Chapter 6
Analysis of Insurance Contracts

■ Overview

In this chapter we turn our attention to insurance contracts. Even though many different insurance contracts are offered, there are certain elements that are common to all insurance contracts. This chapter examines the basic parts of an insurance contract, endorsements and riders, deductibles, coinsurance, and loss settlement when more than one insurance policy covers a loss. The material presented in this chapter will be of great assistance to you as you begin to examine individual insurance contracts. In addition to the “usual” exercises, a problem set and a review of coinsurance are provided.

■ Learning Objectives

After studying this chapter, you should be able to:

• Identify the basic parts of any insurance contract.
• Explain the meaning of an “insured” in an insurance contract.
• Describe the common types of deductibles that appear in insurance contracts, including a straight deductible and a calendar-year deductible.
• Explain how coinsurance works in a property insurance contract.
• Show how coinsurance works in a health insurance contract.
• Explain how losses are paid when more than one insurance contract covers the same loss.
• Define the following:
  Additional insureds
  Aggregate deductible
  “All-risks” policy
  Calendar-year deductible
  Coinsurance clause
  Conditions
  Contribution by equal shares
  Coordination-of-benefits provision
  Corridor deductible
  Declarations
  Deductible
  Elimination (waiting) period
  Endorsements and riders
  Equity in rating
  Exclusions
  First named insured
  Insuring agreement
  Large-loss principle
  Named insured
  Named-perils policy
  Open-perils policy
  Other-insurance provisions
  Other insureds
  Primary and excess insurance
  Pro rata liability
  Special coverage policy
  Straight deductible
Most property losses are not total losses. Effective risk management helps to prevent some losses from occurring and reduces the severity of losses that do occur. For example, a fire may start in a storage building, but the heat or smoke may trigger a sprinkler system. The sprinkler system may extinguish the fire before it has a chance to spread. Given that most losses are partial losses, there is a disincentive to insure for full value. Not insureing for full value creates a problem in determining loss settlements, as can be shown through the following example:

Assume there are three identical buildings, each valued at $1 million. Building A is insured for $500,000; Building B is insured for $800,000; and Building C is insured for $1 million. Also assume that a total loss occurs. The insurer’s liability, respectively, is $500,000, $800,000, and $1 million.
How will partial losses be handled, however? Assume, instead, that a $200,000 loss occurs. Obviously each of the buildings is insured for more than $200,000. Even though two of the buildings are only partially insured, the owners will expect to be fully indemnified because the loss was less than the amount of coverage carried. However, it clearly would be inequitable to provide full indemnification to all of the property owners as each purchased a different amount of insurance. How can partial losses be settled equitably when less than full insurance coverage is carried?

One solution is coinsurance. Coinsurance requires the property owner to purchase insurance equal to a specified percentage of value if the insured wants to collect in full for a partial loss. If less than the prescribed amount of coverage is carried, the insured must bear a portion of the loss. The coinsurance formula is:

\[
\frac{\text{Amount of Insurance Carried}}{\text{Amount of Insurance Required}} \times \text{Loss} = \text{Loss Payment}
\]

Suppose in our previous example that the property insurance policy included an 80 percent coinsurance requirement. Thus to be fully reimbursed for any partial loss, $800,000 in insurance coverage (80% \times $1 million) must be purchased. The owner of Building A insured for $500,000. If a $200,000 loss occurred, the owner would receive:

\[
\frac{\$500,000}{\$800,000} \times 200,000 = 125,000
\]

Because the building was not insured for 80 percent of its value, the additional portion of the loss must be absorbed by the owner.

If the building were insured for $800,000; the fraction in the formula is ($800,000/$800,000) which equals one. Thus the entire $200,000 loss would be covered by the insurer. Note, however, that the maximum liability of the insurer is $800,000 if a total loss occurred.

The building owner who insured for $1 million would collect the full value of any partial loss and $1 million if a complete loss occurred.

● **Short Answer Questions**

1. List and explain the six parts of an insurance contract.
2. What is the difference between an insuring agreement that provides named-perils coverage and an insuring agreement that provides all-risk (open-perils) coverage?

3. Why are exclusions used in insurance contracts?

4. Why do insurers include definitions of terms in the insurance contract?
5. Why are endorsements and riders used in insurance contracts?

6. Why is coinsurance used in property insurance and what is the coinsurance formula?

7. Why are deductibles used in insurance?
8. Why are “other-insurance” provisions necessary in insurance contracts?

9. In what ways can an “insured” be defined in an insurance contract?

10. What types of information would be included in the miscellaneous provisions of an insurance contract?
Multiple Choice Questions

Circle the answer that corresponds to the BEST answer.

1. The part of an insurance contract that can be written on a named-perils or all-risk basis is the:
   (a) insuring agreement
   (b) conditions
   (c) exclusions
   (d) declarations

2. A written provision that adds to, deletes from, or in some other way alters an insurance contract is called a(n):
   (a) deductible
   (b) endorsement or rider
   (c) binder
   (d) coinsurance provision

3. Carson Company purchased a commercial property insurance policy. Under one provision of the policy, Carson would pay all covered losses until the sum paid reached $50,000; then the insurer would cover all future losses. This provision is a(n):
   (a) corridor deductible
   (b) percentage participation clause
   (c) coinsurance clause
   (d) aggregate deductible

4. Which statement is true about the conditions section of an insurance policy?
   I. It contains a description of the property or life that is insured.
   II. It explains what types of perils, losses, and property are not covered under the contract.
   (a) I only
   (b) II only
   (c) both I and II
   (d) neither I nor II

5. Tom was disabled and unable to work. Before he was able to collect benefits under his disability income insurance policy, he was required to serve a two-week period during which no benefits were paid. This two-week period is called a(n):
   (a) franchise deductible
   (b) elimination (waiting) period
   (c) corridor deductible
   (d) percentage participation clause
6. Bert purchased fire insurance on his dwelling. Shortly thereafter, he began to manufacture fireworks in the basement, near the furnace. When a fire severely damaged his home, the insurer denied liability because the policy stated, “we will not be liable for any losses directly attributable to a material increase in hazard.” This clause is an example of a(n):
(a) condition
(b) declaration
(c) definition
(d) insuring agreement

7. Which statement is true with regard to deductibles?
   I. Property insurance premiums are unrelated to deductibles.
   II. Deductibles help to eliminate small claims.
(a) I only
(b) II only
(c) both I and II
(d) neither I nor II

8. Exclusions are used in insurance contracts for all of the following reasons EXCEPT:
   (a) to provide a physical description of the property to be insured
   (b) to prevent moral hazard from occurring
   (c) to eliminate the duplication of coverage
   (d) to avoid coverage of uninsurable perils

9. One other-insurance provision assesses liability of an insurer in relation to the proportion that the company’s insurance bears to the total amount of insurance in force. This other-insurance provision is:
   (a) pro rata liability
   (b) contribution by equal shares
   (c) percentage participation
   (d) primary and excess

10. Which statement is true with regard to endorsements?
    I. If there is a conflict between the endorsement and the underlying contract, the endorsement usually takes precedence.
    II. An endorsement can be used to add coverage for additional perils.
(a) I only
(b) II only
(c) both I and II
(d) neither I nor II
**True/False**

*Circle the T if the statement is true, the F if the statement is false. Explain to yourself why a statement is false.*

T  F  1. Insurance policies written on an all-risk basis cover all perils.

T  F  2. Coinsurance in property insurance and coinsurance (percentage participation) in health insurance operate in the same way.

T  F  3. Riders and endorsements are used to amend insurance contracts.

T  F  4. Life insurance is an example of a named-perils coverage.

T  F  5. A straight deductible requires the insured to bear a portion of each loss before the insurer has any liability.

T  F  6. Cancellation rights and subrogation provisions are miscellaneous provisions in insurance contracts.

T  F  7. Deductibles are not used in life insurance.

T  F  8. Under a primary and excess other-insurance settlement, it is possible that only one insurer will be required to pay when a loss occurs.

T  F  9. Individuals must be mentioned by name in order to be covered under insurance contracts.

T  F  10. To determine if a peril is covered under an all-risk policy, you have to read the list of covered perils.

T  F  11. Other-insurance provisions are designed to prevent profiting from insurance and violating the principle of indemnity.

T  F  12. An aggregate deductible may be based on losses that occur during a calendar year.

**Problems**

1. Harold owns a building valued at $400,000. He purchased $280,000 in property insurance on the building, and the property insurance contract includes an 80 percent coinsurance clause.
   (a) If an $80,000 covered loss occurs, how much will Harold collect from his insurer?
(b) If a $340,000 covered loss occurs, how much will Harold collect from his insurer?

(c) How would your answers to part (a) and part (b) change if, instead of $280,000, Harold insured the building for $320,000?

2. Although still married, Mike and Beth Harris are legally separated. Mike insured their vacation home for $200,000. Unaware that Mike purchased coverage, Beth insured the vacation home for $300,000. While both policies were in force, a $90,000 covered loss occurred. How will the loss be settled if:

(a) pro rata liability is used?

(b) contribution by equal shares is used?
(c) primary and excess insurance is used, with Mike’s coverage deemed primary?

3. Janice’s health insurance includes an 80–20 coinsurance (percentage participation) provision, after a $250 deductible is satisfied. Janice needed medical attention and the covered medical expenses totaled $25,250. How will this claim be settled?

4. Bob’s insurance coverage started at the beginning of the year. Given the following losses: January 14, $500 loss; March 27, $1200 loss; and August 6, $800 loss; how much will Bob have to pay if:
   (a) the losses were auto collision losses and Bob carried a $250 straight deductible?
   (b) the losses are health-related claims, and Bob carries a $1000 aggregate deductible based on the calendar-year?
Case Applications

Case 1

Part of ABC Insurance Company’s training program for new employees is an analysis of insurance contracts. After the training program is completed, each new employee is given an “Insurance Skills Test.”

One question from the test requires employees to identify sections of an insurance policy. The test provides short excerpts from ABC policies. Employees are asked to identify the excerpt as a(n): (1) declaration, (2) definition, (3) insuring agreement, (4) exclusion, (5) condition, or (6) miscellaneous provision.

Part of the test is reproduced here. Identify the section of the policy from which the excerpt was taken.

a. “The property is a wood frame building located at 852 Pine Street in Metro City. It was constructed in 1979 and is currently valued at $60,000. The building has smoke detectors and a sprinkler system.”

b. “If there has been a material increase in hazard or if the building is left vacant or unoccupied beyond 30 days, this coverage is suspended.”

c. “We will not be responsible for losses that are intentionally caused… Nor will we be responsible for the loss of money, stocks, or bonds.”

d. “This policy covers direct physical damage to your property that is not specifically excluded.”
e. “In this policy, an “occurrence” will mean a loss that develops over time as well as sudden and accidental losses.”

f. “If the insurer and insured cannot agree on the value of the insured loss, each party will name an appraiser, and the two appraisers will jointly appoint an umpire. A decision by any two of the three (appraisers and umpire) is binding upon the insured and the insurer.”

**Case 2**

Henry and Carol Green filed two insurance claims. Determine the insurer’s liability in each case.

a. The Greens purchased a storage building in another city two years ago. They insured the building for $64,000 under a property insurance policy that included an 80 percent coinsurance requirement. At the time the building was damaged by a covered peril, the building was valued at $90,000. The damage was $9000. How much will the Greens collect from their insurer?

b. The Greens purchased a cabin in the mountains together with their friends, Guy and Ruby Blake. The Greens and Blakes periodically use the cabin. The Greens insured the cabin for $50,000. Unaware that the Greens had insured the cabin, Guy and Ruby insured the cabin for $75,000. Recently the cabin sustained a $15,000 loss that was covered by both policies. If the insurers agree to settle the claim on a pro rata basis, how much of the claim will be paid by the Greens’ insurer?
Solutions to Chapter 6

Short Answer Questions

1. **Declarations:** Statements about the property or life to be insured; used for underwriting and rating purposes as well as identification of the property, life, or activity insured.

   **Definitions:** Section of the policy in which the insurer explains the meaning of key words or phases in the contract. Definitions help to reduce disputes between the insurer and insured because key words and phrases are clearly defined as part of the contract.

   **Insuring Agreement:** Part of the insurance contract that states the major promises of the insurer. The insuring agreement can be written on an all-risk (“open perils”) or named-perils basis.

   **Exclusions:** Listing of perils, losses, and property that are not covered under the insurance contract.

   **Conditions:** Provisions that qualify or place limitations on the insurer’s promise to perform.

   **Miscellaneous Provisions:** General provisions common to insurance contracts that address the relationship between the insurer and the insured, and the responsibilities of the insurer toward third parties. An example is a description of policy renewal and cancellation requirements.

2. Named-perils coverage lists causes of loss that are covered under the policy. If the peril causing a loss is not named, the loss is not covered. All-risk coverage provides protection against all risks, except those that are specifically excluded. If the peril causing the loss is not excluded, the loss is covered.

3. Exclusions are used in insurance contracts for several reasons. Some risks (e.g., war) are not privately insurable. Some exposures are too hazardous to insure. Coverage may be provided elsewhere so it does not need to be provided under the contract. Exclusions are also needed to protect against losses attributable to moral hazard. Finally, some coverages may not be needed by a typical insured.

4. Insurers have an incentive to make contracts more readable and more easily understood. Ambiguity in an insurance contract is construed against the insurer. To provide clarity, insurers specifically define the meaning of key words and phrases.

5. The purpose of endorsements and riders is to add to, delete from, or in some other way modify an insurance contract. For example, a renter can change the personal property coverage in his or her policy from actual cash value coverage to replacement cost coverage by adding a replacement cost endorsement to the renter’s insurance policy.

6. Coinsurance is used to achieve equity in rating and to provide equitable loss settlements. It requires insureds to purchase property coverage for a specified percentage of value if they wish to collect in full for a partial loss. If they have not satisfied the coinsurance requirement, they must bear a portion of the loss.

   The coinsurance formula is:

   \[
   \frac{\text{Amount of Insurance Carried}}{\text{Amount of Insurance Required}} \times \text{Loss} = \text{Insurer's Liability}
   \]
7. Deductibles are used for a number of reasons. It costs something to process a claim, regardless of the size of the claim. Deductibles reduce the number of small claims filed. Secondly, deductibles reduce premiums. The more of the loss the insured is willing to retain through the deductible, the lower the premium. Finally, deductibles reduce moral and attitudinal (morale) hazard because the insured is required to bear a portion of the loss.

8. Other-insurance provisions are needed because in some situations more than one insurance policy covers a loss. In the absence of other-insurance provisions, the loss settlement would not be coordinated, and more than the value of the loss might be paid, violating the principle of indemnity.

9. An insured can be defined in a number of ways. One way, as is done in life insurance, is to name one specific person by name. A second practice is to insure the person mentioned in the declarations and others who satisfy the definition of a “named insured.” For example, the personal liability coverage of the homeowner’s contract covers the purchaser named in the declarations, as well as his or her spouse and children. Finally, the coverage may extend to persons not specifically named in the contract. For example, business auto coverage does not list the name of every employee. If the employer hires a new delivery driver, he or she is covered.

10. Some miscellaneous provisions address disputes relating to valuation. Other common miscellaneous provisions pertain to subrogation, cancellation, loss notification, and claim settlement practices.

**Multiple Choice Questions**

1. (a) The insuring agreement can be written on an all-risk or named-perils basis.

2. (b) Endorsements and riders are added to insurance contracts to amend the underlying policy.

3. (d) The provision described is an aggregate deductible.

4. (d) Neither statement is true with regard to conditions. The first statement describes the declarations section; the second statement describes the exclusions section.

5. (b) A waiting or elimination period is an initial period at the start of a covered disability during which no benefits are paid. It is really a deductible expressed in time, rather than dollars.

6. (a) This clause states a condition that must be satisfied (no material increase in hazard) for the insurer to provide indemnity. If the insured has violated the condition, as was the case here, the insurer can deny coverage of the loss.

7. (b) The level of the deductible will affect the premium that is charged for the coverage. The lower the deductible, the higher the premium. Deductibles help to reduce the number of small claims submitted to insurers.

8. (a) A physical description of the property insured is found in the declarations section of the policy. Exclusions are used for the reasons listed in the other choices.

9. (a) Pro rata settlements fit this description. If an insurer has written 75 percent of the total coverage in force when a loss occurs, the insurer must pay 75 percent of the loss.

10. (c) Both statements are true. The endorsement takes precedence unless it is in violation of the law. Endorsements are commonly used to broaden coverage by adding perils.
True/False

1. F  All risks are covered except those risks that are specifically excluded.

2. F  Coinsurance in property insurance requires the policyowner to insure for a specified percentage of value in order to collect in full for a partial loss. Coinsurance (percentage participation) in health insurance determines loss sharing after the deductible is satisfied.

3. T

4. F  Life insurance is all-risk coverage, with very few exclusions.

5. T

6. T

7. T

8. T

9. F  Often times a description of an insured is used (e.g., spouse of the insured, children of the insured, employees of the insured) in an insurance contract.

10. F  You would have to read the list of exclusions. If the peril is not excluded, the peril is covered.

11. T

12. T

Problems

1. (a) Harold carries $280,000 in coverage. However, $320,000 (.80 × $400,000) was required to satisfy the coinsurance provision. Therefore Harold will receive:

\[
\frac{280,000}{320,000} \times 80,000 = 70,000
\]

(b) According to the coinsurance formula, $297,500 should be paid:

\[
\frac{280,000}{320,000} \times 340,000 = 297,500
\]

However, recovery is limited to the face amount of coverage in force. The insurer will be liable for $280,000.
(c) If Harold had insured the building for $320,000; the first loss would have been paid in full:

\[
\frac{320,000}{320,000} \times 80,000 = 80,000
\]

Although the coinsurance requirement is also satisfied in the second case, the settlement is limited by the face amount of the coverage. The maximum the insurer will pay if a $340,000 loss occurs is $320,000, the amount of coverage purchased.

2. (a) Under pro rata liability, each insurer is responsible for the proportion of the loss that its coverage bears to the total insurance in force. Mike’s insurer has written 40 percent of the coverage in force ($200,000/$500,000); and Beth’s insurer has written 60 percent of the coverage in force ($300,000/$500,000). Therefore the $90,000 loss would be settled in this manner:

\[
\frac{200,000}{500,000} \times 90,000 = 36,000 \text{ (Mike’s insurer)}
\]

\[
\frac{300,000}{500,000} \times 90,000 = 54,000 \text{ (Beth’s insurer)}
\]

(b) Under contribution by equal shares, each insurer contributes equally until the loss is paid in full or the limit of liability of the insurer is reached. In this case, each insurer would contribute $45,000 to settle the claim.

(c) Under primary and excess insurance, one insurer pays first, and if its limit of liability is not high enough to cover the entire claim, then the other insurer pays the remainder. In this case, Mike’s insurer would pay the entire claim. If the claim had been larger, $220,000 for example, Mike’s insurer would pay $200,000 and Beth’s insurer would pay the balance.

3. The claim would be settled in the following manner:

<table>
<thead>
<tr>
<th>$25,250</th>
<th>Total claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>– $250</td>
<td>Janice pays the deductible</td>
</tr>
<tr>
<td>$25,000</td>
<td>Balance of claim</td>
</tr>
</tbody>
</table>

The insurer pays 80 percent of the $25,000 balance, which is $20,000. Janice pays 20 percent of the $25,000 balance, which is $5000.

So Janice would pay a total of $5250 of the claim.

4. (a) An auto insurance collision deductible is an example of a straight deductible. Thus Bob would have to pay the first $250 of each of the three losses.

(b) Under a calendar-year deductible, covered losses are totaled until they reach a specified level, and then the insurer pays the remaining claims. In this case, Bob would be responsible for the $500 claim in January. He would also be responsible for $500 of the $1200 claim in March. That amount, plus the $500 he paid in January, satisfies the calendar-year deductible. The insurer would be responsible for the $700 balance of the March claim and the entire $800 claim in August.
Case Applications

Case 1

1. (a) Declarations: A description of the insured property (location, value, construction, age, and protection) is provided.
   (b) Conditions: The insurer provides a conditional promise of indemnity. The insurer will pay for damage to the property. However, if the hazard has been materially increased or the building was vacant or unoccupied for 30 days before a loss occurred, the insurer will not pay the claim.
   (c) Exclusions: Here the insurer is excluding coverage for a type of loss (intentional acts) and for certain types of property.
   (d) Insuring Agreement: The major promises of the insurer are summarized in a simple sentence. The insurer will pay for direct physical damage to the insured property, unless the loss is excluded. This is an all-risks (open perils) insuring agreement.
   (e) Definitions: What is an occurrence? The insurer here defines the term broadly to include not only damage that occurs over time, but also sudden and accidental losses.
   (f) Miscellaneous Provisions: This answer is arrived at through the process of elimination. It’s not a definition, or a declaration, or a condition, or an exclusion, or part of the insuring agreement. Therefore, it is assigned to the catch-all category “miscellaneous provisions.”

2. (a) To collect in full for a partial loss, the Greens would have needed to carry $72,000 in coverage at the time of loss (80 percent of $90,000 is $72,000). As this requirement was not met, the coinsurance formula must be applied. The Greens will receive $8000 from the insurer:

\[
\frac{\$64,000}{\$72,000} \times \$9000 = \$8,000
\]

(b) As the policies will respond on a pro rata basis, the percentage for which each insurer is responsible must be determined. A total of $125,000 worth of coverage was in force at the time of the loss ($50,000 plus $75,000). Of this amount the Greens’ coverage was $50,000 of the total of $125,000, or 40 percent. The Blakes’ coverage was $75,000 out of the total of $125,000, or 60 percent. Therefore, the Greens’ insurer will pay 40 percent of the loss, which is $6000:

\[
\$15,000 \times .40 = \$6000
\]

The Blakes’ insurer will pay 60 percent of the loss, which is $9000:

\[
\$15,000 \times .60 = \$9000
\]