Principles of

Risk and Insurance

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Chapter one

Introduction to risk

WHAT IS THE MEANING OF RISK ?

Risk is defined as uncertainty concerning the occurrence of a loss when the definition of risk includes the concept of uncertainty, there is different between objective risk and subjective risk.

Objective Risk

Objective risk: defined as the relative variation of actual loss from expected loss . useful concept for an insurer or a corporate risk manager.

As the number of exposures increases, an insurer can predict its future loss experience more accurately because it can rely on the law of large numbers.

The **law of large numbers** states that as the number of exposure units increases, the more closely the actual loss experience will approach the expected loss experience. For example, as then number of homes under observation increases, the greater is the degree of accuracy in predicting the proportion of homes that will burn.

Subjective Risk

Subjective risk is defined as uncertainty based on person's mental condition or state of mind , This mental uncertainty is called subjective risk.

CHANCE OF LOSS

Chance of loss is defined as the probability that an event will occur , Like risk, "probability" has both objective and subjective aspects.

Objective Probability

Objective probability refers to the long-run relative frequency of an event based on the assumptions of an infinite number of observations and of no change in the underlying conditions .

Subjective Probability

Subjective probability is the individual's personal estimate of the chance of loss , Subjective probability need not coincide with objective probability.

PERIL AND HAZARD

The terms peril and hazard should not be confused with the concept of risk discussed earlier.

Peril

Peril is defined as the cause of loss . If your house burns because of a fire, the peril, or cause of loss, is the fire. If your car is damaged in a collision with another car, collision is the peril, or cause of loss. Common perils that cause loss to property include fire, lightning, windstorm, hail, tornado, earthquake, flood, burglary, and theft

Hazard

A **hazard** is a condition that creates or increases the frequency or severity of loss .

There are three major types of hazards:

■ **Physical hazard**

■ **Moral hazard**

■ **Morale hazard**

Physical Hazard is a physical on diction that increases the frequency or severity of loss .

Examples of physical hazards include icy roads that increase the chance of an auto accident, defective wiring in a building that increases the chance of fire, and a defective lock on a door that increases the chance of theft.

Moral hazard is dishonesty or character defects in an individual that increase the frequency or severity of loss .

Morale hazard is carelessness or indifference to a loss, which increases the frequency or severity of a loss.

CLASSIFICATION OF RISK

They include **pure and speculative risk**

Pure risk is defined as a situation in which there are only the possibilities of loss or no loss . The only possible outcomes are adverse

Examples of pure risks include premature death, job-related accidents, catastrophic medical expenses, and damage to property from fire, lightning, flood, or earthquake.

Speculative risk is defined as a situation in which either profit or loss is possible

A particular risk and Fundamental risk

A particular risk is a risk that affects only individuals or small groups and not the entire economy. It is risk that can be reduced or eliminated by diversification.

Fundamental risk is a risk that affects the entire economy or large numbers of persons or groups within the economy. It is a risk that cannot be eliminated or reduced by diversification. Examples include rapid inflation, cyclical unemployment, war, hurricanes, floods, and earthquakes because large numbers of individuals or groups are affected.

MAJOR PERSONAL RISKS AND COMMERCIAL RISKS

The preceding discussion shows several ways of classifying risk. However, in this text, we emphasize primarily the identification and treatment of pure risk. Certain pure risks are associated with great economic insecurity for both individuals and families, as well as for commercial business firms.

Personal Risks

Personal risks are risks that directly affect an individual or family They involve the possibility of the loss or reduction of earned income, extra expenses, and the depletion of financial assets. Major personal risks that can cause great economic insecurity

include the following:

■ Premature death

■ Insufficient income during retirement

■ Poor health

■ Unemployment

Premature Death

Premature death is defined as the death of a family head with unfulfilled financial obligations .

Insufficient Income During Retirement

The major risk associated with retirement is insufficient income. The majority of workers in the United States retire before age 65. When they retire, they lose their earned income.

Unless they have sufficient financial assets on which to draw, or have access to other sources of retirement income, such as Social Security or a private pension,

Poor Health :

Poor health is another major personal risk that can cause great economic insecurity.

The risk of poor health includes both the payment of catastrophic medical bills and the loss of earned income.

Unemployment

The risk of unemployment is another major threat to economic security.

Unemployment can result from business cycle downswings, technological and structural changes in the economy, seasonal factors, imperfections in the labor market, and other causes as well.

Property Risks :

Persons owning property are exposed to **property risks** —the risk of having property damaged or lost from numerous causes. Homes and other real estate and personal property can be damaged or destroyed because of fire, lightning, tornado, windstorm, and numerous other causes.

There are two major types of loss associated with the destruction or theft of property: direct loss and indirect or consequential loss.

Direct Loss :

A **direct loss** is defined as a financial loss that results from the physical damage, destruction, or theft of the property .

For example, if you own a home that is damaged by a fire, the physical damage to the home is a direct loss.

Indirect or Consequential Loss :

An **indirect loss** is a financial loss that results indirectly from the occurrence of a direct physical damage or theft loss . For example, as a result of the fire to your home, you may incur additional living expenses to maintain your normal standard of living. You may have to rent a motel or apartment while the home is being repaired.

Liability Risks :

Liability risks are another important type of pure risk that most persons face. Under our legal system, you can be held legally liable if you do something that results in bodily injury or property damage to someone else.

A court of law may order you to pay substantial damages to the person you have injured.

Commercial Risks

Business firms also face a wide variety of pure risks that can financially cripple or bankrupt the firm if a loss occurs.

These risks include

(1) property risks,

(2) liability risks,

(3) loss of business income, and

(4) other risks.

Property Risks Business firms own valuable business property that can be damaged or destroyed by numerous perils, including fires, windstorms, tornadoes, hurricanes, earthquakes, and other perils.

Liability Risks :

Business firms today often operate in highly competitive markets where lawsuits for bodily injury and property damage are common. The lawsuits range from small nuisance claims to multimillion-dollar demands. Firms are sued for numerous reasons, including defective products that harm or injure others, pollution of the environment, damage to the property of others.

TECHNIQUES FOR MANAGING RISK

Techniques for managing risk can be classified broadly as either **risk control or risk financing**.

Risk control refers to techniques that reduce the frequency or severity of losses .

Risk financing refers to techniques that provide for the funding of losses .

Risk Control :

As noted above, risk control is a generic term to describe techniques for reducing the frequency or severity of losses. Major risk-control techniques include the following:

■ Avoidance

■ Loss prevention

■ Loss reduction

Avoidance :

Avoidance is one technique for managing risk. For example, you can avoid the risk of divorce by not marrying.

Loss Prevention :

Loss prevention aims at reducing the probability of loss so that the frequency of losses is reduced. Several examples of personal loss prevention can be given. Auto accidents can be reduced if motorists take a safe-driving course and drive defensively.

The number of heart attacks can be reduced if individuals control their weight, stop smoking, and eat healthy diets. Loss prevention is also important for business firms.

Loss Reduction Strict loss prevention efforts can reduce the frequency of losses; however, some losses will inevitably occur. Thus, the second objective of loss control is to reduce the severity of a loss after it occurs.

Risk Financing

As stated earlier, risk financing refers to techniques that provide for the payment of losses after they occur. Major risk-financing techniques include the following:

■ **Retention**

■ **Noninsurance transfers**

■ **Insurance**

Retention :

Retention is an important technique for managing risk. **Retention** means that an individual or a business firm retains part of all of the losses that can result from a given risk. Risk retention can be active or passive.

Active Retention active risk retention means that an individual is consciously aware of the risk and deliberately plans to retain all or part of it.

Passive Retention

Risk can also be retained passively. Certain risks may be unknowingly retained because of ignorance, indifference, laziness, or failure to identify an important risk. Passive retention is very dangerous if the risk retained has the potential for financial ruin.

Self-Insurance :

Self-insurance is a special form of planned retention by which part or all of a given loss exposure is retained by the firm. Another name for self-insurance is self-funding, which expresses more clearly the idea that losses are funded and paid for by the firm.

Noninsurance Transfers :

Noninsurance transfers are another technique for managing risk. The risk is transferred to a party other than an insurance company.

A risk can be transferred by several methods, including:

■ Transfer of risk by contracts

■ Hedging price risks

■ Incorporation of a business firm

Hedging Price Risks :

Hedging price risks is another example of risk transfer. **hedging** is a technique for transferring the risk of unfavorable price fluctuations to a speculator by purchasing and selling futures contracts on an organized exchange.

Incorporation of a Business

Firm Incorporation :Is another example of risk transfer If a firm is a sole proprietorship, the owner's personal assets can be attached by creditors for satisfaction of debts. If a firm incorporates, personal assets cannot be attached by creditors for payment of the firm's debts. In essence, by incorporation, the liability of the stockholders is limited, and the risk of the firm having insufficient assets to pay business debts is shifted to the creditors.

Insurance :

Insurance is the most practical method for handling major risks. Although private insurance has several characteristics, three major characteristics should be emphasized.

First, risk transfer is used because a pure risk is transferred to the insurer. Second, the pooling technique is used to spread the losses of the few over the entire group so that average loss is substituted for actual loss.

Finally, the risk may be reduced by application of the law of large numbers by which an insurer can predict future loss experience with greater accuracy.

Select the Appropriate Combination of Techniques for Treating the Loss Exposures

The third step in the risk management process is to select the appropriate combination of techniques for treating the loss exposures.

These techniques can be classified broadly as either risk control or risk financing.

Risk control refers to techniques that reduce the frequency or severity of losses .

Risk financing refers to techniques that provide for the funding of losses . Risk managers typically use a combination of techniques for treating each loss exposure.

Risk Control As noted above, risk control is a generic term to describe techniques for reducing the frequency or severity of losses. Major risk-control techniques include the following:

■ Avoidance

■ Loss prevention

■ Loss reduction

Avoidance :

Avoidance means a certain loss exposure is never acquired or undertaken, or an existing loss exposure is abandoned .

For example, flood losses can be avoided by building a new plant on high ground, well above a floodplain.

Loss Prevention:

Loss prevention refers to measures that reduce the frequency of a particular loss . For example, measures that reduce truck accidents include driver training, zero tolerance for alcohol or drug abuse, and strict enforcement of safety rules.

Loss Reduction:

Loss reduction refers to measures that reduce the severity of a loss after it occurs .

Examples include installation of an automatic sprinkler system that promptly extinguishes a fire; segregation of exposure units so that a single loss cannot simultaneously damage all exposure units, such as having warehouses with inventories at different locations; rehabilitation of workers with job-related injuries; and limiting the amount of cash on the premises.

Risk Financing as stated earlier, risk financing refers to techniques that provide for the payment of losses after they occur. major risk-financing techniques include the following:

■ Retention

■ Noninsurance transfers

■ Commercial insurance

Retention :

Retention means that the firm retains part or all of the losses that can result from a given loss . Retention can be either active or passive.

Active risk retention means that the firm is aware of the loss exposure and consciously decides to retain part or all of it, such as collision losses to a fleet of company cars. Passive retention, however, is the failure to identify a loss exposure, failure to act, or forgetting to act. For example, a risk manager may fail to identify all company assets that could be damaged in an earthquake.

Retention can be effectively used in a risk management program under the following conditions:

■ No other method of treatment is available . Insurers may be unwilling to write a certain type of coverage, or the coverage may be too expensive.

Also, noninsurance transfers may not be available. In addition, although loss prevention can reduce the frequency of loss, all losses cannot be eliminated. In these cases, retention is a residual method. If the exposure cannot be insured or transferred, then it must be retained.

■ The worst possible loss is not serious . For example, physical damage losses to vehicles in a large firm's fleet will not bankrupt the firm if the vehicles are separated by wide distances and are not likely to be simultaneously damaged.

■ Losses are fairly predictable . Retention can be effectively used for workers compensation claims, physical damage losses to cars, and shoplifting losses. Based on past experience, the risk manager can estimate a probable range of frequency and severity of actual losses. If most losses fall within that range, they can be paid out of the firm's income.

Self-Insurance :

Self-insurance is widely used in risk management programs., **self-insurance** is a special form of planned retention by which part or all of a given loss exposure is retained by the firm. Another name for self-insurance is self-funding. Self-insurance is widely used in workers compensation insurance.

Advantages and Disadvantages of Retention :

The risk retention technique has both advantages and disadvantages in a risk management program. The major advantages are as follows:

■ Save on loss costs . The firm can save money in the long run if its actual losses are less than the loss component in a private insurer's premium.

■ Save on expenses . The services provided by the insurer may be provided by the firm at a lower cost.

■ Encourage loss prevention, because the exposure is retained, there may be a greater incentive for loss prevention.

■ Increase cash flow: cash flow may be increased because the firm can use some of the funds that normally would be paid to the insurer at the beginning of the policy period.

The retention technique, however, has several disadvantages:

■ Possible higher losses . the losses retained by the firm may be greater than the loss allowance in the insurance premium that is saved by not purchasing insurance. also, in the short run, there may be great volatility in the firm’s loss experience.

■ Possible higher expenses . Expenses may actually be higher. Outside experts such as safety engineers may have to be hired. Insurers may be able to provide risk control and claim services at a lower cost.

■ Possible higher taxes . Income taxes may also be higher. The premiums paid to an insurer are immediately income-tax deductible. However, if retention is used, only the amounts paid out for losses re deductible, and the deduction cannot be taken until the losses are actually paid. Contributions to a funded reserve are not income-tax deductible.

Noninsurance Transfers :

Noninsurance transfers are another risk-financing technique. **Noninsurance transfers** are methods other than insurance by which a pure risk and its potential financial consequences are transferred to another party . Examples of noninsurance transfers include contracts, leases, and hold-harmless agreements. For example, a company’s contract with a construction firm to build a new plant can specify that the construction firm is responsible for any damage to the plant while it is being built. A firm’s computer lease can specify that maintenance,

repairs, and any physical damage loss to the computer are the responsibility of the computer firm. noninsurance transfers have **several advantages**:

■ The risk manager can transfer some potential losses that are not commercially insurable.

■ Noninsurance transfers often cost less than insurance.

■ The potential loss may be shifted to someone who is in a better position to exercise loss control.

However, noninsurance transfers have several disadvantages:

■ The transfer of potential loss may fail because the contract language is ambiguous. Also, there may be no court precedents for the interpretation of a contract tailor-made to fit the situation.

■ If the party to whom the potential loss is transferred is unable to pay the loss, the firm is still responsible for the claim.

■ An insurer may not give credit for the transfers, and insurance costs may not be reduced.

Insurance Commercial insurance is also used in a risk management program. Insurance is appropriate for loss exposures that have a low probability of loss but the severity of loss is high. If the risk manager uses insurance to treat certain loss exposures, five key areas must be emphasized:

■ Selection of insurance coverage

■ Selection of an insurer

■ Negotiation of terms

■ Dissemination of information concerning insurance

coverage

■ Periodic review of the insurance program

First, the risk manager must select the insurance coverage needed .

The coverage selected must be appropriate for insuring the major loss exposures identified in step one. To determine the coverage needed, the risk manager must have specialized knowledge of commercial property and liability insurance contracts. The risk manager must also determine if a deductible is needed and the size of the deductible.

A **deductible** is a provision by which a specified amount is subtracted from the loss payment otherwise payable to the insured .

A deductible is used to eliminate small claims and the administrative expense of adjusting these claims.

As a result, substantial premium savings are possible. In essence, a deductible is a form of risk retention.

Most risk management programs combine the retention technique discussed earlier with commercial insurance. In determining the size of the deductible, the firm may decide to retain only a relatively small part of the maximum possible loss. The insurer normally adjusts any claims, and only losses in excess of the deductible are paid.

Advantages of Insurance :

The use of commercial insurance in a risk management program has certain advantages.

■ The firm will be indemnified after a loss occurs.

The firm can continue to operate and fluctuations in earnings are minimized.

■ Uncertainty is reduced, which permits the firm to lengthen its planning horizon. Worry and fear are reduced for managers and employees.

■ Insurers can provide valuable risk management services, such as risk-control services, loss exposure analysis, and claims adjusting.

■ Insurance premiums are income-tax deductible as a business expense.

Disadvantages of Insurance

The use of insurance also entails certain disadvantages and costs.

■ The payment of premiums is a major cost because the premium consists of a component to pay losses, an amount to cover the insurer's expenses, and an allowance for profit and contingencies.

There is also an opportunity cost.

Under the retention technique discussed earlier, the premium could be invested or used in the business until needed to pay claims. If insurance is used, premiums must be paid in advance, and the opportunity to use the funds is forgone.

■ Considerable time and effort must be spent in negotiating the insurance coverage.

An insurer or insurers must be selected, policy terms and premiums must be negotiated, and the firm must cooperate with the risk-control activities of the insurer.

■ The risk manager may have less incentive to implement loss-control measures because the insurer will pay the claim if a loss occurs. Such a lax attitude toward risk control could increase the number of noninsured losses as well.

Which Technique Should Be Used?

In determining the appropriate technique or techniques for handling loss exposures, a matrix can be used that classifies the various loss exposures according to frequency and severity.

This matrix can be useful in determining which risk management method should be used The first loss exposure is characterized by both low frequency and low severity of loss. One example of this type of exposure would be the potential theft of office supplies.

This type of exposure can be handled by retention because the loss occurs infrequently and, when it does occur, it seldom causes financial harm.

The second type of exposure is more serious.

Losses occur frequently, but severity is relatively low. Examples of this type of exposure include physical damage losses to automobiles, workers compensation claims, shoplifting, and food spoilage. Loss prevention should be used here to reduce the frequency of losses. In addition, because losses occur regularly and are predictable, the retention technique can also be used. However, because small losses in the aggregate can reach sizable levels over a one-year period, excess insurance could also be purchased.

The third type of exposure can be met by transfer, including insurance. As stated earlier, insurance is best suited for low-frequency, high-severity losses.

High severity means that a catastrophic potential is present, while a low probability of loss indicates that the purchase of insurance is economically feasible.

Examples of this type of exposure include fires, explosions, natural disasters, and liability lawsuits.

The risk manager could also use a combination of retention and commercial insurance to deal with these exposures.

The fourth and most serious type of exposure is one characterized by both high frequency and high severity.

This type of exposure is best handled by avoidance.

For example, a pharmaceutical company might be concerned about the harmful side effects of a new drug that it is developing. The exposure to liability arising from this drug can be avoided if the drug is not produced and sold.

Cooperation with Other Departments

The risk manager does not work alone. Other functional departments within the firm are extremely important in identifying loss exposures, methods for treating these exposures, and ways to administer the risk management program. These departments can cooperate in the risk management process in the following ways:

■ Accounting . Internal accounting controls can reduce employee fraud and theft of cash.

Accounting can also provide information on the tax treatment of risk finance alternatives.

■ Finance . Information can be provided showing the effect that losses will have on the firm's balance sheet and profit and loss statement.

■ Marketing . Accurate packaging and product-use information can prevent lawsuits. Safe distribution procedures can prevent accidents.

■ Production . Quality control can prevent the production of defective goods and lawsuits. Effective safety programs in the plant can reduce injuries and accidents.

■ Human resources . This department is responsible for employee benefit programs, retirement programs, safety programs, and the company’s hiring, promotion, and dismissal policies.

This list indicates how the risk management process involves the entire firm. Indeed, without the active cooperation of the other departments, the risk management program will fail. It is essential for there to be open communication between the risk management department and other functional areas of the firm.

Periodic Review and Evaluation

To be effective, the risk management program must be periodically reviewed and evaluated to determine whether the objectives are being attained or if corrective actions are needed. In particular, risk management costs, safety programs, and loss-prevention programs must be carefully monitored. Loss records must also be examined to detect any changes in frequency and severity.

Retention and transfer decisions must also be reviewed to determine if these techniques are being properly used. Finally, the risk manager must determine whether the firm’s overall risk management policies are being carried out, and whether the risk manager is receiving cooperation from other departments.

BENEFITS OF RISK MANAGEMENT

The previous discussion shows that the risk management process involves a complex and detailed analysis. Despite the complexities, an effective risk management program yields substantial benefits to the firm or organization. Major benefits include the following:

■ A formal risk management program enables a firm to attain its pre-loss and post-loss objectives more easily.

■ The cost of risk is reduced, which may increase the company's profits. the **cost of risk** is a risk management tool that measures certain costs.

These costs include premiums paid, retained losses, loss control expenditures, outside risk management services, financial guarantees, internal administrative costs, and taxes, fees, and other relevant expenses.

■ Because the adverse financial impact of pure loss exposures is reduced, a firm may be able to implement an enterprise risk management program that treats both pure and speculative loss exposures.

Chapter Two

INTRODUCTION TO INSURANCE

DEFINITION OF INSURANCE

There is no single definition of insurance. Insurance can be defined from the viewpoint of several disciplines, including law, economics, history, actuarial science, risk theory, and sociology. But each possible definition will not be examined at this point. Instead, we will examine the common elements that are typically present in any insurance plan.

However, before proceeding, a working definition of insurance—one that captures the essential characteristics of a true insurance plan—must be established. After careful study, the Commission on Insurance Terminology of the American Risk and Insurance Association has defined insurance as follows.

Insurance is the pooling of fortuitous losses by transfer of such risks to insurers, who agree to indemnify insured for such losses, to provide other pecuniary benefits on their occurrence, or to render services connected with the risk .

BASIC CHARACTERISTICS OF INSURANCE

Based on the preceding definition, an insurance plan or arrangement typically includes the following characteristics:

■ Pooling of losses

■ Payment of fortuitous losses

■ Risk transfer

■ Indemnification

Pooling of Losses

Pooling or the sharing of losses is the heart of insurance.

Pooling is the spreading of losses incurred by the few over the entire group, so that in the process, average loss is substituted for actual loss . In addition, pooling involves the grouping of a large number of exposure units so that the law of large numbers can operate to provide a substantially accurate prediction of future losses. Ideally, there should be a large number of similar, but not necessarily identical, exposure units that are subject to the same perils.

Thus, pooling implies (1) the sharing of losses by the entire group and (2) prediction of future losses with some accuracy based on the law of large numbers. The primary purpose of pooling, or the sharing of losses, is to reduce the variation in possible outcomes as measured by the standard deviation or some other measure of dispersion, which reduces risk.

Payment of Fortuitous Losses

A second characteristic of private insurance is the payment of fortuitous losses.

A **fortuitous loss** is one that is unforeseen and unexpected by the insured and occurs as a result of chance . In other words, the loss must be accidental.

The law of large numbers is based on the assumption that losses are accidental and occur randomly.

Risk Transfer

Risk transfer means that a pure risk is transferred from the insured to the insurer, who typically is in a stronger financial position to pay the loss than the insured .

From the viewpoint of the individual, pure risks that are typically transferred to insurers include the risk of premature death, excessive longevity, poor health, disability, destruction and theft of property, and personal liability lawsuits.

Indemnification

A final characteristic of insurance is indemnification for losses. **Indemnification** means that the insured is restored to his or her approximate financial position prior to the occurrence of the loss.

Thus, if your home burns in a fire, a homeowners policy will indemnify you or restore you to your previous position. If you are sued because of the negligent operation of an automobile, your auto liability insurance policy will pay those sums that you are legally obligated to pay. Similarly, if you become seriously disabled, a disability-income insurance policy will restore at least part of the lost wages.

CHARACTERISTICS OF AN IDEALLY INSURABLE RISK

Private insurers generally insure only pure risks. However, some pure risks are not privately insurable. From the viewpoint of a private insurer, an insurable risk ideally should have certain characteristics.

There are ideally six characteristics of an **insurable risk** :

■ There must be a large number of exposure units.

■ The loss must be accidental and unintentional.

■ The loss must be determinable and measurable.

■ The loss should not be catastrophic.

■ The chance of loss must be calculable.

■ The premium must be economically feasible.

Large Number of Exposure Units :

The first requirement of an insurable risk is a large number of exposure units . Ideally, there should be a large group of roughly similar, but not necessarily identical, exposure units that are subject to the same peril or group of perils.

Accidental and Unintentional Loss :

A second requirement is that the loss should be accidental and unintentional; ideally, the loss should be unforeseen and unexpected by the insured and outside of the insured's control. Thus, if an individual deliberately causes a loss, he or she should not be indemnified for the loss. The loss should be accidental because the law of large numbers is based on the random occurrence of events.

Determinable and Measurable Loss :

A third requirement is that the loss should be both determinable and measurable .

This means the loss should be definite as to cause, time, place, and amount. Life insurance in most cases meets this requirement easily.

The cause and time of death can be readily determined in most cases, and if the person is insured, the face amount of the life insurance policy is the amount paid. Some losses, however, are difficult to determine and measure.

No Catastrophic Loss :

The fourth requirement is that ideally the loss should not be catastrophic .

This means that a large proportion of exposure units should not incur losses at the same time. As we stated earlier, pooling is the essence of insurance. If most or all of the exposure units in a certain class simultaneously incur a loss, then the pooling technique breaks down and becomes unworkable. Premiums must be increased to prohibitive levels, and the insurance technique is no longer a viable arrangement by which losses of the few are spread over the entire group.

Reinsurance :

is an arrangement by which the primary insurer that initially writes the insurance transfers to another insurer (called the reinsurer) part or all of the potential losses associated with such insurance.

The reinsurer is then responsible for the payment of its share of the loss.

Calculable Chance of Loss :

A fifth requirement is that the chance of loss should be calculable .

The insurer must be able to calculate both the average frequency and the average severity of future losses with some accuracy.

Economically Feasible Premium :

A final requirement is that the premium should be economically feasible .

The insured must be able to afford the premium. In addition, for the insurance to be an attractive purchase, the premiums paid must be substantially less than the face value, or amount, of the policy.

ADVERSE SELECTION AND INSURANCE :

Adverse selection is the tendency of persons with a higher-than-average chance of loss to seek insurance at standard (average) rates, which if not controlled by underwriting, results in higher-than-expected loss levels .

Adverse selection can be controlled by careful underwriting.

Underwriting refers to the process of selecting and classifying applicants for insurance .

Applicants who meet the underwriting standards are insured at standard or preferred rates. If the underwriting standards are not met, the insurance is denied, or an extra premium must be paid, or the coverage offered may be more limited. Insurers frequently sell insurance to applicants who have a higher-than-average chance of loss, but such applicants must pay higher premiums.

The problem of adverse selection arises when applicants with a higher-than-average chance of loss succeeding obtaining the coverage at standard or average rates. Policy provisions are also used to control adverse selection. Examples are the suicide clause in life insurance and the preexisting conditions clause in individual medical expense policies prior to enactment of the Affordable Care Act, also known as “Obama care.” These policy provisions are discussed in greater detail later in the text when specific insurance contracts are analyzed.

INSURANCE AND GAMBLING COMPARED

Insurance is often erroneously confused with gambling.

There are two important differences between them.

First, gambling creates a new speculative risk, while insurance is a technique for handling an already existing pure risk .

Thus, if you bet $500on a horse race, a new speculative risk is created, but if you pay $500 to an insurer for a homeowners policy that includes coverage for a fire, the risk of fire is already present. No new risk is created by the transaction.

The second difference is that gambling can be socially unproductive, because the winner's gain comes at the expense of the loser . In contrast, insurance is always socially productive, because neither the insurer nor the insured is placed in a position where the gain of the winner comes at the expense of the loser. Both the insurer and the insured have a common interest in the prevention of a loss. Both parties win if the loss does not occur. Moreover, frequent gambling transactions generally never restore the losers to their former financial position. In contrast, insurance contracts restore the insured's financially in whole or in part if a loss occurs.

INSURANCE AND HEDGING COMPARED :

we discussed the concept of hedging, by which risk can be transferred to a speculator through the purchase of a futures contract.

An insurance contract, however, is not the same thing as hedging.

Although both techniques are similar in that risk is transferred by a contract, and no new risk is created, there are some important differences between them.

First, an insurance transaction typically involves the transfer of pure risks because the characteristics of an insurable risk generally can be met .

However, hedging is a technique for handling speculative risks that may be uninsurable, such as protection against a decline in the price of agricultural products and raw materials.

A second difference between insurance and hedging is that insurance can reduce the objective risk of an insurer by application of the law of large numbers . As the number of exposure units increases, the insurer’s prediction of future losses improves because the relative variation of actual loss from expected loss will decline.

Thus, many insurance transactions reduce objective risk. In contrast, hedging typically involves only risk transfer, not risk reduction. The risk of adverse price fluctuations is transferred to speculators who believe they can make a profit because of superior knowledge of market conditions. The risk is transferred, not reduced, and prediction of loss generally is not based on the law of large numbers

TYPES OF INSURANCE :

Insurance can be classified as either private or government insurance. Private insurance includes life and health insurance and property and liability insurance.

Government insurance includes social insurance programs and other government insurance plans.

Private Insurance :

Life insurance pays death benefits to designated beneficiaries when the insured dies.

The benefits pay for funeral expenses, uninsured medical bills, estate taxes, and other expenses.

Health Insurance Although many life insurers described above also sell some type of individual or group health insurance plan, the health insurance industry overall is highly specialized and controlled by a relatively small number of insurers.

Property and Liability Insurance

Property insurance indemnifies property owners against the loss or damage of real or personal property caused by various perils, such as fire, lightning, windstorm, or tornado.

Liability insurance covers the insured's legal liability arising out of property damage or bodily injury to others; legal defense costs are also paid.

Property and liability insurance is also called property and casualty insurance. In practice, nonlife insurers typically use the term property and casualty insurance (rather than property and liability insurance) to describe the various coverage's and operating results.

Casualty insurance is a broad field of insurance that covers whatever is not covered by fire, marine, and life insurance; casualty lines include auto, liability, burglary and theft, workers compensation, and health insurance.

■ **Homeowners insurance** is a package policy that provides property insurance and personal liability insurance in one policy. There are a number of homeowners policies available that cover the dwelling, other structures, and personal property against loss or damage from numerous perils, including fire, lightning, windstorm, or tornado. The policies also include theft coverage and personal liability insurance.

A homeowners policy is an example of a multiple-line policy , which refers to state legislation that allows insurers to write property and casualty lines in one policy.

■ Personal umbrella liability insurance provides protection against a catastrophic lawsuit or judgment. Coverage applies on an excess basis after any underlying insurance coverage are exhausted. Policy limits typically range from$1 million to $10 million.

■ Earthquake insurance covers damage that can result from the shaking and cracking of buildings and damage to personal property in an earthquake. Homeowners policies and business insurance policies do not cover damage from earthquake. However, coverage can be obtained by an endorsement to the policy or by a separate policy.

Commercial Lines.

Commercial lines refer to property and casualty coverage for business firms, nonprofit organizations, and government agencies. Major commercial lines include the following:

■ Fire insurance covers losses caused by fire and lightning; it is usually sold as part of a package policy, such as a commercial multiple-peril policy. Allied lines refer to coverage that are usually purchased with fire insurance, such as coverage for windstorm, hail, and vandalism. Indirect losses can also be covered, including the loss of business income, rents, and extra expenses.

■ Commercial multiple-peril insurance is a package policy, which can be written to include property insurance, general liability insurance, business income insurance, equipment breakdown insurance, and crime insurance.

■ General liability insurance covers the legal liability of business firms and other organizations that arise out of property damage or bodily injury to others. Legal liability can arise out of the ownership of business property, sale or distribution of products, and manufacturing or contracting operations.

However, general liability insurance does not include products liability insurance, which is a separate line.

■ Products liability insurance covers the legal liability of manufacturers, wholesalers, and retailers to persons who are injured or incur property damage from defective products.

■ Workers compensation insurance covers workers for a job-related accident or disease.

The insurance pays for medical bills, disability income benefits, rehabilitation benefits, and death benefits to the dependents of an employee whose death is job-related.

■ Commercial auto insurance covers the legal liability of business firms arising out of the ownership or operation of business vehicles. It also includes physical damage insurance on covered business vehicles for damage or loss resulting from a collision, theft, or other perils.

■ Accident and health insurance is also sold by some property and casualty insurers. This lines similar to the health insurance coverage sold by life and health insurers.

■ Inland marine insurance covers goods being shipped on land, which include imports, exports, domestic shipments, and instrumentalities of transportation (for example, bridges, tunnels, and pipelines). Inland marine insurance also covers personal property such as fine art, jewelry, and furs.

■ Ocean marine insurance covers ocean-going vessels and their cargo from loss or damage because of perils of the sea; contracts are also written to cover the legal liability of shippers and owners.

■ Professional liability insurance provides protection against malpractice lawsuits or lawsuits that result from a substantial error or omission. Professional liability insurance covers the professional acts or omissions of physicians, surgeons, attorneys, accountants, and other professionals.

For example, medical malpractice insurance covers physicians another health-care providers for liability claims arising out of harm or injury to patients.

■ Directors and officers provides financial protection for the directors and officers and the corporation if the directors and officers are sued for mismanagement of the company’s affairs.

■ Boiler and machinery insurance (also known as mechanical breakdown, equipment breakdown, or systems breakdown coverage) is a highly specialized line that covers losses due to the accidental breakdown of covered equipment. Such equipment includes steam boilers, air-conditioning and refrigeration equipment, and electrical generating equipment.

■ Fidelity bonds cover loss caused by the dishonest or fraudulent acts of employees, such as embezzlement and the theft of money. Surety bonds provide for monetary compensation in the case of failure by bonded persons to perform certain acts, such as failure of a contractor to construct building on time.

■ Crime insurance covers the loss of money, securities, and other property because of burglary, robbery, theft, and other crime perils.

■ Other coverage include aircraft insurance , which provides physical damage insurance on covered aircraft and liability coverage for legal liability arising out of the ownership or operation of aircraft.

Credit insurance covers manufacturers and wholesalers against loss because an account receivable is uncollectible.

Government Insurance :

Government insurance can be divided into social insurance programs other government insurance programs.

Social Insurance Social insurance programs are government insurance programs with certain characteristics that distinguish them from other government insurance plans.

These programs are financed entirely or in large part by mandatory contributions from employers, employees, or both, and not primarily by the general revenues of government.

The contributions are usually earmarked for special trust funds; the benefits, in turn, are paid from these funds. In addition, the right to receive benefits is ordinarily derived from or linked to the recipient's past contributions or coverage under the program; the benefits and contributions generally vary among the beneficiaries according to their prior earnings, but the benefits are heavily weighted in favor of low-income groups. Moreover, most social insurance programs are compulsory. Covered workers and employers are required by law to pay contributions and participate in the programs.

BENEFITS OF INSURANCE TO SOCIETY

The major social and economic benefits of insurance include the following:

■ Indemnification for loss

■ Reduction of worry and fear

■ Source of investment funds

■ Loss prevention

■ Enhancement of credit

Indemnification for Loss :

Indemnification permits individuals and families to be restored to their former financial position after a loss occurs. As a result, they can maintain their financial security.

Because insures are restored either in part Orin whole after a loss occurs, they are less likely to apply for public assistance or welfare benefits, or to seek financial assistance from relatives and friends. Indemnification to business firms also permits firms to remain in business and employees to keep their jobs. Suppliers continue to receive orders, and customers receive the goods and services they desire. The community also benefits because its tax base is not eroded. In short, the indemnification function contributes greatly to family and business stability and therefore is one of the most important social and economic benefits of insurance.

Reduction of Worry and Fear :

A second benefit of insurance is that worry and fear are reduced. This is true both before and after a loss.

For example, if family heads have adequate amounts of life insurance, they are less likely to worry about the financial security of their dependents in the event of premature death; persons insured for long-term disability do not have to worry about the loss of earnings if a serious illness or accident occurs; and property owners who are insured enjoy greater peace of mind because they know they are covered if a loss occurs. Worry and fear are also reduced after a loss occurs, because the insured's know that they have insurance that will pay for the loss.

Source of Investment Funds :

The insurance industry is an important source of funds for capital investment and accumulation. Premiums are collected in advance of the loss, and funds not needed to pay immediate losses and expenses can be loaned to business firms. These funds typically are invested in shopping centers, hospitals, factories, housing developments, and new machinery and equipment. The investments increase society’s stock of capital goods, and promote economic growth and full employment. Insurers also invest in social investments, such as housing, nursing homes, and economic development projects. In addition, because the total supply of loanable funds is increased by the advance payment of insurance premiums, the cost of capital to business firms that borrow is lower than it would be in the absence of insurance.

Loss Prevention :

Insurance companies are actively involved in numerous loss-prevention programs and also employ aide variety of loss prevention personnel, including safety engineers and specialists in fire prevention, occupational safety and health, and products liability. Some important loss-prevention activities that property and casualty insurers strongly support include the following:

■ Highway safety and reduction of auto accidents and deaths

■ Fire prevention

■ Reduction of work-related injuries and disease

■ Prevention of auto thefts

■ Prevention and detection of arson losses

■ Prevention of defective products that could injure

the user

■ Prevention of boiler explosions

■ Educational programs on loss prevention

The loss-prevention activities reduce both direct and indirect, or consequential, losses. Society benefits, because both types of losses are reduced.

Enhancement of Credit :

A final benefit is that insurance enhances a person's credit. Insurance makes a borrower a better credit risk because it guarantees the value of the borrower's collateral or gives greater assurance that the loan will be repaid. For example, when a house is purchased, the lending institution normally requires property insurance on the house before the mortgage loan is granted.

The property insurance protects the lender's financial interest if the property is damaged or destroyed.

Similarly, a business firm seeking a temporary loan for Christmas or seasonal business may be required to insure its inventories before the loan is made. If a new car is purchased and financed by a bank or other lending institution, physical damage insurance on the car may be required before the loan is made. Thus, insurance can enhance a person's credit.

COSTS OF INSURANCE TO SOCIETY :

Although the insurance industry provides enormous social and economic benefits to society, the social costs of insurance must also be recognized.

The major social costs of insurance include the following:

■ Cost of doing business

■ Fraudulent claims

■ Inflated claims

Cost of Doing Business :

One important cost is the cost of doing business.Insurers consume scarce economic resources—land, labor, capital, and business enterprise—in providing insurance to society. In financial terms, an expense loading must be added to the pure premium to cover the expenses incurred by insurance companies in their daily operations.

An **expense loading** is the amount needed to pay all expenses, including commissions, general administrative expenses, state premium taxes, acquisition expenses, and an allowance for contingencies and profit .

Fraudulent Claims :

A second cost of insurance comes from the submission of fraudulent claims. Examples of fraudulent claims include the following:

■ Auto accidents are faked or staged to collect benefits.

■ Dishonest claimants fake slip-and-fall accidents.

■ Phony burglaries, thefts, or acts of vandalism are reported to insurers.

■ False health insurance claims are submitted to collect benefits.

■ Dishonest policyholders take out life insurance policies on unsuspecting insurers and later arrange to have them killed.

The payment of such fraudulent claims results in higher premiums to all insurers. The existence of insurance also prompts some insurers to deliberately cause a loss to profit from insurance. These social costs fall directly on society.

Some types of insurance fraud are especially outrageous, The Coalition Against Insurance Fraud has established a "hall of shame" for insurance scams that are strikingly shocking, brazen, and outrageous .

Inflated Claims :

Another cost of insurance relates to the submission of inflated or "padded" claims. Although the loss is not intentionally caused by the insured, the dollar amount of the claim may exceed the actual financial loss.

Examples of inflated claims include the following:

■ Attorneys for plaintiffs sue for high-liability judgments that exceed the true economic loss of the victim.

■ Insured's inflate the amount of damage in auto collision claims so that the insurance payments will cover the collision deductible.

■ Disabled persons often malinger to collect disability income benefits for a longer duration.

■ Insured's exaggerate the amount and value of property stolen from a home or business. Inflated claims must be recognized as an important social cost of insurance. Premiums must be increased to pay the additional losses. As a result, disposable income and the consumption of other goods and services are reduced.

Chapter Three

FUNDAMENTAL LEGAL PRINICIPLES OF INSURANCE CONTRACT

PRINCIPLE OF INDEMNITY :

The principle of indemnity is one of the most important principles in insurance.

The **principle of indemnity** states that the insurer agrees to pay no more than the actual amount of the loss; stated differently, the insured should not profit from a loss .

Most property and casualty insurance contracts are contracts of indemnity. If a covered loss occurs, the insurer should not pay more than the actual amount of the loss.

A contract of indemnity does not mean that all covered losses are always paid in full. Because of deductibles, dollar limits on the amount paid, and other contractual provisions, the amount paid is often less than the actual loss The principle of indemnity has two fundamental purposes.

The first purpose is to prevent the insured from profiting from a loss . For example, if Kristin's home is insured for $200,000, and a partial loss of$50,000 occurs, the principle of indemnity would be violated if $200,000 were paid to her. She would be profiting from insurance.

The second purpose is to reduce moral hazard .If dishonest policyholders could profit from a loss, they might deliberately cause losses with the intention of collecting the insurance. If the loss payment does not exceed the actual amount of the loss, the temptation to be dishonest is reduced.

Actual Cash Value :

The concept of actual cash value supports the principle of indemnity. In property insurance, the basic method for indemnifying the insured is based on the actual cash value of the damaged property at the time of loss. The courts have used a number of methods to determine actual cash value, including the following:

■ Replacement cost less depreciation

■ Fair market value

■ Broad evidence rule

Replacement Cost Less Depreciation Under this rule, **actual cash value** is defined as replacement costless depreciation .

This rule has been used traditionally to determine the actual cash value of property in property insurance. It takes into consideration both inflation and depreciation of property values overtime. Replacement cost is the current cost of restoring the damaged property with new materials of like kind and quality. Depreciation is a deduction for physical wear and tear, age, and economic obsolescence.

Exceptions to the Principle of Indemnity

There are several important exceptions to the principle of indemnity. They include the following:

■ Valued policy

■ Valued policy laws

■ Replacement cost insurance

■ Life insurance

Valued Policy

A **valued policy** is a policy that pays the face amount of insurance if a total loss occurs . Valued policies typically are used to insure antiques, fine arts, rare paintings, and family heirlooms.

Because of difficulty in determining the actual value of the property at the time of loss, the insured and insurer both agree on the value of the property when the policy is first issued. **Valued Policy Laws** Valued policy laws are another exception to the principle of indemnity.

A **valued policy law** is a law that exists in some states that requires payment of the face amount of insurance to the insured if a total loss to real property occurs from a peril specified in the law .

Replacement cost :

Replacement cost insurance means there is no deduction for physical depreciation in determining the amount paid for a loss .

Life Insurance :

Life insurance is another exception to the principle of indemnity. A life insurance contracts not a contract of indemnity but is a valued policy that pays a stated amount to the beneficiary upon the insured's death.

The indemnity principles difficult to apply to life insurance because the actual cash value rule (replacement cost less depreciation) is meaningless in determining the value of a human life.

PRINCIPLE OF INSURABLE INTEREST :

The **principle of insurable interest** states that the insured must be in a position to lose financially if covered loss occurs .

For example, you have an insurable interest in your car because you may lose financially if the car is damaged or stolen. You have uninsurable interest in your personal property, such as a computer, books, and clothes, because you may lose financially if the property is damaged or destroyed.

Purposes of an Insurable Interest :

To be legally enforceable, all insurance contracts must be supported by an insurable interest. Insurance contracts must be supported by an insurable interest for the following reasons.4

- To prevent gambling
- To reduce moral hazard
- To measure the amount of the insured's loss in property insurance

First, an insurable interest is necessary to prevent gambling . If an insurable interest were not required, the contract would be a gambling contract and would-be against the public interest. For example, you could insure the property of another and hope for a loss to occur. You could similarly insure the life of another person and hope for an early death. These contracts clearly would be gambling contracts and would be against the public interest.

Second, an insurable interest reduces moral hazard . If an insurable interest were not required, dishonest person could purchase property insurance on someone else's property and then deliberately cause a loss to receive the proceeds. But if the insured stands to lose financially, nothing is gained by causing the loss. Thus, moral hazard is reduced. In life insurance, an insurable interest requirement reduces the incentive to murder the insured for the purpose of collecting the proceeds.

Finally, in property insurance, an insurable interest measures the amount of the insured's loss .

Most property insurance contracts are contracts of indemnity, and one measure of recovery is the insurable interest of the insured. If the loss payment cannot exceed the amount of one's insurable interest, the principle of indemnity is supported.

Examples of an Insurable Interest :

Several examples of an insurable interest are discussed in this section. However, it is helpful at this point to distinguish between an insurable interest in property and casualty insurance and in life insurance.

Property and Casualty Insurance :

Ownership of property can support an insurable interest because owners of property will lose financially if their property is damaged or destroyed. Potential legal liability can also support an insurable interest. For example, a dry-cleaning firm has uninsurable interest in the property of the customers.

The firm may be legally liable for damage to the customers 'goods caused by the firm's negligence.

Secured creditors have an insurable interest as well. A commercial bank or mortgage company that lends money to buy a house has an insurable interesting the property. The property serves as collateral for the mortgage, so if the building is damaged, the collateral behind the loan is impaired. A bank that makes an inventory loan to a business firm has uninsurable interest in the stock of goods, because the goods are collateral for the loan. However, the courts have ruled that unsecured or general creditors normally do not have an insurable interest in the debtor's property.

Finally, a contractual right can support uninsurable interest. Thus, a business firm that contracts to purchase goods from abroad on the condition that they arrive safely in the United States has an insurable interest in the goods because of the loss of profits if the merchandise does not arrive.

Life Insurance The question of an insurable interest <u>does not arise when you purchase life insurance</u> on your own life. The law considers the insurable interest requirement to be met whenever a person voluntarily purchases life insurance on his or her life.

When Must an Insurable Interest Exist?

In property insurance, the insurable interest must exist at the time of the loss .

There are two reasons for this requirement. First, most property insurance contracts are contracts of indemnity. If an insurable interest does not exist at the time of loss, the insured would not incur any financial loss. Hence, the principle of indemnity would be violated if payment were made. For example, if Mark sells his home to Susan, and a fire occurs before the insurance on the home is cancelled, Mark cannot collect because he no longer has an insurable interest in the property. Susan cannot collect either under Mark’s policy because she is not named as an insured under his policy.

Second, you may not have an insurable interesting the property when the contract is first written but may expect to have an insurable interest in the future, at the time of possible loss. For example, in ocean marine insurance, it is common to insure a return cargo by a contract entered into prior to the ship’s departure.

PRINCIPLE OF SUBROGATION :

The principle of subrogation strongly supports the principle of indemnity. **Subrogation** means substitution of the insurer in place of the insured for the purpose of claiming indemnity from a third party for a loss covered by insurance. Stated differently, the insurer is entitled to recover from a negligent third party any loss payments made to the insured.

Purposes of Subrogation :

Subrogation has three basic purposes. First, subrogation prevents the insured from collecting twice for the same loss . In the absence of subrogation, the insured could collect from his or her insurer and from the person who caused the loss.

The principle of indemnity would be violated because the insured would be profiting from a loss.

Second, subrogation is used to hold the negligent person responsible for the loss . By exercising its subrogation rights, the insurer can collect from the negligent person who caused the loss.

Finally, subrogation helps to hold down insurance rates . Subrogation recoveries are reflected in the ratemaking process, which tends to hold rates below where they would be in the absence of subrogation. Although insurers pay for covered losses, subrogation recoveries reduce the loss payments.

Importance of Subrogation :

You should keep in mind several important corollaries of the principle of subrogation.

1. The general rule is that by exercising its subrogation rights, the insurer is entitled only to the amount it has paid under the policy .
2. Some insured may not be fully indemnified after a loss because of insufficient insurance, satisfaction of a deductible, or legal expenses in trying to recover from a negligent third party. Many policies, however, now have a provision that states how a subrogation recovery is to be shared between the insured and insurer.

PRINCIPLE OF UTMOST GOOD FAITH :

principle of utmost good faith — that is, a higher degree of honesty is imposed on both parties to an insurance contract than is imposed on parties to other contracts .

This principle has its historical roots in ocean marine insurance. An ocean marine underwriter had to place great faith in statements made by the applicant for insurance concerning the cargo to be shipped. The property to be insured may not have been visually inspected, and the contract may have been formed in a location far removed from the cargo and ship.

Thus, the principle of utmost good faith imposed a high degree of honesty on the applicant for insurance.

The principle of utmost good faith is supported by three important legal doctrines: representations, concealment, and warranty.

Representations :

Representations are statements made by the applicant for insurance . For example, if you apply for life insurance, you may be asked questions concerning your age, weight, height, occupation, state of health, family history, and other relevant questions. Your answers to these questions are called representations.

The legal significance of a representation is that the insurance contract is voidable at the insurer's option if the representation is (1) material, (2) false, and (3) relied on by the insurer. **Material** means that if the insurer knew the true facts, the policy would not have been issued, or it would have been issued on different terms . False means that the statement is not true or is misleading. Reliance means that the insurer relies on the misrepresentation in issuing the policy at a specified premium.

Concealment :

The doctrine of concealment also supports the principle of utmost good faith.

A **concealment** is intentional failure of the applicant for insurance to reveal material fact to the insurer .

Concealment is the same thing as nondisclosure; that is, the applicant for insurance deliberately withholds material information from the insurer. The legal effect of a material concealment is the same as a misrepresentation—the contract is voidable at the insurer's option.

To deny a claim based on concealment, anon marine insurer must prove two things: (1) the concealed fact was known by the insured to be material, and (2) the insured intended to defraud the insurer.

Warranty :

The doctrine of warranty also reflects the principle of utmost good faith.

A **warranty** is a statement that becomes part of the insurance contract and is guaranteed by the maker to be true in all respects.

For example, in exchange for a reduced premium, liquor store owner may warrant that an approved burglar alarm system will be operational at all times.

REQUIREMENTS OF AN INSURANCE CONTRACT :

An insurance policy is based on the law of contracts.

To be legally enforceable, an insurance contract must meet four basic requirements: offer and acceptance, consideration, competent parties, and legal purpose.

Offer and Acceptance

The first requirement of a binding insurance contracts that there must be an **offer and acceptance** of its terms. In most cases, the applicant for insurance makes the offer, and the company accepts or rejects the offer. An agent merely solicits or invites the prospective insured to make an offer.

The requirement of offer and acceptance can be examined in greater detail by making a careful distinction between property and casualty insurance, and life insurance. In property and casualty insurance, the offer and acceptance can be oral or written. In the absence of specific legislation to the contrary, oral insurance contracts are valid. As a practical matter, most property and casualty insurance contracts are in written form. The applicant for insurance fills out the application and pays the first premium(or promises to pay the first premium).

A **binder** is a temporary contract for insurance and can be either written or oral . The binder obligates the company immediately prior to receipt of the application and issuance of the policy. Thus, the insurance contract can be effective immediately, because the agent accepts the offer on behalf of the company.

This procedure is usually followed in personal lines of property and casualty insurance, including homeowners policies and auto insurance. However, in some cases, the agent is not authorized to bind the company, and the application must be sent to the company for approval. The company may then accept the offer and issue the policy or reject the application. In life insurance, the procedures followed are different.

A life insurance agent does not have the power to bind the insurer. Therefore, the application for life insurance is always in writing, and the applicant must be approved by the insurer before the life insurance is in force. The usual procedure is for the applicant to fill out the application and pay the first premium.

A **conditional premium receipt** is then given to the applicant. The most common conditional receipt is the “insurability premium receipt.” If the applicant is found insurable according to the insurer’s normal underwriting standards, the life insurance becomes effective as of the date of the application. Some insurability receipts make the life insurance effective on the date of the application or the date of the medical exam, whichever is later.

Consideration :

The second requirement of a valid insurance contracts **consideration** — the value that each party gives tithe other. The insured's consideration is payment of the premium (or a promise to pay the premium) plus an agreement to abide by the conditions specified in the policy.

The insurer's consideration is the promise to do certain things as specified in the contract. This promise can include paying for a loss from an insured peril, providing certain services, such as loss prevention and safety services, or defending the insured in a liability lawsuit.

Conditional Contract :

. **Conditions** are provisions inserted in the policy that qualify or place limitations on the insurer's promise to perform .

The conditions section imposes certain duties on the insured if he or she wishes to collect for a loss.

Although the insured is not compelled to abide by the policy conditions, he or she must do so to collect for an insured loss.

The insurer is not obligated to pay a claim if the policy conditions are not met.

Personal Contract

In property insurance, insurance is a **personal contract** , which means the contract is between the insured and the insurer . Strictly speaking, a property insurance contract does not insure property, but insures the owner of property against loss.

The owner of the insured property is indemnified if the property is damaged or destroyed. Because the contract is personal, the applicant for insurance must be acceptable to the insurer and must meet certain underwriting standards regarding character, morals, and credit. A property insurance contract normally cannot be assigned to another party without the insurer’s consent. If property is sold to another person, the new owner may not be acceptable to the insurer.

Contract of Adhesion :

A **contract of adhesion** means the insured must accept the entire contract, with all of its terms and conditions .

The insurer drafts and prints the policy, and the insured generally must accept the entire document and cannot insist that certain provisions beaded or deleted or the contract rewritten to suit the insured.

Although the contract can be altered by the addition of endorsements and riders or other forms, the contract is drafted by the insurer. To redress the imbalance that exists in such a situation, the courts have ruled that any ambiguities or uncertainties in the contract are construed against the insurer . If the policy is ambiguous, the insured gets the benefit of The general rule that ambiguities in insurance contracts are construed against the insurers reinforced by the principle of reasonable expectations.

Chapter Four

BASIC PARTS OF AN INSURANCE CONTRACT

Insurance contracts generally can be divided into the following parts:

■ Declarations

■ Definitions

■ Insuring agreement

■ Exclusions

■ Conditions

■ Miscellaneous provisions

Although all insurance contracts do not necessarily contain all six parts in the order given here, such a classification provides a simple and convenient framework for analyzing most insurance contracts.

Declarations

The declarations section is the first part of an insurance contract.

Declarations are statements that provide information about the particular property or activity to be insured .

Information contained in the declarations section is used for underwriting and rating purposes and for identification of the property or activity that is insured.

The declarations section usually can be found on the first page of the policy or on a policy insert. In property insurance, the declarations page typically contains information concerning the identification of the insurer, name of the insured, location of the property, period of protection, amount of insurance, amount of the premium, size of the deductible(if any), and other relevant information. In life insurance, although the first page of the policy technically is not called a declarations page, it contains the insured's name, age, premium amount, issue date, and policy number.

Definitions

Insurance contracts typically contain a page or section of definitions. Key words or phrases have quotation marks (". . .") around them. For example, the insurer is frequently referred to as "we," "our, "or "us." The named insured is referred to as "you "and "your." The purpose of the various definitions is to define clearly the meaning of key words or phrases so that coverage under the policy can be determined more easily.

Insuring Agreement

The insuring agreement is the heart of an insurance contract. The **insuring agreement** summarizes the major promises of the insurer . The insurer agrees to do certain things, such as paying losses from covered perils, providing certain services (such as loss-prevention services), or agreeing to defend the insured in a liability lawsuit.

There are two basic forms of an insuring agreement in property insurance: (1) named-perils coverage and (2) open-perils coverage (formerly called “all-risks” coverage). Under a **named-perils policy** , only those perils specifically named in the policy are covered . If the peril is not named, it is not covered. For example, in a homeowners policy,

personal property is covered for fire, lightning, windstorm, and certain other named perils. Only losses caused by these perils are covered. Flood damage is not covered because flood is not a listed peril. Under an **open-perils policy** , all losses are covered

except those losses specifically excluded. An open-perils policy is also called a **special coverage policy** . If the loss is not excluded, then it is covered . For example, the physical damage section of the personal auto policy covers losses to a covered auto. Thus, if a smoker burns a hole in the upholstery, or a bear in a national park damages the vinyl top of a covered auto, the losses would be covered because they are not excluded.

An open-perils policy generally is preferable to named-perils coverage, because the protection is broader with fewer gaps in coverage. If the loss is not excluded, then it is covered. In addition, a greater burden of proof is placed on the insurer to deny acclaim. To deny payment, the insurer must prove that the loss is excluded. In contrast, under a named-perils contract, the burden of proof is on the insured to show that the loss was caused by a named peril .

Because the meaning of risk is ambiguous, rating organizations generally have deleted the words “risk of” and “all risks” in their policy forms. In the latest edition of the homeowners forms, the Insurance Services Office has deleted the words “risk of,” which appeared in earlier editions. The deletion of any reference to “risk of” or “all-risks” is intended to avoid creating unreasonable expectations among policyholders that the policy covers all losses, even those losses that are specifically excluded.

Life insurance is another example of an open perils policy. Most life insurance contracts cover all causes of death by accident or by disease except for certain exclusions. The major exclusions are suicide during the first two years of the contract; certain aviation hazard exclusions, such as military flying, crop-dusting, or sports piloting; and in some contracts, death caused by war.

Exclusions

Exclusions are another basic part of any insurance contract. There are three major types of exclusions

(1) excluded perils, (2) excluded losses, and

(3) excluded property.

Excluded Perils The contract may exclude certain perils, or causes of loss In a homeowners policy, the perils of flood, earth movement, and nuclear radiation or radioactive contamination are specifically excluded. In the physical damage section of the personal auto policy, loss to a covered auto is specifically excluded if the car is used as a public taxi.

Excluded Losses Certain types of losses may be excluded. For example, in a home owners policy, failure of an insured to protect the property from further damage after a loss occurs is excluded. In the personal liability section of a homeowners policy, a liability lawsuit arising out of the operation of an automobile is excluded. Professional liability losses are also excluded; a specific professional liability policy is needed to cover this exposure.

Excluded Property The contract may exclude or place limitations on the coverage of certain property.

For example, in a homeowners policy, certain types of personal property are excluded, such as cars, planes, animals, birds, and fish.

Reasons for Exclusion

Exclusion are necessary for the following reasons:1

- Certain perils considered uninsurable
- Presence of extraordinary hazards
- Coverage provided by other contracts
- Moral hazard problems
- Attitudinal hazard problems

■ Coverage not needed by typical insured's

Exclusions are necessary because the peril maybe considered uninsurable by commercial insurers .

Conditions

Conditions are another important part of an insurance contract. **Conditions** are provisions in the policy that qualify or place limitations on the insurer's promise to perform . In effect, the conditions section imposes certain duties on the insured. If the policy conditions are not met, the insurer can refuse to pay the claim. Common policy conditions include notifying the insurer if a loss occurs, protecting the property after a loss, preparing an inventory of damaged personal property, and cooperating with the insurer in the event of a liability suit.

Miscellaneous Provisions

Insurance contracts also contain a number of miscellaneous provisions. In property and casualty insurance, miscellaneous provisions include cancellation, subrogation, requirements if a loss occurs, assignment of the policy, and other-insurance provisions. In life and health insurance, typical miscellaneous provisions include the grace period, reinstatement of a lapsed policy, and misstatement of age. Details of these provisions are discussed later in the text when specific insurance contracts are analyzed.

DEFINITION OF “INSURED”

An insurance contract must identify the person or parties who are insured under the policy. For ease in understanding, the meaning of “insured” can be grouped into the following categories:

■ Named insured

■ First named insured

■ Other insured’s

■ Additional insured’s

Named Insured

The **named insured** is the person or party named on the declarations page of the policy .

The named insured can be one or more persons or parties. For example, Ron and Kay Lukens may be specifically listed as named insured on the declaration page of their homeowners policy.

The words “you” and “your” appear in many policies and refer to the named insured shown in the declarations.

Thus, throughout the entire policy, “you” or “your” refers to the named insured.

First Named Insured

When more than one person or party is named on the declarations page, the order of names is important.

The **first named insured** is the first name that appears on the declarations page of the policy as an insured .

The first named insured has certain additional rights and responsibilities that do not apply to other named insured's. Additional rights include the right to a premium refund and the receipt of a cancellation notice. However, the first named insured is responsible

for the payment of premiums and for complying with notice-of-loss requirements.

Other Insured's

Other insured's are persons or parties who are insured under the named insured's policy even though they are not specifically named in the policy

Additional Insured's

An **additional insured** is a person or party who is added to the named insured's policy by an endorsement .

As a result, an additional insured acquires coverage under the named insured's policy.

ENDORSEMENTS AND RIDERS

Insurance contracts frequently contain **endorsements and riders** . The terms endorsements and riders are often used interchangeably and mean the same thing. In property and casualty insurance, an endorsement is a written provision that adds to, deletes from, or modifies the provisions in the original contract. In life and health insurance, a rider is a provision that amends or changes the original policy .

There are numerous endorsements in property and casualty insurance that modify, extend, or delete provisions found in the original policy. For example, a homeowners policy excludes coverage for earthquakes.

DEDUCTIBLES

A deductible is a common policy provision that requires the insured to pay part of the loss.

A **deductible** is provision by which a specified amount is subtracted from the total loss payment that otherwise would be payable .

Deductibles typically are found in property, health, and auto insurance contracts.

A deductible is not used in life insurance because the insured’s death is always a total loss, and a deductible would simply reduce the face amount of insurance.

Also, a deductible generally is not used in personal liability insurance because the insurer must provide a legal defense, even for a small claim. The insurer wants to be involved from the first dollar of loss so as to minimize its ultimate liability for a claim.

Also, the premium reduction that would result from a small deductible in personal types of third-party liability overages would be relatively small.2

Purposes of Deductibles

Deductibles have several important purposes. They include the following:

■ To eliminate small claims

■ To reduce premiums

■ To reduce moral hazard and attitudinal hazard

A deductible eliminates small claims that are expensive to handle and process .

For each large claim processed, there are numerous small claims, which can be expensive to process.

Deductibles in Property Insurance

The following deductibles are commonly found in property insurance contracts:

■ Straight deductible

■ Aggregate deductible

Straight Deductible With a **straight deductible** , the insured must pay a certain number of dollars of loss before the insurer is required to make a payment .

Such a deductible typically applies to each loss An example can be found in auto collision insurance.

Aggregate

An **aggregate deductible** means that all losses that occur during a specified time period, usually a policy year, are accumulated to satisfy the deductible amount .Once the deductible is satisfied, the insurer pays all future losses in full. For example, assume that the policy contains an aggregate deductible of $10,000.

Deductibles in Health Insurance

In health insurance, the deductible can be stated in terms of dollars or time, such as a calendar-year deductible or an elimination (waiting) period.

Calendar-Year Deductible A **calendar-year deductible**

is a type of aggregate deductible that is found in individual and group medical expense policies.

COINSURANCE

Coinsurance is a contractual provision that often appears in property insurance contracts.

This is especially true of commercial property insurance contracts.

Nature of Coinsurance

A **coinsurance clause** in a property insurance contract encourages the insured to insure the property to a stated percentage of its insurable value. If the coinsurance requirement is not met at the time of loss, the insured must share in the loss as a coinsurer .

The insurable value of the property is the actual cash value, replacement cost, or some other value described in the valuation clause of the policy. If the insured wants to collect in full for a partial loss, the coinsurance requirement must be satisfied. Otherwise, the insured will be penalized if a partial loss occurs.

A coinsurance formula is used to determine the amount paid for a covered loss. **The coinsurance formulaic as follows**:

Amount of insurance carried

Amount of insurance required

* Loss = Amount of recovery

Purpose of Coinsurance

The fundamental purpose of coinsurance is to achieve **equity in rating** .

Coinsurance Problems

Some practical problems arise when a coinsurance clause is present in a policy.

First, inflation can result in a serious coinsurance penalty if the amount of insurance is not periodically increased for inflation.

The insured may be in compliance with the coinsurance clause when the policy first goes into effect; however, price inflation could increase the replacement cost of the property.

OTHER-INSURANCE PROVISIONS

typically are present in property and casualty insurance and health insurance contracts.

These provisions apply when more than one contract covers the same loss.

The purpose of these provisions is to prevent profiting from insurance and violation of the principle of indemnity . If the insured could collect the full amount of the loss from

each insurer, there would be profiting from insurance and a substantial increase in moral hazard. Some dishonest insured's would deliberately cause a loss to collect multiple benefits. Some important other-insurance provisions in property and liability insurance include (1) the pro rata liability clause, (2) contribution by equal shares, an (3) primary and excess insurance.

Pro Rata Liability

Pro rata liability is a generic term for a provision that applies when two or more policies of the same type cover the same insurable interest in the property. Each insurer's share of the loss is based on the proportion that its insurance bears to the total amount of insurance on the property .

Contribution by Equal Shares

Contribution by equal shares is another type of other-insurance provision that often appears in liability insurance contracts.

Each insurer shares equally in the loss until the share paid by each insurer equals the lowest limit of liability under any policy, or until the full amount of the loss is paid.

Chapter Five

LIFE INSURANCE

TYPES OF LIFE INSURANCE

life insurance policies can be classified as either **term insurance** or **Whole Life Insurance**

Term Insurance

Term insurance has several basic characteristics.

First, the period of protection is temporary, such as 1, 5, 10, 20, or 30 years. Unless the policy is renewed, the protection expires at the end of the period.

Most term insurance policies are **renewable** ,which means that the policy can be renewed for additional periods without evidence of insurability.

The premium is increased at each renewal date and is based on the insured's attained age. The purpose of the renewal provision is to protect the insurability of the insured. However, the renewal provision results in adverse selection against the insurer.

Because premiums increase with age, insured's in good health tend to drop their insurance, while those in poor health will continue to renew, regardless of the premium increase.

To minimize adverse selection, many insurers have an age limitation beyond which renewal is not allowed, such as age 70 or 80.Some insurers, however, permit term policies to be renewed to age 95 or 99.

Most term insurance policies are also **convertible** , which means the term policy can be exchanged for cash-value policy without evidence of insurability.

There are two methods for converting a term policy.

Under the attained-age method, the premium charged is based on the insured's attained age at the time of conversion. Under the original-age method, the premium charged is based on the insured's original age when the term insurance was first purchased. Most insurers offering the original-age method require the conversion to take place within a certain time period, such as five years, from the issue date of the term policy.

A financial adjustment is also required. Many insurers require policyholders to pay the larger of(1) the difference in reserves (or cash values) under the policies being exchanged, or (2) the difference between the premiums paid on the term policy and those that would have been paid on the new policy, with interest on the difference at a specified rate.8 The purpose of the financial adjustment is to place the insurer in the same financial position it would have achieved if the policy had been issued at the original age. Because of the financial adjustment required, few term insurance policies are converted based on the original-age method.

Finally, term insurance policies have no cash value or savings element. Although some long-term policies develop a small reserve, it is used up by the contract expiration date.

Types of Term Insurance A wide variety of term insurance products are sold today. They include the following:

■ Yearly renewable term

■ 5-, 10-, 15-, 20-, 25-, or 30-year term

■ Term to age 65

■ Decreasing term

■ Reentry term

■ Return of premium term insurance

Yearly renewable term insurance is issued for one-year period, and the policyholder can renew for successive one-year periods to some stated age without evidence of insurability. Premiums increase with age at each renewal date. Most yearly renewable term policies also allow the policyholder to convert to a cash-value policy with no evidence of insurability.

Term insurance can also be issued for 5, 10, 15, 20, 25, or 30 years . The premiums paid during the term period are level, but they increase when the policy is renewed.

A term to age 65 policy provides protection to age 65, at which time the policy expires. The policy can be converted to a permanent plan of insurance, but the decision to convert must be exercised before age 65.

Decreasing term insurance is a form of term insurance where the face amount gradually declines each year. However, the premium is level throughout the period. In some policies, the premiums are structured so that the policy is fully paid for a few years before the coverage expires. For example, a 20-year decreasing term policy may require premium payments for 17 years. This method avoids paying a relatively large premium for only a small amount of insurance near the end of the term period.

Uses of Term Insurance

Term insurance is appropriate in three situations. First, if the amount of income that can be spent on life insurance is limited, term insurance can be effectively used . Substantial amounts of life insurance can be purchased for a relatively modest annual premium outlay .

Second, term insurance is appropriate if the need for protection is temporary . For example, decreasing term insurance can be used to pay off the mortgage if the family head dies prematurely, or provide income during the dependency period.

Finally, term insurance can be used to guarantee future insurability . People may desire large amounts of permanent insurance, but may be financially unable to purchase the needed protection today. Inexpensive term insurance can be purchased, which can be converted later into a permanent cash-value policy without evidence of insurability.

Whole Life Insurance

If the insured wants lifetime protection, term insurance is impractical because the coverage is temporary, and the premiums are prohibitive in cost at older ages. In contrast, **whole life insurance** is a cash value policy that provides lifetime protection .

Ordinary Life Insurance

Ordinary life insurance has several basic characteristics.

First, as stated earlier, premiums are level throughout the premium-paying period.

As a result, the insured is actuarially overcharged during the early years and undercharged during the later years.

The premiums paid during the early years are higher than is actuarially necessary to pay current death claims, whereas those paid in the later years are inadequate for paying death claims. The excess premiums paid during the early years are accumulated at compound interest and are then used to supplement the inadequate premiums paid during the later years of the policy. Because state law regulates the method of investing and accumulating the fund, it is referred to as a **legal reserve** . Technically, the legal reserve is a liability item that must be offset by sufficient financial assets. Otherwise, regulatory officials may declare the insurer to be insolvent. Insurers are required to calculate their minimum legal reserve liabilities according to certain standards.

The illustration is based on the newer 2001 CSO mortality table. As the death rate increases with age, the legal reserve or savings component steadily increases, and the pure insurance portion called the net amount of risk steadily declines.

The **net amount at risk** is the difference between the legal reserve and face amount of insurance .

As a result of an increasing legal reserve and decreasing net amount of risk, the cost of the insurance can be kept within manageable bounds at all ages, and the insurer can provide lifetime protection.9

A second characteristic is the accumulation of **cash-surrender values** , which is the amount paid to a policyholder who surrenders the policy.

As noted earlier, under a system of level premiums, the policyholder overpays for the insurance protection during the early years, which results in a legal reserve and the accumulation of cash values. Cash values should not be confused with the legal reserve.

They are not the same thing and are computed separately. Because of the loading for expenses and high first-year acquisition expenses, cash values are initially below the legal reserve. However, the policyholder has the right to borrow the cash value or exercise one of the cash-surrender options.

Uses of Ordinary Life Insurance An ordinary life policy is appropriate when lifetime protection is needed . This means that the need for life insurance will continue beyond age 65 or 70. Some financial planners and consumer experts point out that the average person does not need large amounts of life insurance beyond age 65, because the need for life insurance declines with age. This view is simplistic and misleading.

Some persons may need substantial amounts of life insurance beyond age 65. For example, an estate clearance fund is still needed at the older ages; there may be a sizable estate tax problem if the estate is large; a divorce settlement may require the maintenance of a life insurance policy on a divorced spouse, regardless of age; and the policyholder may wish to leave a sizable bequest to a surviving spouse, children, or a charity, regardless of when death occurs. Because an ordinary life policy can provide lifetime protection, these objectives can be realized even though the insured dies at an advanced age.

Ordinary life insurance can also be used to save money . Some policyholders wish to meet their protection and savings needs with an ordinary life policy.

As stated earlier, ordinary life insurance builds cash values that can be obtained by surrendering the policy or by borrowing the cash value. Substantial amounts of cash-value life insurance are sold today as an investment and as a method to save money.

Endowment Insurance : Endowment insurance is another traditional form of life insurance.

Endowment insurance pays the face amount of insurance if the insured dies within a specified period; if the insured survives to the end of the endowment period, the face amount is paid to the policyholder at that time.

Net single and annual premiums

- Mortality Table (Males) (1958) الجدول الإنجليزي

Age X	Number living L_x	Number Dying d_x	Deaths Per 1000 q_x
0	185890	777	4.18
1	185113	200	1.08
⋮	⋮	⋮	⋮
99	200	200	1.00

- L_x = the number living at age x.
- d_x = the number can be expected to die before reaching age x+1.
- q_x =the probability of dying within a year for a person age x.

$q_x = \frac{777}{185890}$ = .004179 = 4.18 لكل الف

- احتمال أن شخص عمره صفر يموت قبل بلوغ السن x+1 (سنة واحدة)

$q_x = \frac{200}{185113}$ = .00108 1.08 لكل الف شخص

- Mortality Table (Males).

- الجدول الأمريكي

X	L_x	d_x	q_x
0	10 000 000 9929200	70800 17475	.00708 .00176
1	9911725	15066	.00152
2	L_x= the number living at age x d_x= the number can be expected to die before reaching age x+l.		
99	6415	6415	1.000

■ **Commutation Table (1958- 3%).**

X	D_x	N_x	M_x
0	10 000 000	288963016.7	1583601.456
1	9640000.0	278763016.7	1514863.592
2 ⋮	$D_x= v^x \times l_x$ $N_x= D_x+D_{x+1}$............. آخر الجدول $M_x=C_x+C_{x+1}$ .... آخر الجدول $C_1= v^x \times d_x$		
99	q_x= the probability of dying within a year for a person age x.		

المعادلة الأساسية لحساب الأقساط

- Net premiums discounted to date of issued = benefits discounted to date of issue.

- القيمة الحالية للمزايا المدفوعة من شركات التأمين = القيمة الحالية للأقساط المدفوعة من قبل المستأمنين.
- وذلك كله في تاريخ التعاقد (الإصدار).

- Commutation table (Males) (1958-3%)

- جدول الاستعاضة (معدل من 3% عام 58)

X	D_x	N_x	M_x
0	185890	4026216	12512.42
1	185113	200	1.08
⋮	⋮	⋮	⋮
99	2.6	2.6	2.51

$D_x = v^x \times l_x$

$N_x = D_x + D_{x+1}$.................... آخر الجدول

$M_x = C_x + C_{x+1}$ .... آخر الجدول

$C_x = v^x \times d_x$

Example-1-

- **What is the probability that a 20- year- old man will live to age 50? Of a group of 1000 20-year- old man, what is the predicted number that will live to age 50?**

- **Solution:** $$\textit{the}\ \text{prob} = \frac{L_{50}}{L_{20}} = \frac{166.662}{181.322} = .92$$

- Out of 1000 20- year- old man, the predicted number that will living at to age 50 is 1000 x .92=920

Example-2-

What is the probability that a 20- year- old man will die before reaching age 50? Of a group of 1000 20-year- old man, what is the predicted number that will die before reaching age 50?

Solution: $$\textit{the}\ \text{prob} = \frac{\mathrm{L}_{20} - \mathrm{L}_{50}}{\mathrm{L}_{20}} = \frac{181.322 - 166.682}{181.322} = .0807$$

Predicted number = 1000 x .0807= 81

Pure Endowment:

- **Net single premium**. $$nE_x = \frac{D_{x+n}}{D_x}$$

Example-1-

- **What is the net single premium for an 18- year- old man for a 20-year pure endowment of 10.000?.**

- **Solution:**

$$nE_x \frac{D_{x+n}}{D} \qquad 20\,E_{18} = \frac{D_{18+20}}{D_{18}} = \frac{D_{38}}{D_{18}}$$

$$= 10.000 \times \frac{D_{38}}{D_{18}} = 10.000 \times \frac{32904.2}{82402.5} = 3993$$

Example-2-

- **Find the net single premium for an 18-year- old man for a pure endowment of 10.000 at age 60.**

- **Solution:**

$$10.000\times\frac{D_{60}}{D_{18}}=10.000\times\frac{10713.4}{82402.5}=1300$$

This cost is lower than in Example 1? لماذا

Whole life Annuities

1- Ordinary life Annuity:

$$a_x=\frac{N_{x+1}}{D_x}$$

1- Whole life Annuity due:

$$\ddot{a}_x=\frac{N_x}{D_x} \qquad \mathrm{a}_{\mathrm{x}}=\ddot{a}_x-1$$

Find the net single premium for a whole life annuity due of 10.000 per year issued to a man who is 50 year old?

Solution:

$$\ddot{a}_x=\frac{N_x}{D_x} \qquad \ddot{a}_{50}\,\frac{N_{50}}{D_{50}}=10.000\times\frac{274879.5}{18459.3}$$
$$=10000\times14.8959=148.959$$

Example-3-

How much would an immediate life annuity of 5000 a year cost a man who is 18 years old?

Solution:

$$a_x = \frac{N_{x+1}}{D_x} \qquad a_{18} = \frac{N_{18+1}}{D_{18}} = 5000 \times \frac{N_{19}}{D_{18}}$$
$$= 5000 \times \frac{1604568.9}{82402.5} = 5000 \times 19.47233$$
$$= 97.361.6$$

ويمكن الحل بطريقة أخرى

$$a_x = \ddot{a}_x - 1 = 5000(\ddot{a}_{18} - 1)$$
$$= 5000(\frac{N_{18}}{D_{18}} - 1) = 5000(20.47234 - 1) = 97.361.6$$
$$\frac{\mathrm{N}_{18}}{D_{18}} = \frac{1686971.4}{82402.5}$$

Deferred whole life Annuity

$$n \backslash a_x = \frac{N_{x+n+1}}{D_x} \qquad \mathrm{n} = \text{مدة التأجيل}$$

Example:

- **A man 40 years of age wants a life income of 15.000 a year in addition to social security with the first annual payment to be made when he is 65 what is the net cost of this annuity?**

Solution:

$$n \backslash a_x = \frac{N_{x+n+1}}{D_x} \quad 24 \backslash a_{40} = \frac{N_{40+24+1}}{D_{40}} = 5000 \times \frac{N_{65}}{D_{40}}$$

$$= 5000 \times \frac{80048.6}{29969.8} = 40.064$$

Temporary immediate life Annuity:

دفعة الحياة المؤقتة العادية

$$a_x : \overline{n|} = \frac{N_{x+1} - N_{x+n+1}}{D_x}$$

Example:

- **A How much would a man aged 18 have to pay for a 5-year- temporary life Annuity of 10.000 per year if the first payment is to be made when be is 19?**

$$a_x : \overline{n|} = \frac{N_{x+1} - N_{x+n+1}}{D_x}$$

$$\mathrm{a}_{18} : \overline{5|} = \frac{N_{18+1} - N_{18+5+1}}{D_{18}} =$$

$$= 10.000 \times \frac{N_{19} - N_{24}}{D_{18}} =$$

$$= 10.000 \times \frac{1604568.9 - 1244767.8}{82402.5} = 43.663$$

Temporary life Annuity Due:

دفعة الحياة المؤقتة العاجلة

$$\ddot{a}_x : n \quad = \frac{N_x - N_{x+n}}{D_x}$$

Example:

- **A How much would a 5- year temporary life Annuity due of 10.000 per year cost a man is 18 years old?**

Solution:

$$\ddot{a}_{x}:n = \frac{N_x - N_{x+n}}{D_x}$$

$$\therefore \ddot{a}_{18}:5 = \frac{N_{18} - N_{18+5}}{D_{18}} = 10.000 \times \frac{N_{18} - N_{23}}{D_{18}}$$

$$= 10.000 \times \frac{1686971.4 - 1310276.3}{82402.5} = 45.714.04$$

Deferred temporary life Annuity:

$$n \backslash ma_x = \frac{N_{x+n+1} - N_{x+n+m+1}}{D_x}$$

Example:

- **How much a 5- year temporary life Annuity of 10.000 a year would cost a man aged 18 if he is to receive the first payment when he is 28?**

Solution:

$$n \backslash ma_x = \frac{N_{x+n+1} - N_{x+n+n+1}}{D_x}$$

$$9 \backslash 5a_{18} = \frac{N_{18+9+1} - N_{18+9+5+1}}{D_{18}}$$

$$=10{,}000\times\frac{N_{28}-N_{33}}{D_{18}}$$

$$=10{,}000\times=\frac{1010797.3-772562.7}{82402.2}=28911.09$$

Whole or straight life insurance

$$A_{\mathrm{x}}=\frac{\mathrm{M_x}}{D_x} \qquad (\mathrm{A_X}=\text{Net single premium})$$

Term insurance:

$$A^{1}_{\mathrm{x}}:\overline{\mathrm{n}}|=\frac{\mathrm{M_x}-M_{x+n}}{D_X}$$

Endowment insurance:

$$A_{\mathrm{x}}:\overline{\mathrm{n}}|=\frac{\mathrm{M_x}-M_{x+n}+D_{x+n}}{D_X}$$

$$=\frac{\mathrm{M_x}-M_{x+n}}{D_x}+\frac{D_x+n}{D_x}$$

Net annual premium:

$$P_{\mathrm{x}}=\frac{\mathrm{M_x}}{N_x} \qquad \mathrm{P}^{1}_{\mathrm{x}}\overline{:\mathrm{n}}|=\frac{\mathrm{M_x}-M_{X+n}}{N_x-N_x+n}$$

Limited payment life insurance:

$$_{t}P_{\mathrm{x}}=\frac{\mathrm{M_x}}{N_X-N_{x+t}} \qquad \mathrm{P_x}\overline{:\mathrm{n}}|=\frac{\mathrm{M_x}-M_{x+n}+D_{x+n}}{N_x-N_{x+n}}$$

Example:

Find the net single premium and the net annual premium for a $ 1000 whole life policy issued to

1-a 20-year-oldman

2- a 40 year.

Solution:

$$A_x = \frac{M_x}{D_x} \qquad A_{20} = \frac{M_{20}}{D_{20}} = 1000 \times \frac{9477}{75183}$$

$$P_x = \frac{M_x}{N_x} \qquad \mathrm{P}_{20} = \frac{M_{20}}{N_{20}} = \frac{9477}{1525855} \times 1000$$

Example:

Find the net single premium and the net annual premium for a 10- year, $ 25.000 term policy issued to a 30-year-old man and woman.

Solution:

$$A_x^1 : n = \frac{M_x - M_{x+n}}{D_x} \qquad A_{30}^1 : 10 \quad = \frac{M_{30} - M_{30+10}}{D_{30}}$$

$$net \text{ signale premium} = \frac{\mathrm{M}_{30} - M_{40}}{D_{30}} \times 25000$$

$$P_x^1 : n = \frac{M_x - M_{x+n}}{N_x - N_{x+n}}$$

$$P_{30}^1 : 10 = \frac{M_{30} - M_{40}}{N_{30} - N_{40}}$$

$$P_x^1 : 10 = 25000 \times \frac{M_{30} - M_{40}}{N_{30} - N_{40}}$$

ويستكمل الحل

Example:

Find the annual premium for 20000 30- Payment life policy issued to an 18- year- old man.

Solution:

$$ {}_tP_x = \frac{M_x}{N_x - N_{x+t}} \qquad\qquad 30\mathrm{P}_{18} = \frac{M_{18}}{N_{18} - N_{18+30}} \times 20000 $$

Example:

Find the net single premium and the net annual premium for a $25.000 30- year endowment policy issued to 28- year- old man..

Solution:

$$ A_x : n = \frac{M_x - M_{x+n} + D_{x+n}}{D_x} $$

$$ A_{28} : 30 = \frac{H_{28} - M_{28+30} + D_{28+30}}{D_{28}} \times 25.000 $$

$$ = 25.000 \times \frac{M_{28} - M_{58} + D_{58}}{D_{28}} $$ ويستكمل الحل

$$ P_x : n = \frac{M_x - M_{x+n} + D_{x+n}}{N_x - N_{x+n}} $$ أما القسط السنوي فيحسب كالآتي:

$$ P_{28} : 30 = \frac{M_{28} - M_{58} + D_{58}}{N_{28} - N_{58}} $$ ويستكمل الحل

1- Find the net single premium for a whole life insurance of $4000 on the life of man:

a) Aged 20 **b) Aged 85**

Solution:

$$A_x = \frac{M_x}{D_x}$$

من جدول
الاستعاضة

$$a) = A_{20} = \frac{M_{20}}{D_{20}} \times 4000 \quad A_{20} = \frac{1321070}{5351272} \times 4000 = 987.9$$

من جدول
الاستعاضة

$$b)\ A_{85} = \frac{M_{85}}{D_{85}} \times 4000 = \frac{92609}{106305} \times 4000 = 3484.6$$

2- A certain life ins. Policy provides for $2000 in event of death before ago 65 with $1000 Cash payment if the insured survives to age 65. Assuming the policy is issued at age 30, compute the net single premium.

Solution:

Net single premium = $A_{x'} : n \times 2000 + A_x :\ n \times 1000$

$$= \frac{M_x - M_{x+n}}{D_x} \times 2000 + \frac{D_x + n}{D_x} \times 1000$$

$$= \frac{M_{30} - M_{30+35}}{D_{30}} \times 2000 + \frac{D_{30} + D_{30+35}}{D_{30}} \times 1000$$

$$= \frac{M_{30} - M_{65}}{D_{30}} \times 2000 + \frac{D_{65}}{D_{30}} \times 1000$$

$$= \frac{1234952 - 686751}{3905782} \times 2000 + \frac{995687}{3905782} \times 1000$$

$$= 280.71 + 254.92 = 535.63$$

يمكن النظر إليها كتأمين مختلط مبلغ 1000 جنيه تأمين مؤقت مبلغ 1000 جنيه

مؤقت   وقفية بحتة

$$=\frac{M_{30}-M_{65}+D_{65}}{D_{30}}\times 1000+\frac{M_{30}-M_{65}}{30}\times 1000$$

ويستكمل الحل -

3- من التمرين السابق: كيف يكون الحل إذا كان مبلغ التأمين المؤقت 1000 بينما تأمين الوقفية البحتة مبلغ 2000 جنيه.

$$=\frac{M_{30}-M_{65}+D_{65}}{D_{30}}\times 1000+\frac{D_{65}}{D_{30}}\times 1000$$

أو

$$=\frac{M_{30}-M_{65}}{D_{30}}\times 1000+\frac{D_{65}}{D_{30}}\times 2000$$

A man aged 65 is promised a pension of 500 at the end of each year for as long as he lives. What is the present value of the pension?

Solution:

$$a_x=\frac{N_{x+1}}{D_x}$$

$$a_{65}=\frac{N_{65+1}}{D_{65}}\times 500=\frac{N_{66}}{D_{65}}\times 500=\frac{9611139}{995687}\times 500=4826.38$$

6- A certain life insurance policy calls for the payment of premiums of 100 at the beginning of each year for twenty years by an individual now aged 34. Find the present value of the premiums.

Solution

$$\ddot{a}_x : n = \frac{N_x - N_{x+n}}{D_x} = \frac{N_{34} - N_{34+20}}{D_{34}} = \frac{N_{34} - N_{54}}{D_{34}} \times 100$$ ويستكمل الحل من الجدول.

Net Single Premium

1- Whole life insurance (A_x)

$$A_x = \frac{M_x}{D_x}$$ تأمين مدى الحياة

$$r \backslash A_x = \frac{M_{x+r}}{D_x}$$ تأمين مدى الحياة المؤجل R (حيث R مدة التأجيل)

Deferred

2- Term insurance $\left(A_{x'} : \overline{n|}\right)$ التأمين المؤقت

$$A_{x'} : \overline{n|} = \frac{M_x - M_{x+n}}{D_x}$$ المؤقت

$$r \backslash A_{x'} : \overline{n|} = \frac{M_{x+r} - M_{x+r+n}}{D_x}$$ المؤجل المؤقت

3- Endowment ins. المختلط: $A_x : \overline{n|} = \frac{M_x - M_{x+n} + D_{x+n}}{D_x}$

Net Annual Premium

1- Whole life insurance

$${}_nP_x = \frac{M_x}{N_x - N_{x+n}} \qquad P_x = \frac{M_x}{N_x}$$

2- Term insurance يدفع خلال المدة m

$${}_mP_{x'}:n=\frac{M_x-M_{x+n}}{N_x-N_{x+m}}\ ,\qquad P_{x'}:n=\frac{M_x-M_{x+n}}{N_x-N_{x+n}}$$ يدفع خلال المدة n

3- Endowment ins. المختلط

$${}_mP_x:\overline{n|}=\frac{M_x-M_{x+n}+D_{x+n}}{N_x-N_{x+m}}$$ يدفع خلال المدة m

$$P_x:n=\frac{M_x-M_{x+n}+D_{x+n}}{N_x-N_{x+n}}$$ يدفع خلال المدة n

$$A_x:\overline{n|}=\frac{D_{x+n}}{D_x}$$ الوثيقة البحتة (Pure Endowment) تدفع في حالة الحياة فقط

$$a_x=\frac{N_{x+1}}{D_x}\qquad \ddot{a}_x=\frac{N_x}{D_x}\qquad m\backslash\ddot{a}_x=\frac{N_{x+m}}{D_x}\qquad m\backslash a_x=\frac{N_{x+m+1}}{D_x}$$

Immediate
عاجل

$$\ddot{a}_x:\overline{n|}=\frac{N_x-N_{x+n}}{D_x}$$

$$a_x:\overline{n|}=\frac{N_{x+1}-N_{x+n+1}}{D_x}$$

$$m\backslash\ddot{a}_x:\overline{n|}=\frac{N_{x+m}-N_{x+m+n}}{D_x}$$

$$m\backslash a_x:\overline{n|}=\frac{N_{x+m+1}-N_{x+m+n+1}}{D_x}$$

أما الأقساط السنوية يتم القسمة على: في حالة الدفع المحدد المدة N_x-N_{x+n}

أما في حالة الدفع مدى الحياة يتم القسمة على: N_x

Chapter Six

HOMEOWNERS INSURANCE

In this chapter, we discuss the homeowners forms drafted by the Insurance Services Office (ISO). ISO forms are widely used throughout the United States. Some insurers, however, use the homeowners forms designed by the American Association of Insurance Services (AAIS), which is an advisory organization similar to ISO. Other insurers use their own forms, which differ slightly from the ISO forms.

Eligible Dwellings A homeowners policy on a private dwelling is designed for the owner-occupants of a one-, two-, three-, or four-family dwelling used exclusively for private residential purposes (although certain business occupancies are permitted, such as a home day care business and offices for business or professional purposes).

A one-family dwelling may not be occupied by more than one additional family or more than two roomers or boarders. Separate homeowners forms are written for renters and condominium unit owners.

Overview of Homeowners Policies The following forms are used in the current ISO homeowners (HO) program:

■ HO-2 (broad form)

■ HO-3 (special form)

■ HO-4 (contents broad form)

■ HO-5 (comprehensive form)

■ HO-6 (unit-owners form)

■ HO-8 (modified coverage form)

Homeowners 2 (Broad Form) Homeowners 2 is a named-perils policy that insures the dwelling,

other structures (e.g., a detached garage or tool shed), and personal property against loss from certain listed perils . Covered perils include fire, lightning, windstorm, hail, explosion, and other perils.

A complete list of covered perils can be found in . The HO-2 also covers the additional living expenses or fair rental value in the event a covered loss makes the dwelling uninhabitable.

Homeowners 3 (Special Form)

Homeowners 3 insures the dwelling and other structures against direct physical loss to property . This means that all direct physical losses to the dwelling and other structures are covered, except those losses specifically excluded. Losses to the dwelling and other structures are paid on the basis of full replacement cost with no deduction for depreciation if certain conditions (discussed later) are met. Personal property is covered for the same broad form perils listed for the HO-2 policy.

Homeowners 4 (Contents Broad Form)

Homeowners 4 is designed for tenants who rent apartments, houses, or rooms . Homeowners covers the tenant's personal property against loss or damage and also provides personal liability insurance. Personal property is covered for the same named perils listed in Homeowners In addition, 10 percent of the insurance on personal property can be applied to cover any additions or alterations to the building made by the insured.

Although most renters need a homeowners policy, the majority of tenants are uninsured.

A Homeowners policy, however, is especially valuable if a total loss occurs, especially in the case of a fire in which all of your belongings are totally destroyed. The cost of replacing your furniture, clothes, books, laptop computer and other electronic equipment, television, cosmetics, food, and\ other personal property.

Additional living expenses are paid if an insured peril renders the rented apartment or home uninhabitable.

The HO-4 also provides a minimum of $100,000 of personal liability insurance that covers most personal activities. The annual premium generally is less than $175.

Homeowners 5 (Comprehensive Form)

The **Homeowners** form insures the dwelling, other structures, and personal property against direct physical loss to property . This provision means that all direct physical losses are covered except those losses specifically excluded.

Unlike the other homeowners forms that cover personal property only for certain named perils, HO-5 insures personal property for all direct physical losses except those losses specifically excluded.

Homeowners 6 (Unit-Owners Form)

Homeowners 6 is designed for the owners of condominium units and cooperative apartments .

The condominium association carries insurance on the building and other property owned in common by the owners of the different units. Homeowners 6 covers the personal property of the unit owner for the same named perils listed in Homeowners 2. In addition, there is a minimum of $5000 of insurance on the condominium unit that covers certain property, such as built-in appliances, carpets, additional kitchen cabinets, and wallpaper.

Homeowners 8 (Modified Coverage Form)

Homeowners 8 is a modified coverage form that covers loss to the dwelling and other structures on the basis of repair cost, which is the amount required to repair or replace damaged property using common construction materials and methods . Payment is not based on replacement cost. In some states, actual cash value is used to determine the amount payable.

The HO-8 policy is designed for an older home whose replacement cost substantially exceeds its market value. For example, an older home with a replacement cost of $300,000 may have a market value of only $200,000. Insurers will not insure a home for replacement cost when its current market value is substantially lower. Thus, to make homeowners coverage available for older homes and to reduce moral hazard, the HO-8 form was developed.

The HO-8 policy provides only limited coverage for the theft of personal property. Theft coverage is limited to a maximum of $1000 per occurrence and applies only to losses that occur on the residence premises.

ANALYSIS OF HOMEOWNERS 3 POLICY (SPECIAL FORM)

In the remainder of this chapter, we examine the major provisions that appear in Section I in the Homeowners 3 policy (special form). As you study this section, you may find it helpful to refer to the Homeowners

Persons Insured

Certain words and phrases are defined in the policy. One of the most important is the meaning of the term “insured.” The following persons are considered insured’s under the policy:

■ Named insured and residents of the household who are your relatives. The named insured is the person or persons named in the declarations page of the policy. The named insured under the policy is also referred to as "you." Coverage also applies to the spouse of the named insured if she or he is a resident of the same household. Children and other relatives residing in the named insured's household are covered.

■ Other persons under age21. Other persons under age 21 who are in the care of the named insured or the care of a household resident who is a relative. Examples are a foster child, a ward of the court, or a foreign exchange student.

■ Full-time student away from home. The definition of "insured" includes a full-time student away from home who was a resident of the named insured's household before moving out to attend school, provided the student is under age 24 and a relative of the named insured, or is under age 21 and in the care of the named insured or the care of a household resident who is your relative. In addition to the above, the definition of "insured" includes the following persons under the Section II coverage's:

■ Any person legally responsible for covered animals or watercraft. For example, if you leave your dog with a neighbor, and the dog bites someone, the neighbor has liability coverage under your policy. However, coverage does not apply to a person or organization having custody of animals or watercraft for business purposes, such as an operator of a dog kennel or boat marina.

■ With respect to a motor vehicle covered by the policy, coverage applies to persons employed by the named insured or by other insured's as defined above while working for the insured.

For example, if an employee mows your lawn with a riding mower that you own and someone is injured, he or she has liability coverage under your policy.

COVERAGES

There are four basic coverage’s and several additional coverage’s in Section I of the Homeowners 3 policy:

■ Coverage A: Dwelling

■ Coverage B: Other structures

■ Coverage C: Personal property

■ Coverage D: Loss of use

■ Additional coverage

Coverage A: Dwelling

Coverage A covers the dwelling on the residence premises as well as any structure attached to the dwelling. Thus, the home and an attached garage or carport would be insured under this section.

Materials and supplies intended for construction or repair of the dwelling or other structures are also covered.

Coverage A specifically excludes land.

Thus, if the land on which the dwelling is located is damaged from an insured peril—such as an airplane crash— the land is not covered.

Coverage B: Other Structures

Coverage B insures other structures on the residence premises that are separated from the dwelling by clear space. This coverage includes a detached garage, tool shed, or horse stable. Structures connected to the dwelling only by a fence, utility line, or other similar connections are considered to be “other structures.”

The amount of insurance under Coverage B is based on the amount of insurance on the dwelling (Coverage A). Under the HO-3 policy, 10 percent of the insurance on the dwelling applies as additional insurance to the other structures. Land damage is excluded.

Also, with the exception of a private garage, there is no coverage if the other structure is rented to someone who is not a tenant of the dwelling. For example, assume that Todd owns and occupies a home that has a horse stable on the premises. If Todd rents the horse stable to another person, he would have no coverage if the stable burns in a fire. In addition, other structures from which a business is conducted are not covered. Thus, if Charles operates an auto repair business in a detached garage, the garage is not covered if it is damaged in a tornado.

Finally, other structures used to store business property are excluded.

However, the current form covers a structure that contains business property owned by the insured or tenant of the dwelling, provided such property does not include gaseous or liquid fuel, other than fuel in a permanently installed fuel tank in a vehicle parked in the structure.

For example, if a professional painter stores ladders in a storage shed on his own premises, the shed would be covered as long as it does not contain gaseous or liquid fuel (other than fuel in the tank of a parked vehicle).

Coverage C: Personal Property

Personal property owned or used by an insured is covered anywhere in the world.

This provision also includes borrowed property. In addition, after a loss and at the named insured's request, the insurance can be extended to cover the personal property of a guest or resident employee while the property is in any residence occupied by an insured.

The amount of insurance on personal property is equal to 50 percent of the amount of insurance on the dwelling, which can be increased if desired.

The insurance on personal property covers you both on and off the premises. For example, Claire, age 20, is a college student who is temporarily away from her parents' home during the academic year.

If a thief breaks into her dormitory room and steals a laptop computer, the loss is covered under her parents' policy.

An important limitation applies to personal property away from the premises if the property is usually located at another residence, such as personal property in a vacation home or cabin. In such cases, the off-premises coverage is limited to 10 percent of Coverage C, or $1000, whichever is greater.

Property Not Covered Certain types of property are excluded under Coverage C. The following property is not covered.

1. Articles separately described and specifically insured. Coverage C does not cover articles separately described and specifically insured under either the homeowners policy or some other policy. The intent here is to avoid duplicate coverage. Thus, if jewelry or furs are specifically insured, Coverage C of the homeowners policy will not contribute toward the loss.

2. Animals, birds, and fish. Pets are excluded because they are difficult to value.

Specialized coverage can be used to cover high-value animals, such as thoroughbred horses and pedigreed dogs.

3. Motor vehicles. Motor vehicles and their accessories and equipment are specifically excluded.

Thus, cars, motorcycles, and motor scooters are excluded under the policy. Likewise, the theft of a car battery or wheel covers from a car would not be covered.

The exclusion does not apply to portable electronic equipment that reproduces, receives, or transmits audio, visual, or data signals and is designed so that it may be operated from a power source other than the vehicle’s electrical system.

Motor vehicles not required to be registered for use on public roads that are used solely to service the insured residence or designed to assist the handicapped are exempt from the exclusion. Thus, a garden tractor, riding lawn mower, or electric wheelchair would normally be covered under the policy.

4. Aircraft and parts. Aircraft and parts are specifically excluded. However, the policy does cover hobby or model aircraft not used or designed to carry people or cargo.

5. Hovercraft and parts. Hovercraft and parts are also excluded. A hovercraft is a self-propelled vehicle that generates a cushion of air on which to move.

6. Property of roomers, boarders, and other tenants.

Property of roomers and boarders who are not related to an insured is excluded.

Thus, if the insured rents a room to a student, the student's property is not covered under the insured's homeowners policy.

However, the property of roomers, boarders, and tenants related to an insured is covered.

7. Property in a regularly rented apartment. Property in an apartment regularly rented or being held for rental to others by an insured is specifically excluded.

8. Property rented or held for rental to others off the residence premises. Property away from the residence premises that is rented to others is specifically excluded. For example, if Jennifer owns a bike rental business, the bicycles are not covered under Jennifer's homeowners policy.

9. Business data. The homeowners policy excludes business data stored in books of account, drawings or other paper records, or in computers and related equipment.

The overall effect of this exclusion is to eliminate coverage for the expense of reproducing business records.

10. Credit cards, electronic fund transfer cards, or access devices. Coverage of personal property does not include credit cards, electronic fund transfer cards, or access devices.

There is some coverage for the unauthorized use of such cards under Additional Coverage's .

11. Water or steam. The homeowners policy excludes coverage of water or steam as personal property.

Thus, water or steam delivered through a public water main or from the insured's own well is excluded. Also, water in a swimming pool is not covered.

Coverage D: Loss of Use

Coverage D provides protection when the residence premises cannot be used because of a covered loss.

Three benefits are provided: additional living expense, fair rental value, and prohibited use .

Additional Living Expense : If a covered loss makes the residence premises not fit to live in, the insurer pays the additional living expenses that the insured may incur as a result of the loss.

Additional living expense is the increase in living expenses actually incurred by the insured to maintain the family's normal standard of living.

For example, assume that Heather's home is damaged by a fire. If she rents a furnished apartment for three months at $800 per month, the additional living expense of $2400 would be covered.

Prohibited Use: Loss-of-use coverage also includes prohibited use losses. Even if the covered home is not damaged, a civil authority may prohibit the insured from using the premises because of direct damage to neighboring premises from an insured peril.

The additional living expenses and fair rental value can be paid for up to two weeks.

Summary of Lectures

Meaning of Risk:

Risk is defined as uncertainty concerning the occurrence of loss

Objective Risk:

Is defined as the Relative variation of actual loss from expected loss.

Subjective Risk:

Is defined as uncertainty based on a person's mental condition or state of mind.

Chance of Loss:

Is defined as the probability that an event will occur.

Objective Probability:

Refers to the long- run relative frequency of an event based on the assumption of an infinite number of observations and of no change in the underlying conditions.

Subjective Probability:

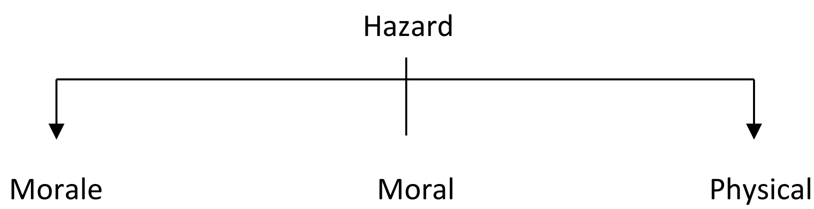
Is the individual's personal estimate of the chance of loss .

Peril:

Is defined as the cause of loss like/fire collision, lightning windstorm, hail, theft, burglary.

Hazard:

Is a condition that increases the chance of loss .



Physical:

Is physical condition that increases the chance of loss- Example, ice roads that increase the chance of an auto accident .

Moral:

Is dishonesty in an individual that increase the frequency or severity of loss.

Morale:

Is carelessness or indifference to a loss because of the existence of insurance .

The basic categories of risk include the following.

Pure and speculative risks.

Fundamental and particular risks.

Pure Risk:

Is a risk where there are only the possibilities of loss or no loss

Speculative risks:

Is risk where either profit or loss is possible.

Fundamental risk:

Is a risk that affects the entire economy or large numbers of persons group within the economy, such as, inflation war.

A particular risk:

Is a risk that affects only the individual and not the entire community or country.

the following types of pure risk can threaten an individual's financial security:- Personal risks- Property risks- Liability risks- risks that directly affect an individual.

Personal Risks:

1- risk of premature death.

2- risk of insufficient income- during retirement

3- risk of poor health.

4- risk of unemployment.

Property risks affect persons who own property if property is damaged or lost, two principal types of losses may result

- Direct loss to property.

- Indirect, or consequential, loss.

Direct loss is defined as a financial loss that results from the physical damage-destruction or theft of the property.

An indirect loss is a financial loss that result indirectly from the occurrence of a direct physical damage, theft loss.

For Example: Loss of profit loss of rents extra expenses.

Liability Risk:

If you do something that results in bodily injury or property damage to someone else, law order to pay to the person you have injured.

Methods of Handling Risk:

Avoidance.

Loss Control.

Loss prevention | **Loss Reduction**

Retention.

Active Ret | **Passive Ret**

aware the risk | **Ignorance.**

deductible. | **Indifference.**

Non Insurance Transfers Hedging Risks .

Hedging:

Is a technique for transferring the risks of unfavorable غير مرغوب فيها price fluctuations to a speculator by purchasing and selling futures contracts .

Incorporation of a business firm incorporation.

Insurance:

Insurer | **Pure risk**

insured | **Pooling technique**

Spread the losses

Law of Large Number:

Pure risk is transferred to the insurer.

Average loss is substituted for actual loss the risk may be reduced by application of the law of large number.

أهم المصطلحات

- Insurance, Risk, Hazard Loss, Life Insurance, Property Liability, Moral, Morale, Peril, Pure Risk, Speculative, Subjective, Objective, Chance of Loss, Loss Control, Personal, Avoidance, Hedging, uncertainty, Retention, Transfer, Portfolio Fluctuation تقلبات في السوق, incorporation اندماج indifference لامبالاة, Permanent دائم, Loss Reduction تجنب الخسارة, disability, deductible, mutual تبادلي, Retirement Pension, Prematureمبكر, disaster

1- Definition of insurance.

2- Basic characteristics of insurance

- Pooling of Losses.
- Payment of fortuitous.
- Risk transfer.

- Indemnification.

3- Requirements of an insurable Risk

- There must be a large number of exposure units. Enable the insurer to predict loss by use low of large number.
- The loss must be determinable and measurable. Cause- place-time-amount
- ………Accidental and unintentional. moral hazard
- The loss should not be catastrophic.
- The chance of loss must be calculable (frequency average – severity- future loss-war-flood)
- The Premium must be economically feasible s 1000 life ins-premium960

4- Adverse Selection and insurance.

5- Insurance and gambling compared.

6- ……… Hedging compared (Pure risk- speculative risk- reduce the speculative risk of an insurer).

7- Types of insurance.

Private Ins. | **Government INS**

Private INS

Life insurance | **Property- liability**

Government INS

Social | **Other**

Property and liability:

- Fire.
- Marine.
- Casualty.
- Multiple- Line insurance.
- Fidelity and bonds.

8- Benefits of ins to Society:

- Indemnification.
- Less worry and fear.
- Source of investment funds.
- Loss Prevention.
- Enhancement of credit.

9- Costs of ins to Society:

- Cost of doing business.
- Fraudulent claim.
- Inflated claims.

Insurance:

Is the pooling of fortuitous losses by transfer of such risk to insurers, who agree to indemnity insured's for such loss losses, to provides other pecuniary benefits on the occurrence or to render services connected with the risk.

Pooling:

Is the spreading of losses incurred by the few person over the entire group, so that in the process, average loss is substituted for actual loss.

Fortuitous:

Is one that is unexpected and occur as a result of chance. (the loss must be accidental).

Indemnification:

Means that the insured is restored to his or her approximate financial position prior to the occurrence of the loss.

Reinsurance:

Is the shifting of part or all of the insurance originally written by on insurer to another insurer.

Adverse Selection:

Is the tendency of persons with a higher than average chance of loss to seek insurance at standard (average) rates, which if not controlled by underwriting result in higher-than- expected .

Underwriting:

Refer to the process of deselecting and classifying applicants for insurance.

Property and Liability Insurance:

- Fire insurance and allied lines.
- Marine insurance.
- Automobile insurance.
- General liability INS.

- Workers compensation.
- Boiler and machinery insurance.
- Health insurance
- Casualty INS.
- Multiple line INS.
- Fidelity INS.

أهم الأسئلة

1- All of the following are Requirement of privately INS risk except:

(A) Losses must not be catastrophic.

(B) Losses must not be an accidental.

(C) There must be a large number of Exposure units.

(D) Losses must be

Determinable Measurable

2- Omnia was concerned that her employees might steal money from the cash registers to provide protection against such losses, Omnia should purchase

A- Worker's compensation INS.

B- Fidelity bonds.

C- Social insurance.

D- Marine INS.

3- Which statement is true with regard to INS.

I- It involves the pooling of fortuitous losses.

II- It involves transfer of risk and indemnification of loss.

A- I only.

B- II only.

C- Both I and II.

D- Neither I nor II.

4- Spreading of losses incurred by a few person over entire group so that in process average losses are substituted for actual losses is called:

A- Indemnification.

B- Adverse selection.

C- Underwriting.

D- Pooling.

5- Insurance benefits society in all of the following ways except

A- It reduce fear.

B- It provide indemnification when losses occur.

C- It leads to inflated claims.

D- It Provides a source of investment funds.

6- Hazem was concerted that customers at his store might be injured while on the premises and sue him to provide protection against such claims, Hazem should purchase:

A- Liability insurance. B- Social INS.

C- Surety Bonds. D- Inland marine INS.

7- Which of the follow true about the law of large of numbers:

I- According to the law of large numbers, as the sample decline, objective risk decline.

II- By applying the low of large numbers, insures prevent losses from occurring.

A- I only. B- II only.

C- Both. D- Neither I nor II.

8- All of the following risks are privately insurable except:

A- The risk of premature death.

B- The risk of physical damage to your car

C- The risk of poor Health.

D- The risk of unemployment.

9- Although insurance benefit society in many ways, there are some social costs associated with insurance these social costs include all of the following except:

A- Insurers' cost of doing business.   B- Inflated claims.

C- Indemnification of losses.   D- Fraudulent claims

1- Multiple- line insurance provide several types of coverage in one contract.

2- Insurers play no role in capital formation. المؤمنين ليس لهم دور في تكوين رأس المال (عبارة خطأ)

3- According to the low of large numbers, as the number of exposures increases, the average size of loss declines.

4- Market risks, financial risks, production risks, and political risks are generally uninsurable.

5- Social insurance program are involuntary private ins. Program mandatory.

6- Fortuitous loss is a loss that is expected to occur.

أسئلة اخرى

1- Explain the major Requirement of an insurable risk.

2- How is insurance beneficial to society.

3- How dos insurance differ from Gambling, Hedging.

- **True - false**

1- Risk is the probability that an event will occur.

2- As the sample size increases expected losses also increases.

3- liability risks are of great importance than property risks.

- **Multiple choice:**

1- All of the following are personal risks except:

a. The risk of dying prematurely.

b. The risk of living too long.

c. The risk of poor health.

b. The risk of damage to your car.

2- Which statement is true with regard to risk and insurance:

I. Most speculative risks can be privately.

II. Insurance is a form of risk transfer.

a. I only b. II only. C. both I and II d. neither I nor II.

Assume that an actuary estimates the following probability of various loss for certain risk:

Amount of loss (X_i)	**Prob. of loss (P_i)**
$ 0	**.30**
$ 360	**.50**
$ 600	**.20**

1. Find the expected loss given the prob. Distribution?
2. Calculate the value of risk?

Solution:

1- EV = Σ X_i P_i

Amount of loss (X_i)		prob. of loss (P_i)		X_i P_i
0	×	.30	=	$ 0
360	×	.50	=	180
600	×	.20	=	120
EV = X^- = 300				$ 300

EV = Σ Xi Pi = 300

2- Calculate σ^2 , σ , CV معامل الاختلاف

$$\sigma^2 = .30(0-300)^2 + .50(360-300)^2 + .20(600-300)^2 = 27{,}000 + 1{,}800 + 18{,}000 = 46{,}800$$

$$\sigma = \sqrt{46{,}800} = 216.33$$

$$CV = \frac{\sigma}{EV} = \frac{216.33}{300} = 0.72$$

Suppose that in some sample of observation an insurer estimates the following distribution of average automobile collision losses:

Number of Policies	**Average Dollars of loss**	**Total loss**
$ 300	**$ 0**	**$ 0**
50	**40**	**2000**
40	**100**	**4000**
10	**1000**	**10000**
400		**16000**

a) Verify that the mean and the standard deviation of the above loss dist. Is 40 and $ 156.8

b) What is the Best estimate of the standard deviation of the population of losses from which this sample is drawn?

c) Verify that the insurer may be "95% confident" that the average losses will range between $ 24.32 and 55.68 and "99% confident" that average losses will range between $ 16.48 and $ 63.52.

d) If the sample size is increased to 1600 but the mean is the same what would you expect to happen to the estimated standard deviation of the population of losses.

Solution:

a) The mean would be $ 16,000/400 or 40 – The standard dev./S.d is calculated:

إشارة سالبة

Loss	Actual loss - Mean loss	(Act. – mea)^2	Num. of Pol. عدد الزبائن	التباين Var.
0	-40	1600	300	480,000
40	0	0	50	0
100	60	3600	40	144,000
1000	960	921,600	10	9,216,000
			400	9840000

Variance (6^2) = 9,840,000/400 = $ 24,600

6 = Square root of 24,600 = 156,84

This is S.D of sample

b) 156.84/square root of 400 = 7.84 this is “standard error” $\frac{15.84}{\sqrt{400}}$

c) 95% of the time the average will fall within the range

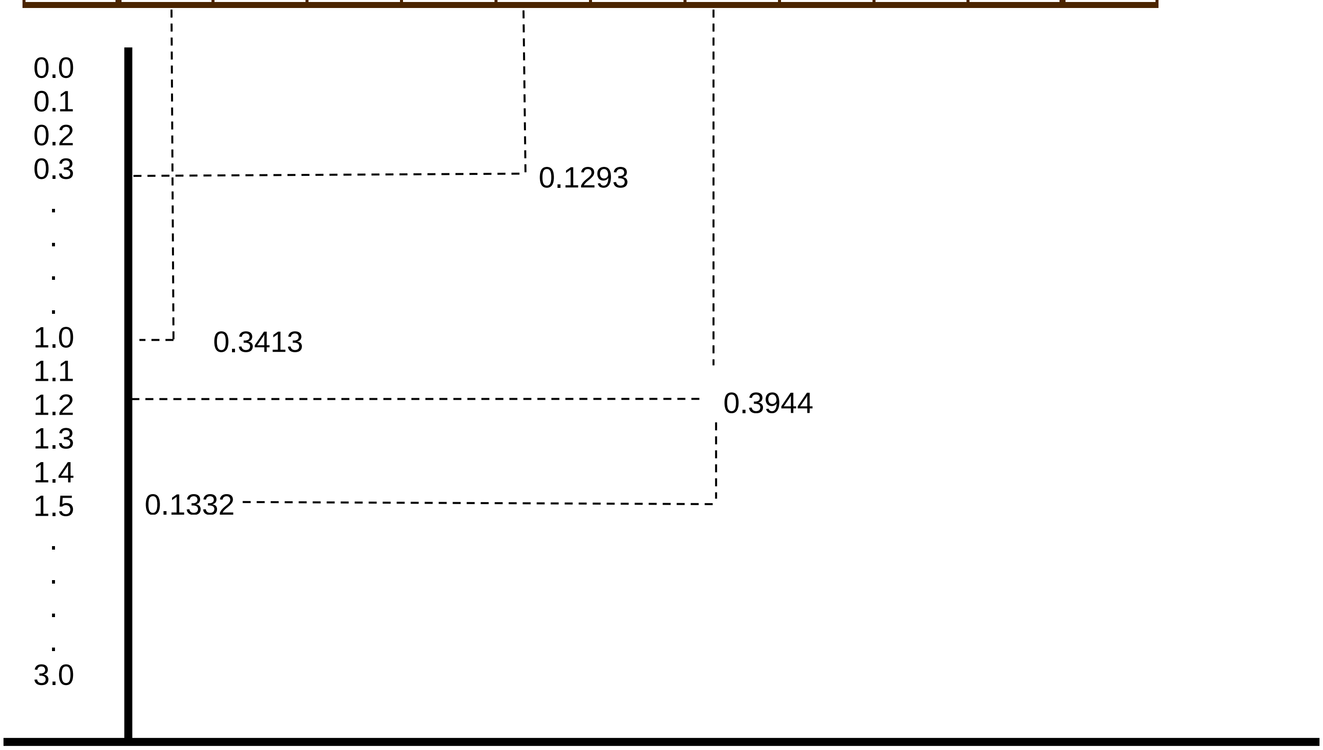
40 ± 2 (7.84) or 24.32 to 55.68 or the 99% of the time the range will be 40 ± 3 (7.84) or 16.48 to 63.52

d) The estimated standard deviation would be expected to be ½ of the former amount. Since the square root of the sample size is now 40 the best estimate of the standard deviation is 156.84 = ½ of 7.84 = 3.92 inversely

وذلك يعني أن تقدير الانحراف المعياري للمجتمع يتناسب عكسياً مع الجذر التربيعي لحجم العينة حيث أن : ينخفض أو يقل الخطأ المعياري مع كل زيادة في قيمة الجذر التربيعي لحجم العينة (الخطأ المعياري = $SD / \sqrt{N}$) وهو ما يفسر قانون الأعداد الكبيرة في التأمين. مع كل زيادة في حجم العينة يكون هناك انخفاض في الخطأ المعياري أي أن القيمة المتوقعة تقترب من القيمة الفعلية.

Areas under the Normal Curve

Z	.00	01	02	02	03	04	05	06	07	08	09

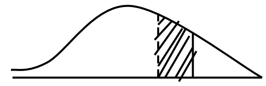


استخدام التوزيع الطبيعي في توقع الخسارة:

$Z = \frac{X-M}{S}$ **loss forecasting using the normal distribution**

1- Assume that the number of weather related property losses is normally distributed with the mean (m) equal to 16 and standard deviation (S) equal to 4. What is the probability between 16 and 21?

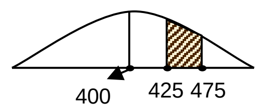
Solution:



Z= $\frac{21-16}{4}$= 1.25 , the prop. Of between 16 and 21 = 0.3944

2- Assume that of vehicle physical damage claims is normally distribute. With a mean of 400 and standard deviation of 25. What is the prob. That the number of vehicle physical damage losses will be between 425 and 475?

Solution



Z= $\frac{475-400}{75}$= 1.00

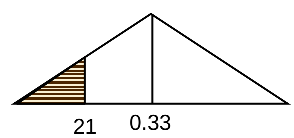
Prob. From the table is .3413,

and Z= $\frac{425-400}{75}$= 0.33 ; prob. is 1293

P (number of losses between 425 and 475 = 0.3413 – 0.1293 = 0.2120

3- Assume that the number of losses is normally distributed with M = 33 and S = 8 what is the prob. That fewer than 21 losses will occur?

Solution:



Z= $\frac{21-33}{8}$ = -1.50

Prob. From the normal curve table is = 0.4332

The Prob. Is = 0.50 – 0.4332 = 0.668

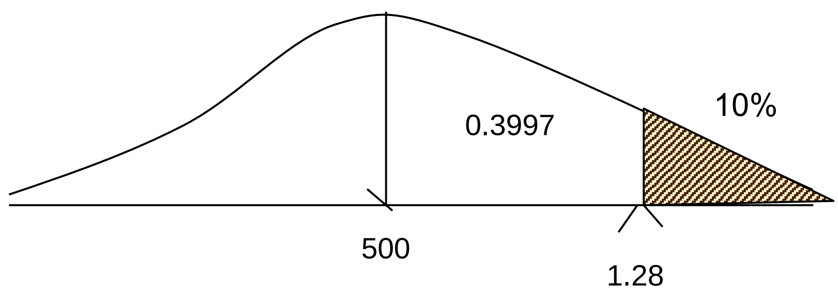
4- m=500 S = 100 – Above what value of x do the high 10 percent of all x value fall?

Multiple Choice

If an insurer increase the number of units by 16 time its objective risk is reduce by what factor?

(A) -1/16 (B) -1/8 (C) -1/4 (D) -1/2

ما هي القيمة التي يزيد عنها 10% من الخسائر؟



$$1.28 = \frac{X - 500}{100} = 500 + (1.28 \times 100), \quad X = 628$$

The upper 10 percent of all claims are higher than 628

3- Selecting the Appropriate Techniques for treating loss Exposures

Risk control **Risk financing**

Risk control : it is techniques that reduce the frequency and severity of accidental losses.

Risk financing : it is techniques that provide for the funding of accidental losses after they control.

Major risk control techniques include the following:

* Avoidance * loss control

The major advantage of Avoidance is that the chance of loss is reduced to Zero.

Loss Control:

1- Loss Prevention **2- Loss reduction**

1- it is measures that reduce the frequency of a particular loss.

2- loss reduction: it is measures that reduce the severity of a loss after it occurs

- Risk financing:

Major risk-financing tech. include the following:

- Retention * Non insurance
- Transfers * commercial insurance

Retention: Retains part or all of the losses that can result from a given loss.

Active Passive

- Retention can be effectively used under the following conditions:

- متى يكون الاحتفاظ مناسب؟

- No other method is available.

- The coverage may be too expensive.

- The worst possible loss is not serious.

Example: Workers compensation claims, shoplifting losses.

Self-insurance: it is special form of planned retention by which part or all of a given loss exposure is retained by the firm.

A better name for self-ins. Is self-funding الأخطار البحتة لم يتم نقلها أو تحويلها إلى المؤمن

Misnomer تسمية خطأ

Advantages of Retention:

- Save money.
- Lower expenses.
- Encourage loss prevention.
- Increase cash flow. زيادة تدفق الأموال

Disadvantages of Retention:

- Possible higher losses.
- Possible higher expenses.
- Possible higher taxes.

Non insurance Transfers:

Methods other than insurance by which a pure risk, and its potential **financial consequences** نتائج مالية are transferred to another party.

For Example: contract عقود التشييد, leases عقود الإيجار

Advantages and disadvantages insurance:

إذا قرر مدير الحظر اختيار طريقة التأمين عليه القيام بالآتي:

1- Selection of insurance coverage.

2- Selection of an insurer.

3- Negotiation of terms. التفاوض بخصوص عقد التأمين

4- Periodic review of the program.

Advantages of insurance:

- The firm will be indemnified after a loss occurs.
- Uncertainty is reduced.
- Insurer can provide valuable risk management service such as loss-control services.
- Insurance premium are income tax-deductible as business expense.

Disadvantages of insurance:

- The payment of premiums is a major cost.
- Considerable time and effort must be spent in negotiating the insurance cover ages.
- The risk manager may have less incentiveحافز to follow a loss-control program.

<u>Matrix</u> can be useful in determining.

Which risk management methods should be used?

Type of loss	Loss frequency	Loss severity	Appropriate risk management tec.
1-	Low	Low	Retention
2-	High	low	Loss control and ret.
3-	Low	high	Insurance.
4-	High	High	Avoidance.

4- Implementing and administering the risk management program = Cooperation with other departments.

- Accounting.
- Finance information.
- Marketing.
- Production.
- Human resources = periodic Review.

■ Fundamental legal Principles:

The Principle of indemnity has Two Fundamental purpose:

1- Prevent the insured from profiting from à loss.

2- reduce moral Hazard.

- **Actual cash value**
  - Replacement cost loss depreciation.
  - Fair market value.
  - Broad evidence rule.
- **Exceptions to principle of indem.**
  - Valued policy.
  - Valued policy laws.
  - Replacement cost insurance.
  - Life insurance

Principle of insurable interest:

- **Purposes of an insurable interest:**
  - To prevent gambling.
  - To reduce moral hazard.
  - To measure the amount of the insured’s loss in property insurance.
- **Examples of an insurable interest:**
  - Property and liability insurance.
  - Life insurance.
- **When must an insurable interest exist?**
  - Property INS. At the time of the loss.

- Life insurance : only at the inception of the policy

■ Principle of subrogation:

❑ **Purposes of subrogation:**

- Prevent the insured from collecting.
- To hold the guilty person responsible for the loss.

❑ **Importance of subrogation:**

- The general rule:
- Entitled only the amount it has paid under the policy.
- the insured cannot impair the insurer’s subrogation/rights
- The insurer can waive its subrogation rights in the contract.
- Subrogation does not apply to life insurance- health ins. contract.

❑ **Principle of utmost Good faith**

- Representation (voidable)
- Material – false-Reliance.
- Concealment (Nondisclosure)
- Warranty misrepresentation.

❑ **Requirements of an insurance Contract** **متطلبات عقود التأمين**

❑ **Condition:** are provision in the policy that qualify or place limitation on the insurer's promise to perform. (Notifying the property after a loss, cooperating with the insurer in the event of a liability.

- **Miscellaneous provisions: (احكام متنوعة)**

Property INS: → cancellation subrogation

Life INS → grace period, misstatement of age

- **Definition of the "Insured"**

First, some policies insure only one person second, the named insure is the person named in the declaration section, the policy may also cover other parties even though they are not specifically named in the policy.

- **Endorsements and Riders:**

  - Mean the same thing (interchangeable)
  - Is a written provision that adds to, delete from, in life in life insurance it is
  - A document that amends at change the original policy.
  - Endorsements : modify, extend, delete

- **Deductibles**: is provision on by which a specified amount is subtracted from the total loss payment otherwise would be payable.

It is not used in life insurance ----------- in personal liability INS.

- **Purpose of deductible:**

  1- to eliminate small claims.
  2- to reduce premiums.
  3- To reduce moral and morale hazard.

- **Large-loss principle**: it is using insurance premiums to pay for large rather than for small loss.
- **Deductibles in property insurance:**

  1- Straight deductible.

  2- Aggregate deductible commercial property INS.

- **Basic parts of an ins. contract:**
  - Declarations. Definitions.
  - Insuring agreement – Exclusions
  - Conditions – Miscellaneous provisions.
- **Declarations**: are statements that provide information about the property or activity to be insured (in property INS).

Underwriting, Rating (First page) identification of the insurer, named of insured, location of the property period of protection, amount of ins. Size of deductible (if any)

(In life insurance) : Insured's named , age, premium , issue date , policy number.

- **Declarations** : the purpose of the various definition is to define clearly the meaning of key words or phrases so that coverage under the policy can be deter mind more easily.
- **Insuring Agreement :** is the heart of an insurance contract.
- **Major promises of the insurer:**
  - Paying losses of the insured perils.

- To defend the insured in liability Insurance.

There are two basic forms of an insuring agreement in property and liability insurances.

1- Named perils coverage.

2- all-risk coverage open perils policy all-risk is generally preferable to named-perils coverage, because the protection is broader with fewer gaps in coverage if the loss is not exclude , then it is covered.

Burden of proof

Insurer   Insured

- Risk of direct loss to property is now used instead of the term (all risks).
- Life insurance is example of an “all risks” policy (all cause of death)

Accident   Diseas

Major Exclusion are suicide during the two years of contract.

Exclusion: there are three major types of exclusions:

1- Excluded perils.

2- Excluded losses.

3- Excluded property.

Reasons for Exclusion:

1- Some perils considered uninsurable.

2- Presence of extraordinary Hazards.

3- Coverage provided by other contracts

4- Moral Hazard problems.

5- Coverage not needed by typical insured**.**

Offer and Acceptance.

- Binder is temporary contract for insurance and can be either written or oral
- Consideration عقد معاوضة: it is the value that each party gives to the other.
- Competent partiers it means the أهلية أطراف التعاقد

Parties must have legal capacity to enter in to a binding contract.

- **Legal Purpose**

Distinct legal characteristics of insurance contract الخصائص القانونية المميزة لعقد التعاقد

- Aleatory contract منطوي على مخاطرة
- Unilateral contract ملزم بجانب واحد
- Conditional contract.
- Contract of adhesion اذعان
- Actual cash value – offer and acceptance

Valued Policy

Representation binder

Replacement cost INS.

Utmost good faith Concealment insurable interest

Consideration subrogation Fair market

Aleatory Value

Unilateral Implied

Waiver Power

Warranty- Adhesion

- **Coinsurance**: it requires the insured to insure the property for insured to insure the property for a stated percentage of its insurable value.

The coinsurance formula:

$$\frac{\textbf{Amount of insurance carried}}{\textbf{Amount of insurance required}} \times \text{Loss} = \text{Amount of recovery}$$

- **Example: Assume that a commercial building has an actual cash value of 500, and that the owner has insured for only $300,000, if an 80 percent coinsurance clause is present in the policy. What is the Amount of recovery if you know:**

  1- a $ 10,000 loss occurs.

  2- The required amount of ins. would be based on replacement cost.

Solution:

Required amount of ins. Based on actual cash value = 400,000 (80%× 500,000)

Face amount of INS = 300,000

Paid by insurer = $\frac{300,000}{400,000}$ x $10000 = 7500$

- **If a $ 500,000 loss occurs what is Amount of recovery ?**

$\frac{300,000}{400,000}$ x $500,000 = 375,000.$ كيف؟

- **if $ 100,000 loss, face Amount = 400,000**

Actual cash value = 500,000 ، 75% percent coinsurance clause

- **Insurance required = 500,000 x $\frac{75}{100}$ = 375,000**

Paid by the insurer = 100,000 * $\frac{400,000}{375,000}$ = 106.000 كيف؟

Purpose of coinsurance: is to achieve equity in Rating, loss if everyone insures only for the partial rather than for the total loss, the premium rate for each 100 of insurance would be higher.

$Acv = 10.000$

$= 5000$ $\boxed{1}$

$= 1000$

1000 x $\frac{5000}{10,000}$ = 500 ← تطبيق شرط النسبية

= 1000 ← عدم تطبيق شرط النسبية

$$Acv = 10.000$$
$$= 10.000$$
$$= 1000$$
$\boxed{2}$

$$1000 \times \frac{10,000}{10,000} = 1000$$ تطبيق شرط النسبية

$$= 1000$$ عدم تطبيق شرط النسبية

- **Coinsurance problems:** inflation the insured may be in compliance with the coinsurance clause when the policy first goes in to effect.

حل المشكلة

Reporting form | Agreed value optional cover

- **Other-insurance provisions:**

These provisions apply when more than one contract covers the same loss, the purpose, is to prevent profiting from insurance and violation of the principle of indemnity.

- **Pro Rata liability:** Each insurers share of the loss is based on the proportion that it INS.

Bears to the total amount of insurance on the property (contribution clause)

Example:

$ 100,000 with company A

$ 50,000 with company B

$ 50,000 with company C

If $ 10,000 loss occurs each insurer will pay only it's pro rata share of the loss.

- So the insurers will pay only $ 10.000 and not $ 30.000 company

$$A = \frac{100,000}{200,000} \text{ x } 10,000 = 5000$$

$$B = \frac{50,000}{200,000} \text{ x } 10,000 = 2500$$

$$C = \frac{50,000}{200,000} \text{ x } 10,000 = 5000$$

(1) $ 1000 straight deductible

Loss	Amount	insurer pay
A	$2500	$1500
B	$ 3500	$ 2500
c	$ 10000	$ 9000

(2) $ 15000 annual aggregate deductible

Loss	Amount of loss	insurer pay
A	$2500	-
B	$ 3500	-
C	$ 10000	1000

$$\frac{Amount\ of\ Ins.Carried}{Amount\ of\ Ins.Required} \times loss = Amount\ of\ recovery$$

Amount of ins. carried = 200 000

Amount of ins. required = 500 000 × 80/100 = 400 000

Amount of recovery = $\frac{200,000}{400,000}$ x 50,000 = 25000

b) Amount of recovery = $\frac{500,000}{400,000}$ x 10,000 = 12500

= 10000 only

: (contribution clause)

a) $ 100000 loss occurs,

Company A = 100,000 x $\frac{100,000}{500,000}$ = 20,000

Company B = 100,000 x $\frac{200,000}{500,000}$ = 40,000

Company C = 100,000 x $\frac{200,000}{500,000}$ = 40,000

- Homeowners insurance:

It is a package policy that combines two or more separate coverage into one policy

Package Policy

Total Premium is less

There are fewer gaps in coverage

■ Homeowners insurance:

- Ho-2 (broad form)

- Ho-3 (Special form)
- Ho-4 (contents broad form)
- Ho-5 (comprehensive form)

Ho-3(Special form):

1- Persons insured

2- Coverage in Ho-3 (special from)

- Coverage A: Dwelling
- Coverage B: Other structures.
- Coverage C : Personal property
- Coverage D: loss of use
- Additional coverage:

A- Attached garage- carport-supplies for repair of the dwelling

Excludes land.

B- Detached garage, horse stable 10 percent of insurance on the dwelling (coverage A)

C- Personal property owned or used by an insured is covered, property of a guest, borrowed property the amount of insurance is equal to 50 percent of the insurance on the dowelling.

- **Property not covered:** in coverage Animal, birds, fish, Motor vehicles Aircraft- Business record- credit cards.

- Special limits of liability (in coverage)

3- Perils insured against:

Risk of direct physical loss to property (Dwelling and other structures)

Excluded:

1- Collapse.
2- Freezing.
3- Dwelling under construction.
4- Vandalism.

5- Other exclusions

Wear and tear | Birds | Animals

Personal Property: is covered on (a named – perils) as the following:

- Fire of lightning-Explosion.
- Windstorm or Hail-Aircraft.
- Riot or civil commotion.
- Vehicles - smoke- vandalizing.
- Theft : there is exclusions:

- Theft by an insured.
- That in or a dwelling under construction.
- Theft from any part of the premises rented to someone other than an insured.

4- Exclusions:

Ordinance or law- Earth movement- water Damage- like flood – power- failure- neglect- war- nuclear- Hazard-intentional loss- government action- weather conditions- Acts or decisions (the government failure to control flood loss)

5- Conditions:

Insurable interest and limit of liability Duties after a loss:

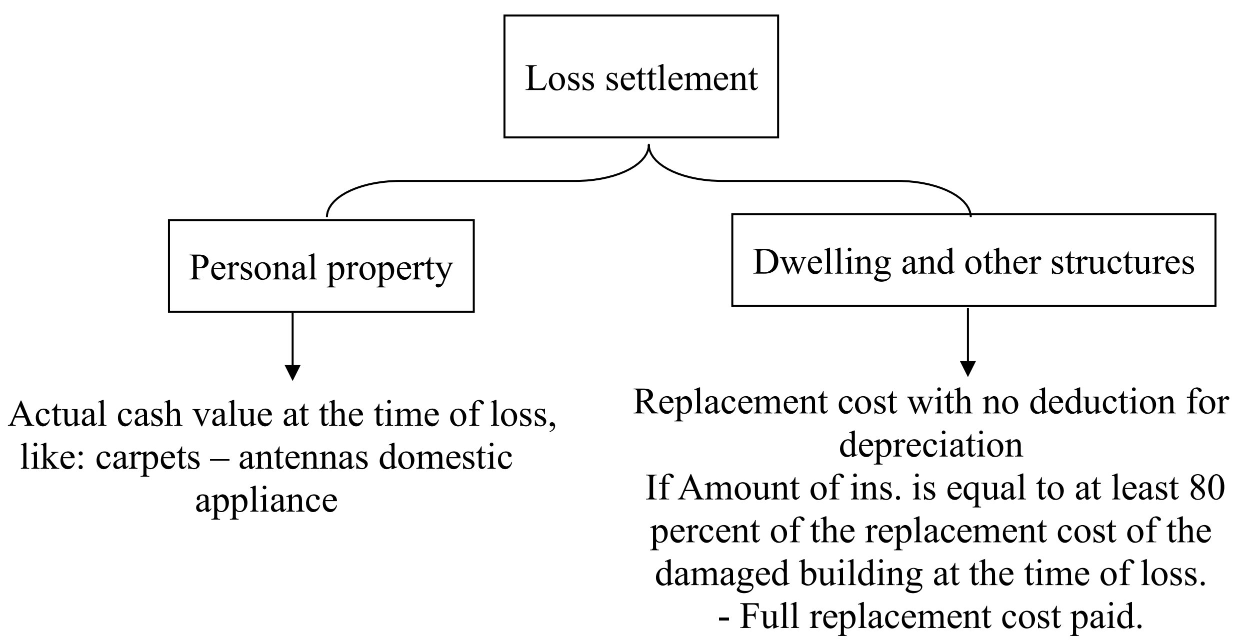
1- Give prompt notice.

2- Protect the property.

3- Prepare an inventory of damaged personal property.

4- Exhibit (عرض أو إظهار) the damaged property.

5- File a proof of loss within 60 days after insurer request (cause of loss).



- **What is the replacement cost?**

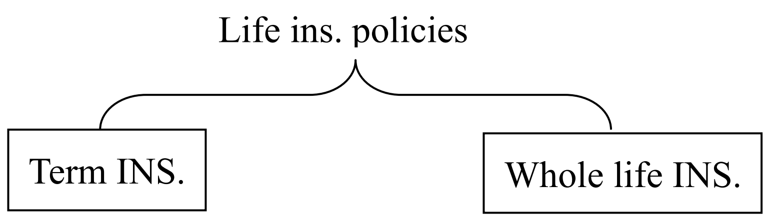
It is the amount necessary to repair or replace the dwelling with material of like kind and quality at current price

(اختيار متعدد سؤال هام)

If a dwelling has a replacement cost of 120000 but is insured for only 72000. The reef of the house is 10 years old and has useful life of 20 years, the root is damaged, cost of new roof is 24000, the insured receives:

A- 12000 b- 24000 c- 19200 d- 18000

- **Types of life Insurance:**



- **Term insurance: it provides temporary protection such as 1,5,10 years, most term insurance are renewable which means that the policy can be renewed for additional period without evidence of insurability.**

- **Types of term insurance**:

- Yearly renewable term.
- 5- , 10-, or 20- year term.
- Term to age 65.
- Decreasing term.
- Uses of term insurance.

- Limitation of term insurance.
- It has two major limitations.
- Term insurance premiums increase with age.
- It is inappropriate if you wish to save money for specific need.

2- Whole life insurance:- it provides lifetime protection.

Types of whole life INS.

- Ordinary life INS.
- Limited- payment life INS.

3- Endowment insurance:-

An endowment policy pays the face amount of insurance if the insured dies within a specified period, if the insured survives to the end of the endowment period.

- Industrial life ins.
- Group life ins.

Questions Bank

- Multiple choice question

1- Chance of Loss is defined as…………….

a- The cause of loss like/fire collision, lightning windstorm, hail, theft, burglary

b- Long- run relative frequency of an event based on the assumption of an infinite number of observations and of no change in the underlying conditions.

c- The individual's personal estimate of the chance of loss

d- The probability that an event will occur

2- Peril is defined as…………….

a- The probability that an event will occur

b- The individual's personal estimate of the chance of loss.

c- The cause of loss like/fire collision, lightning windstorm, hail, theft, burglary

d- Uncertainty concerning the occurrence of loss

3- Hazard is…………….

a- Dishonesty in an individual that increase the frequency or severity of loss.

b- a condition that increases the chance of loss

c- Carelessness to a loss because of the existence of insurance.

d- Physical condition that increases the chance of loss example, ice roads that increase the chance of an auto accident.

4- Moral is…………….

a- Carelessness to a loss because of the existence of insurance.

b- a condition that increases the chance of loss

c- Dishonesty in an individual that increase the frequency or severity of loss.

d- Indifference to a loss because of the existence of insurance.

5- Morale is…………….

a- a condition that increases the chance of loss

b- Dishonesty in an individual that increase the frequency or severity of loss.

c- physical condition that increases the chance of loss

d- carelessness or indifference to a loss because of the existence of insurance

6- Physical hazard is …………….

a- Indifference to a loss because of the existence of insurance.

b- a condition that increases the chance of loss

c- Dishonesty in an individual that increase the frequency or severity of loss.

d- A condition that increases the chance of loss for Example, ice roads that increase the chance of an auto accident.

7- The basic categories of risk include the following:

a- pure and speculative risks

b- particular and fundamental risks

c- All of the above

d- None of the above

8- Inflation and war is an example for:

a- Pure risks

b- Speculative risks

c- Fundamental risks.

d- A particular risks

9- All of the following are personal risks except :

a- Risk of premature death

b- Risk of insufficient income- during retirement

c- Risk of poor health

d- Risk of physical damage to your car

10-Method of handling risk is ……

a- Loss Control

b- Hedging

c- Retention

d- Insurance

11- Social insurance is kind of …………….

a- private insurance

b- Property insurance

c- government insurance

d- liability insurance

12- Fire insurance is kind of…………….

a- life insurance

b- Property insurance

c- government insurance

d- liability insurance

13- All of the following are Requirements of insurable risk Except:

a- Losses must not be catastrophic

b- Losses must not be accidental.

c- There must be a large number of Exposure units.

d- Losses must be determinable

14- Hazem was concerned that her employees might steal money from the cash registers to provide protection against such losses, Omnia should purchase

a- Worker's compensation insurance.

b- Infidelity insurance.

c- Social insurance.

d- Marine insurance

15- Which statement is true with regard to insurance:

I It involves the pooling of fortuitous losses.

II It involves transfer of risk and indemnification of loss.

a- I only.

b- II only.

c- Both I and II.

d- Neither I nor II.

16- Spreading of losses incurred by a few person over entire group so that in process average losses are substituted for actual losses is called:

a- Indemnification.

b- Adverse selection.

c- Underwriting.

d- Pooling.

17- Insurance benefits society in all of the following ways Except:

a- It reduces fear.

b- It provides indemnification when losses occur.

c- It leads to inflated claims.

d- It Provides a source of investment funds

18- All of the following are Benefits of insurance to Society Except:

a- Indemnification

b- Source of investment funds.

c- Fraudulent claim.

d- Enhancement of credit

19- All of the following are Benefits of insurance to Society Except:

a- Less worry and fear.

b- Loss Prevention.

c- Source of investment funds.

d- Inflated claims

20- One of the following is Benefits of insurance to Society:

a- Cost of doing business.

b- Indemnification.

c- Fraudulent claim.

d- Inflated claims.

21- One of the following is Costs of insurance to Society:

a- Fraudulent claim

b- Loss Prevention.

c- Enhancement of credit.

d- Indemnification

22- Insurance benefits society in all of the following ways Except:

a- It reduces fear.

b- It provides indemnification when losses occur.

c- It leads to inflated claims.

d- It Provides a source of investment funds

23- When loss frequency is low and loss severity is high appropriate risk management techniques is...........

a- Avoidance

b- Insurance.

c- Retention

d- Loss control and ret.

24- When loss frequency is low and loss severity is low appropriate risk management techniques is……

a- Insurance

b- Avoidance.

c- Retention

d- Loss control

25- When loss frequency is high and loss severity is low appropriate risk management technique is………

a- Loss control

b- Retention

c- Insurance

d- Avoidance

26- When loss frequency is high and loss severity is high appropriate risk management technique is………

a- Retention

b- Insurance

c- Avoidance

d- Loss control

27- All of the following are advantages of retention Except:

a- Save money.

b- Lower expenses.

c- Encourage loss prevention

d- Possible higher losses

28- All of the following are Fundamental legal Principles for insurance Except:

a- Principle of indemnity

b- Principle of insurable interest

c- Principle of actual cash value

d- Principle of subrogation

29- All of the following are fundamental legal Principles for insurance Except:

a- Principle of insurable interest.

b- Principle of indemnity.

c- Principle of utmost Good faith

d- Principle of replacement cost

30- One of the following is fundamental purpose for Principle of indemnity:

a- Reduce moral hazard.

b- To prevent gambling.

c- Prevent the insured from collecting.

d- To hold the guilty person responsible for the loss

31- One of the following is fundamental purpose for Principle of insurable interest:

a- Prevent the insured from profiting from à loss

b- Prevent the insured from collecting

c- To hold the guilty person responsible for the loss.

d- To measure the amount of the insured's loss in property insurance

32- One of the following is fundamental purpose for Principle of subrogation:

a- To reduce moral hazard.

b- To hold the guilty person responsible for the loss.

c- To prevent gambling.

d- Prevent the insured from profiting from à loss

33- All of the following are Exceptions to principle of indemnity Except:

a- Valued policy

b- Replacement cost insurance.

c- Life insurance

d- Property insurance

34- All of the following are Purposes of deductible in insurance Except:

a- To eliminate small claims

b- To hold the guilty person responsible for the loss

c- To reduce premiums

d- To reduce moral and morale hazard

35- All of the following are Purposes of deductible in insurance Except:

a- To reduce premiums

b- To reduce morale hazard

c- To eliminate small claims

d- To prevent gambling

36- One of the following is fundamental purpose for deductible in insurance :

a- To measure the amount of the insured's loss in property insurance.

b- To prevent the insured from profiting from à loss.

c- To prevent the insured from collecting.

d- To eliminate small claims

37- One of the following is fundamental purpose for deductible in insurance:

a- To reduce premiums

b- To Prevent the insured from collecting

c- To hold the guilty person responsible for the loss.

d- To measure the amount of the insured’s loss in property insurance

38- One of the following is fundamental purpose for deductible in insurance :

a- To reduce moral hazard.

b- To hold the guilty person responsible for the loss.

c- To prevent gambling.

d- To Prevent the insured from profiting from à loss

39- Types of deductible in property insurance are:

a- Straight deductible and aggregate deductible

b- Fundamental deductible and particular deductible

c- All of the above

d- None of the above

40- All of the following are basic parts of an insurance contract Except:

a- Conditions

b- Insuring agreement

c- Declarations

d- Binder

41- All of the following are basic parts of an insurance contract Except:

a- Small claims

b- Definitions

c- Miscellaneous provisions

d- Rider

42- One of the following is Purpose for coinsurance clause :

a- To eliminate small claims

b- To reduce premiums

c- To reduce moral and morale hazard

d- to achieve equity in Rating , loss

43- One of the following is Coinsurance clause problem:

a- Rating

b- Inflation

c- Indemnification

d- Gambling

44-It is appropriate if you wish to save money for specific need.

a- Term insurance

b- Decreasing term insurance

c- Term insurance to age 65

d- None of the above

45-It is appropriate if you wish to save money for specific need.

a- Term insurance to age 65

b- Whole life insurance

c- Term insurance

d- Decreasing term insurance

46-It is inappropriate if you wish to save money for specific need.

a- Term insurance

b- Whole life insurance

c- Endowment insurance

d- Limited- payment life insurance

47-Term insurance premiums …………with age

a- Decrease

b- Increase

c- Decrease and Increase

d- Not related

48-It is provides lifetime protection:

a- Term insurance

b- Whole life insurance

c- Decreasing term insurance

d- Endowment insurance

49-………………pays the face amount of insurance if the insured dies within a specified period, if the insured survives to the end of the endowment period:

a- Limited- payment life insurance policy

b- Decreasing term insurance policy

c- Whole life insurance policy

d- Endowment insurance policy

50-…………………. pays the face amount of insurance if the insured dies within a specified period:

a- Term insurance policy

b- Whole life insurance policy

c- Endowment insurance policy

d- None of the above

51-It provides temporary protection:

a- Endowment insurance

b- Whole life insurance

c- Term insurance

d- None of the above

52- Term insurance is………………….. which means that the policy can be renewed for additional period without evidence of insurability

a- Renewable b- Indemnification

c- Insurability d- Rating

53- Term insurance policy can be renewed for additional period without evidence of ……………

a- Rating

b- Insurability

c- Indemnification

d- Reinsurance

54- Assume that a commercial building has an actual cash value of $500,000 and that the owner has insured for only $300,000, if an 80 percent coinsurance clause is present in the policy. What is the Amount of recovery if a $10,000 loss occurs?

a- $7500 b- $5000

c- $10,000 d- $6000

55- Assume that a commercial building has an actual cash value of $500,000 and that the owner has insured for only $300,000, if a 100 percent coinsurance clause is present in the policy. What is the Amount of recovery if you know $ 10,000 loss occurs?

a- $7500 b- $5000

c- $10,000 d- $6000

56- Assume that a commercial building has an actual cash value of $ 500,000 and that the owner has insured for only $300,000, if an 80 percent coinsurance clause is present in the policy. What is the Amount of recovery if you know$ 500,000 loss occurs?

a- $375,000 b- $500,000

c- $300,000 d- $400,000

57- Assume that a commercial building has an actual cash value of $500,000 and that the owner has insured for only $400,000 if an 80 percent coinsurance clause is present in the policy. What is the Amount of recovery if you know$ 100,000 loss occurs?

a- $80,000 b- $100,000

c- $50,000 d- $40,000

58- Assume that a commercial building has an actual cash value of $5,000,000 and the amount of insurance with company A $1,000,000 and $2,000,000 with company B and $2,000,000 with company C, What is the Amount of recovery for every company if you know $10,000 loss occurs?

For company A:

a- $2000 b- $3000

c- $4000 d- $5000

For company B:

a- $2000 b- $3000

c- $4000 d- $5000

For company C:

a- $2000 b- $3000

c- $4000 d- $5000

59- Assume that a commercial building has an actual cash value of $5,000,000 and The amount of insurance with company A $1,000,000 and S2,000,000 with company B and S2,000,000 with company C, What is the Amount of recovery for every company if you know $ 6,000,000 loss occurs?

For company A:

a- $1,000,000 b- $3,000,000

c- $2,000,000 d- $6,000,000

For company B:

a - $1,000,000 b- $2,000,000

c- $4,000,000 d- $5,000,000

For company C:

a- $6,000,000 b- $3,000,000

c- $4,000,000 d- $2,000,000

60- Assume that a commercial building has an actual cash value of $5000,000 and The amount of insurance with company A $1000,000 and S1000,000 with company B and S1000,000 with company C, if an 100 percent coinsurance clause is present in the policy What is the Amount of recovery for every company if you know $ 100,000 loss occurs?

For company A:

a- $40,000 b-$30,000

c- $20,000 d-$50,000

For company B:

a- $30,000 b-$20,000

c- $40,000 d-$50,000

For company C:

a- $50,000 b-$30,000

c- $40,000 d-$20,000

61-…………………… is appropriate if you wish to save money for specific need

a- Term insurance to age 65

b- Whole life insurance

c- Term insurance

d- Decreasing term insurance

62-……………………is inappropriate if you wish to save money for specific need

a- Term insurance to age 65

b- Whole life insurance

c- Term insurance

d- Decreasing term insurance

63-……………………premiums decrease with age

a- Term insurance to age 65

b- Whole life insurance

c- Term insurance

d- None of the above

64-……………………… is provides lifetime protection

a- Term insurance

b- Whole life insurance

c- Endowment insurance

d- Limited- payment life insurance

65-………………… pays the face amount of insurance if the insured dies within a specified period, if the insured survives to the end of the endowment period .

a- Term insurance

b- Whole life insurance

c- Endowment insurance

d- Limited- payment life insurance

66-…………………… provides temporary protection

a- Term insurance

b- Whole life insurance

c- Endowment insurance

d- Limited- payment life insurance

67-……………………is renewable which means that the policy can be renewed for additional period without evidence of insurability

a- Term insurance

b- Whole life insurance

c- Endowment insurance

d- Limited- payment life insurance

68-……………………. These provisions apply when more than one contract covers the same loss, the purpose, is to prevent profiting from insurance and violation of the principle of indemnity.

a- Contribution clause

b- Subrogation clause

c- Indemnity clause

d- Actual cash value clause

69-………………………… is temporary contract for insurance and con be either written of oral.

a- Binder b- rider

c- Endorsement d- policy

70-………………………….. are statements that provide information about the property or activity to be insured like named of insured, location of the property, period of protection

a- Declarations b- Conditions

c- Exclusions d- Insuring agreement

71-………………is the heart of an insurance policy.

a- Declarations b- Conditions

c- Exclusions d- Insuring agreement

2-True/False Question:

1- Hazard is a condition that increases the chance of loss

2- Morale is dishonesty in an individual that increase the frequency or severity of loss

3- Moral is carelessness or indifference to a loss because of the existence of insurance

4- Physical hazard is physical condition that increases the chance of loss

5- Pure Risk is a risk where there are only the possibilities of loss or no loss

6- Speculative risks is risk where either profit or loss is possible

7- Fundamental risk is a risk that affects only the individual and not the entire community or country

8- A particular risk is a risk that affects the entire economy or large numbers of persons group within the economy, such as, inflation and war.

9- Loss of profit lost and rents extra are example for direct loss

10- Destruction or theft is example for indirect loss

11- Retention is method of Handling Risk

12- Avoidance is not method of Handling Risk

13- Loss Control is method of Handling Risk

14- Hedging is not method of Handling Risk

15- There are two Retention, active retention and passive retention

16- There is no different between private insurance and government insurance

17- social insurance and health insurance are government insurance

18- Marine insurance is kind of Property insurance

19- Compulsory motor insurance is kind of liability insurance

20- Compulsory motor insurance is kind of property insurance

21- Aviation insurance is kind of Property insurance

22- There is no different between general insurance and life insurance

23- boiler and machine insurance is kind of Property insurance

24- Automobile insurance is kind of liability insurance

25- Burglary insurance is kind of Property insurance

26- Compulsory motor insurance (third party) is kind of government insurance

27- Multiple Line or all risks insurance is kind of General insurance

28- Automobile comprehensive insurance is kind of Property insurance

29- All insurance policies subject to Principle of indemnity

30- All insurance policies subject to Principle of utmost Good faith

31- Property insurance policies subject to Principle of insurable interest

32- Life insurance policies subject to Principle of indemnity

33- Marine insurance policies subject to Principle of subrogation

34- There is no different between endorsements and riders

35- There is no different between condition in insurance policy and miscellaneous provisions

36- The insurance policy may also cover other parties even though they are not specifically named in the policy.

37- Representation, Concealment, misrepresentation, and voidable these words can be used when we writes short notes about principle of utmost good faith

38- Eliminate small claims is purpose for deductible in insurance

39- Term insurance is appropriate if you wish to save money for specific need

40- Whole life insurance is appropriate if you wish to save money for specific need

41- Endowment insurance is inappropriate if you wish to save money for specific need

42- Term insurance premiums increase with age

43- Endowment insurance is provides lifetime protection

44- Whole life insurance policy pays the face amount of insurance if the insured dies within a specified period, if the insured survives to the end of the endowment period

45- Endowment insurance policy pays the face amount of insurance if the insured dies within a specified period

46- Term insurance provides temporary protection

47- Limited- payment life insurance is renewable which means that the policy can be renewed for additional period without evidence of insurability

48- Term insurance policy can be renewed for additional period without evidence of insurability .

49- Assume that a commercial building has an actual cash value of $500,000 and that the owner has insured for only $300,000, if an 80 percent coinsurance clause is present in the policy and you know a $10,000 loss occurs then the Amount of recovery = $7500

50- Assume that a commercial building has an actual cash value of $500,000 and that the owner has insured for only $300,000, if a 100 percent coinsurance clause is present in the policy and you know $10,000 loss occurs then the Amount of recovery = $10,000

51- Assume that a commercial building has an actual cash value of $500,000 and that the owner has insured for only $300,000, if an 80 percent coinsurance clause is present in the policy and you know $500,000 loss occurs then the Amount of recovery = $400,000

52- Assume that a commercial building has an actual cash value of $500,000 and that the owner has insured for only $400,000, if an 80 percent coinsurance clause is present in the policy and you know $100,000 loss occurs then the amount of recovery = $75000

53- Assume that a commercial building has an actual cash value of $5,000,000 and The amount of insurance with company A $1,000,000 and S2,000,000 with company B and S2,000,000 with company C, if you know $10,000 loss occurs , then the amount of recovery for company A=$2000 and for company B=$4000 and for company C=$2000

54- Assume that a commercial building has an actual cash value of $5,000,000 and The amount of insurance with company A $1,000,000 and $2,000,000 with company B and $2,000,000 with company C, if you know $6,000,000 loss occurs then the amount of recovery for company A=$2,000,000 and for company B=$2000,000 and for company C=$2000,000

55- Assume that a commercial building has an actual cash value of $5,000,000 and The amount of insurance with company A

$1,000,000 and $1,000,000 with company B and $1,000,000 with company C, if an 100 percent coinsurance clause is present in the policy and you know $100,000 loss occurs then the amount of recovery for company A= $20,000 and for company B= $20000 and for company C= $20000

56- Term insurance is appropriate if you wish to save money for specific need

57- Whole life insurance is inappropriate if you wish to save money for specific need

58- Term insurance premiums increase with age

59- Endowment insurance is provides lifetime protection

60- Endowment insurance pays the face amount of insurance if the insured dies within a specified period, if the insured survives to the end of the endowment period .

61- Whole life insurance provides temporary protection

62- Term insurance is renewable which means that the policy can be renewed for additional period without evidence of insurability

63- Contribution clause these provisions apply when more than one contract covers the same loss, the purpose, is to prevent profiting from insurance and violation of the principle of indemnity.

64- Pro Rata liability means each insurers share of the loss is based on the proportion that it insurance bears to the total amount of insurance on the property

65- Binder is temporary contract for insurance and con be either written of oral .

66- Consideration is the value that each party gives to the other.

67- Declarations are statements that provide information about the property or activity to be insured like: named of insured, location of the property, period of protection .

68- Exclusion is the heart of an insurance policy .

69- Condition: is provision in the policy that qualify or place limitation on the insurer's promise to perform.

70- Deductibles is provision on by which a specified amount is subtracted from the total loss payment otherwise would be payable, it is not used in life insurance .

EXAMS FOR PRIOR YEARS

South Valley University Faculty of Commerce	Date:25 /3/2021 Time Allowed: 2hours
Insurance	
Third Year	English Teaching Section

Question one (60points)

Choose the correct answer

1- .... It is the amount necessary to repair or replace the dwelling with material of like kind and quality at current price

a- actual cash value   b-replacement cost

c- face amount   d-premium

2- All of the following are personal risks except :

a- risk of premature death

b- risk of insufficient income- during retirement

c- risk of poor health

d- risk of physical damage to your house

3- Social insurance is kind of …………….

a- Private insurance b- government insurance

c- Property insurance d- liability insurance

4- Fire insurance is kind of…………….

a- life insurance b- government insurance

c- property insurance d- liability insurance

5- All of the following are Requirements of insurable risk Except:

a- losses must be catastrophic

b- losses must be accidental.

c- there must be a large number of Exposure units.

d- losses must be determinable

6- Hazem was concerned that her employees might steal money from the cash registers to provide protection against such losses, Hazem should purchase

a- Liability insurance. b- Marine insurance

c- Infidelity insurance. d- Social insurance.

7- Which statement is true with regard to insurance:

I It involves the pooling of fortuitous losses.

II It involves transfer of risk and indemnification of loss.

a- I only. b- Both I and II

c- II only. d- Neither I nor II

8- Spreading of losses incurred by a few person over entire group so that in process average losses are substituted for actual losses is called:

a- Indemnification. b- Underwriting

c- Adverse selection. d- Pooling

9- Insurance benefits to society in all of the following ways Except:

a- It reduces fear. b- It leads to inflated claims

c- It provides indemnification when losses occur

d- It Provides source of investment funds

10- All of the following are Benefits of insurance to Society Except:

a- Indemnification b- Enhancement of credit

c- Source of investment funds. d- Fraudulent claim.

11- When loss frequency is low and loss severity is high appropriate risk management techniques is...........

a- Avoidance b- Retention

c- Insurance. d- Loss control and ret

12- All of the following are advantages of retention Except:

a- Save money. b- Encourage loss prevention

c- Lower expenses. d- Possible higher losses

13- One of the following is fundamental purpose for Principle of subrogation:

a- To reduce moral hazard.

b- To hold the guilty person responsible for the loss.

c- To prevent gambling.

d- Prevent the insured from profiting

14- One of the following is fundamental purpose for Principle of indemnity:

a- Reduce moral hazard.

b- To prevent gambling.

c- Prevent the insured from collecting.

d- To hold the guilty person responsible for the loss

15- Term insurance policy can be renewed for additional period without evidence of……………

a- Rating b- Indemnification

c- Insurability d- Reinsurance

16- All of the following are Purposes of deductible in insurance Except:

a- To reduce premiums

b- To reduce morale hazard

c- To eliminate small claims

d- To prevent gambling

17- All of the following are basic parts of an insurance contract Except:

a- Conditions c- declarations

b- Insuring agreement d- Binder

18- It is appropriate if you wish to save money for specific need.

a- Term insurance b-Decreasing term insurance

c- Term insurance to age 65 d- None of the above

19- Term insurance premiums …….with age

a- Decrease b- decrease and increase

c- Increase d- not related

20- It is provides lifetime protection:

a- Term insurance b- Endowment insurance

c- Whole life insurance d- Decreasing term insurance

21- ……………… pays the face amount of insurance if the insured dies within a specified period, if the insured survives to the end of the endowment period:

a- Limited- payment life insurance policy

b- Decreasing term insurance policy

c- Whole life insurance policy

d- Endowment insurance policy

22- All of the following are Exceptions to principle of indemnity Except:

a- Valued policy b- Replacement cost insurance.

c- Life insurance d- Property insurance

23- Types of deductible in property insurance are:

a- Straight deductible and aggregate deductible

b- Fundamental deductible and particular deductible

c- All of the above d- None of the above

24- ……………………. These provisions apply when more than one contract covers the same loss, the purpose, is to prevent profiting from insurance and violation of the principle of indemnity.

a- Contribution clause b- Subrogation clause

c- Indemnity clause d- Actual cash value clause

25- Assume that a commercial building has an actual cash value of $5,000,000 and the amount of insurance with company A $1,000,000 and $2,000,000 with company B and $2,000,000 with company C, What is the Amount of recovery for company A if you know $10,000 loss occurs?

For company A:

a- $1000 b- $3000 c- $4000 d- $2000

26- A commercial building has an actual cash value of $5,000,000 and The amount of insurance with company A $1,000,000 and S2,000,000 with company B and S2,000,000 with company C, What is the Amount of recovery for company B if you know $ 6,000,000 loss occurs?

For company B:

a- $1,000,000 b- $2,000,000 c- $4,000,000 d- $5,000,000

27- Assume that a commercial building has an actual cash value of $5000,000 and The amount of insurance with company A $1000,000 and S1000,000 with company B and S1000,000 with company C, if an 100 percent coinsurance clause is present in the policy What is the Amount of recovery for company C if you know $ 100,000 loss occurs?

For company C:

a- $40,000 b-$30,000 c- $20,000 d-$50,000

28- If a dwelling has a replacement cost of $120000 but is insured for only$100000 the roof of the house is 10 years old and has useful life of 20 years, the roof is damaged, and cost of new roof is $24000 the insured receives:

a- 12000 b- 24000 c- 19200 d- 18000

29- Commercial building has an actual cash value of $10,000,000 and The amount of insurance with company A $2,000,000 and $2,000,000 with

company B and $2,000,000 with company C, if an 100 percent coinsurance clause is present in the policy What is the amount of recovery for company (A) if you know $ 100,000 loss occurs?

a- $40,000 b-$30,000 c- $20,000 d-$50,000

30- **Assume that a commercial building has an actual cash value of $1,000,000 and that the owner has insured for only $600,000, if an 80 percent coinsurance clause is present in the policy. What is the Amount of recovery if a $10,000 loss occurs?**

a-$7500 b- $5000 c-$10,000 d- $6000

Question two (40points)

<u>State whether each of the following statements is true (T) or false (F)</u>

1- Boiler and machine insurance is kind of property insurance
2- Morale is indifference to a loss because of the existence of insurance
3- Speculative risks is a risk where there are only the possibilities of loss or no loss
4- Homeowners insurance is a package policy that combines two or more separate coverage into one policy
5- Compulsory motor insurance is kind of property insurance
6- Burglary insurance is kind of liability insurance
7- Fire insurance policies subject to Principle of subrogation
8- Eliminate huge claims is purpose for deductible in insurance
9- There is no different between endorsements and binder
10- Term insurance is inappropriate if you wish to save money for specific need
11- Endowment insurance is provides lifetime protection
12- Subrogation does not apply to life insurance- health ins. contract.

13- Term insurance policy can be renewed for additional period without evidence of insurability

14- Rider is temporary contract for insurance and can be either written of oral

15- Contribution clause these provisions apply when more than one contract covers the same loss, the purpose, is to prevent profiting from insurance and violation of the principle of indemnity

16- Replacement cost is the amount necessary to repair or replace the dwelling with material of like kind and quality at current price

17- Deductibles is provision on by which a specified amount is subtracted from the total loss payment otherwise would be payable, it is used in life insurance

18- In Mortality table the number living at age 30 more than the number living at age20

19- Purpose of coinsurance clause is to achieve equity in rating

20- Inflation is coinsurance problems, the insured may be in compliance with the coinsurance clause when the policy first goes in to effect

كلية التجارة جامعة جنوب الوادي	South Valley University Faculty of Commerce	Date:4 /1/2023 Time Allowed: 3hours	
	Insurance		
	Third Year	English Teaching Section	

Answer the following questions;

Question one (60points)

Choose the correct answer

1- Commercial building has an actual cash value of $10,000,000 and The amount of insurance with company A $2,000,000 and $2,000,000 with company B and $2,000,000 with company C, if a 100 percent coinsurance clause is present in the policy What is the amount of recovery for company (B) if you know $100,000 loss occurs?

a- $40,000 b-$30,000 c-$20,000 d-$50,000

2- Assume that a commercial building has an actual cash value of $1,000,000 and that the owner has insured for only $600,000, if an 80 percent coinsurance clause is present in the policy. What is the Amount of recovery if a $8,000 loss occurs?

a- $7500 b- $5000 c-$10,000 d-$6000

3- How much would a whole life annuity of $5000 a year cost a man who is 18 years old?

a- $97316 b-$ 97361 c-$97613 d-$97351

4- A man 40 years of age wants a life income of $15000 a year in addition to social security with the first annual payment to be made when he is 65 what is the net cost of this annuity?

a- $40046 b-$40466 c-$40464 d-$40064

5- How much would a man aged 18 have to pay for a 5-year- temporary life Annuity of $10.000 per year if the first payment is to be made when he is 19 years?

a- $43366 b-$43663 c-$43336 d-$43446

6- How much would a 5- year temporary life Annuity of $10.000 a year cost a man aged 18 if he is to receive the first payment when he is 28 years

a-$28811 b-$28711 c-$28911 d-$28611

7- Find the net single premium for a whole life insurance of $4000 on the life of man aged 20 years

a- $987 b-$978 c-$899 d-$879

8- A certain life insurance policy provides for $2000 in event of death before age 65 with $1000 Cash payment if the insured survives to age 65. Assuming the policy is issued at age 30, compute the net single premium.

a- $563 b-$535 c-$635 d-$663

9- Find the net single premium for an 18-year- old man for a 20-year pure Endowment of $10.000?

a- $3399 b-$3939 c-$3393 d-$3993

10- Assume that an actuary estimates the following probability of various loss for certain risk:

Amount of loss (X_i)	Prob. of loss (P_i)
$ 0	.30
$ 360	.50
$ 600	.20

Calculate the value of risk (CV)?

a- 0.72 b-0.76 c-0.67 d- none of the above

11- What is the probability that a 20- year- old man will die before reaching age 50? Of a group of 1000 20-year- old man.

a- 0.0708 b- 0.0609 c- 0.0907 d- none of the above

12- Social insurance is kind of …………….

a- Liability insurance b- Government insurance

c- Property insurance d- None all the above

13- All of the following are requirements of insurable risk Except:

a- Losses must be catastrophic

b- Losses must be accidental.

c- There must be a large number of exposure units.

d- Losses must be determinable

14- Hazem was concerned that his employees might steal money from the cash registers to provide protection against such losses, Hazem should purchase

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I it involves the pooling of fortuitous losses.

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a- Indemnification. b- Underwriting

c- Adverse selection. d- Pooling

17- Insurance benefits to society in all of the following ways Except:

a- It reduces fear. b- It leads to inflated claims

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a- Save money. b- Encourage loss prevention

c- Lower expenses. d- Possible higher losses

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a- Reduce moral hazard.

b- To prevent gambling.

c- Prevent the insured from collecting.

d- To hold the guilty person responsible for the loss

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a- Rating b- Indemnification

c- Insurability d- Reinsurance

22- All of the following are purposes of deductible in insurance Except:

a- To reduce premiums b- To reduce morale hazard

c- To eliminate small claims d- To prevent gambling

23- All of the following are basic parts of an insurance contract Except:

a- Conditions b- declarations

c- Insuring agreement d- Binder

24- It is appropriate if you wish to save money for specific need.

a- Term insurance b- Decreasing term insurance

c- Term insurance to age 65 d- Endowment insurance

25- Term insurance premiums ……. with age

a- Decrease b- decrease and increase

c- Increase d- not related

26- It is providing lifetime protection:

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27- ……………..pays the face amount of insurance if the insured dies within a specified period, if the insured survives to the end of the endowment period:

a- Limited- payment life insurance policy

b- Decreasing term insurance policy

c- Whole life insurance policy

d- Endowment insurance policy

28- All of the following are exceptions to principle of indemnity Except:

a- Valued policy b- Replacement cost insurance.

c- Life insurance d-Property insurance

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a- Straight deductible and aggregate deductible

b- Fundamental deductible and particular deductible c- All of the above d- None of the above

30- ……………………. These provisions apply when more than one contract covers the same loss, the purpose, is to prevent profiting from insurance and violation of the principle of indemnity.

a- Contribution clause b-Subrogation clause

c- Indemnity clause d- Actual cash value clause

Question two (40points)

State whether each of the following statements is true (T) or false (F)

1- A man 40 years of age wants a life income of $15000 a year in addition to social security with the first annual payment to be made when he is 65 -the net cost of this annuity is $40046

2- The net single premium for a whole life insurance of $4000 on the life of man aged 20 years is $978

3- A certain life insurance policy provides for $2000 in event of death before age 65 with $1000 Cash payment if the insured survives to age 65. Assuming the policy is issued at age 30, the net single premium is $535

4- The net single premium for an 18-year- old man for a 20-year pure

Endowment of $10.000 is $3939

5- Deductibles is provision on by which a specified amount is subtracted from the total loss payment otherwise would be payable, it is used in property insurance

6- In Mortality table the number living at age 50 more than the number living at age 40

7- Purpose of coinsurance clause is to achieve equity in rating

8- Inflation is coinsurance problem; the insured may be in compliance with the coinsurance clause when the policy first goes in to effect

9- Exclusion is the heart of an insurance policy

10- Pure risk is a risk where there are only the possibilities of loss or no loss

11- Indemnification means that the insured is restored to his or her approximate financial position prior to the occurrence of the loss.
12- Reinsurance is the shifting of part or all of the insurance originally written by an insurer to another insurer.
13- Homeowners insurance is a package policy that combines two or more separate coverage into one policy
14- Compulsory motor insurance is kind of property insurance
15- Burglary insurance policies is kind of life insurance policies
16- Eliminate huge claims is purpose for deductible in insurance
17- There is different between endorsements and rider
18- Subrogation does not apply to property insurance contract.
19- Binder is temporary contract for insurance and can be either written or oral
20- Contribution clause these provisions apply when more than one contract covers the same loss, the purpose, is to prevent profiting from insurance and violation of the principle of indemnity

(Notes)

$L_{50} = 166682$	$L_{20} = 181322$
$D_{38} = 32904.2$	$D_{18} = 82402.5$
$N_{19} = 1604568.9$	$N_{65} = 80048.6$
$D_{40} = 29969.8$	$N_{24} = 1244767.8$
$N_{28} = 1010797.3$	$N_{33} = 772562.7$
$M_{20} = 1321070$	$D_{20} = 5351272$
$D_{30} = 3905782$	$M_{65} = 686751$
$M_{30} = 1234952$	$D_{65} = 995687$

Good luck

Prof. Attia Gallol

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