising out of loss-causing events that occur during the policy period, regardless of when a claim is filed.

Ocean Marine Insurance A form of insurance that covers ocean-going vessels, their cargoes, and the legal liability of owners and shippers.

Oligopoly A market structure in which there are a limited number of sellers who recognize the interdependence of the pricing and production decisions. This recognition can create the basis for explicit or tacit cooperation to raise market prices and limit output to increase profits and/or protect inefficiency.

Open-Perils Policy A policy which covers all perils unless specifically excluded. This type of policy is sometimes called an "all-risk" policy.

Ordinary Life Insurance A type of whole life insurance that provides protection throughout the insured's lifetime and for which premiums are paid throughout the insured's lifetime.

Peril Something that can cause a loss, such as fire or windstorms.

Personal Umbrella Policy An insurance policy designed to provide protection for an individual or family against a catastrophic lawsuit or judgement. This insurance is intended to provide excess coverage over liability coverage provided in personal auto and homeowners insurance policies.

Point-of-Service Plan A health insurance plan that allows the insured the option to use providers in an HMO network or providers outside the network. A larger portion of the insured's expenses are reimbursed if they use a provider within the network.

Policy Loan An option that allows the owner of a life insurance policy to borrow its cash value, at interest.

Policyholders' Surplus The difference between an insurer's assets and its liabilities.

Pooling The spreading of losses incurred by the individual members of a group over the entire group. Each member pays the average loss incurred by the group rather than his or her actual loss.

Preferred Provider Organization (PPO) A network of screened and closely-controlled group of providers selected by an insurer who have agreed to a negotiated fee schedule in return for prompt payment for services provided and a larger volume of patients.

Pricing The process by which insurers determine the rate or premium they will charge for a given insurance contract and insured.

Principal-Agent Relationship A relationship in which an agent acts on behalf of a principal. A principal-agent relationship is established by an insurance contract in which the principal is the policyowner and the agent is the insurer. Principals may have some difficulty in monitoring and controlling the behavior of their agents which can lead to problems if they have conflicting incentives.

Prior-Approval Law A state law requiring that insurers file and receive approval for their rates from the state insurance department before they go into effect.

Product Design The process by insurers develop insurance contracts or policies and related services to meet the needs and preferences of insureds.

Products Liability The legal liability of manufacturers, wholesalers, and retailers to persons who are injured or who incur property damage from defective products.

Profit The difference between the costs incurred by firms and the income they receive.

Provider-Sponsored Organization (PSO) A pre-payment plan for health services owned by providers.

Purchasing Group A type of entity established by the federal Liability Risk Retention Act of 1986. A purchasing group is authorized to purchase commercial liability insurance on behalf of its members and must be domiciled in at least one state.

Pure Premium The portion of the insurance rate needed to pay losses and loss-adjustment expenses.

Pure Risk The situation in which there only the possibilities of loss or no loss and there is no possibility of gain.

Rate The price per unit of insurance.

Receivership A general term that refers to the legal seizure of an insurer by regulators in the event of financial difficulty or insolvency for the purposes of the rehabilitation, sale or liquidation of the insurer.

Reciprocal Exchange An unincorporated mutual insuring organization in which insurance is exchanged among members and which is managed by an attorney-in-fact.

Regulation The restriction of private activities by government to promote the public interest or other public objectives.

Reinsurance The transfer of risk initially underwritten by one insurer to another insurer.

Replacement-Cost Insurance A form of loss settlement for property insurance in which the insured is indemnified on the basis of the replacement cost of the insured property with no deduction for depreciation.

Residual Market A term used to generally describe non-voluntary market mechanisms to cover persons or firms that cannot obtain insurance in the voluntary market.

Retention A term that refers to the amount of potential losses retained by an insured and not subject to reimbursement by an insurer.

Retrocession A process by which a reinsurer obtains reinsurance from or transfers risk to another reinsurer.

Retrospective Rating A form of merit-rating in which the insured's loss experience during the policy period determines the premiums paid by the insured for the policy period.

Risk A situation in which more than one outcome is possible.

Risk-Based Capital A flexible, minimum capital standard developed by the NAIC which varies by insurer according to a formula applied to an insurer's financial structure.

Risk-Retention Group A risk-bearing entity established by the federal Liability Risk Retention Act of 1986 to provide commercial liability insurance. A risk-retention group must be chartered and licensed as an insurer in at least one state but may operate in other states without a license.

Schedule Rating A form of merit-rating which adjusts an insured's rate upward or downward according to a schedule of credits and debits applied to certain risk characteristics of the insured.

Self Insurance A term used to describe a program in which an individual or firm pays a portion or all of its losses.

Separate Account A variation of the deposit administration pension plan arrangement in which pension funds are segregated so that account assets are not commingled with an insurer's general assets and can be invested separately.

Speculative Risk A situation in which either profit or loss are possibilities.

Stock Insurer A profit-making insurance company funded by an initial capital investment by the owners or stockholders of the company.

Stop-Loss Limit A modification of the coinsurance provision in major medical insurance plans that sets a maximum limit on the amount of medical expenses the insured must pay out of his or her own pocket.

Structure-Conduct-Performance Framework A conceptual framework used by economists to explain the relationship of market structure, market conduct and market performance.

Surety Bond A bond that provides monetary compensation if the bonded party fails to perform certain acts.

Surplus Lines Broker A specialized insurance broker licensed to place business with a non-admitted insurer.

Term Life Insurance A type of life insurance that provides temporary protection for a specified number of years.

Total Adjusted Capital (TAC) A specific calculation of an insurer's capital and surplus with certain modifications which is compared against the insurer's RBC requirement to determine whether regulatory or company action is needed.

Treaty Reinsurance A form of reinsurance arrangement or contract in which the primary insurer must automatically cede and the reinsurer must automatically assume certain risks as defined by the terms of their contract.

Twisting An illegal insurance sales practice that induces a policyowner to drop an existing policy in one company and take out a new policy in another through misrepresentation or incomplete information.

Underinsured Motorists Coverage A coverage that may be added to a personal auto insurance policy that pays bodily injury damages to the insured caused by the ownership or operation of an underinsured vehicle by another driver.

Underwriting The selection and risk classification of insurance applicants by an insurer.

Underwriting Cycle A term used to characterize the cyclical movement in the supply and price of certain lines of insurance over time.

Unearned Premium Reserve A liability reserve of an insurer that represents the unearned portion of gross premiums written on all outstanding policies at the time of valuation.

Uninsured Motorists Coverage A coverage that may be added to a personal auto insurance policy that pays bodily injury damages to the insured caused by an uninsured motorist, a hit-and-run driver, or a driver whose insurer is insolvent.

Universal Life Insurance A flexible whole-life insurance policy that provides lifetime protection under a contract that separates the protection and savings components. The policyowner can vary the timing and amount of premium payments and can earn interest in excess of the guaranteed crediting rate based on the investment performance of the insurer.

Use and File A regulatory system under which insurers are allowed to put rates into effect before they are filed.

Valued Policy An insurance policy that pays the face amount of insurance, regardless of the actual cash value of the insured's loss, if a total loss occurs.

Valued Policy Law A state law requiring payment of the face amount of insurance if a total loss to real property occurs from a peril specified in the law, even though the policy may state that only actual cash value will be paid.

Variable Life Insurance A whole-life insurance policy in which the death benefit and cash surrender value vary according to the investment experience of a separate account maintained by the insurer.

Windstorm/Beach Pool A special residual market mechanism established to provide property insurance coverage to homeowners in certain specified coastal areas who cannot obtain insurance in the voluntary market.

Workable Competition A standard for evaluating the competitiveness and performance of markets under "real world" conditions. A market is workably competitive when it approximates the conditions for perfect competition and government intervention cannot feasibly improve the market's performance.

Workers' Compensation Insurance A form of insurance that covers the payment of all workers' compensation and other benefits that an employer must legally provide to covered employees who suffer a work-related illness or injury.

Appendix B

Sources of Statistical Information on Insurance

Key Statistical References

Insurance regulators often seek information on the industry to assist their analysis. There are numerous, valuable sources of such information that are referenced in this text. Several are listed below that are particularly helpful in summarizing industry statistics and facts and are a good place to start many information gathering efforts. These publications are updated annually.

A.M. Best Company, 2005, *Best's Aggregates and Averages Life-Health 2004* (Oldwick, N.J.).

A.M. Best Company, 2005, *Best's Aggregates and Averages Property-Casualty 2004* (Oldwick, N.J.).

American Council of Life Insurers, 2004, *2004 Life Insurance Fact Book* (Washington, D.C.).

Bureau of Labor Statistics, 2005, *Statistical Abstract of the United States 2004–2005* (Washington, D.C.: U.S. Government Printing Office).

Insurance Information Institute, 2005, *The Fact Book 2005: Property/Casualty Insurance Facts* (New York).

National Association of Insurance Commissioners, *Profitability by Line by State* (Kansas City, Mo.).

National Association of Insurance Commissioners, *Issues* (Kansas City, Mo.).

National Association of Insurance Commissioners, *Statistical Compilation of Annual Statement Information for Life/Health Insurance Companies* (Kansas City, Mo.).

National Association of Insurance Commissioners, *Statistical Compilation of Annual Statement Information for Property/Casualty Insurance Companies* (Kansas City, Mo.).

Organizations that Provide Information on the Insurance Industry

The organizations publishing the above references, and others, provide a number of other valuable materials. Below is an abbreviated listing of organizations providing statistical information of potential value to regulators. The NAIC publishes a more complete listing of all insurance-related organizations.

A.M Best Company
(908-439-2200) www.ambest.com

American Council of Life Insurers
(202-624-2000) www.acli.com

America's Health Insurance Plans
(202-778-3200) www.ahip.org

American Insurance Association
(202-828-7100) www.aiadc.org

Automobile Insurance Plans Service Office
(401-946-2310) www.aipso.com

Conning & Company
(860-299-2000) www.conning.com

Georgia State University, Center for Risk Management and Insurance Research
(404-651-4250) http://rmictr.gsu.edu

Institute for Business and Home Safety
(813-286-3400) www.ibhs.org

Insurance Information Institute
(212-346-5500) www.iii.org

Insurance Library Association of Boston
(617-227-2087) www.insurancelibrary.org

Insurance Research Council
(610-644-2212) www.ircweb.org

Insurance Services Office
(800-888-4476) www.iso.com

Life Insurance Marketing and Research Association
(860-688-3358 or 800-235-4672) www.limra.com

Life Office Management Association
(770-951-1770 or 800-275-5662) www.loma.org

National Association of Insurance Commissioners
(816-842-3600) www.naic.org

National Conference of Insurance Guaranty Funds
(317-464-8199) www.ncigf.org

National Council on Compensation Insurance
(800-622-4123) www.ncci.com

National Organization of Life and Health Insurance Guaranty Associations
(703-481-5206) www.nolhga.com

Property Casualty Insurers Association of America
(847-297-7800) www.pciaa.net

Property Insurance Plans Services Office
(617-371-4175) www.pipso.com

Reinsurance Association of America
(202-638-3690) www.reinsurance.org

Risk and Insurance Management Society
(212-286-9292) www.rims.org

Standard & Poor's Rating Group
(212-438-7280) www.standardandpoors.com

Workers Compensation Research Institute
(617-661-9274) www.wcrinet.org

Subject Index

H

I

J

L

M


RII-ZB-05