

# Introduction and Objectives

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## INTRODUCTION

This module will help you understand the following three forces affecting the business of general insurance:

- **Financial Economics:** Financial economics is the discipline underlying all financial services. It is the study of how individuals and institutions acquire, save, and invest money. These activities are fundamental to institutions and individuals, including risk taking financial institutions such as general insurance companies.
- **Regulatory Environment:** It is important for actuaries to understand the regulatory environment under which insurance operates. Insurance is a highly regulated industry. There are many reasons for this, but it is often justified on the basis that regulation is required to protect the public interest. Insurance accepts premium up front for the potential of a recovery at a later date based upon the occurrence of a contingent event. The public generally lacks the expertise to fully understand the insurance product and needs protection from the potential of insurer insolvencies.
- **Legal Environment:** There are many laws that are relevant to general insurance. It is important to understand the legal environment that affects the industry. This includes contract law, tort law and international law.

## OVERALL OBJECTIVES

After you complete this module, you will be able to do the following:

### *Relating to financial economics*

- Describe asset pricing models and discuss the principal results, assumptions and limitations of such models.
- Explain sources of empirical anomalies.
- Describe and apply asset-liability management techniques to general insurance portfolios.

### *Relating to the regulatory environment that insurers must operate within*

- Describe regulatory systems and explain the purpose of insurance regulation.
- Explain the regulatory systems for insurer activities (underwriting, rates and claims), insurance producers, and insurer solvency.

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- Explain various specialized topics related to insurer regulation (e.g., unfair discrimination, use of credit scores, usage-based rating, captive insurance, use of price optimization).
- Explain how the government gets involved in the provision of insurance and explain how some of these plans operate.

### *Relating to the legal environment affecting general insurance*

Describe and interpret the key elements of tort law and the underlying principles of insurance law.

- Discuss the influence of the U.S. tort law environment in other countries.
- Discuss the issues of tort trends and tort reform as it applies to the general insurance industry
- Explain mass torts/class action suits and discuss their impact on the general insurance industry.
- Describe and interpret legal cases/issues as included in the modules directed readings.
- Describe social inflation and its effect on insurance claims.

## MODULE SECTIONS

- Section 1: Module Overview
- Section 2. Asset Pricing Models [Financial Economics]
- Section 3. Empirical Anomalies and Behavioral Finance [Financial Economics]
- Section 4. Asset-Liability Management [Financial Economics]
- Section 5. Regulation of Insurer Activities [Regulatory Environment]
- Section 6. Further Topics in Insurance Regulation [Regulatory Environment]
- Section 7. Government Provision of General Insurance [Regulatory Environment]
- Section 8. Insurance Contract Law [Legal Environment]
- Section 9. Tort Law [Legal Environment]
- Section 10. International Law [Legal Environment]

## General Insurance Applications: Introduction and Objectives

### Section 2 Objectives

After completing this section, you will be able to:

- Describe the assumptions and the principal results of the Capital Asset Pricing Model (CAPM).
- Discuss the limitations of the basic CAPM and some of the attempts that have been made to develop the theory to overcome these limitations.
- Discuss the assumptions, principal results and limitations of the Ross Arbitrage Pricing Theory model (APT).
- Perform calculations using the CAPM.

### Section 3 Objectives

After completing this section, you will be able to:

- Describe some anomalies that exist.
- Explain that the anomalies can sometimes be justified by a broader version of the underlying efficient markets and rational behavior theories as well as by entirely different theories.
- Explain that some anomalies appear beyond the reach of classical rational decision theory/efficient markets theory.

### Section 4 Objectives

After completing this section, you will be able to:

- Apply duration and convexity to immunize a liability portfolio, including portfolios with embedded options.
- Understand how ALM became important in the life insurance industry in the 1980s
- Understand important differences between ALM for life insurers and general insurers.
- Apply ALM to a portfolio of general insurance liabilities.

### Section 5 Objectives

After completing this section, you will be able to:

- Describe the theories and justifications for regulation
- Describe what principles of regulation apply to the business of insurance
- Identify the goals of underwriting regulation
- Explain how underwriting regulations affect an insurer
- Identify the goals of rate regulation
- Explain how different types of rate regulation operate
- Identify the purpose of claim regulation
- Explain how claim regulations affect an insurer
- Describe the different types of insurance producers and explain how they are regulated
- Describe the goals of solvency regulation
- Explain how solvency regulation affects the business of insurance

## General Insurance Applications: Introduction and Objectives

### Section 6 Objectives

After completing this section, you will be able to:

- Explain the considerations for the use of an applicant's sex as an insurance rating factor
- Explain the considerations for the use of an applicant's credit score as an insurance rating factor
- Describe the regulatory issues regarding the use of price optimization by insurers
- Explain the potential concerns regarding the use of telematics and usage-based insurance
- Explain the considerations in the creation and operation of a captive insurer

### Section 7 Objectives

After completing this section, you will be able to:

- Describe the reasons governments decide to provide general insurance.
- Explain how government insurance programs can be evaluated.
- Describe examples of the government provision of insurance for several general insurance lines of business.
- Explain how some of these government insurance programs are administered.
- Describe the development of the National Flood Insurance Program (NFIP) in the United States.
- Describe the purpose and operation of residual markets as an alternative to the government provision of insurance for certain conditions in private insurance markets.

### Section 8 Objectives

After completing this section, you will be able to:

- Describe special characteristics that are typically included within insurance contracts
- Describe the process for the formation of the insurance policy
- Explain the ways that a general insurance contract acts as a third-party beneficiary contract
- Explain what distinguishes representations from warranties in an insurance contract
- Identify three legal doctrines that apply most frequently to insurance and explain how they are applied
- Explain how insurers use nonwaiver agreements and reservation of rights letters for situations in which the insurer may deny an insured's claim under the policy

### Section 9 Objectives

After completing this section, you will be able to:

- Explain what torts are and how tort law affects general insurance
- Identify the requirements to prove negligence and what the defenses are against negligence claims with respect to unintentional torts
- Identify the different types of intentional torts
- Describe what types of extraordinary circumstance attach liability, even in the absence of negligence or intent
- Identify the causes of action for products liability and the defenses for it

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- Identify types of damages that may be awarded by the courts to a successful plaintiff
- Describe some of the liability concepts that affect who can sue and who can be potentially liable
- Explain how tort trends are measured
- Identify types of tort reforms that have been enacted in the United States
- Describe the issues regarding mass torts and toxic torts
- Identify some of the important cases in the United States that affect general insurance
- Explain how U.S. tort law influences tort law in other jurisdictions
- Define social inflation and describe how insurers can manage it

### Section 10 Objectives

After completing this section, you will be able to:

- Describe the various methods for a company to engage in international business
- Identify the predominant legal systems and describe their major differences
- Explain the differences between public international law and private international law
- Describe the various multinational organizations and agreements that must be understood by a company engaged in international business
- Explain the considerations for a company engaged in international business
- Explain the considerations for a general insurance actuary working for an insurer engaged in international business