CISR | ELEMENTS OF RISK MANAGEMENT

LEARNING GUIDE

THE NATIONAL ALLIANCE
for Insurance Education & Research

Elements of Risk Management

THE CERTIFIED INSURANCE SERVICE REPRESENTATIVE PROGRAM

Elements of Risk Management

Life & Health Essentials

Commercial Casualty I

Commercial Casualty II

Insuring Commercial Property

Insuring Personal Auto Exposures

Agency Operations

Insuring Personal Residential Property

Personal Lines Miscellaneous

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Insurance policy forms, clauses, rules, court decisions, and laws constantly change. Policy forms and underwriting rules vary across companies.

Contents

A Letter from William J. Hold, President/CEO

We know that choosing the right professional development programs to strengthen your career can be challenging. There are many options for you to choose from; so how can you be sure that your time, efforts, and money are being invested and not wasted?

By partnering with The National Alliance, you can rest assured that you are also making the best educational choice for your career—no matter what step of your learning path you are on.

For the last 50 years, our designations have been regarded throughout the industry as symbols of quality and trust. Our practical insurance and risk management courses are taught by active insurance practitioners, include policies and forms currently used in the field, and guide you through real-world scenarios to give you a deeper understanding of what your clients are facing today. The knowledge and skills you develop in any one of our courses (or designation programs) can be put to use immediately.

You will build long-lasting relationships with your clients and stay ahead of industry trends, emerging risks, and products that are constantly evolving in our dynamic market. You will have access to the industry's latest learning materials and be the first to hear about new courses. With a learning path customized to fit your needs, you will be better equipped to protect your clients.

Have no doubt that your success is our priority. Whether you are new to your career or a seasoned professional, you are about to embark on a wonderful professional development journey. Thank you for choosing The National Alliance for Insurance Education & Research as your guide toward a thriving career.

Let's take the first step.

William J. Hold, M.B.A., CRM, CISR

President/CEO

To the Participant

Welcome to Elements of Risk Management, part of the Certified Insurance Service Representative designation program. This program will provide you with the core knowledge and tools you need in your work as a highly trained insurance service representative.

A Certified Insurance Service Representative is recognized as someone capable of analyzing risks, policies, forms, and claims data and communicating that understanding clearly to clients, carriers, and colleagues. As a participant in The National Alliance (TNA) program of study, it is expected that you will not only gain knowledge that will give you greater success in your work, but that you will be challenged to integrate TNA's core values of integrity, innovation, and imagination into your daily practice.

As experts in their fields, faculty members, consultants, and academic directors—each with a commitment to assisting you in your efforts to achieve standards of excellence—have contributed to the content of this course. In this course you can expect:

- engagement in the learning process
- clear learning objectives supported by essential content
- activities designed to strengthen understanding
- exposure to real-world examples and contexts

As representatives of The National Alliance (TNA), we take great pleasure in welcoming you to this program and to our organization. We are committed to helping you become a successful Certified Insurance Service Representative.

Program Overview

The progam overview provides an at-a-glance view of the contents of this learning guide. Here you will find section goals, as well as specific learning objectives for every section.

Section 1: Introduction to Risk Management

Section Goal

In this section you are introduced to terminology common to discussions of risk management. In addition to becoming familiar with critical terms and fundamental concepts, you will analyze the five steps of the risk management process and how those steps merge to build a comprehensive risk management program.

Learning Objectives

1. Defining Risk
Distinguish between pure risk and speculative risk.

2. Key Risk Management Terms
Provide specific examples of essential risk management terms that will help your clients understand their meanings.

3. Risk Management
Identify the five steps of the risk management process and explain how those steps integrate to create a risk management program.

Section 2: Risk Identification

Section Goal

In this section you will look more closely at the first and foremost step in the risk management process—Risk Identification. Analysis of this step will include an introduction to general classes of risk and their logical classifications, followed by ten specific methods risk managers can use independently or in combination to identify specific risks.

Learning Objectives

1. The Importance of Risk Identification
Explain the importance of Risk Identification in the risk management process.

2. General Classes of Risk
Give examples of loss exposures related to each class of risk.

3. Four Logical Classifications of Exposures
Give examples of exposures, perils, and hazards related to four logical classifications of exposures.

4. Risk Identification Methods
Describe and provide examples of ten risk identification methods.

Section 3: Risk Analysis

Section Goal

The goal of this section is to introduce you to the second step of the risk management process—Risk Analysis. You will learn how both quantitative and qualitative analysis methods are used to understand the frequency and severity of past and predicted losses.

Learning Objectives

1. The Uses of Risk Analysis
Describe multiple uses of risk analysis and identify tools used to assess the likelihood and impact of losses, should they occur.

2. Loss Trending
Explain loss trending and list the steps in the process.

Section 4: Risk Control

Section Goal

The goal of this section is to explain Risk Control—Step 3 in the risk management process. Risk Control is critical, given that the least expensive and most effective way to deal with risk is to prevent it.

Learning Objectives

1. Risk Control Techniques
Apply risk control techniques.

2. Prevention Basics
Identify the root causes of accidents and the accident prevention steps that can be taken to help control them.

Section 5: Risk Financing

Section Goal

The goal of this section is to explain Step 4 in the risk management process—Risk Financing. You will develop an understanding of risk financing options, which risks are insurable, and the continuum of risk financing.

Learning Objectives

1. Risk Financing
Explain three risk financing options.

2. Insurable Risks
Describe which exposures are insurable and which fall outside the standard insurance market.

3. Risk Retention and Transfer
Choose a risk financing plan appropriate for a given organization.

Section 6: Risk Administration

Section Goal

The goal of this section is to explain the fifth and final step in the risk management process—Risk Administration. You will develop an understanding of the risk administration process, which includes the implementation and monitoring of a risk management program. Additionally, you will learn about the risk manager's role and the risk management network needed for an effective risk management program.

Learning Objectives

1. Implementation and Monitoring of a Risk Management Program
Describe the implementation and monitoring of a risk management program.

2. The Role of a Risk Manager
Explain the role of an effective risk manager and how that role contributes to the long-term success of a risk management program.

3. The Risk Management Network
Identify members of a risk management network and explain how to determine the best fit for network members.

How to Use this Learning Guide

The learning guide you are using in this course is like all the learning materials published by TNA; it has been written and authenticated by industry experts.

Each section in this learning guide shares the same features.

A title identifies each section.

The section's primary purpose is summarized in the Section Goal.

Section text supports specific learning objectives.

Section 5: Risk Financing

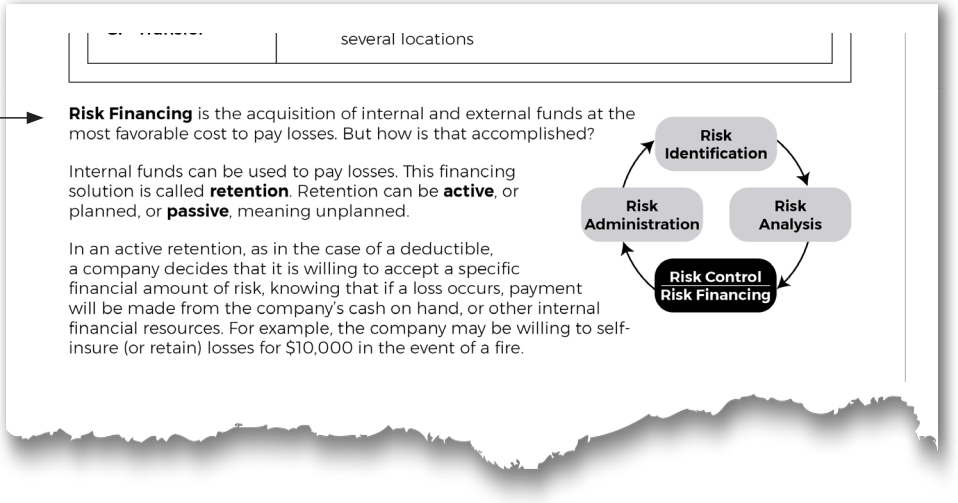
Section Goal

The goal of this section is to explain Step 4 in the Risk Management Process, Risk Financing. Participants will build an understanding of risk financing options, which risks are insurable, and the continuum of risk financing.

Learning Objectives

- Explain three risk financing options.
- Describe which exposures are insurable and which fall outside the standard insurance market.

Important terms are boldfaced. The terms also appear in the Glossary of Terms.



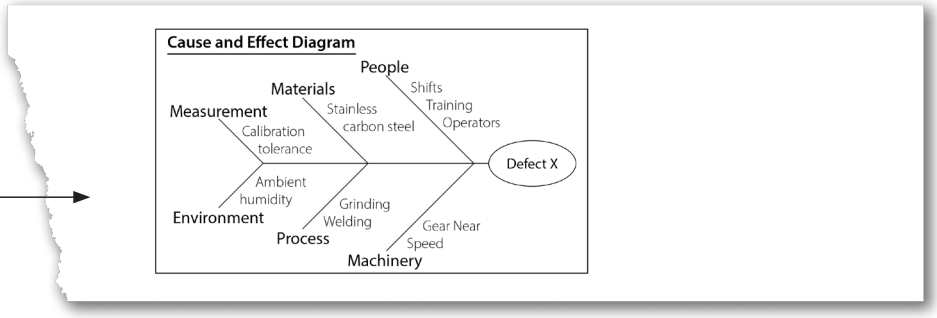
several locations

Risk Financing is the acquisition of internal and external funds at the most favorable cost to pay losses. But how is that accomplished?

Internal funds can be used to pay losses. This financing solution is called **retention**. Retention can be **active**, or planned, or **passive**, meaning unplanned.

In an active retention, as in the case of a deductible, a company decides that it is willing to accept a specific financial amount of risk, knowing that if a loss occurs, payment will be made from the company's cash on hand, or other internal financial resources. For example, the company may be willing to self-insure (or retain) losses for $10,000 in the event of a fire.

Visuals such as diagrams, graphs, and tables support the text.



Each section opens with an introduction and concludes with a summary.

Introduction to Risk Management

Regardless of their size, businesses face uncertainty. Consider, for example, potential losses associated with fire, theft, and natural disasters. Or consider the losses attached to the resignation, disability, or death of essential employees. The insurance industry provides products and services to help mitigate and respond to much of this uncertainty.

While large businesses may have the financial

Summary

Risk identification is the first and most critical step in the Risk Management Process. Risks car then be sorted using two classification frameworks — the General Classes of Risk and the Four Logical Classifications of Exposure. The classification frameworks, which focus on where risks arise, provide risk managers with information that can lead to clearer communication and effective decision-making.

There are seven general classes of risk, which are summarized in the following table.

Check-Ins and Knowledge Checks help you test your understanding before moving forward.

Check-in

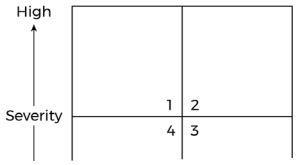
Directions: Use the following terms to fill in the blanks. Some terms may be used more than once.

area of expertise **negative** **uncertainty**
job function **positive**

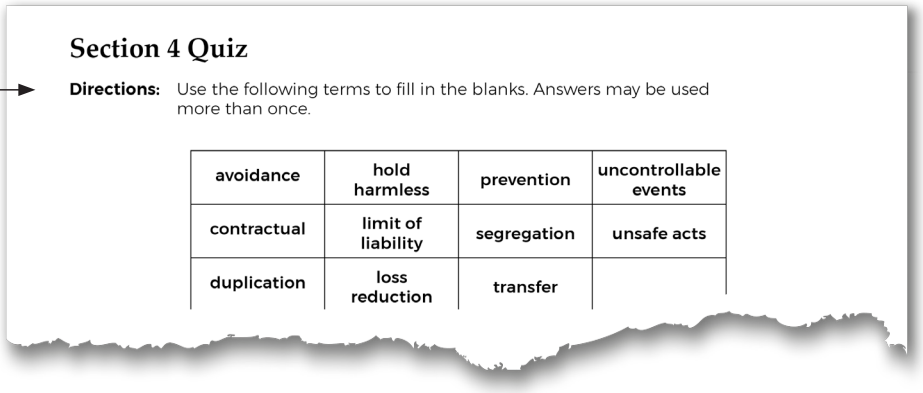
Risk is a condition of either _____ or

Knowledge Check:

Consider each of the following exposures. Then indicate in which quadrant each exposures should be placed.



Each section closes with a quiz to help you assess your learning.

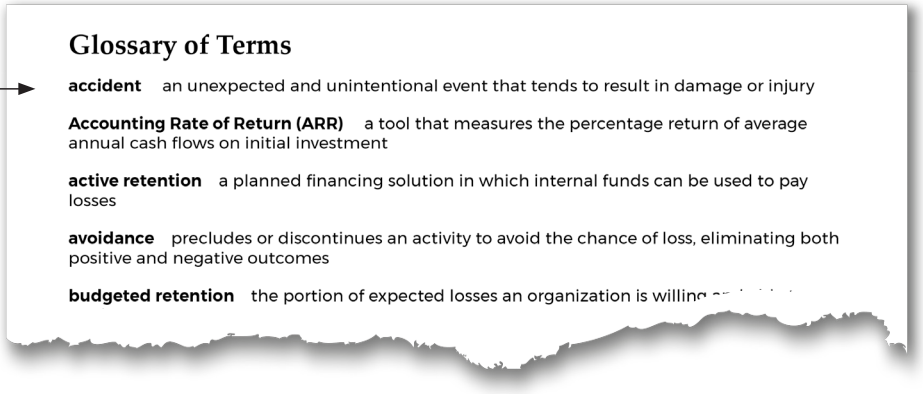


Section 4 Quiz

Directions: Use the following terms to fill in the blanks. Answers may be used more than once.

avoidance	hold harmless	prevention	uncontrollable events
contractual	limit of liability	segregation	unsafe acts
duplication	loss reduction	transfer	

A Glossary of Terms puts the learning resource's special vocabulary in one, easy-to-use location.



Glossary of Terms

accident an unexpected and unintentional event that tends to result in damage or injury

Accounting Rate of Return (ARR) a tool that measures the percentage return of average annual cash flows on initial investment

active retention a planned financing solution in which internal funds can be used to pay losses

avoidance precludes or discontinues an activity to avoid the chance of loss, eliminating both positive and negative outcomes

budgeted retention the portion of expected losses an organization is willing

Section 1: Introduction to Risk Management

Section Goal

In this section, you are introduced to terminology common to discussions of risk management. In addition to becoming familiar with critical terms and fundamental concepts, you will analyze the five steps of the risk management process and how those steps merge to create a comprehensive risk management program.

Learning Objectives

1. *Define risk and be able to distinguish between pure risk and speculative risk.*
2. *Provide specific examples of essential risk management terms that will help your clients understand their meanings.*
3. *Identify the five steps of the risk management process and explain how those steps integrate to create a risk management program.*

Introduction to Risk Management

Regardless of their size, businesses face uncertainty. Consider, for example, potential losses associated with fire, theft, and natural disasters. Or consider the losses attached to the resignation, disability, or death of essential employees. The insurance industry provides products and services to help mitigate and respond to much of this uncertainty.

While large businesses may have the financial resources required to employ risk management experts, small businesses often do not. Surveys of small business owners in the US indicate that more than 40% of small business owners have never purchased insurance at all, making them vulnerable to significant loss and even bankruptcy.

Though some risk may be avoided or mitigated, few companies of any size are truly protected without insurance. Today's insurance professionals play a critical role in ensuring an organization's financial health and stability.

Defining Risk

Learning Objective 1

Define risk and be able to distinguish between pure risk and speculative risk.

A Definition of Risk

Before insurance professionals can recommend appropriate risk control measures to their clients, they must be familiar with essential terminology, beginning with the term, *risk*, itself.

Risk is defined as a condition of either positive or negative uncertainty arising from a given set of circumstances. In other words, risk does not solely describe possible negative outcomes, the chance of loss, or no loss. Risk outcomes can also be positive.

Perceptions of Risk

While the definition of risk may appear simple and indisputable, perceptions of risk vary depending on an individual's job function or area of expertise. For example, an insurance agent or broker may perceive risk either as the insured, or as the exposure, such as a building or vehicle. This perception differs slightly from that of an underwriter or an insurance company that may refer to a person or property as the risk, depending on which is covered by an insurance policy. And then there is risk as it is defined by a risk manager, who may define risk as the person or property exposed to a potential loss.

Check-In

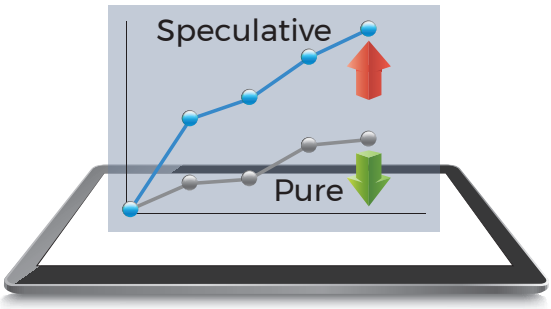
Directions: Use the following terms to fill in the blanks. Some terms may be used more than once.

area of expertise	**negative**	**uncertainty**
job function	**positive**	

Risk is a condition of either _____ or _____ _____ arising from a given set of circumstances. The term does not solely describe possible _____ outcomes, the chance of loss, or no loss. Risk outcomes can also be _____. Perceptions of risk vary, depending on an individual's job function or _____.

Two Types of Risk

Although agents and brokers may identify a risk differently that underwriters and insurance companies, they generally view risk simply as something that can go wrong. In business there are two types of risk—pure and speculative. Let's consider pure risk first.



Pure Risk

A **pure risk** involves a situation or incident in which the only outcome can either be loss or no loss. There is no opportunity for gain.

Pure risks include threats to property and people, as well as liability. The result of a pure risk is some measure of loss, either full or partial. Pure risks pose the chance of loss or the chance of no loss. Insurance usually addresses pure risk.

Let's look at an example of pure risk more closely.

Mr. Smith has leased a commercial kitchen where he uses family recipes to create and distribute desserts to local restaurants. Mr. Smith's head pastry chef is a culinary school graduate with a diploma in pastry arts. The pastry chef has one assistant. Mr. Smith also employs a part-time bookkeeper and two full-time delivery drivers who use the company's vans to deliver products within a 50-mile radius. (continued on next page)

Mr. Smith has agreements with numerous fruit suppliers in his state who provide organically grown seasonal fruit. He also works with a local dairy and the owners of a local flour mill for essential ingredients.

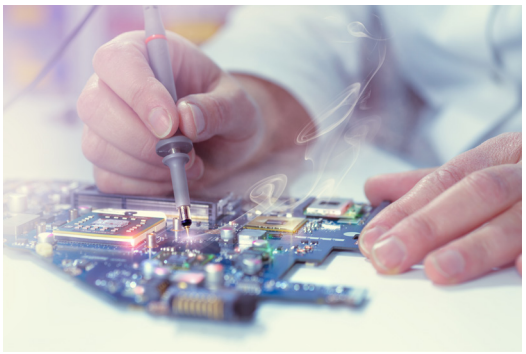
What pure risks are associated with Mr. Smith's business? They could include damage to the leased commercial kitchen, failure of essential kitchen equipment, maintenance issues with the vans or an accident involving one of the vehicles, and the loss of any of Mr. Smith's employees.

Speculative Risk

Like pure risk, **speculative risk** presents the possibility of loss or no loss. However, it differs from pure risk in that it also presents the chance of a gain, even when there is no loss. This combination of both positive and negative uncertainty reflects the full definition of risk.

Speculative risk is associated with business or financial risk. For example, speculative risk includes positive and negative changes in the value of a company's stock and positive and negative changes in a market that affect the demand for a company's manufactured goods. Speculative risk is also considered when determining if an organization should develop a new product or service. Let's look at an example of speculative risk more closely.

Ms. Johnson owns a manufacturing company that produces a very specific widget for use in computers. This widget is comprised of components from China and is built in the United States. There is a large demand for the widget and her customers have requested that she increase production by 50%. Her company is not able to produce more widgets with current equipment. It is estimated that upgraded equipment would cost $2,000,000, which she would need to finance through her bank. There is a worry that the components from China will be affected by trade tariffs, increasing the cost of production.



What speculative risks are associated with Ms. Johnson's business plan? Possible negative outcomes include rising costs of components as a result of tariffs. The cost to upgrade her equipment and the associated interest rate also need to be considered. And, there is a concern that if the economy does not continue to grow, the demand for the widget will decrease. On the other hand, if she is able to increase her production, Ms. Johnson's profit margin will increase substantially.

Knowledge Check

Directions: Imagine that one of your clients owns a company that manufactures and sells a variety of granola breakfast and snack products. Identify three examples of pure and speculative risk associated with your client's business.

Type of Risk	Examples
Pure	
Speculative	

Key Risk Management Terms

Learning Objective 2

Provide specific examples of essential risk management terms that will help your clients understand their meanings.

A Shared Vocabulary

Individuals within every industry or profession share special vocabulary, or jargon. A clear grasp of this vocabulary allows for effective communication. Professionals rely on a common understanding of essential terms to discuss and solve problems, make decisions, advise clients, and respond to clients' questions and needs.

There are 13 critical terms common to the insurance and risk management industry. Developing a solid understanding of these terms gives insurance professionals the foundation they require to work successfully with clients and insurance companies. Let's examine those terms one by one, beginning with the term *loss*.

Loss

Loss is defined as a reduction in asset value. For example, losses include:

a business interruption	physical property damage	injury to an employee or customer
		

Mr. Adams works for a hardware distributor. He uses a company truck to deliver hardware orders to remote parts of his state. Last winter, while returning from making a delivery, Mr. Adams' truck slid on a stretch of black ice and slammed forcefully into a road barrier. A towing service was called to remove the truck, and emergency service providers took Mr. Adams to the nearest hospital where X-rays revealed a broken tibia in his right leg.

What kinds of losses have occurred? Injury to an employee and physical property damage definitely occurred. It is also possible that Mr. Adams' condition and the loss of the truck interrupted business.

Exposure

Exposure is a situation, practice, or condition that may lead to an insured's susceptibility to adverse financial consequences or loss. Activities, resources, and assets are also considered exposures. Let's use property as an example. A building is an asset that presents various exposures for the building's owner.

Imagine standing in the lobby of a boutique hotel built along a busy thoroughfare. Look around. What exposures exist?

In addition to offices, private rooms, a restaurant and bar, the hotel has stairs, elevators, hallways, balconies, and storage facilities. There may be a maintenance room, where the hotel's heating and cooling equipment resides.

Behind the hotel is a private pool. And in front of the hotel, valets greet guests, take their car keys, and park their cars in a lot a short distance away.

Employees also expose companies to losses. As hotel employees work and move within and outside the building, there are exposures attached to their activities. But they aren't the only people at the hotel who pose the possibility of loss. Guests arrive daily. What exposures do they present for the hotel's owner?

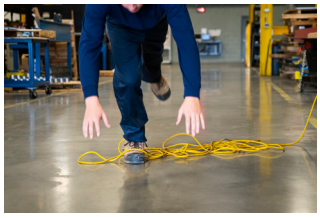
A boutique hotel is only one example of a type of business with potential exposures associated with its activities, resources, and assets. Consider the following examples.

the potential for vehicular accidents while employees carry out daily product delivery services	the potential for flooding, given a building's location along a coastline	the potential for market losses after repackaging a popular brand of cookies
		

Ms. Smith's family has owned a large distribution facility for several years. The company has 62 semi-trucks with a travel radius of more than 500 miles. The fleet operates seven days a week, and employees are compensated on a per-mile basis with bonuses for on-time or early arrivals.

Ms. Smith wants to expand her operation, but due to the lack of qualified applicants in the area, she will need to lower her driver eligibility requirements. What is an exposure in this example? The 62 semi-trucks represent the main exposure that the organization faces. By incentivizing her drivers for on-time and early arrivals, Ms. Smith increases her exposure for vehicle accidents, and reducing driver eligibility requirements is a hazard.

Peril A **peril** is a cause of loss. Perils include fire, lightning, riots, vehicular accidents, smoke, theft, heavy snow and ice, hurricanes, tornadoes, and volcanic eruptions. Below are some additional examples of perils.

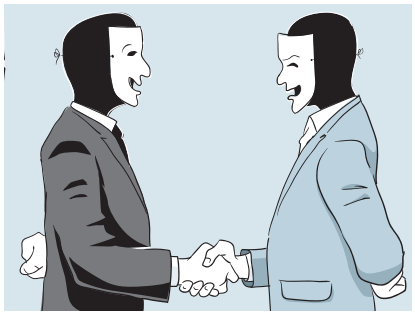
		
falling	wind, hail, lightning	cyber-attacks
		
vandalism	falling objects	explosions

Hazard Recall that a peril is a cause of loss. A **hazard** is a factor that increases the likelihood that a peril will occur.

Think, for example, of a spill in a supermarket aisle. The spill is a hazard that increases the likelihood of the peril of falling as shoppers walk across the floor. Falling can result in injuries as well as liability claims.

An action or condition that makes it more likely that a peril will lead to loss is also a hazard. There is scientific evidence, for example, that smoking contributes to disease. Smoking, then, is a health hazard that can lead to illness and even death.

Hazards fall into three categories—physical, moral, and morale.

physical hazards	moral hazards	morale hazards
Smoking, like spills, is an example of a physical hazard.	Dishonesty, or other behaviors that can lead to loss, are classified as moral hazards.	And, when insureds neglect or feel indifferent toward their possessions because losses will be covered, they demonstrate examples of the third category of hazards—morale hazards.
		

Check-In

Directions: Read each statement. Then select True or False.

1. A hazard is a cause of loss.

True **False**

2. A situation, behavior, or condition that may lead to adverse financial consequences is an exposure.

True **False**

3. A cyber-attack is an example of an exposure.

True **False**

4. A spill on a supermarket aisle is an example of a hazard because it increases the likelihood that someone will fall.

True **False**

5. An insured who shows no regard for his insured property demonstrates a morale hazard.

True **False**

Some events are unintentional. Others are deliberate. And some events are small, while others are large with significant consequences. Incidents fit all of these descriptions.

Incident

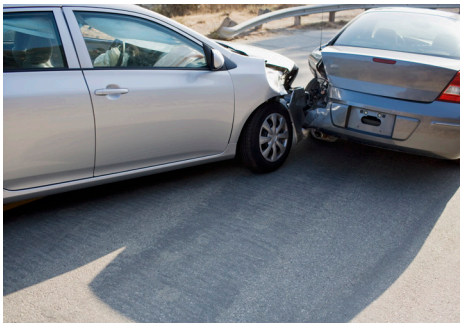
An **incident** is an event that may lead to a loss or a claim. Or, it may cause a business interruption.

Say, for example, someone stumbles while stepping onto or off of an escalator in a department store. The shopper recovers and incurs no immediate injury. This is an example of an incident.

So is an individual's discovery of what appears to be a fraudulent credit card charge. The bank, upon being notified, takes immediate action, freezing the account to minimize potential losses.

Incidents come in all sizes—big, small, or somewhere in the middle. Incidents can also be deliberate or completely unintended. Incidents are unexpected events that may lead to property damage. However, they do not lead to injury or illness. That makes them different from accidents.

Accident An **accident** is always an unexpected and unintentional event that tends to result in damage or injury. Being involved in a car crash, for example, is an example of an accident. So is incurring physical injury while working with faulty work equipment. An accident always occurs at a specific time and place.



Occurrence An accident and an **occurrence** are related. An occurrence goes beyond an immediate and observable accident. It is an "accident" that occurs over an extended period of time. Say, for example, that in their daily work, employees engage in heavy lifting or constant typing. These behaviors can lead to repetitive stress injuries, which are the result of occurrences.

Claims Incidents, accidents, and occurrences can lead to claims. A **claim** is a demand for payment, or a company's obligation to pay as result of a loss or occurrence. Examples of claims include workers' compensation claims, automobile insurance claims, homeowners' insurance claims, injured customers' claims, and health and dental claims.

Check-In

Directions: Read each example. Write the risk term that applies.

1. A passenger enters an elevator. His clothing is caught in the elevator door as the door closes. The passenger snatches the clothing from the door before the elevator begins to move. He is uninjured and his clothes are not damaged.

_____

2. A mixing paddle on a faulty bakery mixer snaps and strikes an employee's hand. The employee's hand is cut and bleeding.

_____

3. A driver is at fault in a minor auto accident. The other driver is uninjured, but the bumper on her car requires repairs. The other driver demands that the at-fault driver's insurance company pay for the loss.

_____

Frequency

The number of claims that occur, or that an insurer expects to occur within a given period of time, is labeled **frequency**. Frequencies can be low, moderate, or high.

Low Frequency	Moderate Frequency	High Frequency
Loss has rarely occurred. It is unlikely to occur in the future.	Loss has occurred occasionally in the past, so it will likely occur again.	Loss has occurred regularly in the past, so it is expected to continue occurring regularly.

Severity

Severity is the aggregate dollar amount of all losses for a given period of time. The aggregate dollar amount of homeowners' insurance claims in a calendar year, for example, serves as an example of *severity,* while the aggregate number of homeowners' claims is an example of *frequency.*

Insurance companies divide the total amount of losses in a given period by the total number of claims to calculate average severity.

$$\frac{\text{Total amount of losses}}{\text{Number of claims}} = \text{Average Severity}$$

An insurance company can use the average severity calculation to observe losses in a designated time period. It can also use the calculation to predict future claims. This is one of the steps an insurance company uses to determine premiums.

Expected Losses

Expected losses are an estimate of total losses of a given type an insurance company can "expect" in a given period. A company might estimate, for example, workers' compensation losses in a 12-month period. The estimate is the product of the two estimates of terms already discussed in this section—loss frequency and loss severity. These terms refer to how willing and how capable organizations are of dealing with risk.

Estimate of loss frequency
x Estimate of loss severity
= Expected losses

Risk Appetite

Risk appetite applies to an organization's willingness to accept or tolerate risks, or simply, the extent of its aversion to risk. For example, say a CEO has a strong aversion to risk. She takes measures to minimize her organization's exposures. Consequently, an insurance policy that carries a small deductible suits her organization's needs. In this example, the CEO is well aware of how much risk her organization can or should tolerate and makes an appropriate insurance purchase.

Check-In

Directions: Match each term to its description .

A. average severity **B. risk appetite** **C. high frequency** **D. low frequency** **E. severity** **F. expected losses**	_____ The total dollar amount of all losses for a given period of time
	_____ A loss has occurred but is unlikely to occur again in the future
	_____ An organization's tolerance for risk
	_____ The product of loss frequency multiplied by loss severity
	_____ The total amount of losses in a given period divided by the total number of claims
	_____ A loss expected to continue occurring regularly

Risk Ability

Risk ability, or risk capacity, does not describe an organization's level of risk appetite, but its ability—or inability—to self-insure, that is, to assume financial responsibility for loss. An organization that cannot afford to self-insure purchases an insurance policy.

Let's consider a simple example that may make this concept clearer. Let's say Ms. Holmes is going shopping for a new outfit. Her budget is $100. That $100 is her starting financial "appetite."

When Ms. Holmes arrives at the store, she is surprised to learn that the store is having an extraordinary sale. Before she knows it, Ms. Holmes has five outfits in her hands. Altogether, the cost comes to a total of $475. Despite her early intentions, Ms. Holmes wants to purchase them all. Consequently, she exceeds her original budget by $375.

Unfortunately, Ms. Holmes does not have that much money in her bank account. Even if she puts the purchase on her credit card, making the payments will cause her a financial hardship. Ms. Holmes' appetite has exceeded her financial "ability."

Now, take Ms. Holmes' financial dilemma and multiply it by millions of dollars for losses a large company could face and you will see why it is very important that risk managers understand the difference between *risk appetite* and *risk ability.*

Check-In

Directions: Match each term to its description.

A. loss **B. exposure** **C. peril** **D. hazard** **E. incident** **F. accident** **G. occurrence** **H. claim**	_____ A cause of loss
	_____ An unplanned event definite as to time and place that results in injury or damage to a person or property
	_____ An event that disrupts normal activities and may become a loss or business interruption
	_____ A demand for payment or an obligation to pay as a result of a loss or occurrence
	_____ A situation, practice, or condition that may lead to an adverse financial consequence or loss; an activity or resource; people or assets
	_____ A reduction in asset value
	_____ An accident with the limitation of time removed; an "accident" extended over a period of time rather than a single, observable event
	_____ A condition or characteristic that may create or increase the likelihood or severity of a loss

Knowledge Check

Imagine a client is seeking property insurance for a condominium building that her company manages. The building, located on Florida's Gulf Coast, is valued at $10,000,000. It was built in 2002, has 10 floors, and 100 condominium units. The building's roof has not been updated, and a recent inspection concluded that the main electrical panel needs repairs. It also appears that the majority of the unit owners do not own fire extinguishers, nor do they own hurricane shutters.

Directions: Give one example of each of the following risk management factors your client should consider:

Exposure	**Building**
Peril	
Hazard	
Incident	
Accident	

Risk Management

Learning Objective 3

Identify the five steps of the risk management process and explain how those steps integrate to create a risk management program.

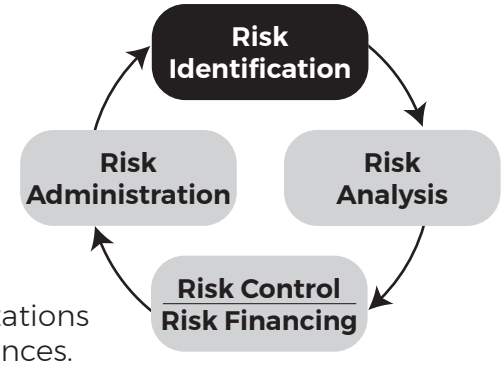
What Is Risk Management?

Risk management is the implementation of a process intended to minimize the uncertainty of exposures that can adversely affect an individual's or organization's assets and financial well-being. It can also be used to identify internal and external strengths that can lead to a financial gain.

The Five Steps of the Risk Management Process

The risk management process consists of five steps, and each step is necessary for a risk management program to be effective. Let's examine each step in the process separately.

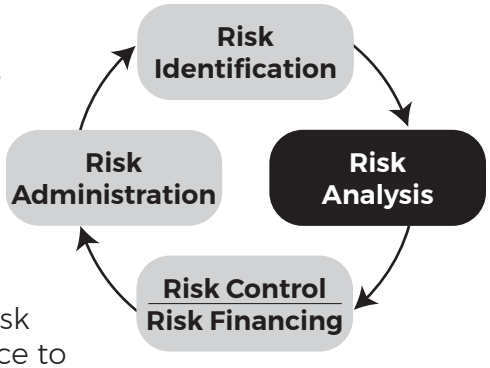
1. Risk Identification



The first and most important step in the risk management process is **Risk Identification**. In this step, a risk manager identifies and examines all of an organization's exposures. A failure to identify those exposures may subject organizations to negative financial consequences.

Failure to identify the dangers inherent in operating a piece of heavy machinery could result in not having insurance for an accident or injury to someone as a result of operating that piece of machinery. The insured would have to pay the claim from the insured's own financial resources.

2. Risk Analysis



Risk Analysis—the second step in the process—relies on the exposures identified in step 1 to assesses the potential impact of those exposures upon an organization. Risk analysis takes two forms—qualitative and quantitative. Let's consider qualitative methods first.

Some information does not lend itself easily to mathematical measurements. For example, how would a risk manager determine the potential threats in the marketplace to a package delivery service or how customers perceive a national hardware brand?

Risk managers rely on a variety of qualitative analysis methods to find the answers to such questions. Information comes from sources such as case studies, carefully constructed interviews, historical analyses, and examination of cultural customs. This information, when combined with quantitative measurements, helps clients and risk managers answer the question, "Should we do this?"

The word, *quantity,* explains the meaning of quantitative analysis. A risk manager undertaking quantitative analysis uses numerical values to predict the likelihood and severity of risk upon a client's finances. Calculations ultimately help clients and risk managers answer the question, "Can we do this?"

Qualitative and quantitative assessments work together to predict risk. Risk managers use qualitative measurements to *understand* risk and quantitative measurements *measure* them.

In the diagram showing the five steps of the risk management process, Risk Control and Risk Financing share the same position because they are interchangeable. They do not necessarily occur in a particular order. One can be done before the other, or both can be done simultaneously.

3. Risk Control

For the sake of discussion, however, let's consider Risk Control first. **Risk Control** applies a set of methods or actions intended to minimize or avoid the impact of loss.

Approaches to risk control are theoretical. Consider these examples.

The human approach: This theory states that accidents occur because of the negligent or deliberate act of a person. The risk manager asks, "What can I do to change employee behavior?"

The engineering approach: This theory is based on the concept that objects and stored energy cause accidents. For example, an employee is working with a machine punch and the equipment breaks, causing injury to the employee. The risk manager asks, "What can I do to improve the safety of the equipment we use?"

The systems approach: This last theory takes into account internal system failures or weaknesses that cause accidents. Failure to monitor or implement correct policies and procedures, as well as negligent supervision, lead to accidents under this approach. In this situation, the risk manager asks,
"What can I do to change the internal processes and procedures to reduce accidents?"

Check-In

Directions: Use the following terms to fill in the blanks.

behaviors	**objects**	**quantitative**
case studies	**operations**	**Risk Control**
interviews	**procedures**	**Risk Financing**
negative	**qualitative**	**Risk Identification**

_____ is the first and most important step in the risk management process. Any failure to identify risk exposes an organization to _____ financial consequences.

Once risks are identified, they are analyzed to assess their potential impact. Analysis takes two forms. _____ analysis allows the collection of information that does not lend itself easily to _____ analysis, or mathematical measurement. _____ and _____ are examples of this form of analysis.

_____ and _____ share the same position in the risk management process because they are interchangeable. _____ applies methods or actions aimed at minimizing or avoiding the impact of a loss. The human approach to risk control focuses on people's _____. The engineering approach focuses on _____ and _____. The systems approach pays attention to _____ and policies, as well as negligent supervision.

Risk Control Techniques

Before we discuss the remaining steps of the risk management process, let's take a moment to consider some of the risk control techniques risk managers apply to prevent, reduce, transfer, or simply avoid loss.

Avoidance—or the elimination of risk—represents the best method of risk control. For example, say a children's accessories company learns that a chemical used in the fabrication of lunch containers can leach into food, making it potentially harmful to children. The manufacturer can avoid risk by replacing the chemical in the manufacturing process. Practically speaking, in most cases, risk is unavoidable in daily business activities.

Prevention focuses on the frequency with which events occur. For example, say that numerous residents inhabit an apartment building. Some residents enter or depart the building without securing the building's doors. Consequently, residents frequently report the theft of items left in communal areas. To prevent loss, the building's owner installs cameras at all points of entry and exit.

Reduction focuses on the severity of incidents. It recognizes potential risk and takes action to reduce loss should those risks occur. For example, imagine that a successful artist and her team work in a large warehouse where they store and work with a variety of flammable materials. Recognizing the potential for loss should a fire occur, the artist installs a water sprinkler system. A fire sprinkler system cannot prevent a fire from occurring, but it reduces the amount of damage a fire could cause.

Segregation, separation, and duplication work together to reduce the overall severity of claims. Let's examine each action separately.

Segregation involves isolating an exposure from other exposures, perils, or hazards. Say a company's operations depend on computers. The company would need to "segregate" the computers into a separate room equipped with firewalls and fire suppression systems.

However, while segregating the servers could better protect them from fire, it would also mean that this critical equipment would all be located in one room. That could expose the servers to other risks, such as sabotage by a disgruntled employee. That is why companies often use a combination of risk control methods to guard against various risks, especially when it concerns critical company assets.

Separation is the process of spreading exposures or activities over several locations, thus dividing assets across locations. This way, if one of the locations suffers a loss, the other location will have sufficient capacity to meet the needs of the organization. For example, an online retailer may have separate warehouses located in different locations to ensure that a loss at one location will not completely shut down the organization. The key to separation is ensuring that the locations are far enough apart to ensure they are not both subject to the same loss.

Duplication is the creation of asset back-ups. Asset duplication may minimize business interruptions should an unexpected but not impossible event occur. An ice-cream manufacturer, for example, can duplicate power systems to avoid a business interruption in the event of equipment failure.

Another common example of duplication is the spare tire in a car. If one of the other tires is damaged or flat, the driver has a duplicate tire.

There are two types of transfer: physical or contractual.

Physical transfer is the shift of some or all of an operational function or exposure to an outside source or third party. A distributor might hire a common carrier to deliver its manufactured goods rather than delivering them itself.

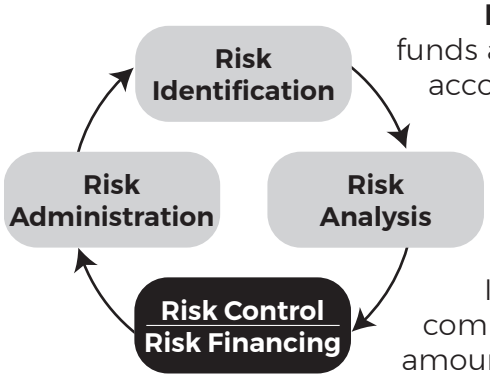
Contractual transfer shifts the responsibility of certain liabilities to another party. Contractual transfers include exculpatory agreements, waivers of subrogation, limit of liability clauses, and hold harmless agreements, all of which are discussed in later sections.

Check-In

Directions: Match each term to its description.

A. Avoidance **B. Prevention** **C. Reduction** **D. Segregation** **E. Separation** **F. Duplication** **G. Transfer**	_____ A response to a focus on the frequency with which events occur
	_____ The isolation of an exposure from other exposures, perils, or hazards
	_____ Creating asset back-ups
	_____ A response to a focus on the severity of incidents in an effort to recognize risk and take action to lower losses
	_____ The shift of function, exposure, or responsibility of certain liabilities to another party
	_____ The elimination of risk
	_____ The process of spreading exposures or activities over several locations

4. Risk Financing



Risk Financing is the acquisition of internal and external funds at the most favorable cost to pay losses. But how is that accomplished?

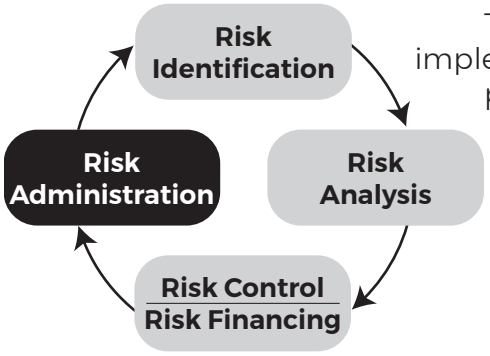
Internal funds can be used to pay losses. This financing solution is called **retention**. Retention can be **active** (planned), or **passive** (unplannned).

In an active retention, as in the case of a deductible, a company decides it is willing to accept a specific financial amount of risk, knowing that if a loss occurs, payment will be made from the company's cash on hand or other internal financial resources. For example, the company may be willing to self-insure (or retain) losses for $10,000 in the event of a fire.

A passive retention is unplanned. Let's say Company X purchases a new automobile but forgets to notify its agent to add it to the company policy. Several months later, the car is involved in an accident. Because it was not insured, Company X must pay for the damages. Because it was an unplanned retention, this is an example of passive retention. This example illustrates why risk identification is so important. Risks that are not identified cannot be analyzed, controlled, financed, or administered correctly.

When clients rely on insurance to pay losses, they pay premiums in exchange for promises of compensation for specified losses. In a non-insurance contractual transfer of financial responsibility for an exposure, losses are paid using external funds.

5. Risk Administration



The final step is **Risk Administration**—the ongoing implementation and monitoring of risk management programs, policies, and procedures.

The risk management process involves a variety of steps, each presenting a potential benefit for clients.

Activity	Potential Benefit
the identification of exposures and risks	greater awareness
determination of a client's risk appetite and ability	support of client objectives
the distribution of the total cost of risk	
the reduction or mitigation of loss	protection of client brand and/or reputation
the integration of risk control and safety	greater awareness and improvement of morale and productivity
budgeting and planning	increases profitability

Knowledge Check

Review the diagram of the five steps of the risk management process. Summarize in your own words why each part of the process is necessary.


Risk Identification
Risk Analysis
Risk Control
Risk Financing
Risk Administration


Risk Identification
Risk Analysis
Risk Control
Risk Financing
Risk Administration

Summary

Clients—whether they are individuals or organizations—imagine and set goals for their futures. While risk may be inevitable, it is manageable with assistance from insurance professionals who possess a thorough understanding of terminology, forms of risk, and steps or actions their clients can take to avoid or minimize financial loss.

A thorough understanding of risk management depends in part on an understanding of common terms. The term "*risk*," for example, is a condition of either positive or negative uncertainty arising from a given set of circumstances. Pure risks involve situations or incidents whose only outcomes can either be loss or no loss. There is no possibility of gain, in other words.

Speculative risk, on the other hand, involves the possibility of loss or no loss. That makes it like pure risk. However, unlike pure risk, speculative risk involves the chance of a gain, even when there is no loss. In other words, speculative risk, which is associated with business or financial risk, combines positive and negative uncertainty.

Other terms critical to a risk manager's vocabulary include:

Loss	a reduction in asset value
Exposure	a situation, practice, or condition that may lead to adverse financial consequences or loss
Peril	a cause of loss
Hazard	a factor that increases the likelihood a peril will occur
Incident	an event that may lead to a loss or a claim
Accident	an unexpected and unintentional event that tends to result in damage or injury
Occurrence	an "accident" that occurs over an extended period of time
Claim	a demand for payment or a company's obligation to pay as result of a loss or occurrence
Frequency	the number of claims that occur or are expected to occur within a given period of time
Severity	the aggregate dollar amount of all losses for a given period of time
Expected losses	an estimate of total losses of a given type that can be expected in a given period
Risk appetite	an organization's willingness to accept or tolerate risk
Risk ability	an organization's ability or inability to assume financial responsibility for loss

Risk managers apply a five-step risk management process—a process that is never complete because risk is constantly evolving and emerging.

Step 1—Risk Identification—is the most important of the five steps. It is in this step that a risk manager identifies and examines all of an organization's exposures.

Step 2—Risk Analysis—assesses the potential impact of the exposures identified in step 1.

Steps 3 and 4—Risk Control and Risk Financing—are interchangeable. Either can be completed before the other, or they may both be completed simultaneously. In Risk Control, a risk manager applies methods or actions intended to minimize or avoid the impact of loss. Risk Financing is the acquisition of internal and external funds to pay for losses.

Step 5—Risk Administration—is the final step in the risk management process. It represents the implementation and monitoring of risk management programs, policies, and procedures.

Resources

For valuable reinforcement, some important concepts related to the learning objectives in this section are summarized in audio and video clips. Use the following link to access these helpful learning resources.

scic.com/ELRresources

	The Language of Risk
	Peril
	Risk Appetite vs. Risk Ability
	What is Risk Management?
	Risk Management Process

Section 1 Self-Quiz

Directions: Complete each item. For fill-in-the-blank items, choose the term that correctly completes the sentence. Answers may be used more than once.

accident	**hazard**	**segregation**
avoidance	**incident**	**severity**
business	**liability**	**speculative**
contractual	**measure of loss**	**risk ability**
exposure	**occurrence**	**Risk Administration**
financial	**peril**	**risk management**
frequency	**physical**	**uncertainty**

1. Risk is defined as a condition of either positive or negative _____ arising from a given set of circumstances.

2. Perceptions of risk depend upon an individual's job function or area of expertise. Select True or False.

True **False**

3. A risk manager may define risk as the person or property exposed to a potential loss. Select True or False.

True **False**

4. Pure risks include threats to property and people, as well as _____.

5. The result of a pure risk is some _____.

6. Unlike pure risk, _____ risk presents the opportunity for gain.

7. Speculative risk is associated with _____ or _____ risk.

accident	**hazard**	**segregation**
avoidance	**incident**	**severity**
business	**liability**	**speculative**
contractual	**measure of loss**	**risk ability**
exposure	**occurrence**	**Risk Administration**
financial	**peril**	**risk management**
frequency	**physical**	**uncertainty**

8. Think about the definition of the term *loss*. Check each example of loss.

- ☐ a business interruption
- ☐ physical property damage
- ☐ injury to an employee or customer

9. A situation, practice, or condition that may lead to an insured's susceptibility to adverse financial consequences or loss is called a(n) _____.

10. A(n) _____ is a cause of loss.

11. A(n) _____ is a factor that increases the likelihood that a peril will occur.

12. A(n) _____ is an event that may lead to a loss or a claim, or an event that may cause a business interruption.

13. A(n) _____ is always an unexpected and unintentional event that tends to result in damage or injury.

14. An "accident" that occurs over an extended period of time is called a(n) _____.

15. The number of claims that occur or that an insurer expects to occur within a given period of time is labeled _____.

16. The dollar amount inflicted by a given loss or catastrophe, or the aggregate dollar amount of all losses for a given period of time, is defined by the word _____.

17. _____ describes an organization's ability or inability to assume financial responsibility for loss.

18. _____ is the implementation of a process intended to minimize the uncertainty of exposures that can adversely affect an individual's or an organization's assets and financial well-being.

19. Sequentially order (number them 1–5) the steps of the risk management process.

_____ **Risk Control**

_____ **Risk Administration**

_____ **Risk Identification**

_____ **Risk Analysis**

_____ **Risk Financing**

20. The best method of risk control is _____, or the elimination of risk.

21. _____ involves isolating an exposure from other exposures, perils, or hazards.

22. The two types of risk transfer are _____ and _____.

23. The ongoing implementation and monitoring of the risk management process is called _____.

Section 2: Risk Identification

Section Goal

In Section 1, you examined the five steps of the risk management process. In this section, you will look more closely at the first and foremost step in the process—Risk Identification. Analysis of this step will include an introduction to general classes of risk and their logical classifications, followed by ten specific methods risk managers can use independently or in combination to identify specific risks.

Learning Objectives

1. *Explain the importance of Risk Identification in the risk management process.*
2. *Give examples of loss exposures related to each class of risk.*
3. *Give examples of exposures, perils, and hazards related to four logical classifications of exposures.*
4. *Describe and provide examples of ten risk identification methods.*

Introduction to Risk Identification

Risk Identification is the first step in the risk management process, and it must occur before a risk manager can continue the process. Let's revisit the risk management process diagram that appeared in the previous section.

Risk managers work with the understanding that most risk is unavoidable. They also understand that to minimize the impact of risk upon an organization's desired outcomes, it is necessary to focus on risk sources, or the areas from which risks arise. Implementation of two frameworks—the general classification of risk and the four logical classifications of exposures—helps risk managers sort potential risks practically.

The Importance of Risk Identification

Learning Objective 1

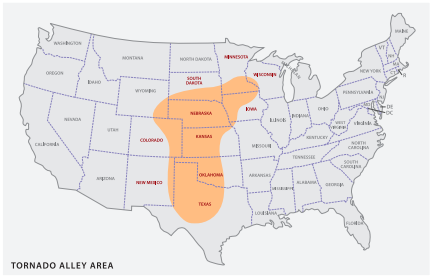
Explain the importance of risk identification in the risk management process.

A Review of Critical Terms

Section 1 introduced several terms critical to risk analysis, including *exposure*, *peril*, and *hazard*. Let's review the meanings of those essential terms before continuing the discussion of risk identification.

- Exposure describes an insured's susceptibility to adverse financial consequences or loss, or reduction of asset value.
- A peril is a cause of loss.
- A hazard is a factor that increases the likelihood that a peril will occur.

Now let's use examples to review the three terms.

Exposure	Peril	Hazard
the potential for several buildings to be damaged by heavy winds within the geographical area nicknamed "Tornado Alley"	the tornadoes that frequently occur within Tornado Alley	an older building that was engineered only to withstand winds of less than 110 miles per hour or tornadoes in the EF1 damage category
		

The Importance of Risk Identification

Implementing the risk management process helps clients avoid or reduce the consequences of losses associated with exposures, perils, and hazards. The process must begin with Risk Identification. But what happens if a risk is overlooked?

Perhaps the most obvious answer is there is an increased likelihood of financial loss. Financial loss can occur through a variety of means. For example, an overlooked risk could lead to damage to a company's reputation, a decline in customer satisfaction, or financial penalties, such as legal fines. An overlooked risk could also lead to product or project failure, as well as missed opportunities for growth.

No matter the cause, the result is the same. An organization or business that fails to identify potential risks stands to suffer financial loss and perhaps complete failure.

Identify the Risks

It's difficult to create a convincing argument or justification for action without first gathering and examining facts. Risk managers undertake thorough examinations of all the risks that could possibly affect their clients and organizations. That includes identifying risks that could have negative impacts upon an organization, as well as those that can present opportunities. Only then are they able to provide client counsel or construct sound solutions to help reduce the effects of loss.

Before continuing, take time to think about your organization and the risks that could possibly affect it.

Reflections

What are some of the potential risks to your organization? Challenge yourself to list within two minutes as many potential risks as you can. List the risks here.

_____

_____

_____

_____

Explain your thinking process. Why did you choose these particular risks? What else would you need to know before changing your list?

_____

_____

_____

_____

In this activity you may have found it difficult to know where to begin in a risk assessment for your organization. The next section presents a useful and efficient classification system for risk identification and analysis.

Knowledge Check

Think about your organization and the risks you identified as potential threats to your organization's well-being. Predict what might happen to your organization if one of the risks you identified was overlooked.

_____

_____

_____

_____

General Classes of Risk

Learning Objective 2

Give examples of loss exposures related to each class of risk.

The General Classes of Risk

Think back to your middle-school life science class. In that class, you were probably introduced to a classification system in which living things were organized by their shared characteristics.

You may have learned, for example, that there are hundreds of thousands of different kinds of plants in the plant kingdom. To understand plant differences, scientists classify them beginning with a large, general classification and narrowing the classifications until each specific kind of plant is identified.

In the risk identification process, it is helpful to apply this same general-to-specific kind of thinking. At the most general level are categories or classes of risk. These classes of risk provide a framework for risk identification. It is also important to remember the two types of risk—pure and speculative—when applying the general classes of risk to exposures. Recall that a pure risk poses the chance of loss or no loss but with no possibility of gain, while a speculative risk is associated with business or financial risk and involves the possibility of both loss and gain.

7 Seven General Classes of Risk

There are seven general classes of risk: economic, legal, physical, social, technological, juridical, and political.

The Economic Class

Risks in the **economic class** arise from internal operations, general economic conditions, external competition, conditions in the financial marketplace, and entrepreneurial activities, such as new products or services. Examples include:

		
exchange rates	inflation	tariffs on imports and/or exports

Let's look at additional examples of risks in the economic class.

CONNECTION

1. For decades, a car parts manufacturer has been the primary employer in City A. In recent years, demand for the company's products has declined. The company's owners have responded by laying off workers and putting a freeze on hiring.

   Decreased economic output and increased unemployment have forced inhabitants to move elsewhere to find work. As inhabitants have moved from the city, they have taken their tax dollars with them. The city now collects fewer taxes to support necessary infrastructure projects, such as road repairs and even garbage collection. Eventually, the crumbling infrastructure discourages new businesses from locating in City A. Fewer new businesses, increased unemployment, and work-related migration create a cycle that can be devastating for existing businesses. These businesses must grapple with fewer customers while they also face increased competition from the other businesses that remain. These circumstances make it more difficult for the existing businesses to earn profits equivalent to those earned in the past. All of these are economic risks.

2. Company Q manufactures paint. Its primary competitor has introduced a new line of less expensive and more durable paints into the marketplace. The competitor's product is driving down Company Q's revenue. Such competitive activity is an economic risk.

3. Company Y is a small bakery. The owners budgeted $1,000 per week for gas for their fleet of five delivery trucks. Inflationary pressures in the marketplace have caused an upward trend in gasoline prices. Per-gallon prices have doubled since the owners created the original budget. Possible causes of the upward trend could include an increased demand for crude oil, a decline in the value of the dollar, and commodities trader activity in the futures markets. All of these potential causes represent economic risks.

The Legal Class

Risks inherent in compliance or arising from common law and statutory liability belong to the **legal class**. Compliance with government regulations is a significant issue for all American businesses, and therefore of critical importance to risk managers. Various licenses are required for many businesses, and failure to comply with licensure or other state-mandated regulations can result in significant fines. The Occupational Safety and Health Administration (OSHA) requires employers to provide safe workplaces for their employees. Failure to do so can subject them to significant fines and penalties at the federal level.

		
government regulation	new legislation	compliance

CONNECTION

1. In states with statutes that require drivers to maintain minimum financial liability limits, drivers without auto insurance can have their licenses suspended or revoked.
2. New OSHA regulations may require an organization to reassess its business processes.

The Physical Class

Risks associated with people and property belong to the **physical class**. These include natural risks such as earthquakes and hurricanes, as well as human-caused risks, including nuclear accidents and climate change.

While the examples mentioned in the previous paragraph and those represented in the following images touch on some of the catastrophic events that can occur, the physical class of risk also includes far less impactful events that may damage people or property. Identifying physical risks is often easier than identifying those in some of the other classes because companies possess specific and tangible physical property.

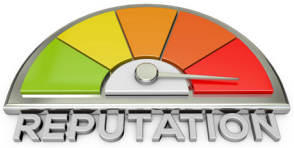
		
bodily injury	fire and water damage	earthquake damage

CONNECTION

1. A massive hurricane causes millions of dollars of damage to a multistory beachfront condominium.
2. A magnitude 4.2 earthquake damages a Kentucky county courthouse.
3. A concert is canceled because the performer contracts laryngitis.

The Social Class

Risks in the **social class** are associated with public relations. They include loss of reputation, brand damage, cultural issues, and social direction or media (also known as reputational risks). This class also includes risks related to social stability, such as income disparity, food shortages, crumbling infrastructure, and risks related to public health, pandemics, and chronic diseases.

		
loss of reputation	brand damage	social trends

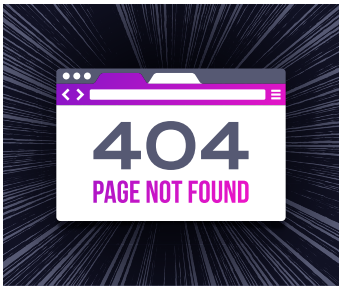
CONNECTION

1. Faulty footwear caused injury to a well-known basketball player during a game. While the injury to the player may belong to the physical class, the loss of reputation or damage to the footwear company's brand falls within the social class.

2. Several customers became ill after eating at a popular restaurant. Subsequently, they posted descriptions of their experiences on Facebook and Instagram. This creates a reputational/social risk. It may also create an economic risk.

The Technological Class

Risks arising from the world's growing use of and dependence upon technology, as well as risks created by emerging technologies, belong to the **technological class**. Examples include cyber-attacks, cyberterrorism, infrastructure disruption, and loss of proprietary data.

		
lost time	lost data	disruption to service or access

CONNECTION

1. An employee at a medical facility responded to a phishing email, exposing the facility to hacking. Cyberthieves then stole 4,000 files containing patient information before the facility became aware of the incident.

2. Cyberterrorists hacked a city's intranet and threatened to destroy all of the stolen data unless the city paid a $500,000 ransom.

The Juridical Class

Judges and juries make careful and deliberate decisions. The outcomes of those decisions carry potential risk and fall into the **juridical class**. Manufacturers fear tort attorneys will find a favorable venue to try class action lawsuits in the hope that juries will be responsive to their arguments.

		
legal costs	verdicts	legal decisions

CONNECTION

1. A customer was injured when a product manufactured by ABC Fireworks exploded. Because the company's legal team had great confidence in their defense, the company was unwilling to settle the claim out of court. At trial, the jury, moved by the plaintiff's testimony and injuries, awarded a multimillion-dollar verdict in favor of the plaintiff.

2. The US Supreme Court hands down a decision that expands the definition of a "Protected Class." This creates a juridical risk for employers, given that they will probably need to revise their employee handbooks and review their hiring practices.

The Political Class

Risks arising from changes in the law, reinterpretations or changes in governmental policy, politics, and diplomacy, and conflict and global governance belong to the **political class**. Risks in this class also include war, terrorism, conflicts over resources, and illicit trade.

		
trade agreements	legislation	political unrest

CONNECTION

1. For years, Company XYZ has imported a critical computer component from China. In addition to offering cheaper labor, China controls the market for the component's source materials. A trade war between China and the US is forcing Company XYZ to decide whether to increase the price of their manufactured product or lay off employees.

2. Normal flight schedules were disrupted when large numbers of protesters physically occupied an airport. Although security teams scrambled to the scene, flights were prevented from arriving and departing for 36 hours. Unable to transport passengers, affected airlines were forced to reroute passengers, crew, and supplies to regional airports.

More than One Classification

While risks are typically separated into general classes, most risks can be classified into more than one category. Consider, for example, the size and complexity of a national box-store's customer database. Then imagine that unauthorized persons access the database, compromising customers' personal information. Such a risk can be classified as social, technological, or even legal.

Let's look at another example.

In 2018, there were almost 200 offshore oil drilling rigs in the North Sea. Large rigs can serve as both a workplace and a home for as many as 200 people. A single explosion can have devastating consequences, including human injury and death, equipment loss, and environmental damage. The risk of an explosion, then, can be classified as social, legal, economic, and physical.

Check-In

Directions: Read each example and consider the risk class implications. Circle all of the risk classifications that apply.

1. The ABC Plastics Company produces medical supplies for distribution across the country. Government sanctions against certain oil-producing countries have led to resource scarcity. Scarcity has led to higher prices, which has triggered protests from national healthcare watchdog groups. How could the risks associated with these circumstances be classified?

Economic Class **Legal Class** **Physical Class**

Social Class **Technological Class**

Juridical Class **Political Class**

2. The XYZ Company manufactures children's clothing and accessories. The company licensed rights to a variety of popular movie characters for use on children's lunchboxes and backpacks. The movie company's employment practices have recently come under scrutiny by state employment authorities, and a number of civil lawsuits are underway. How could the risks associated with these circumstances be classified?

Economic Class **Legal Class** **Physical Class**

Social Class **Technological Class**

Juridical Class **Political Class**

Knowledge Check

A toy company works in partnership with global food manufacturers to create toy models of brand name foods for use in preschool, daycare, and home settings. For years, the toy company has seen revenue increase. Consequently, it has expanded its product line to include popular snack foods. In recent months, the company's marketing team has collected evidence of a growing initiative on social media to eliminate what some consumers call "unhealthful" food choices associated with children's play objects. Explain which classifications of risk apply to the toy manufacturer's current circumstances. Justify your choices.

_____

_____

_____

_____

_____

_____

Four Logical Classifications of Exposures

Learning Objective 3

Give examples of exposures, perils, and hazards related to four logical classifications of exposures.

The Classification of Exposures, Perils, and Hazards

In the last section, we examined general classifications of pure and speculative risk. These classifications provide a framework for risk identification, meaning they give risk managers a starting point for identifying different risks by thinking about how risks arise.

In this section, we examine a systematic way of categorizing exposures, perils, and hazards into one or more of four logical exposure classifications: property, human resources, liability, and net income. Once exposures, perils, and hazards are categorized, risk managers are better able to analyze, control, transfer, and finance them.

Four Logical Classifications

Just as with the general classes of risk, the classification of losses associated with exposures, perils, and hazards is flexible. In other words, categories are not mutually exclusive. So, how do you decide where a loss belongs? Think of where or how it originates. For example, say a fire loss starts as a property loss. Although a fire loss can cause a loss to net income, it can be classified as a property loss.

The Four Logical Classifications of Exposures

Classification	Exposures, Perils, and Hazards Arising from . . .
1	Property
2	Human Resources
3	Liability
4	Net Income

Exposures, Perils, and Hazards Arising from Property

Property can be tangible or intangible. **Tangible property** can be seen or touched and includes real property like buildings and personal property, such as equipment. **Intangible property**, such as patents and intellectual property, has value but no physical form. For example, the value of a trade secret can be priceless, as can the value of intellectual property, such as a bestselling author's copyright on a book. Neither of these things is tangible property that can be seen or touched. Although a copyright symbol may be seen in a book, a copyright does not exist as a physical object, and is, therefore, intangible property.

Property Exposures

Real Property

- Office buildings, manufacturing plants, warehouses
- Storage silos or bins
- Concrete mixing plants
- Tenant improvements and betterments (owner's interest)
- Retaining walls, piers, docks
- Golf courses
- Landscaping (trees, shrubs, paths)

Personal Property

- Cash and securities
- Records and documents
- Inventory
- Mobile equipment
- Equipment, furnishings, and supplies
- Computer systems, hardware, software, databases

Intellectual Property

- Copyrights and patents
- Trademarks, service marks, and trade names
- Trade secrets
- Licenses and franchises
- Leases and leasehold interests

Let's move from risks associated with exposures to those related to perils and hazards.

Perils	Hazards
	
• Windstorm, fire, flood • Theft • Infringement of intellectual property rights	• Faulty wiring • Nature of operations • Lack of physical and network security • Poor housekeeping and maintenance

Previously, we discussed the interconnections among exposures, perils, and hazards. Let's use an example to examine such interconnections.

Imagine a convenience store with boxes of merchandise stacked next to the furnace in the utility room.. The exposure is the store and its contents, the peril is fire, and the hazard is placing boxes next to a heat source.

If the boxes are relocated, the hazard will be removed, and the likelihood of the peril—fire—occurring is reduced.

2 Exposures, Perils, and Hazards Arising from Human Resources

Human resources are an organization's internal people exposure. These risks must be identified to ensure continued survivability of the organization. Unlike property risks, the majority of these exposures can be controlled by internal policies and procedures.

Human Resources	
Exposures • Owners, officers, senior management • Employees • Independent contractors; leased, temporary, and borrowed employees • Clients, suppliers, vendors	
Perils • Death • Disability • Illness/Injury • Resignation, termination, and retirement • Harassment	
Hazards • Non-adherence to safety practices • Poor morale, poor performance, or natural aging process • Workplace violence	

Human resources exposures arise from people in a variety of positions, including those represented in the following table:

owners	employees	clients
officers	independent contractors	suppliers
senior management	leased, temporary, and borrowed employees	vendors

What perils could cause significant losses in the area of human resources? Perils such as death, disability, illness, injury, resignation, termination, and retirement can all have a negative impact.

What are some hazards that exist in the area of human resources? Hazards such as non-adherence to safety practices, poor morale, poor performance, the natural aging process, and workplace violence are all areas of concern.

Let's look at an example. Say an office supply delivery person tends to make inappropriate remarks and advances to the receptionist at your office when delivering supplies to your company. This behavior could create a harassment claim.

You might be surprised to learn that employers are responsible for protecting employees from this type of harassment in the workplace—even when the harassment is committed by a non-employee. In this situation, the exposure is the employee, the peril is harassment, and the hazard is the failure to establish proper rules and boundaries for vendors.

3 Exposures, Perils, and Hazards Arising from Liability

The **liability** classification focuses on risks that affect third parties. Identified people or processes will range from guests on an individual's property to customers who purchase a company's product.

Liability
Exposures • Premises and operations • Advertising and communications • Products and completed operations • Statutory compliance
Perils • Slip and fall on premises • Libel, slander, false imprisonment • Product malfunctions • Unknowing transmission of a computer virus
Hazards • Poor housekeeping • Poor quality control • Failure to enforce, or inadequate policies and procedures

The category of liability exposures is broad. The table of liabilities you just reviewed, for example, lists areas such as premises, operations, advertising, communications, products, and statutory compliance.

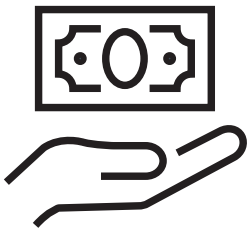
Perils include things such as on-premises slips and falls, libel, slander, false imprisonment, product malfunction, and the unknowing transmission of a computer virus.

The first example in the classification category of liability hazards is poor housekeeping. Neglect, such as failing to keep walkways clear of debris, creates a tripping hazard.

Poor quality control—the second example in the category—involves selling defective products. Such products, which should have been detected during the manufacturing process, may cause injuries to the consumers who use them.

The final example in the liability hazards category is the failure to enforce, or inadequate policies and procedures. This example refers largely to anti-harassment or discrimination policies. In brief, this covers policies, procedures, and practices that may cause employees and customers to be subjected to harassment or discrimination. Recall the earlier example of the driver who harasses the receptionist in your building each time he makes a delivery. This is a liability hazard, as is the company's failure to have adequate policies and procedures in place.

4 Exposures, Perils, and Hazards Arising from Net Income



Whether an organization is for-profit or not-for-profit, positive income is needed for survival. Risks in the **net income** classification have a direct impact on profitability. These risks are more closely aligned with the speculative side of risk.

Net Income	
Exposures • Investment activities • Market conditions and fluctuations • International business interests • Decreased revenue and/or increased expenses	
Perils • Loss of primary supplier, primary customer, or "magnet" business • Weather (no property damage) • Impact of governmental action (e.g., nationalization, shutdown)	
Hazards • Poor product positioning • Overextension of credit or excessive borrowing • Inadequate research and development • Imprudent investment activities	

While a net income loss may be the result of a property, liability, or human resource loss, many net income losses are the result of factors and forces which do not fall within those classifications.

The cause of a net income exposure can be an organization's problem or someone else's problem, but in either case, the result is the organization's problem. Causes may be related to property (destruction of owned or leased property), human resources (personnel losses), or liability exposures (imposition of legal liability). Other causes may be speculative in nature, such as market risk, operational risk, business risk, and fluctuations in financial markets,

or weather (even without property damage, as when a flood prevents customers from accessing an organization's business).

Let's examine possible causes of economic loss and factors that may affect economic losses associated with the shutdown of a manufacturing plant.

Causes that are someone else's problems:

- can be related to an organization's primary supplier or primary customer,
- can be environmental in nature, or
- can be related to local government, location factors, or the economy.

Factors that can affect the economic loss caused by a plant shutdown are the:

- length of the shutdown,
- severity of the shutdown/loss (e.g., the production line, a warehouse, the entire plant, the administrative offices, etc.),
- frequency of the shutdown/loss, or
- timing of the shutdown/loss.

The effect of a net income loss would be either decreased revenues or increased expenses. Decreased revenues would include business interruption, narrowing of a profit margin, weakening sales, or investment income reduction. Increased expenses would include the cost to repair or replace, expediting costs, incremental cost of normal operations, and/or other expenses related to minimizing revenue reduction or expense increases.

Consider a sharp decrease in the stock market or the economy moving toward a recession. Chances are, this movement will affect individuals and company supply chains negatively, decreasing net income. It is not a property, liability, or human resource loss that leads to net income loss, but a condition outside of an individual's or company's operations.

Reflections

Think about loss exposures that affect your organization. Name one or more examples of each of the four logical classifications of exposures.

Property

_____

_____

Human Resources

_____

_____

Liability

_____

_____

Net Income

_____

_____

Knowledge Check

Imagine yourself as the risk manager for XYZ Engineers, a Virginia company holding several engineering patents that apply to green energies. You have identified several areas of intellectual property under the property logical classification. Describe some of the perils and hazards associated with this classification.

_____

_____

_____

_____

Risk Identification Methods

Learning Objective 4

Describe and provide examples of ten risk identification methods.

A Variety of Methods

A risk manager can employ a number of different methods for identifying potential loss exposures. The specific type of exposure a risk manager is attempting to identify determines which identification methods will be most effective.

Some risk identification methods are simple and can be performed by managers with little expertise. Others require more advanced understanding and experience. Risk managers may also choose to apply multiple methods to fully understand a type of exposure.

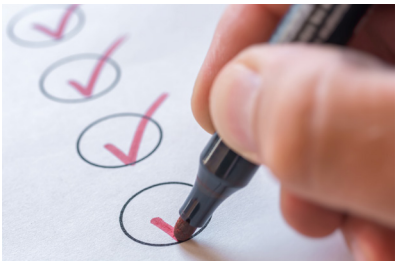
You have the opportunity to watch a video of an individual conducting a physical inspection at www.scic.com/ELRresources. It is important to remember that physical inspections are not necessarily the best, nor the only, risk identification tool you should use.

Businesses are responsible for the health and safety of their employees, guests, and customers. Physical inspections are one tool in the risk management "toolbox." You can use them to help identify and record hazards. You can also use them to help determine values for property.

Inside the Toolbox

Before we examine each of the ten most common risk identification methods individually, let's look at the "toolbox" as a whole.

Checklists, Surveys, and Questionnaires



Compliance Review

Procedures and Policies Review

Contract Review

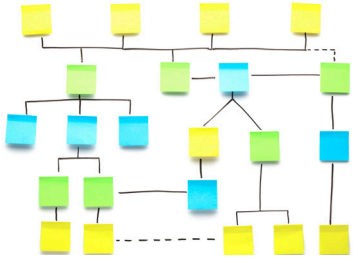
Insurance Policy Review

Financial Statement Analysis

Loss Data Analysis

Expert Review

Flowchart Review



Physical Inspection

Ten Methods

The following ten risk identification methods are numbered only for the purpose of discussion, and are not the only, or even always the best, methods available. Risk managers select the method or methods that work best in their particular organizations.

Method 1: Checklists, Surveys, and Questionnaires

Risk managers use a variety of checklists, surveys, and questionnaires to systematically search for exposures, perils, and hazards. These checklists include asset lists, activity or situation lists, insurance checklists, and industry lists that delineate common exposures in a specific industry. Because checklists are standard in nature, non-risk management personnel can use them. However, checklists may not identify new exposures or cover all areas of an operation.

While checklists are generally used at the company or event level, risk management surveys and questionnaires are often conducted on a large scale to provide industry-specific information to the risk management industry. Several organizations conduct global risk surveys of risk managers and C-suite executives. Survey results are then published to provide the industry with current data that are helpful for identifying new threats. These annual surveys and reports show emerging risks, exposure areas of concern, and general trends in risk management.

Check-In

Directions: Read each statement. Then select True or False.

1. Risk management surveys are more effective at the company or event level because they reveal more industry-specific information.

   True **False**

2. Checklists are an efficient means of covering all areas of an operation.

   True **False**

3. One of the values of reports following annual surveys is the identification of emerging risks.

   True **False**

Method 2: Compliance Review

A compliance review determines an organization's compliance with regulations and laws, which may be statutory—state or federal. Compliance reviews also examine adherence to established professional standards, including those imposed by industry and government insurance programs. For example, reviews examine the enforcement of city codes and state and federal mandates. In most cases, organizations have little or no control over reviews, whose findings can generate unwanted attention. Compliance reviews may be conducted by outside individuals.

Method 3: Procedures and Policies Review

Reviewing the implementation of current and relevant policies and procedures helps a risk manager identify exposures throughout an organization. A review can be internal, external, or performed by legal counsel. Examples of items for review include an organization's charter or articles of incorporation, as well as mission statements, organizational charts, legal policies, board minutes and public records of meetings, employee manuals, procedure manuals, and adequacy of risk management policies, such as those related to safety. The primary purpose of a procedures and policies review is to identify areas within an organization which may not conform with stated policies.

It is important to understand that many organizations do not recognize the value of policy and procedure documents as a part of proactive risk management. The value of having documented processes, policies, and procedures cannot be overstated. It is by adhering to these documents that organizations secure protection for daily practices, such as hiring, employee safety, cyber security, and everything else covered by these operational documents. Having these documents in place also ensures that key risk exposures are monitored and taken into consideration for risk assessment.

Check-In

Directions: Read each statement. Then select True or False.

1. One purpose of a compliance review is to examine an organization's adherence to insurance professional standards.

   True **False**

2. In most cases, an organization has little or no control over a compliance review.

   True **False**

3. An organization may conduct an internal review of procedures and policies or give the task to an external group or legal counsel.

   True **False**

4. Documented processes, procedures, and policies help organizations secure protection against exposures.

   True **False**

Method 4: Contract Review

Careful review of contracts helps a risk manager determine an organization's obligations to others as well as any obligations third parties may have to the organization. Once the obligations are clear, compliance with contractual requirements follows. Examples of contracts include leases, hold harmless or indemnification agreements, purchase orders, sales contracts, bills of lading, warranties, advertising materials, mergers and acquisitions, joint ventures and alliances, employment contracts, and service contracts. Reliance on a second party who may not conform to contract provisions might also be identified.

A risk manager should exercise caution when relying on contractual obligations of another to an organization. If the party agreeing to a contract's terms is unable to comply with them, the organization may be exposed to financial risks. For example, imagine that a tenant in a building agrees to purchase property insurance for the leased premises. If a fire breaks out in the area that is leased and the tenant has not complied with this requirement, the landlord is left with a damaged building for which she may not have purchased property insurance based on her reliance on the contract terms.

Method 5: Insurance Policy Review

Risk managers review insurance policies to identify exposures and perils arising from coverage gaps, insufficient limits, coverage limitations, and exclusions. Reviews are conducted internally, or external experts may review policies.

Say you are the new risk manager for a local family diner. You are aware of an exposure related to vats of old grease held in a tank on the edge of the property and emptied from time to time. Your experience with such businesses also means you know that if the vats rupture or leak, a significant environmental liability situation could result, particularly because there is an all-season creek that flows behind the diner.

During an insurance policy review, you discover there is very limited coverage to provide funding in the event a vat rupture or leak were to occur. By conducting an insurance policy review, you are able to identify this coverage gap and procure the necessary insurance to protect the diner.

Check-In

Directions: Select the term that completes each statement.

1. Recognizing an organization's _____ others is an important outcome of reviewing contracts.

obligations to **reliance on**

2. During contract reviews, a risk manager must be aware of the possibility of _____.

noncompliance with statutes and regulations **exposures to financial risk**

Method 6: Financial Statement Analysis

Analysis of financial statements assists risk managers in the identification and valuation of exposures, in determining an organization's financial capabilities, and with financial-based decision-making. The organization's income statement, balance sheet, and statement of cash flows are the main financial documents relevant to risk managers.

Financial statement analysis may also reveal the acquisition of new equipment which will need to be added to the property schedule, or valuations being carried on the company's books that do not accurately reflect actual values.

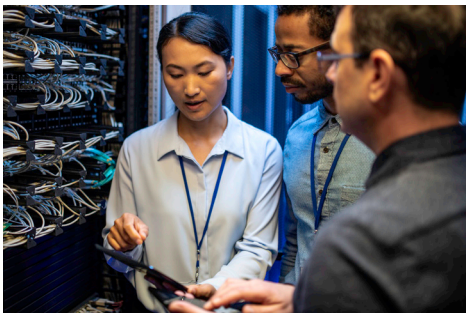
Method 7: Loss Data Analysis

Risk managers examine historical information and data to identify exposures and their valuations. They analyze carrier and/or third-party administrator (TPA) loss runs, internal loss runs, incident and accident reports; index loss against exposure information; and analyze trends in losses and exposures.

For example, say that loss runs for Company ABC indicate workers' compensation losses have increased significantly over prior years. A risk manager with this information would want to delve deeper into the data to determine reasons for these increases. Injury reports could, for instance, indicate more workers are being injured on a specific piece of machinery or there have been more vehicular accidents. The risk manager would then be in a position to make decisions on insurance programs, safety and loss control initiatives, and coverage limits.

Often these analyses are the basis for making projections of future losses.

Method 8: Expert Review



Experts provide professional advice, opinions, and direction for resolving issues associated with a given topic. Accordingly, they are helpful in identifying exposures, hazards, and perils in their areas of expertise.

There are numerous kinds of experts, including human resource consultants, accountants, loss control specialists, brokers/agents, and actuaries. Craft skill experts, such as those with extensive experience in vehicle manufacturing, can also be valuable to the risk identification process.

Check-In

Directions: Select the term that completes each statement.

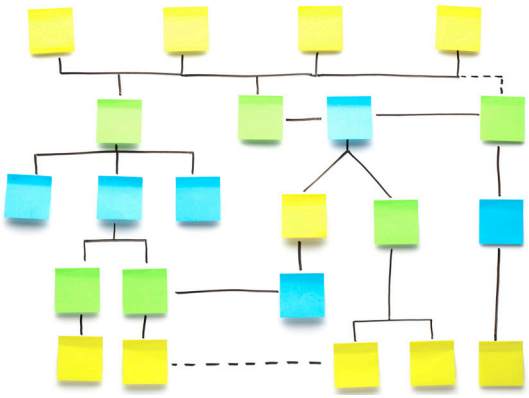
1. Financial statement analysis may reveal understated or overstated _____ being carried on an organization's books.

financial capabilities **values**

2. Experts include human resource consultants, actuaries, and _____.

people with particular craft skills **people with customer service experience**

Method 9: Flowchart Review



Risk managers build flowcharts to graphically depict sequential steps in a process or elements in a system. Flowcharts are useful, for example, in understanding product development processes, decision-making processes, architectural site analyses, and scheduling processes. They are also helpful in identifying bottlenecks and dependencies within a process.

Method 10: Physical Inspection

Both internal and external inspectors can visit physical facilities to identify exposures to risk. Internal inspectors include risk management personnel, safety specialists, and operating personnel, while external inspectors include insurance carrier personnel, agents/brokers, professional consultants, and regulatory agency representatives.

Let's use a restaurant as an example. Regular physical inspections may reveal health code and safety issues that could be corrected in order to avoid code violations, accidents, and injuries.

Reflections

Think about the risk identification methods you have seen implemented where you work. Describe one of those methods and what your organization learned from it.

_____

_____

_____

_____

_____

Check-In

Directions: Match each term to its description.

A. Expert review **B. Financial statement analysis** **C. Physical iInspection** **D. Flowchart construction** **E. Contract review** **F. Compliance review** **G. Checklists, surveys, and questionnaires** **H. Insurance policy review** **I. Loss data analysis** **J. Procedures and policies review**	_____ Examination of an organization's financial information to identify and value its exposures/assets
	_____ A graphical depiction of a process or system
	_____ Contributions from experienced individuals in the identification of exposures
	_____ Systematic searches for as many exposures, perils, and hazards as possible
	_____ Visits to physical sites to identify exposures to risk
	_____ Historical examination of exposures and their valuations
	_____ Identification of contractual obligations and examination of contractual compliance
	_____ Determination of an organization's adherence to laws and regulations
	_____ Examination of current policies and procedures for the purpose of identifying exposures
	_____ Identification of exposures and perils arising from insurance coverage gaps, insufficient limits, coverage limitations, and exclusions

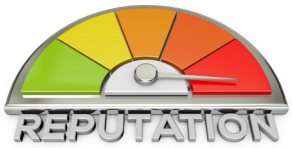
Knowledge Check

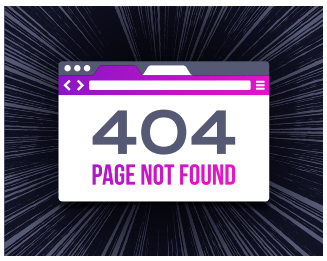
Think about the processes that occur in your organization each day. Select one of those processes. Draw and label a flowchart to show the sequential steps in the process and identify risks associated with those steps.

Summary

Risk Identification is the first and most critical step in the risk management process. Risks can be sorted using two classification frameworks—the general classes of risk and the four logical classifications of exposures. These classification frameworks, which focus on where risks arise, provide risk managers with information that can lead to clearer communication and effective decision-making.

There are seven general classes of risk, which are summarized in the following table.

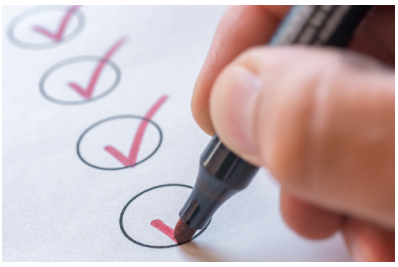
The Economic Class	The Legal Class	The Physical Class	The Social Class
			

The Technological Class	The Juridical Class	The Political Class
		

Risk managers use four logical classifications of exposures to systematically categorize exposures, perils, and hazards. The four logical classifications of exposures are property, human resources, liability, and net income.

Accessing a toolbox of risk identification methods like those identified in the following diagram allows risk managers to customize risk management solutions for any type of organization. Generally speaking, using a combination of methods yields the greatest number of identified risks, regardless of the type of industry or organization. Identification of as many risks as possible is essential for effective risk analysis, finance, and control.

Checklists, Surveys, and Questionnaires



Compliance Review

Procedures and Policies Review

Contract Review

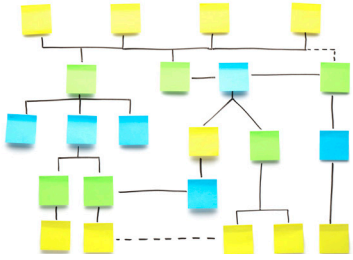
Insurance Policy Review

Financial Statement Analysis

Loss Data Analysis

Expert Review

Flowchart Review



Physical Inspection

Resources

For valuable reinforcement, some important concepts related to the learning objectives in this section are summarized in audio and video clips. Use the following link to access these helpful learning resources.

scic.com/ELRresources

	More Than One Classification
	Exposures
	Snap Kitchen—Physical Inspection

Section 2 Self-Quiz

Directions: Complete each item. For fill-in-the-blank items, choose the term that correctly completes the sentence. Answers may be used more than once.

compliance	**hazard**	**loss data**	**tangible**
economic	**human resources**	**peril**	**technological**
exposure	**intangible**	**physical**	
financial loss	**juridical**	**political**	
flowcharts	**legal**	**social**	

1. The potential for several buildings to be damaged by heavy winds within the geographical area nicknamed "Tornado Alley" is an example of a(n) _____.

2. Tornadoes that frequently occur within Tornado Alley represent a(n) _____.

3. An older building that was engineered only to withstand winds of less than 110 miles per hour, or a tornado in the EF1 damage category, is an example of a(n) _____.

4. The most obvious result of overlooking the Risk Identification step in the risk management process is an increased likelihood of _____.

5. Monetary exchange rates, inflation rates, and import-export tariffs are examples of risks in which general class of risk? _____

6. Government regulation, new legislation, and compliance are examples of risks in which general class of risk? _____

7. Fire and water damage, earthquake damage, and bodily injury are examples of risks in which general class of risk? _____

compliance	**hazard**	**loss data**	**tangible**
economic	**human resources**	**peril**	**technological**
exposure	**intangible**	**physical**	
financial loss	**juridical**	**political**	
flowcharts	**legal**	**social**	

8. The loss of reputation, brand damage, and social trends are examples of risks in which general class of risk? _____

9. Lost data and disruption to service or online access are examples of risks in which general class of risk? _____

10. Legal costs and legal decisions are examples of risks in which general class of risk? _____

11. Trade agreements, legislation, and social unrest are examples of risks in which general class of risk? _____

12. _____ property can be seen or touched, and includes real property like buildings and personal property, such as equipment.

13. Patents and intellectual property are examples of _____ property.

14. _____ are an organization's internal people exposure.

15. Check each example of a peril arising from liability.

- ☐ Libel, slander, false imprisonment
- ☐ Products and completed operations
- ☐ Product malfunctions
- ☐ Failure to enforce or inadequate policies and procedures

16. Check each example of an exposure arising from net income.

- ☐ International business interests
- ☐ Investment activities
- ☐ Weather (no property damage)
- ☐ Overextension of credit or excessive borrowing

17. Check each example of a risk identification method.

- ☐ Checklists, surveys, and questionnaires
- ☐ Compliance review
- ☐ Procedures and policies review
- ☐ Contract review
- ☐ Flowchart construction
- ☐ Physical inspection

18. In the risk identification method, _____ analysis, risk managers examine historical information and data to identify exposures and their valuations.

19. _____ are useful for understanding product development processes, decision-making processes, architectural site analyses, and scheduling processes.

20. An organization conducts a(n) _____ review to determine how well it complies with regulations and laws, which may be statutory, state, or federal.

Section 3: Risk Analysis

Section Goal

The first step in the risk management process, which was introduced in Section 2, is Risk Identification. Section 2 also focused on two risk classification systems and ten methods for identifying risks.

The goal of this section is to introduce you to the second step of the risk management process—Risk Analysis. You will learn how both quantitative and qualitative analysis methods are used to understand the frequency and severity of past and predicted losses.

Learning Objectives

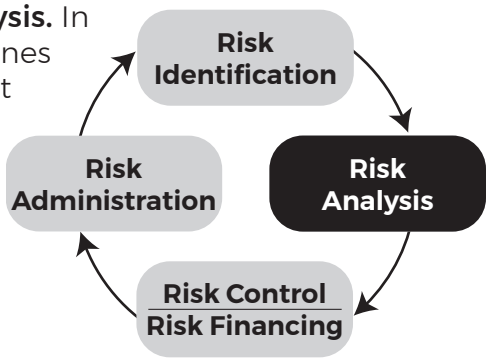
1. *Describe multiple uses of risk analysis and identify tools used to assess the likelihood and impact of risks, should they occur.*

2. *Explain loss trending and list the steps in the process.*

Introduction to Risk Analysis

Up to this point in the examination of the risk management process, the emphasis has been on Risk Identification. Risk Identification is accomplished in a number of ways, including through application of the general classes of risk and the four logical classifications of exposures frameworks. Additionally, a toolbox of methods provides diverse means of identifying risk.

The next step in the risk management process is **Risk Analysis.** In this step, identified risks undergo scrutiny. Analysis determines frequency and severity, but also adjusts loss data to account for factors such as time differences and inflation. Ultimately, analysis makes it possible to make educated decisions regarding how to control and finance risks.



The Uses of Risk Analysis

Learning Objective 1

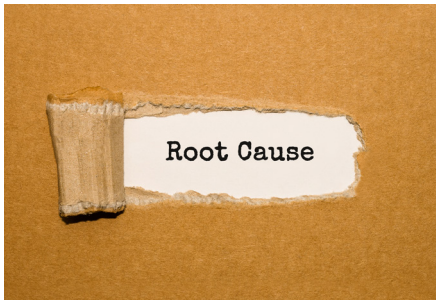
Describe multiple uses of risk analysis and identify tools used to assess the likelihood and impact of losses, should they occur.

The Multiple Uses of Risk Analysis

Risk analysis serves a variety of uses. Let's consider a few of them.

Prioritization of Risk Factors

Once risks are identified, a risk manager must then determine which risks pose the greatest threat or may have the largest impact on an organization. During the Risk Analysis step, it is important to remember that risk is more than a negative outcome or the chance of a loss. This step provides validation and refinement of loss data to allow for the prioritization of risk factors. Loss predictions and ranges of losses will be determined during this stage of the process as well. Risks with the greatest frequency or severity must be prioritized over those that have minimal impact on an organization.



In this stage, risk managers use different analyses to assist in uncovering which risks are controllable and/or which can be financed in the most optimal way. Using the **root cause analysis** helps a risk manager drill down to the "root cause" of an incident systematically.

The **time value of money (TVOM) calculation** helps a risk manager determine the value of money over a given amount of time, considering a given amount of interest. Because money is more valuable today than at a future time, this analysis helps determine the impact of future claims.

Check-In

Directions: Use the following terms to fill in the blanks.

chance of loss	**negative outcome**	**severity**
minimal	**refinement**	**validation**

Risk is more than a(n) _____ or a(n) _____. Risk Analysis provides _____ of loss data. It also provides _____ of loss data. Such information allows risk factors to be prioritized, so those with the greatest frequency or _____ receive more attention than those that have _____ impact on an organization.

Review of Insurance Programs

Risk Analysis can contribute to a review of insurance programs, determining retention program viability and retention levels (recall that retention i, appropriateness of purchased coverages, and insurance purchasing decisions, including limits of liability.

Reflections

Think about the role of Risk Analysis in your organization. Explain the role you play in the process. Or describe your observations of how risk analysis occurs in your department.

_____

_____

_____

_____

Defining Terms

Before reviewing the process of quantitative analysis and examining a variety of risk analysis tools used in that analysis, let's define a few key terms.

Incident

Be aware that during Risk Analysis, risk managers frequently use the terms *event* and *incident* interchangeably. However, they define an "incident" as an event that may or may not lead to a loss or to a claim.

Likelihood

Risk managers search for possible risks and potential losses associated with those risks. Then they seek to understand the likelihood that those losses will occur. Likelihood is simply the chance that something will happen. It is also known as "frequency."

Frequency

Frequency, as mentioned above, is the likelihood of an event occurring or the number of times an event has occurred in the past. Conducting a probability analysis makes it possible to estimate the frequency an event may occur in the future. On the other hand, a review of loss data helps determine how many times (the frequency) an event has already occurred.

Severity

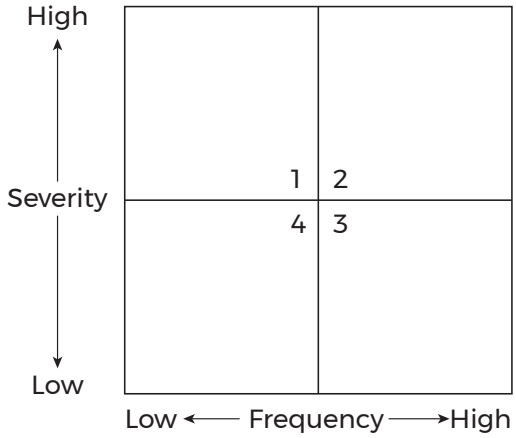
Severity describes the impact of an event, should that event occur. It is often expressed in dollar amounts, and like frequency, risk managers can estimate the severity of future events or look back at past events to see the impact on an organization.

Two Types of Risk Analysis

In Section 1, you became familiar with two types of risk analysis—qualitative and quantitative. Recall that qualitative analysis seeks information that is initially difficult to measure mathematically, and helps answer the question, "Should we do this?" Consequently, analysts rely on a variety of carefully selected information sources, such as interviews, questionnaires, and case studies.

Type 1: Qualitative Analysis Methods in Risk Management

In the practice of risk management, qualitative analysis includes other information gathering methods as well. They include risk mapping, heat mapping, a risk register, and root cause analysis.



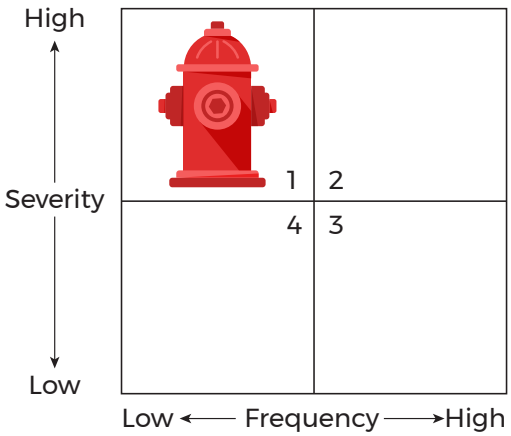
Risk Mapping

Risk mapping is a visual analytical tool that identifies all risks to an organization and indicates on a scale from low to high, both their frequency and potential impact, or severity. The displays, or plots, that result are also called frequency/severity plots.

Risk maps help risk managers determine how to deal with various types of risk based upon their positions in the chart. Let's begin discussion of the risk map with an explanation of its parts.

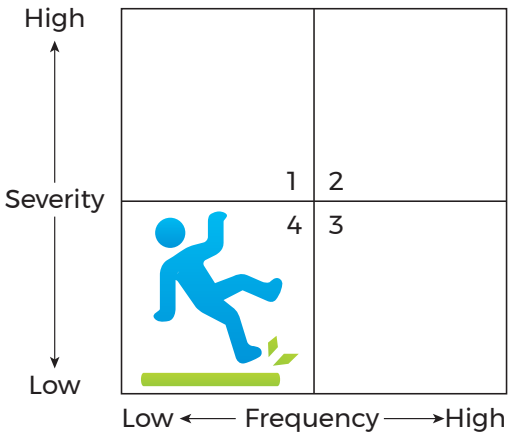
The risk map has four parts, called quadrants. The quadrants, which are numbered 1 through 4, are read clockwise, beginning in the upper left with quadrant 1.

Risks that are low frequency and high severity are assigned to the top left quadrant, or quadrant 1. Let's use fire as an example of a quadrant 1 risk. For most companies, fires do not occur frequently. However, even a single fire can result in severe damage. Therefore, it is economically prudent for a company to insure this loss and retain only a small portion of the risk through its selection of a deductible amount.



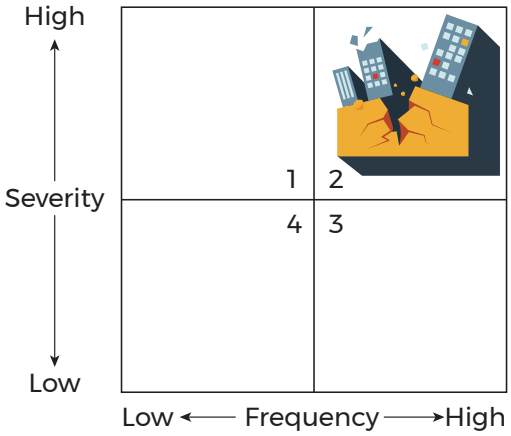
Now let's jump ahead, moving completely around the map to quadrant 4. Risks that are low frequency and low severity are placed in this quadrant. Their position in this quadrant means that these risks do not occur very often, and when they do occur, they are of minimal impact.

For example, consider the risk of injuries to customers. Injuries below a specific threshold, such as $500, could be retained, while those over $500 could be placed in the low frequency but low severity quadrant, meaning quadrant 4.



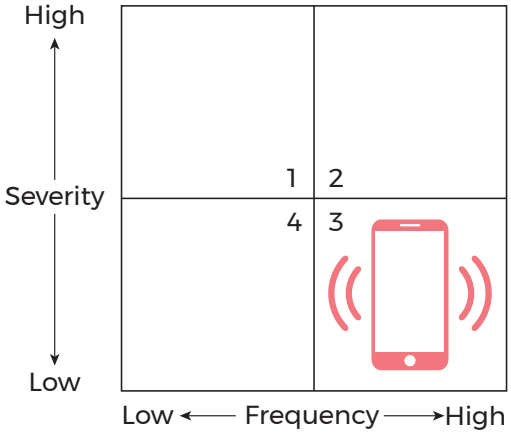
The retention for all of the small losses for customer injuries would then be aggregated with the other small losses that are assigned to this category to determine the total amount that the company will self-insure for these losses. Larger losses will be accounted for elsewhere, as in the example of insuring the number of customer injuries that are typically over $2,000. This is a good example of how the same risk may often fall into different quadrants, depending on the specific risks and loss data for each risk.

Now let's move to the upper right quadrant of the risk map, or quadrant 2. High frequency/high severity risks are assigned to this quadrant. In other words, this quadrant is reserved for the most dangerous risks because they occur frequently and have a significant financial impact. Earthquakes and wildfires in California are examples of quadrant 2 risks.



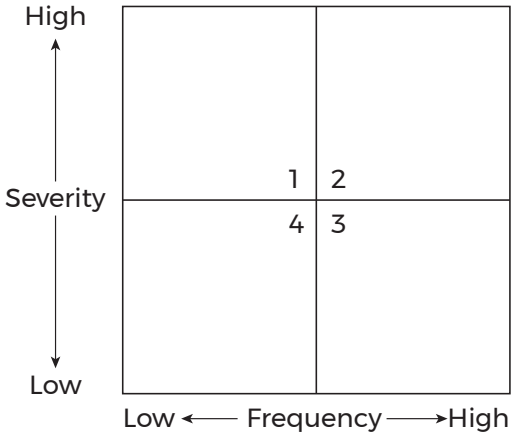
While companies would like to avoid quadrant 2 types of risks entirely, it may not always be possible. If quadrant 2 risks cannot be avoided, the company will implement some combination of risk control and risk financing measures to prevent the frequency or reduce the severity of these types of risks. Insurance will also be considered as a risk financing method to cover some portion of these losses.

Risks that occur with high frequency but are of low severity appear in the bottom right quadrant, or quadrant 3. For example, say a building contractor provides every employee with a cell phone. However, employees frequently lose their cell phones on jobsites, or the cell phones are damaged. While these types of losses are not worth insuring, the company could take steps to avoid the risk by no longer providing every employee with a cell phone, or it could apply strategies to minimize or prevent the frequency or reduce the severity of these losses.



Knowledge Check:

Consider each of the following exposures. Then indicate in which quadrant each exposure should be placed.



1. An earthquake in California:

   Quadrant _____

2. Knife cuts to chefs in a restaurant kitchen

   Quadrant _____

3. Tornadoes in Kansas and Oklahoma

   Quadrant _____

4. Fender-benders due to icy roads in south Texas

   Quadrant _____

5. A bridge collapse during rush-hour traffic

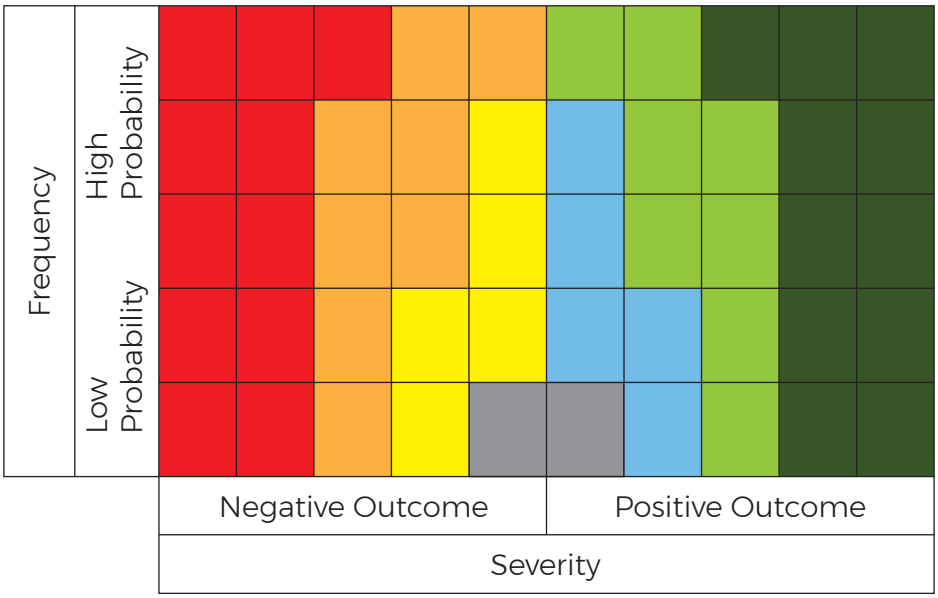
   Quadrant _____

Heat Mapping

Heat mapping is a visual representation of complex sets of data interpretations that uses colors to indicate patterns or groupings of how risk will impact an organization. Values are assigned based on measurement scales for both severity and frequency for each risk. The more severe a risk is thought to be or the more often it is expected to occur will determine the number assigned. The higher the assigned number, the greater the impact or likelihood of an event.

Each risk is plotted on the map based on the assigned value. A heat map can help assist an organization with risk prioritization.

A Sample Heat Map



Risk Register

A risk register prioritizes risks based on a scale of anticipated potential impact. Using a risk register helps track issues, likelihood, potential impact, and mitigation measures. It is highly customizable and may include the date, risk owner, and other factors important to an organization. Most risk registers focus only on pure risk.

Like a heat map, each risk is recorded on the register and assigned a score for probability and impact, and the overall score allows the risk manager to set risk priorities. In addition, a risk register allows the risk manager to list risk control methods that could lower the risk score, which results in a target risk score for the future.

	Current Risk Score				**Target Risk Score**		
Risk Description	**Prob**	**Impact**	**Rating**	**Controls**	**Prob**	**Impact**	**Rating**
Choking hazard							
Food poisoning							
Theft							

The key to successfully using a risk register is conducting this exercise on an annual basis to see if the controls are resulting in decreases to the risk scores over time. When the risk manager uses a risk register to prioritize risks, it is easier to make decisions about where to spend the target organization's limited financial resources for impactful risk control measures. If these measures are effective, the risk scores could be reduced more and more over time with further revision of the risk controls.

Check-In

Directions: Use the following terms to fill in the blanks. Terms may be used more than once.

annual	**greater**	**risk prioritization**
colors	**impact**	**risk scores**
frequency	**likelihood**	**severity**
	mitigation	

Heat mapping uses _____ to indicate patterns or groupings of how risk will impact an organization. Values are assigned based on measurement scales for both _____ and _____ for each risk. The higher the number assigned to a risk, the _____ the _____ or _____ of an event. A heat map can help assist an organization with _____.

A risk register is a highly customizable tool that prioritizes risks based on a scale of anticipated potential _____. A risk manager can use a risk register to track issues, likelihood, potential impact, and _____ measures. The key to using a risk register successfully is conducting this exercise on a(n) _____ basis to see if the controls are resulting in decreases to the _____ over time.

Root Cause Analysis

Recall that root cause analysis is a systematic method intended to drill down to the root cause of an incident. Knowing the root cause of a risk can allow a company to implement risk control measures, rather than retaining risks simply because the company has not really analyzed a problem to determine what can be done about it.

For example, imagine that you are a new risk manager for a cable manufacturing company. While examining the company's loss data, you notice that the number of slip and fall accidents in a certain area of the facility is ten times the number of slip and fall accidents in every other area of the plant. In addition, most of the falls in this area of the facility have

resulted in broken bones or head trauma, and several employees have become permanently disabled due to their injuries. In other words, both frequency and severity are high.

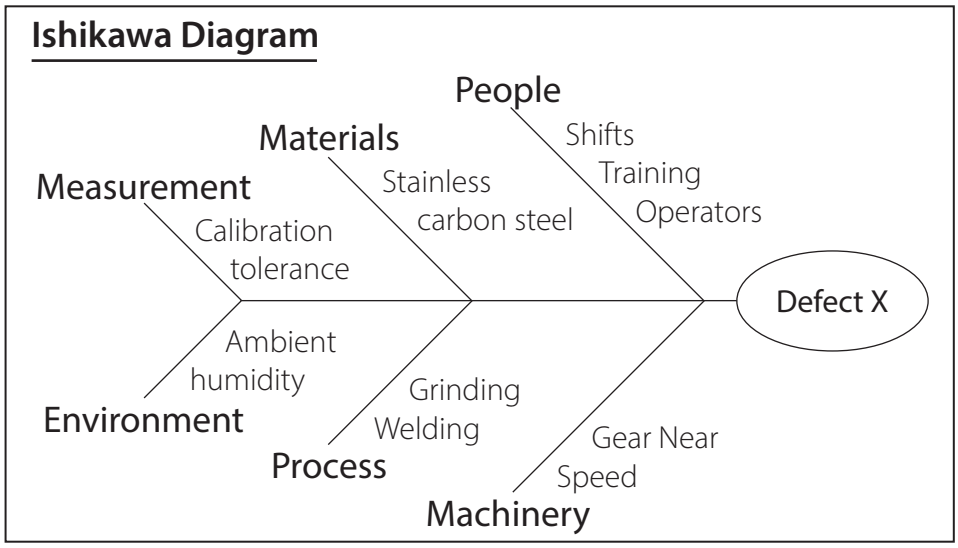
After analyzing this data, you call the line foreman and discover that this production line requires grease to lubricate the gears on a machine that is not used in other parts of the plant. The grease pot has to be emptied regularly or it overflows. Because the liquid grease is clear, it is difficult to detect until employees slip on the grease and fall.

Upon hearing this explanation, you work with the line foreman to implement risk control procedures requiring more frequent monitoring and emptying of the grease pot. By taking steps to reduce the number of accidents, you were able to move a high frequency/high severity risk to a low frequency/high severity spot on the risk map.

Ishikawa Diagram

An Ishikawa diagram, or fishbone diagram, is another example of a root cause analysis. The Ishikawa diagram can help a risk manager solve problems that are influenced by multiple areas or job junctions, as well as more complex risks that have multiple contributing factors.

In an Ishikawa diagram, the head of the "fish" is the identified problem, incident, or accident. Typically, the "fish" has six "ribs," but there may be more or fewer, depending on how an organization functions. Typically, the six ribs are people, process, measurement, machinery, environment, and materials.



The Five Whys

Another root cause analysis tool is the "Five Whys." Let's start the visualization of how Five Whys work by imagining a warehouse worker. The worker has fallen in the warehouse and broken his hip.

Why Number 1. The worker fell

Why Number 2. Because there was water on the floor

Why Number 3. Because the air conditioning unit is leaking

Why Number 4. Because the unit's evaporator coil is frozen

Why Number 5. Because air conditioner maintenance has been neglected, and the needed repairs have not been done

While implementing the Five Whys tool may produce the root cause, in this case it would be possible to ask why the needed repairs were not completed. For example, did someone in maintenance forget to submit a work order?

Using the Five Whys method, a risk manager delves deeper and deeper into the cause of a loss until she or he is able to identify the root cause.

Problem: A broken hip

Why? A warehouse worker slipped and fell.

Why? The floor was wet.

Why? The air conditioner is leaking water.

Why? The air conditioner's evaporation coil is frozen.

Why? Maintenance has been neglected.

Root Cause: Poor air conditioner maintenance led to a frozen evaporation coil which caused the air conditioner to leak water on the floor, resulting in a worker slipping, falling, and breaking his hip.

Type 2: Quantitative Analysis Methods in Risk Management

Unlike qualitative analysis methods, quantitative analysis methods rely on numerical data. Methods include loss projections, time value of money (TVOM) calculations, cost-benefit analyses, and total cost of risk (TCOR) calculations and analyses.

Loss Projections

Loss projections, or loss forecasts, use historical loss data to predict future risk frequency and severity.

Recall that time value of money (TVOM) calculations measure the value of money over a given amount of time, considering a given amount of interest.

Let's use movie ticket prices to construct an example. Say the average movie ticket price in 2018 was $9.00. Now say that in 1998, the price of a single movie ticket was half that amount, or $4.50. So, within ten years' time, inflation caused the cost of a movie ticket to double. For this reason, it would be unfair to compare the top movie in 1998, *Titanic*, to the top movie of 2018, *Black Panther*, in terms of box-office revenue without first adjusting for inflation.

Similarly, if you want to accumulate $20,000 at the end of ten years, and you assume that you can earn eight percent interest, how much money must you put aside today? Using a time value of money calculation, you can determine the amount you need now to generate $20,000 in ten years' time. Risk managers do the same thing, typically with much larger sums of money, to ensure that their clients are well informed about how the time value of money will affect their assets, investments, pricing, and other financial considerations.

Financial decision-making involves cash inflows (benefits) and outflows (costs), with the expectation that the benefits exceed the costs. However, the inflows often occur later than the outflows, making the comparison of benefits and costs challenging unless the TVOM is considered. In other courses we discuss the variables and factors that need to be considered in TVOM calculations. For this course it is important to remember that money is worth more now (presently) than in the future.

Cost-Benefit Analysis

A cost-benefit analysis measures total anticipated benefits after costs are subtracted. This approach is useful in determining if a future project or investment is sound, or if the benefits outweigh the cost. Inflows and outflows of cash are expressed by their net present value (NPV), which takes into account TVOM concepts.

Total Cost of Risk Calculations and Analyses

Total cost of risk (TCOR) calculations and analyses calculate the sum of all costs and expenses associated with risks and risk management within an organization. In response to the question, "What is the total cost of risk within your organization?" a risk manager might respond, “the cost of an organization’s insurance premiums.” But the true total cost of risk is much more complicated. These costs include insurance costs, salaries dedicated to the risk management department, outside services, deductibles, and self-insured retentions.

Risk Analysis Tools

The following risk analysis tools assist with understanding the frequency or severity of identified losses. They are grouped by those tools that assess likelihood and those that assess impact.

Tools that Assess Likelihood

Loss data analysis and risk mapping tools assess the likelihood that an event will occur.

1. **Loss Data Analysis**

   Loss data analysis begins with loss run data, normally gathered from an insurance carrier or third-party administrator. In the analysis process, risk managers search for trends in loss frequency and severity. These trends help risk managers measure the effectiveness of risk management program initiatives and determine priorities.

2. **Risk Mapping**

   Risk mapping is a visual analytical tool used for the purpose of identifying all of an organization’s risks, as well as their potential impact.

Tools that Assess Impact

The following tools assess the severity of a possible event.

1. **Payback Analysis**

   The payback analysis tool measures the length of time needed to recover the cost of a capital investment. For example, say a company invests $100,000 in a new packaging machine, and the positive cash flow is $20,000 a year. The payback period is five years ($100,000 initial investment ÷ $20,000 annual payback = 5 years).

2. **Accounting Rate of Return**

   The accounting rate of return (ARR) tool measures the percentage return of average annual cash flows on initial investment. The ARR is the average annual cash flow divided by the initial investment.

3. **Cost-Benefit Analysis**

   The cost-benefit analysis tool measures a total anticipated benefit once the sum of costs is subtracted. Generally, an organization’s projects proceed when funding is available and benefits outweigh costs.

Quantitative and qualitative analysis methods each offer different insights regarding the risks an organization faces. There are multiple reasons to use both, including the need for attaining valid answers and data for use in decision-making processes.

Check-In

Directions: Indicate "A" or "B" to identify each analysis method as qualitative or quantitative.

	A. **Qualitative analysis method**	B. **Quantitative analysis method**
_____	Cost-benefit analysis	Root cause analysis
_____	Heat mapping	Risk register
_____	Loss projections	Time value of money calculations
_____	TCOR calculations and analyses	Risk mapping

Knowledge Check

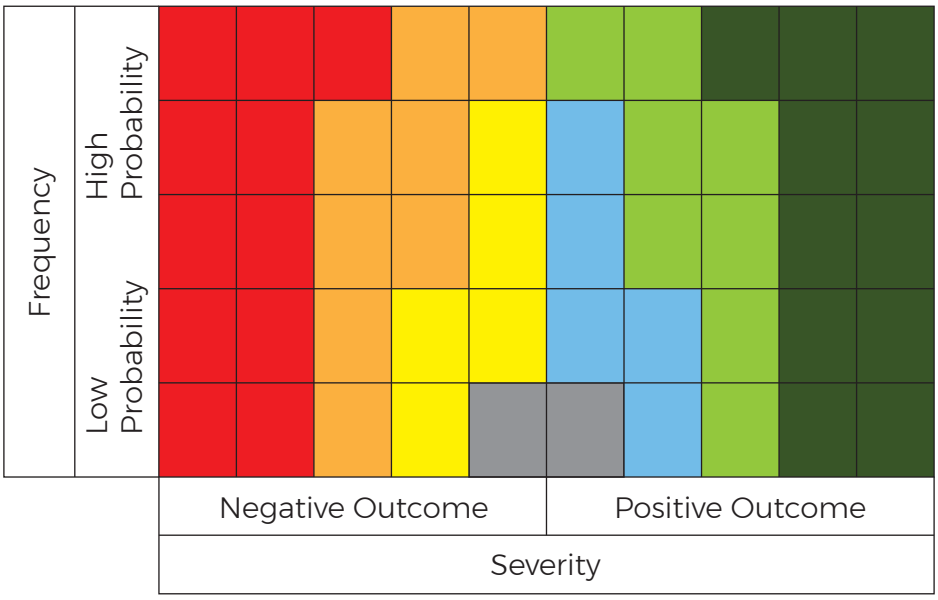
As the risk manager for a large beverage distributor, you have identified the following risks:

1. Catastrophic hurricane
2. Fleet maintenance
3. Vehicular accidents
4. Drivers
5. Supply chain
6. Inventory
7. Competition
8. New distribution opportunities
9. Fuel prices
10. Warehouse fires

After being asked to present your findings to the CEO, you determined that a heat map would be the best way to help the CEO visualize the impact these risks have on the organization.

Directions: Write the number of each identified risk in the following heat map. (For example, you might decide that a hurricane would have low probability but high negative outcome, so you would write the number 1 in the bottom left red square.)

A Sample Heat Map



Loss Trending

Learning Objective 2

Explain loss trending and list the steps in the process.

Loss trending is the process of taking historical losses and adjusting them with factors, such as inflation. This allows historical losses to be valued in current dollar amounts. This is one of the most critical aspects of quantitative loss analysis. It is important because it is necessary to take several factors into account before estimating future losses or exposures.

For a large property exposure, for example, risk managers might examine hurricane-related historical losses in order to estimate what their future exposure might be. They account for the difference in past-dollar values to the value of that same dollar today.

In other words, loss trending takes historical data (losses) and converts that loss data to current dollar amounts. It also allows risk managers to adjust open claims to determine an anticipated future value.

Loss data are collected as reported and stored by an insurance carrier in a loss run or in a **risk management information system (RMIS)** as raw data. For the purpose of risk management, the data must be adjusted to make accurate future projections. Complex losses such as workers' compensation or liability claims can take years to develop or reach their final claim amounts. Loss development is used to calculate the anticipated ultimate losses. The following factors are considered when making these calculations:

- Length of time to close claims: The more complex a claim, the longer it will take for the claim to develop or close. Although costs that are directly attributed to a claim might not be paid for several years, the ultimate impact or cost of the claim must be calculated.

- Accidents that have occurred but have not yet been reported—commonly referred to as incurred but not reported (IBNR): calculations take into account claims or accidents that have occurred but that an organization is not aware of at the present time. For example, say a person is walking across a parking lot when he falls into a large hole, injuring himself. The store owner is unaware of the accident. But the accident has occurred and there must be a way to account for such claims.

- Inflation: It is vital inflation factors be taken into account when risk managers use historical losses to make loss projections.
- Change in exposure base: stability is an important variable in loss projections, so changes in operations must be considered. For example, say an organization's largest losses in workers' compensation come from employees operating a floor scrubber. This year, the organization purchased automated floor scrubbing machines, meaning employees are not required to operate them. Hence, the organization has eliminated any future losses associated with that exposure.

Check-In

Directions: Check each true statement.

- ☐ Loss trending converts historical loss data to current dollar amounts.
- ☐ Loss data are reported to and stored by an insurance carrier in a RMIS.
- ☐ Loss development is used to calculate anticipated ultimate losses.
- ☐ Ultimate losses must be calculated because some claims take extensive periods of time to develop or close.
- ☐ Losses related to accidents that have occurred but have not been reported are excluded from loss calculations.
- ☐ Operational changes within an organization have little or no impact on loss calculations.

Adjusting Loss Data

Delays in reporting (frequency) and the natural growth of losses over time (severity) may result in incomplete data. Therefore, data must be developed, or adjusted.

Loss data are adjusted to provide more accurate calculations of loss trends to improve predictability of future losses. **Loss development** is the process by which data are adjusted to account for lag time to settle claims, recognize frequency development, acknowledge incurred but not reported (IBNR) claims, and index for inflation (calculate the rate of inflation in an economy). These adjustments are required because losses trend upward, meaning they increase in value, after they have been reported.

A **loss development factor (LDF)** is used to adjust (multiply) known claims to determine an anticipated value for claims over a specific time period, or the ultimate loss value. The more recently a claim has occurred, the larger the loss development factor (LDF) will be. Say, for example, that a claim with a cost of $10,000 occurred last year and is still open. The LDF assigned to that year might be 1.5, meaning that the risk manager can project the ultimate value of that claim to $15,000. However, if there is an open claim that occurred four years ago and is valued at $20,000, the LDF assigned might be 1.10, and the ultimate loss would be projected to $22,000.

Steps in the Loss Trending Process

While actual calculations for adjusting loss data are beyond the scope of this course (they are covered in the CRM Analysis of Risk course), it is important to understand the concept and the five steps of loss trending, or adjusting loss data.

The Five Steps of Loss Trending

Step	Action
1	Adjust for frequency development
2	Adjust for severity development
3	Adjust for change in the exposure base
4	Index for inflation
5	Forecast

1. **Adjust for frequency development**

   Frequency development factors are used to project the number of claims that will occur in a specific time period. Much like LDFs that project future costs, these factors project future frequency.

2. **Adjust for severity development**

   Recall how incurred but not reported (IBNR) accidents and loss development factors (LDFs) impact the value of current claims. In this step, risk managers use the IBNR factor and LDF to calculate the increased severity of a claim.

3. Adjust for change in the exposure base

Remember that changes in exposure base will affect the frequency and severity of future claims. If, for example, a manufacturer increases the number of employees in its plant, it simultaneously increases the exposure base, which can increase both the frequency and severity of claims.

4. Index for inflation

Recall that an index for inflation is a calculation describing an economy's rate of inflation. The index is calculated in the loss trending process to improve the predictability of future losses.

5. Forecast

Forecasting involves techniques examined in-depth in the CRM Analysis of Risk course. Forecasting techniques include the application of confidence intervals, loss rates, linear regression, and triangulation.

Overall loss development includes both frequency and severity. Frequency data are developed to discover the actual number of claims on a year-to-year basis. Severity data are developed (overall development) because payout periods can be lengthy or have "long tails." Payout development uses actual dollar payment outflows to calculate how overall developed losses are paid over time.

Knowledge Check

Your supervisor has been examining unadjusted loss data for claims that have occurred over the last five years and identifies some trends. Explain to your supervisor what must be done to loss data before trends can be determined and why those actions are necessary.

Summary

Risk Analysis—the second step in the risk management process—has multiple uses. For example, it can lead to the prioritization of risk factors. Risk managers can use their analyses to determine which risks pose the greatest threat or may have the greatest impact upon an organization. Risks with the greatest frequency or severity are prioritized over risks that affect an organization less.

Risk Analysis can also contribute to reviews of insurance programs, coverages, and insurance purchases.

There are two types of risk analysis methods—qualitative and quantitative. Qualitative analysis methods depend on information that is initially difficult to measure mathematically, while quantitative analysis methods rely on numerical data. Both analysis methods rely on a variety of tools.

Among qualitative analysis tools are risk mapping, heat mapping, risk registers, and root cause analysis, such as Ishikawa diagrams and the Five Whys. Among quantitative methods are loss projections, time value of money (TVOM) calculations, and total cost of risk (TCOR) calculations and analyses.

Some risk analysis tools assess the likelihood that events will occur, while others assess impact, meaning the severity of possible events.

Loss trending, or the process of applying specific factors to adjust historical losses, allows risk managers to evaluate historical lessons in terms of current dollar values. Data from this process, called loss data, are reported by an insurance carrier in a loss run or in a risk management information system (RMIS) as raw data. These data are adjusted to provide more accurate calculations of loss trends for the purpose of improving the predictability of future losses.

In summary, conducting risk analyses helps risk managers determine the frequency and severity of risks affecting an organization. It also helps them adjust loss data to account for factors such as time differences and inflation. Summarized simply, risk analysis makes it possible for risk managers to make educated decisions regarding how to help organizations control and finance risks.

Resources

For valuable reinforcement, some important concepts related to the learning objectives in this section are summarized in audio and video clips. Use the following link to access these helpful learning resources.

scic.com/ELRresources

 Risk Analysis Techniques
 Qualitative Risk Analysis
 Heat Mapping
 Total Cost of Risk (TCOR)
 Loss Trending

Section 3 Self-Quiz

Directions: Complete each item. For fill-in-the-blank items, choose the term that correctly completes the sentence. Answers may be used more than once.

cost-benefit	**loss development**	**risk mapping**
event	**loss projections**	**risk register**
heat mapping	**loss trending**	**root cause**
Ishikawa diagram	**prioritization**	**severity**
likelihood	**qualitative analysis**	**TCOR**

1. Validation and refinement of loss data allow for the _____ of risk factors.

2. A risk manager uses a(n) _____ analysis to systematically drill down to the cause of an incident.

3. This word is used interchangeably with the word "incident." A(n) _____ is an incident that may or may not become a claim.

4. _____ is the chance something will happen. It is also known as frequency.

5. _____ describes the impact of an event, should that event occur.

6. A risk manager carries out _____ to seek information that is initially difficult to measure mathematically.

7. _____ is a visual analytical tool that identifies all risks to an organization and indicates their frequency, on a scale from low to high, and their potential impact, or severity, on a scale from low to high.

8. _____ is a visual representation of complex sets of data interpretations that uses colors to indicate patterns or groupings of how risk will impact an organization.

9. The following diagram is an example of a(n) _____.

	Current Risk Score				Target Risk Score		
Risk Description	**Prob**	**Impact**	**Rating**	**Controls**	**Prob**	**Impact**	**Rating**
Choking hazard							
Food poisoning							
Theft							

10. The head of a "fish" is the identified problem, incident, or accident in a(n) _____.

11. _____ use historical loss data to predict future risk frequency and severity.

12. A(n) _____ analysis measures total anticipated benefits after costs are subtracted.

13. A risk manager who conducts a(n) _____ analysis calculates the sum of all costs and expenses associated with risks and risk management within an organization.

14. _____ takes historical data (losses) and converts that loss data to current dollar amounts.

15. _____ is the process by which data are adjusted to account for lag time to settle claims, recognize frequency development, acknowledge incurred but not reported (IBNR) accidents, and the index for inflation, or a calculation of the rate of inflation in an economy.

Section 4: Risk Control

Section Goal

The goal of this section is to explain Risk Control—step 3 in the risk management process. Risk Control is critical, given that the least expensive and most effective way to deal with risk is to prevent it.

Learning Objectives

1. *Apply risk control techniques.*
2. *Identify the root causes of accidents and the accident prevention steps that can be taken to help control them.*

Introduction to Risk Control

The next step in the risk management process is Risk Control. Risk Control is any conscious action or inaction intended to minimize at optimal cost the probability, frequency, severity, or unpredictability of loss.

Risk Control is a people process, meaning individuals across an organization focus on solutions that will prevent, mitigate, avoid, or eliminate risk. Administration of a risk control program requires prioritization, implementation, coordination, follow-up, and organization-wide communication.

Risk Control Techniques

Learning Objective 1

Apply risk control techniques.

Risk Control Techniques

There are several risk control techniques available to help minimize risk. While risk avoidance is the most effective technique, it is not always practical or conducive to doing business. The appropriate technique depends on two factors—the type of risk and the nature of the business. Below are a variety of risk control techniques. Commonly, a combination of techniques work best to address an exposure. However, avoidance always works alone.

Avoidance eliminating an exposure

Prevention reducing the likelihood of loss

Loss Reduction reducing the severity of a loss

Segregation/Separation/Duplication reducing the severity of a loss

Transfer moving some or all of the risk to another party

Let's examine each risk control technique more carefully.

Avoidance

Avoidance is the complete elimination of an exposure to avoid the chance of loss. With the loss eliminated, positive and negative outcomes disappear. Consequently, managers may hesitate to use this technique, given that avoidance may conflict with an organization's goals and profit motives.

Risk avoidance is a self-sufficient risk control technique, meaning no further action may be required. However, exposures related to past activities may remain. For example, discontinued products can remain in the marketplace or in the hands of consumers, meaning future claims may occur.

Consider this example. Say you are an executive of a company that manufactures child seats for automobiles. Your company hires a consulting firm to test how well the child seats withstand crashes. Results indicate a high failure rate due primarily to the insufficient strength of the seat's structural materials. You make an executive decision to stop production of the product. You used avoidance as a risk control technique.

Check-In

Directions: Read each statement. Then select True or False.

1. Risk avoidance is the mitigation of an exposure to help reduce the severity of a loss.

True **False**

2. Risk avoidance is a business organization's preferred risk management method.

True **False**

3. Exposures related to past activities may remain despite risk avoidance.

True **False**

Prevention

Prevention is an action intended to interrupt a sequence of events that leads to loss. If the action fails to stop the event that leads to loss, it may at least make the loss less likely. Because prevention is not avoidance, this risk control technique allows an organization to continue conducting operations.

Prevention is not the same as avoidance. Avoidance does away with the risk completely. In prevention, the risk is not eliminated. The risk remains and is handled by risk control measures that interrupt a sequence of events which could lead to a loss. However, prevention reduces frequency of loss, not the severity, or budget impact, of loss.

Let's look at an example. Say you are the head of the IT department for a small financial institution. Aware of the potential for cyber-attacks and ransom demands, you supervise the installation of a new firewall. You also schedule a series of training classes for your employees. You used prevention as a risk control technique.

Loss Reduction

Loss reduction is an action taken to minimize the severity, or budgetary impact, of an unprevented loss. The action presumes the loss will occur but is an attempt to reduce the size or extent of the loss. Toward that end, there are pre-loss and post-loss reduction approaches.

For examples of loss reduction, let's use beach hotels in a southern state that borders the Atlantic Ocean. Hurricane season in the Atlantic begins around June 1, hits its peak in late September, and continues into November.

As part of their **pre-loss reduction** approaches, hotels install hurricane blinds, plan evacuation routes, and arrange emergency transportation for employees and guests. Employees are given large plastic containers to pack computer equipment and important papers. These containers are put on desk tops, well out of the way of flood waters. Hotels cover windows with sheets of plywood to prevent glass from shattering and from creating spaces that might allow wind and rain to enter. All of these are pre-loss reduction efforts.

One of the most important **post-loss reduction** actions after a hurricane has occurred is providing medical attention to employees and customers. Hotels also work with contractors to repair damaged rooms to make them available for renting as soon as possible. This work with contractors reduces the income lost on rooms that can't be rented.

While many risk reduction activities can be planned in advance, execution is critical. For that reason, it is important for hotels to have good relationships with local emergency management offices, building contractors, and other groups that can help hotels return to normal business as soon as possible.

Check-In

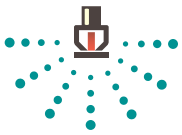
Directions: Use the following terms to fill in the blanks.

budgetary impact	**loss reduction**	**pre-loss**
elimination	**operations**	**prevention**
interrupt	**post-loss**	

While avoidance is the _____ of exposures, _____ is intended to _____ events that lead to loss, not avoid them entirely. Unlike avoidance, prevention is a risk control technique that permits organizations to continue _____.

Actions taken to minimize the severity, or _____, of unprevented losses represent the risk control technique called _____. The approach is applied before and after losses. A coastal hotel, for example, takes _____ actions when it prepares an emergency evacuation plan and implements _____ actions when it provides medical attention to staff and guests after a hurricane has occurred.

Imagine Yourself



You are the distribution supervisor for a home-goods supply store. You manage a team of employees operating inside a massive warehouse. Well aware of the potential for loss arising from fire, you supervise the installation of a superior fire-suppression system. You used a pre-loss approach to loss reduction as a risk control technique.

Segregation/Separation/Duplication

Segregation is an action intended to isolate an exposure from other exposures, perils, or hazards. Let's use a university science lab as an example of segregation.

Researchers in the university science lab use flammable materials in their work. The university stores these necessary materials in a separate building, segregating them from both the lab itself and all of the lab's assets that could be exposed if the flammable materials ignited. The flammable materials, which are one exposure, are thereby isolated from the lab building, which is another exposure.

Now consider an additional example—hydraulic fracturing, or "fracking." "Fracking" is a drilling process in which liquid is injected at high pressure into a vertical or angled well, to a depth of one to two miles. Once the well reaches where natural gas or oil exists, horizontal drilling begins.

Fracking companies use a spill containment pit to capture the contaminated water that is created during the fracking process. The contaminated water is isolated from people and other exposures at the job site. The pits are typically lined with non-porous liners that prevent the water from permeating the ground, which is another exposure.

Separation is the distribution of exposures or activities over several locations. It also describes the division of assets across two or more locations or activities. However, if one location suffers a loss, the other must have sufficient capacity to fulfill an organization's needs.

Amazon presents an example of separation. The company has hundreds of order fulfillment centers in the United States alone. At these fulfillment centers, Amazon employees store and deliver inventory consisting of a wide variety of products offered by a large number of vendors.

To achieve same day delivery, it is helpful to Amazon to store their inventory of products in separate locations around the country. This strategy also ensures that if one center is destroyed in a fire, the other centers should be able to continue fulfilling orders. Separation ensures that there is sufficient inventory at other fulfillment locations—and in Amazon's case, it also means that inventory can be shipped from the fulfillment center that is located closest to a delivery address.

This time, let's use a manufacturer of kitchen tables and chairs as an example. The manufacturer might keep finished goods in two separate warehouses which are not subject to the same weather perils. If one of those warehouses is located in an earthquake zone, let's say, then the other warehouse is located in an area that is not prone to earthquakes.

Duplication is the establishment of backups for critical systems or operations. Duplicated assets and activities are kept in reserve to avoid exposing them to the same loss. For example, many companies back up documents to the Cloud while also keeping them on a physical server. And some companies run replicating servers which carry the same data in real time. In either event, these companies are using the risk control method of duplication to ensure that they always have access to critical systems and information.

It is interesting to note that duplication is a risk control technique that people often use in their personal lives, too. Think about a car. An extra set of keys is an example of duplication. So is the spare tire in the trunk.

Check-In

Directions: Match each term to its example.

A. Segregation **B. Separation** **C. Duplication**	_____ An ice cream start-up builds a second walk-in freezer in its warehouse.
	_____ A car dealership sells its sports utility vehicles from its suburban lot and its compact and hybrid cars from its downtown location.
	_____ A waste management company establishes a compost facility at a site separate from its landfill facility to prevent contamination.

Transfer

Transfer is the movement of some or all financial responsibility for risk to another party. Transfers can be physical or contractual. In a physical transfer, some or all of an operational function or exposure is transferred to an outside source.

Say you own a home remodeling company that provides remodeling services from design to installation. Occasionally, you receive orders for window replacements. Instead of hiring employees to fulfill those orders, you hire independent contractors to complete the jobs. You use **physical transfer** as a risk control technique.

In a **contractual transfer**, financial responsibility for certain liabilities moves to another party. There are four classifications of contractual transfers.

1. An **exculpatory agreement** is a pre-event exoneration of one party for events that may result in any loss or a specified loss to another party. The word *tort* is a legal term referring to an event in which an individual causes damage, injury, or harm to another. An exculpatory agreement absolves the **tort liability**, or liability for negligence, of one or both parties to the contract. However, absolution does not apply to third parties.

Here's an example. Richard and Joan live next door to each other. Joan has a pool in her back yard. The pool is surrounded by a fence. Richard has a tall oak tree in his back yard, and the branches extend over Joan's pool. So almost every day, Joan has to skim leaves from Richard's oak tree out of her pool. Worse, each spring, she has to spend a lot of time backwashing the filter due to the pollen—which is, again, caused by Richard's tree.

One day, Richard tells Joan that he is planning to cut down the tree, but he is worried about limbs falling and damaging her fence. Joan is so happy the tree will be gone that she quickly agrees she will not ask Richard—or his insurance company—to pay for any fence repairs that might be caused when the tree is being cut down. Together, Richard and Joan write an agreement expressing the terms, and they both sign the document.

Joan and Richard have now become parties to an exculpatory agreement. If a branch falls while Richard is cutting down the tree and damages the fence, Joan will be responsible for the repairs. Importantly, Richard will still be responsible if a branch falls on another neighbor's property and causes damage or injuries. The exculpatory agreement between Joan and Richard cannot be extended to any third parties. It applies only in the event that branches from Richard's tree cause damage to Joan's fence.

What happens if tree branches cause some other type of damage to Joan's property, other than damage to the fence? From what we know of the terms of their exculpatory

agreement, Richard will be liable for any damage that was not specifically covered by the language used in the exculpatory agreement.

2. A **waiver of subrogation** is a pre-event agreement that prevents an insurance carrier from recovering payments it makes to its insured on a claim caused by a third party. A business owner may, for example, require a waiver of subrogation from individuals who work for or visit the business's worksite. This protects the owner from liability for claims made by these individuals. A waiver of subrogation does not absolve tort liability of the parties but prevents insurers from any recovery of loss payments made to its insured.

Let's use the owner of a two-story building to provide an example. The owner requires tenants to provide him with a waiver of subrogation for any damages that occur in the leased units which are the result of his actions or inactions. This is a typical lease provision.

Normally, tenants are required to notify their insurance companies that the waiver is required in the lease and to ask their insurers to endorse their policies to reflect the waiver of subrogation.

One day, the owner undertakes plumbing repairs in an upper unit and causes a flood in the unit below. The tenant in the lower unit makes a claim on her insurance policy and is paid for the damages. The waiver of subrogation prevents the insurance company from pursuing the owner of the building—even though the owner was responsible for those damages. The waiver does not change who is at fault—it changes who is responsible for payment. Because of this consideration, some insurance companies charge an additional premium when a waiver of subrogation is added to a policy.

Here's another example. Wilson Designs hires an information technology company, ABC IT, to perform upgrades to its data management system. The contract contains a mutual waiver of subrogation—both parties waive their insurance companies' rights of recovery against the other. One of ABC IT's employees is walking across Wilson's office when he trips over a rip in the carpet and breaks his leg. The ABC IT employee files a workers' compensation claim. The insurance company pays the claim and then tries to subrogate against Wilson Designs. Because of the waiver of subrogation, the insurance company cannot receive the reimbursement it is seeking.

Likewise, Wilson's insurance carrier will pay the claim when one of Wilson's own employees breaks his arm when he trips over tools that an ABC IT employee left on the floor. However, if Wilson's insurance carrier tries to subrogate against ABC IT's insurance company, the *mutual* waiver means that the design company's insurance company will not receive reimbursement.

3. A **limit of liability clause** is a pre-event limitation of the amount, type, or method of calculation of damages available to one or both parties to an agreement. It does not absolve the tort liability of one or both parties. However, it limits the recovery amount of damages available between the parties.

A good example of a limit-of-liability clause can be found in an equipment lease. Companies that lease out equipment often insert a limit-of-liability clause into the lease contract. These clauses typically limit damages to the amount of the lease payments in the contract.

Let's say that a photocopier is leased for sixty months for $500 per month (60 x $500 = $30,000). So, the maximum damages available to the person leasing the machine would be $30,000, no matter how much damage is done.

Now let's say that the photocopier somehow catches fire and burns a large portion of the building. The amount of damages available from the leasing company would be insufficient to cover the needed repairs. The company would not be able to receive more than $30,000—whether through an insurance claim or a subsequent lawsuit—because of the limit-of-liability clause in the contract. However, if the person leasing the photocopier is a tenant in the building, the building owner would not be prevented from pursuing the copier company, because the building owner is not a party to the lease contract.

4. A **hold harmless agreement** or **indemnification agreement** is an arrangement whereby one party assumes the liability inherent in a situation, thereby relieving another party of that liability. In these situations, the party that assumes liability is called the **indemnitor**, and the party that is relieved of that liability is called the **indemnitee**. Contracts that commonly contain hold harmless agreements include construction agreements, service agreements, purchase orders, usage permits, and lease and rental agreements.

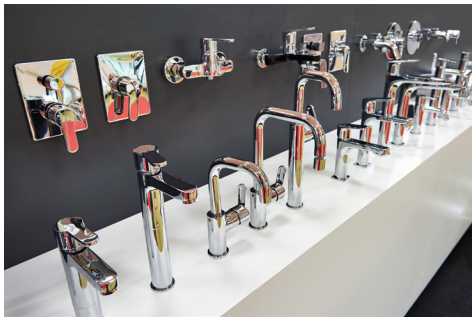
There are three classifications of hold harmless agreements. Reviewing these classifications of hold harmless agreements is simpler if you remember the concept of "mine, ours, and yours."

Limited
Mine This agreement assumes responsibility for an indemnitee's liability for an indemnitor's negligence only.
Intermediate
Mine + Ours This agreement takes the responsibility from the limited form and adds the indemnification of the indemnitee if there is any negligence on the indemnitor's part. It also adds that if the indemnitee shares in any of the negligence, the indemnitor is responsible for the entire claim, regardless of the amount shared.

Broad
Mine + Ours + Yours This agreement takes responsibility from both the limited and intermediate forms and adds that the indemnitor agrees to be responsible for the indemnitee's sole negligence, meaning the indemnitor is liable for damages caused by the indemnitee, regardless of whether the indemnitor is negligent.

Now let's consider examples of limited, intermediate, and broad forms.

Limited Form (Mine)



Freddie owns his own company, Freddie's Faucets. Freddie is the only employee.

Freddie earns the majority of his income as a subcontractor, working for a general contractor who oversees the construction of apartment complexes. Freddie's job is to install faucets inside apartment kitchens and bathrooms.

The general contractor has many subcontractors working on a new apartment complex, and he does not want to be responsible for any damages Freddie or any other subcontractor may cause. And Freddie does not want to be responsible for any mistakes or damages caused by other subcontractors or the general contractor. This problem is solved by the execution of a **limited form hold harmless agreement.**

In a limited form hold harmless agreement, Freddie states that he, as a subcontractor, will be responsible for any claims, damages, or injuries that arise as a result of his activities. If Freddie had employees, his employees would also fall under the terms of this agreement.

Intermediate Form (Ours)

In this situation, subcontractor Freddie agrees to be responsible for his own negligence or fault AND for any shared negligence that he and the general contractor have jointly. By executing an **intermediate form hold harmless agreement,** both parties have agreed that if they both contribute to the damages and/or injuries, the subcontractor will be responsible. The short way to remember this is "mine plus ours."

Broad Form (Yours)

The **broad form hold harmless agreement** gets its name from offering the broadest possible indemnification that can be given. In this situation, the subcontractor agrees to be responsible for his negligence, any negligence he shares with the general contractor, AND the general contractor's own or sole negligence. That means that even if Freddie was in no way involved with the action or inaction that led to claims, injuries, or damages—and only the general contractor was at fault—Freddie will still be responsible for payment. To remember this, think "mine plus ours plus yours."

As a practical matter, courts will not enforce a broad hold harmless agreement. Indemnification for the sole negligence of another party is generally held to be against public policy because it creates a morale hazard.

For example, let's say that Freddie signs a broad form hold harmless agreement with the general contractor. Doing so means that the general contractor would have very little reason to exercise the proper care and professionalism that is expected of someone in his position. Because Freddie would be responsible for the financial consequences of any negligent act of the general contractor—mine, ours, and yours—the general contractor would have an incentive to be lax in the performance of his duties; thus, the morale hazard.

Check-In

Directions: Match each term to its example.

avoidance	**prevention**	**loss reduction**
segregation	**separation**	**duplication**
	transfer	

_____ **1.** A machine shop requires employees to use personal safety equipment while they are using the shop's drill presses.

_____ **2.** An appliance store splits unsold inventory between two warehouses 20 miles apart.

_____ **3.** A company relies on a common carrier to distribute manufactured goods rather than buying trucks to transport its products.

_____ **4.** A dairy farmer installs generators as an energy alternative in cases of power failure.

_____ **5.** A large retail company installs a fire suppression system.

_____ **6.** After there are several reported cases of babies swallowing ornaments decorating a crib mobile, the manufacturer ends production of the mobile.

Knowledge Check

A hurricane struck Florida's Gulf Coast, causing significant damage to a five-star hotel. The hotel has a golf club, golf course, and separate parking structure. The hotel maintains a fleet of minivans and employs drivers to shuttle guests to and from the airport.

During the storm, it was necessary to evacuate guests and employees, and injuries were reported. After the storm, the property required extensive repairs related to wind damage and flooding. Plus, water damage made it necessary to replace the hotel's fleet of golf carts and two minivans.

Knowing the extent of the damage, what risk control measures should the hotel have taken prior to the loss? Write your answers in the chart.

Guests	
Avoidance	
Prevention	
Loss reduction	
Segregation	
Transfer	

Golf carts	
Avoidance	
Prevention	
Loss reduction	
Segregation	
Transfer	
Damage to the building	
Avoidance	
Prevention	
Loss reduction	
Segregation	
Transfer	

Minivans	
Avoidance	
Prevention	
Loss reduction	
Segregation	
Transfer	

Accident Prevention Basics

Learning Objective 2

Identify the root causes of accidents and the accident prevention steps that can be taken to help control them.

The Causes of Accidents

Some events can be predicted and even prevented. Others must be controlled.

A general understanding of the causes of accidents is helpful if a risk manager is to successfully determine which risk control techniques will be most practical or valuable. A key component of any organization's TCOR is the sum of losses arising from damages and/or injuries.

Common root causes of accidents include:

- Unsafe acts or behaviors
- Lack of awareness
- Lack of or insufficient training
- Unsafe conditions
- Uncontrollable events

There are many reasons why employees may work in an unsafe manner. Unsafe acts or behaviors are one.

One very common and also preventable reason is that employees are unaware their behaviors are unsafe. In many cases, this lack of awareness is because no one in the companies where they work has ever identified unsafe behaviors and told them. Neither have many employees had any training about safer ways to accomplish the same objective. Too often, personnel, including managers, become too involved in their other roles and responsibilities, leaving safety to take a back seat.

In circumstances like these, employees rarely, if ever, receive regular reminders regarding the importance of safety, or feedback about their behaviors. In fact, workplace conditions often *encourage* unsafe behavior.

It's not surprising then that employees often think if everyone else is demonstrating a particular behavior, the behavior must be okay. And much of the time, unsafe work behaviors are more convenient, more comfortable, or help employees accomplish their goals in less time.

For example, employees on a construction site may object to wearing hard hats or using cumbersome safety equipment. This is where managers—and risk managers—need to ensure that all personnel understand that employee safety is in everyone's best interest. There must also be a clear understanding that safety requirements will be enforced without exception. Unsafe behaviors rarely result in injury on any single occasion, but at some point, an accident will occur if unsafe behaviors are not addressed. As the risk manager, your goal is to alter unsafe behaviors.

Unsafe conditions are a second major reason for employee accidents. This factor includes everything from commonplace tripping hazards to more specific hazards inherent in dangerous occupations, such as underwater welding. For the manufacturing industry, additional unsafe conditions could include using a machine where the guarding shield has been removed or the dead man's switch has been disabled.

While some unsafe conditions are simply inherent to the nature of specific operations, it is also frequently the case that management permits some unsafe conditions to continue. There have been many lawsuits over unsafe conditions permitted by management. Often the unsafe conditions are allowed because they increase the speed of a production line or enhance efficiency in some other manner. Sometimes, management knowingly disregards a manufacturer's safety recommendations for these very reasons.

For example, let's say a production facility uses a piece of equipment that includes a safety feature called a guard shield. The manufacturer's directions, which are displayed on a warning attached to the equipment, identify the metal plate that accompanies the equipment as the guard shield. The directions emphasize that the equipment should not be operated without the guard shield in place. The manufacturer's warranty also states that operating this machinery without the guard shield in place voids the warranty.

The purpose of the guard shield is to keep human arms and fingers from being exposed to the blades of high-power saws that are located directly behind the guard shield. However, to properly clean the saws, employees must turn off the machine, remove the guard shield, clean the saws' blades, and then reattach the guard shield. Generally, at XYZ Company, the saws require cleaning every two hours.

The line foreman at XYZ Company would like to increase production. He concludes that if the guard shield is permanently removed, the increased airflow will blow the fine debris that accumulates on the saw blades to the floor. That means the line employees will spend much less time cleaning the saw blades. The foreman also figures that employees who work close to the saws have sufficient common sense not to get too close to the saw blades. So, he removes the guard shield, along with all of the warning plates.

Production increases significantly for several weeks, until the day an employee's cell phone accidentally drops out of his pocket and onto a conveyor belt leading to the machine. The employee, who works less than two feet from the machine, responds hastily. Standing up too quickly to reach for his phone, he loses his balance and both his hand and the phone he was attempting to grab are severed by the saw blades. From the company's perspective, as dreadful as this event is, there are more consequences to come. The employee's hand bones and fragments of the cell phone damage other working parts of the machine, causing the entire piece of equipment to halt.

Equipment repairs are so extensive that nothing will be manufactured on that line for a period of at least two weeks. Thirty employees work on this one production line. So, the loss of time is significant. Plus, because the equipment was not being operated in accordance with the manufacturer's directions at the time of the accident, the warranty has been voided. And repairs for such a specialized piece of equipment will be extraordinarily expensive.

In this example, an unsafe practice was permitted to continue for several weeks. Most unsafe behaviors and conditions are observed one or a few times before an accident occurs. That is why it is critical for supervisors to correct these situations. It's fair to say that accidents and injuries are inevitable if unsafe conditions are allowed to persist. Employees may not like the safety requirements or the need for safety training, but employee safety is in the best interest of all concerned. That is why risk managers work to ensure that company culture stresses safety.

Uncontrollable events are usually thought of as catastrophic natural events like earthquakes. These types of events can have devastating effects on both people and property. But an event need not be of catastrophic proportions to be uncontrollable. Consider sinkholes.

Sinkholes are cavities below the ground that form when water erodes an underlying rock layer. The cavities may be from several feet to hundreds of feet in diameter. Unobserved from the surface, the sudden collapse is completely unexpected. In 2020, a sinkhole in China swallowed an entire bus, killing several passengers and injuring many others. Sinkhole activity is an uncontrollable event, even though it does not have the same impact or disastrous nature as a hurricane.

Check-In

Directions: Use the following terms to fill in the blanks.

identify	**permitted**	**uncontrollable**
lack of awareness	**preventable**	**unsafe acts**
operations	**sinkholes**	**unsafe conditions**
overlooked	**training**	

1. _____, or behaviors, are one common and _____ reason for accidents. Often, the cause is a(n) _____. Companies have not taken the time to _____ unsafe behaviors. Neither have they provided their employees with adequate _____ training.

2. _____ are also a reason for employee accidents. While some unsafe conditions are inherent to specific business _____, such conditions are sometimes _____ or even _____ by managers seeking to increase production, promote efficiency, or save money.

3. Large natural events like earthquakes are _____ acts and considered catastrophic. Much smaller natural events like _____ can also have significant damaging effects on both people and property.

Accident Prevention

Accident prevention is possible. There are a number of steps an organization can take to protect itself from accidental events. Because prevention is possible, accident prevention should be an area of focus for all risk managers.

In practicality, there are six major methodologies for accident prevention:

- Elimination of potential hazards
- Substituting a less hazardous substance or process for an existing one
- Using engineering controls to physically modify designs
- Administrative controls
- The use of personal protective equipment, or PPE
- Employee training

Let's begin with the first method—the elimination of potential hazards. For example, ladders are one of the largest sources of employee accidents and deaths in the construction industry. Many construction companies have eliminated this hazard by requiring the use of various types of lifts. Employees are not provided ladders, nor are they allowed to use them.

The second method of accident prevention is substituting a less hazardous substance or process for an existing one. For example, many companies use non-toxic alternatives for substances commonly used in the workplace that contain chemicals that can cause employee injuries. In other words, the second method of accident prevention is finding safer alternatives.

Another accident prevention technique is using engineering controls to physically modify designs. For example, say a hedge trimmer manufacturer learns that homeowners are sustaining hand injuries because the product was designed to leave one hand free. The manufacturer redesigns the product to require two-handed operation. This physical modification ensures that the free hand will no longer be at risk of injury.

Now let's look at administrative controls. This method establishes rules or processes aimed at reducing the likelihood of injury. A good example would be establishing whether employees are allowed to use their phones while driving company vehicles. Another would be the requirement that employees be given rest breaks of ten minutes every four hours.

The fifth accident prevention technique is requiring the use of personal protective equipment, or PPE. A welder's helmet is an example of PPE. It protects a welder's face and eyes from sparks and burns. It also offers eye protection from the electromagnetic energy given off by an arc or flame, commonly referred to as radiant energy or light radiation. For protection from radiant energy, OSHA requirements state that workers must use personal protective equipment, such as safety glasses, goggles, welding helmets, or welding face shields. The nature of welding operations and the materials required to complete those operations determine which PPE is required.

Finally, there is employee training. Employees must be aware of safe work habits and procedures. Many companies have "toolbox talks" on a regular basis. Toolbox talks are informal safety meetings normally lasting five to seven minutes and held at the beginning of a shift or workday. These talks focus on specific safety topics and can be as simple as brief reminders to stay hydrated while working outdoors in the summer.

While not all accidents are avoidable, individuals and organizations can take steps to decrease their frequency and severity.

Reflection

Think about one or more steps your organization has taken to prevent accidents in the workplace. Describe the step. Then suggest another step the organization should take to prevent the same kind of accidents.

_____

_____

_____

_____

Knowledge Check

Here are six steps for accident prevention:

1. Eliminate a potential hazard.
2. Substitute a less hazardous substance or process for another.
3. Make physical modifications to a design to reduce the likelihood of injury.
4. Establish rules or processes aimed to reduce the likelihood of injury.
5. Provide personal protective equipment to employees.
6. Offer training.

Directions: Read the following scenario. Explain how these steps could prevent an accident from occurring.

Your organization specializes in mechanical and structural repair. Your employees often work on scaffolding, outside in the heat, and with open welding flames. Your equipment is several years old, and the majority of the tanks have visible dents from years of use.

_____

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Summary

Risk Control—step 3 in the risk management process—is a people process, meaning individuals across an organization focus on solutions that will prevent, mitigate, avoid, or eliminate risk. While avoidance eliminates risk, it is often difficult to do, given that risk is inherent in doing business. Risk control is the practical option.

Risk managers employ techniques and methods for minimizing risk.

- Avoidance eliminates an exposure.
- Prevention reduces the likelihood of loss.
- Loss reduction reduces the severity of a loss.
- Segregation/separation/duplication reduce the severity of a loss.
- Transfer moves some or all risk to another party.

If risk managers are to successfully determine which risk control techniques will be most practical or valuable, it is helpful for them to have a general understanding of the causes of accidents. Common root causes of accidents include:

- Unsafe acts or behaviors
- Lack of awareness
- Lack of or insufficient training
- Unsafe conditions
- Uncontrollable events

While unsafe acts or behaviors are common causes of accidents, they frequently occur because a lack of awareness exists among employees, or because employees have received little or no safety training. Other reasons also contribute to accidents. Unsafe conditions, including those encouraged by management in order to increase productivity, can lead to accidents. So can entirely uncontrollable and often unexpected events, such as earthquakes.

Despite the numerous causes of accidents, accident prevention is possible when organizations take steps to protect themselves. Organizations typically rely on six accident prevention methodologies:

- Elimination of potential hazards
- Substituting a less hazardous substance or process for an existing one
- Using engineering controls to physically modify designs
- Administrative controls
- The use of personal protective equipment, or PPE
- Offering training

While not all accidents within an organization are necessarily avoidable, individuals and organizations can take steps to decrease their frequency and severity.

Resources

For valuable reinforcement, some important concepts related to the learning objectives in this section are summarized in audio and video clips. Use the following link to access these helpful learning resources.

scic.com/ELRresources

	Implementing Risk Control Techniques
	Five Risk Control Techniques

Section 4 Self-Quiz

Directions: Use the following terms to fill in the blanks. Answers may be used more than once.

avoidance	**hold harmless**	**prevention**	**uncontrollable events**
contractual	**limit of liability**	**segregation**	**unsafe acts**
duplication	**loss reduction**	**transfer**	

1. Risk _____ is the complete elimination of an exposure to avoid the chance of loss.

2. An action intended to interrupt a sequence of events that leads to loss is called _____.

3. _____ reduces frequency of loss, not the severity, or budget impact, of loss.

4. _____ is an action taken to minimize the severity, or budgetary impact, of an unprevented loss.

5. An action intended to isolate an exposure from other exposures, perils, or hazards is called _____.

6. The establishment of backups for critical systems or operations is called _____.

7. Movement of some or all risk to another party is called _____.

8. Responsibility for certain liabilities moves to another party in a(n) _____ transfer.

9. A(n) _____ agreement is an arrangement whereby one party assumes the liability inherent in a situation, thereby relieving another party of that liability.

10. A(n) _____ clause is a pre-event limitation of the amount, type, or method of calculation of damages available by one or both parties to an agreement.

11. What do the items in the following list have in common? Write your answer on the lines.

- Unsafe acts or behaviors
- Lack of awareness
- Lack of or insufficient training
- Unsafe conditions
- Uncontrollable events

_____

_____

12. Check each example of accident prevention.

- ☐ enter into an exculpatory agreement
- ☐ eliminate a potential hazard
- ☐ substitute a less hazardous substance or process for another
- ☐ establish a waiver of subrogation
- ☐ make physical modifications to a design to reduce the likelihood of injury
- ☐ offer training

Section 5: Risk Financing

Section Goal

The goal of this section is to explain step 4 in the risk management process—Risk Financing. You will build an understanding of risk financing options, which risks are insurable, and the continuum of risk financing.

Learning Objectives

1. *Explain three risk financing options.*
2. *Describe which exposures are insurable and which fall outside the standard insurance market.*
3. *Choose a risk financing plan appropriate for a given organization.*

Introduction to Risk Financing

Once risks are identified and analyzed, the next step in the risk management process is Risk Control or Risk Financing. Although the steps are separate, either can be done in lieu of the other. In reality, most risks should be both controlled and financed.

It is less expensive to avoid risk than to finance it. However, risk is inherent to business. Because it is impossible to avoid or control all risk, there must also be a risk financing program. This program should define what risk should be retained, when it is appropriate to transfer financial responsibility, and what type of insurance program meets an organization's needs.

Risk Financing

Learning Objective 1

Explain three risk financing options.

The Acquisition of Funds

Risk financing is the acquisition of funds at the most favorable or optimal cost to pay losses. Funds can be internal (retention, planned, or unplanned) and external (borrowing, insurance, non-insurance contractual transfers). The term, *optimal cost,* is flexible, defined broadly as the best, most satisfactory, or most desirable cost. The term does not necessarily mean the "cheapest."

Risk control and risk financing are closely interrelated. In many cases, risk managers will use some combination of risk control and risk financing measures for different risks. For example, one of the primary treatments for low frequency/high severity risks, such as hurricanes, is insurance. Thus, a risk manager may begin the fourth step of the risk management process by financing the majority of this loss with insurance. However, the risk manager will also use pre-loss and post-loss risk control methods to reduce either the frequency or severity of these types of losses. So in reality, the risk manager will move back and forth between the financing and control steps to determine the best course of action.

For a high frequency-low severity risk such as theft from a convenience store, a risk manager may first examine the risk controls that could be put into place to reduce frequency. However, the risk manager would also want to insure cases of high severity theft, such as employee embezzlement. Similarly, the risk manager may wish to retain small losses for customer injuries, but insure any injuries that are above two thousand dollars.

A risk manager's goals and objectives determine which risk financing program is best, most satisfactory, or most desirable. Three questions guide decision-making:

- Is the program the most efficient use of resources?
- Is it the lowest cost?
- Does it offer the best value?

To answer the question "Is the program the most efficient use of resources?" a risk manager will clearly need to understand the resources that are available. She will need to review the analysis that has been conducted regarding the company's financial position, its loss history, and its near-term goals and objectives. For example, say that one year a company has a brilliant idea for a new product that could take the market by storm. The primary goal for this year may be to get that product launched as quickly as possible. But there are two more questions that must be considered before the risk manager can make risk financing decisions.

The second question, "Is it the lowest cost?" is also relative, and closely related to question three, "Does it offer the best value?" Something of low cost and little value may not be worth having. For example, it is entirely possible that the risk manager can buy very inexpensive property insurance by lowering limits, taking a chance that there won't be a hurricane this year, or buy cheaper policies that do not include the "bells and whistles" offered by other carriers.

The CEO may be very happy to hear this will save the company forty thousand dollars which can be invested into a new product launch. The CEO will be happy at least until the hurricane. Cost is one thing—value and protection are another.

The amount of resources available to meet a company's objectives drives discussions regarding cost versus value. At every turn, everyone involved in the development of the risk management program needs to understand the importance of obtaining the best use of resources, at the best cost, and at the best value. The risk manager has to consider all of these factors, and many more, in order to ensure that the best risk financing plan is put into place.

Check-In

Directions: Select each true statement.

- ☐ Risk financing involves all acquisitions of funds, regardless of cost.
- ☐ Internal risk financing includes unplanned retention.
- ☐ External risk financing includes contractual transfers.
- ☐ The term, *optimal cost,* is a precisely defined term that means the best product for a customer at market prices.
- ☐ Risk control and risk financing are closely related, as in the case of a company that purchases insurance to cover potential losses while also taking steps within the company to mitigate those losses.

Other Options

The objective of a risk financing program is to find the appropriate balance of financing options. Although insurance is a common risk financing option, there are other options as well—retention, transfer of financial responsibility, and insurance. Let's begin with retention.

Retention

Retention, whether active or passive, is the use of internal funds to pay losses. Active retention is planned, and funding can come from reserves or an organization's general budget.

For example, a risk manager knows that each insurance policy carries deductibles which a company will need to pay in the event losses occur. Sometimes the risk manager will reserve that amount of money in the budget for payment of those losses.

Similarly, the risk manager will establish reserves for other losses that the company plans to pay for on its own. In most cases, these figures will have been derived from historical loss runs. Let's use the owner of a framing and office supply store as an example.

The owner knows that it typically costs his company $7,000 annually for merchandise that is damaged in transit, such as chipped, broken, or water-damaged wood and glass breakage. When he constructs his annual budget, he will reserve $7,000 in the budget to pay for these losses. He will do exactly the same for other planned losses and expenditures.

What business owners and risk managers *can't* plan for is passive retention. For example, let's say that an organization purchases a new building. The person responsible for working with the insurance agent has resigned and his responsibilities have not been reassigned or redistributed while the company searches for his replacement. So, the building is not added to the business's insurance policies.

A customer slips and falls in the new building and sustains injuries. When the claim is reported to the liability insurance carrier, the agent and the business owner discover that the building is not on the policy. The responsibility for payment of the customer's claim now falls on the business. This is passive retention—it is unplanned.

Regardless of whether an organization planned to fund for a loss (deductible, self-insured retention, or uninsured), it will be required to pay for it. Failure to fund for a loss simply means that an organization will have no choice but to use funds allotted to a different department, resulting in an unplanned impact on the organization's budget.

Transfer of Financial Responsibility

Recall the discussion of transfer as a risk control technique. Transfers can be contractual or physical.

A **transfer of financial responsibility** is the use of external funds to pay for losses. Both non-insurance contractual transfer of control or responsibility, and non-insurance contractual indemnification or financial responsibility, are types of transfers. So are physical or operational responsibility transfers. Risk transfer shifts non-insurance financial responsibility for certain liabilities from one party to another.

Let's say that a general contractor wants to be sure he shifts as much financial responsibility as possible for claims to another party. Before they can perform work for this contractor, subcontractors are required to sign an indemnification (hold harmless) agreement (intermediate form). Subcontractors who sign this form agree to be responsible for their own negligence or fault AND for any negligence that they and the general contractor share jointly.

Consider this example. A subcontractor working for the general contractor installed a floor. Days later, a flaw in the floor's installation caused someone to fall. While both the subcontractor and general contractor are deemed negligent, execution of the indemnification (hold harmless agreement) means that the subcontractor will be held financially responsible.

Insurance

Insurance is a promise of indemnification for specified losses in exchange for payment of premium. More technically speaking, it is a contractual relationship in which the insurer receives consideration in the form of a premium. By accepting this payment, the insurance

company agrees to indemnify the insured's losses that are due to specific perils and conditions stated in the policy. The premium, or consideration, is paid to secure the promise of future payment of covered claims or losses.

Insurance is not a transfer of risk, however. It is a contractual responsibility to assume the financial consequences of a risk. If the transferee (the insurer) cannot or will not pay the financial consequences, the obligation falls back to the transferor (the insured).

For example, say Robert shops online for the cheapest auto policy he can find. He is not giving any thought as to whether the companies he is considering are reputable. He simply wants cheap insurance. Robert makes his selection.

Shortly after making his purchasing decision, Robert is involved in an auto accident. Robert, who is at fault, causes injuries to the other driver, as well as extensive damage to her car.

When Robert tries to report the claim, he discovers that the insurance company's phone has been disconnected. After spending time researching the company, he discovers that the company declared bankruptcy several months ago and has gone out of business.

Robert is now going to be responsible for paying the other driver's claim. Even if he files a claim in bankruptcy court against the insurance company, chances are he will never be reimbursed. He will also probably never receive the portion of the policy premium which is owed to him.

Check-In

Directions: Match each term to its description.

A. the insurer **B. the insured** **C. exposure** **D. insurance** **E. premium**	_____ A consideration in exchange for a promise of indemnification
	_____ Susceptibility to loss
	_____ A transferee that takes contractual responsibility for the financial consequence of a risk
	_____ A transferor with a relationship with a transferee
	_____ A promise of indemnification for specified losses in exchange for payment of premium

Knowledge Check

You speak to your organization's management team about creating a risk financing program. A manager asks you to explain retention in relation to creating a risk financing plan. How do you respond?

_____

_____

_____

_____

Insurable Risks

Learning Objective 2

Describe which exposures are insurable and which fall outside the standard insurance market.

Insurable Risks from a Point of View

Different professionals hold different perceptions of an **insurable risk.** For example, an underwriter may perceive an insurable risk as something that has little chance of occurring and has low severity should it occur. A risk manager, on the other hand, may perceive an insurable risk as an exposure that is often subject to loss and can negatively affect an organization.

Elements of Insurable Risk in Standard Markets

The standard insurance market is typically referred to as the "standard market." Carriers that are considered standard are admitted and licensed by the states in which they operate. These carriers must conform to rate and form regulations, surplus premium guidelines, and additional laws.

To determine which risks are insurable for standard markets, insurance companies look at the following six major elements. Let's examine each of these elements to understand insurable risk from the perspective of an insurance company.

Elements of insurable risk:

- definite loss
- accidental loss
- large enough loss to cause economic distress
- large group of similar exposure units
- chance of loss must be calculable
- not likely to produce loss to a great many units at the same time

Definite Loss

The first element of an insurable risk is definite loss. A loss causes a decline or reduction in value. To be able to insure such a loss, it must be definite in time, place, and amount so the insurance company can verify and measure the loss. How can insurers agree to pay for losses if they cannot determine whether covered losses take place or how much the losses are worth?

Accidental Loss

The second element of an insurable risk is accidental loss. A loss must be accidental from the viewpoint of the insured. Were an insured able to deliberately cause a loss, such action would distort loss predictability and might create a financial gain for the insured. The purpose of insurance is to transfer risk, which is the uncertainty of loss. A planned loss is *not* uncertain.

Large Enough Loss to Cause Economic Distress

The next element of an insurable risk is that the loss must be large enough to cause economic distress. If a loss is not large or severe enough to cause economic or financial distress, then individuals or organizations are less inclined to purchase insurance. They will simply pay out of pocket. An insurance company must receive enough premium to make it economically feasible to provide insurance.

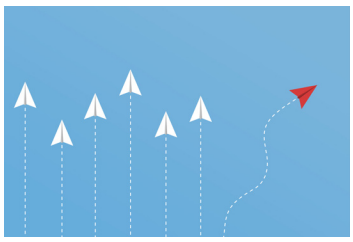
Large Group of Similar Exposure Units

The fourth element of an insurable risk is a large group of similar exposure units with exposure to the same perils or causes of loss. For example, an insurance company writing auto coverage on trucks cannot base its operations on only 75 to 100 trucks. A large number of homogeneous exposures to loss must exist in order to accurately calculate the probability of loss.

Chance of Loss Must Be Calculable

Element number five requires that the probability of loss must be calculable by gathering the loss history of similar acts, properties, and/or causes of loss. Otherwise, it is impossible to predict aggregate losses and determine what premiums to charge. For example, think of a nuclear accident. Fortunately, there have not been enough nuclear accidents for insurance companies to understand how extensive losses could be, or what premium to charge and still remain solvent. Consequently, without a chance of calculable loss, the risk is uninsurable.

Not Likely to Produce Loss to a Great Many Units at the Same Time



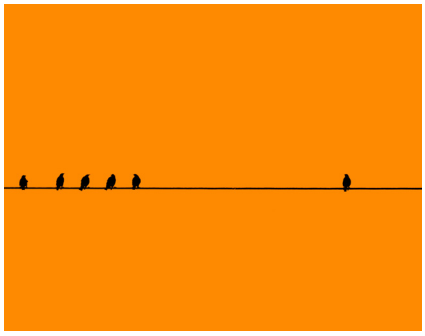
The final element is that the risk is not likely to produce loss to a great many units at the same time. For example, property located near rivers is prone to flood damage. In extreme cases, literally hundreds of thousands of properties could be damaged in one event or in a series of closely related events. Therefore, private insurance companies usually do not insure flood-prone property for flood losses. There is too much of a chance these losses would be severe enough to put the insurance companies out of business.

An Underwriter's Perspective

From an underwriter's perspective, an insurable risk is a risk that has the following characteristics:

- a risk shared by many
- a fortuitous risk, meaning an unexpected and unintended risk
- a reasonably calculable risk as to likelihood
- a risk which generates enough premium paid by the many to pay for the losses of the few
- a non-catastrophic risk or a risk that is unlikely to strike many simultaneously

Let's look at some examples of the characteristics in this list.

Characteristic	Example	
A risk shared by many	An example is damage to an automobile. With millions of cars on US roads every day, damage to an automobile is a risk shared by many.	
A fortuitous risk	Risks in this category are unplanned and unintended. An example is a lightning strike that causes a building fire.	
A reasonably calculable risk as to likelihood	Risks in this category occur with enough frequency to reasonably calculate their likelihood. An example is the number of back injuries among hospital staff across the entire industry.	
A risk which generates enough premium paid by the many to pay for the losses of the few	Insurers frequently offer insurance for customer injuries—commonly called premises liability insurance—because there are historical claims data by industry which allow the number of future claims to be actuarially determined. Thus, the losses of the few would be paid for by the many.	
A non-catastrophic risk or a risk that is unlikely to strike many simultaneously	A good example here would be property damage due to hurricane winds.	

As you review the list of insurable risks from an underwriter's perspective, you see that an underwriter views risk as something that is unlikely to occur. For example, most charity golf events have a "hole-in-one" competition. If a player hits a hole-in-one on a designated hole, she or he wins a large amount of money. Did you know that the prize is typically insured? Underwriters know that the chance of someone hitting a hole-in-one is very slim, and the premium paid by the many events will pay for the

off-chance that someone actually gets a hole-in-one. From an underwriter's perspective, the hole-in-one offer is an insurable risk.

A Risk Manager's Perspective

From a risk manager's perspective, an insurable risk is likely to be seen as a risk that:

- is not reasonably calculable by the organization
- severe enough to cripple an organization
- needs additional services that can be provided more efficiently or conveniently by an insurer
- is less costly than the cost of retention because of insurance market conditions
- exceeds an organization's risk appetite

A risk manager's perspective of insurable risks differs greatly from those of the insurance company and underwriters. A risk manager wants to insure risks that are not reasonably calculable by an organization. In many cases, these types of risks could be of such severity that should they occur, they would cripple an organization. Consider, for example, the severe effects of a major hurricane like Hurricane Harvey, which caused $125 billion in damages.

A risk manager would also like to insure risks for which an insurer provides additional services—particularly those which can be provided more efficiently or conveniently by an insurer.

Let's use claims responsibilities, for example. A risk manager may find that it is more cost-effective to outsource claims responsibilities to an insurance company, rather than having an internal claims department. Having an internal claims department comes with special needs and requirements. To start, such a department requires experienced and licensed claims staff, as well as a supervisor. Continuing education for the staff is ongoing if their licenses are to remain in good standing. In addition, there are equipment costs to consider. An organization would need to purchase one or more systems capable of managing claims and reporting loss data for analysis. All of these needs would be expensive and time-consuming. Consequently, the risk manager would likely outsource claims responsibilities to the insurance company.

There is another element that is important to risk managers. The cost of insuring a risk should be less costly than retention. During times of soft insurance market conditions, premiums may be less expensive than they are at other times. Insurance at these times is more attractive to risk managers as a risk financing option.

The last element of an insurable risk from the risk manager's perspective that we'll discuss is that many risks may exceed an organization's risk appetite. This means that certain risks are simply too expensive or difficult to retain, which is why a risk manager is interested in insuring them. For example, think of infant car seats. Then think of potential product liability claims for a company that manufactures those infant car seats.

Let's use another example to understand a risk manager's viewpoint in considering risk appetite. How would a risk manager who works for a fireworks manufacturer perceive an insurable risk? The risk manager would consider the exposure of an explosion or an injury to a customer as an insurable risk. And based on the inherent danger of this exposure, the risk manager would want to make sure to transfer financial responsibility to a third party.

Check-In

Directions: Use the following terms to fill in the blanks. Terms may be used more than once.

calculable	**many**	**unintended**
exceed	**retention**	**unlikely**
few	**risk manager**	

An underwriter views risk as something that is _____ to occur. An insurable risk is one that is shared by _____, and is unexpected and _____, such as the likelihood that an audience member will sink a basketball from across a court in a charity event. An insurable risk is also reasonably _____, like auto accidents. Damage to autos is an example of an insurable risk that generates enough premium paid by _____ to pay for the losses of a(n) _____.

A(n) _____ has a different perspective on what constitutes an insurable risk. From this perspective, insurable risks are *not* reasonably _____ within an organization and are capable of causing great harm. Insurable risks are those that _____ an organization's risk appetite and are less costly than the cost of _____ because of insurance market conditions.

Risks Outside the Standard Insurance Market

Recall that the term, *standard market,* typically refers to standard insurance carriers that are admitted and licensed by the states in which they operate. These carriers conform to laws and regulations.

Not all insurance carriers work solely in the standard market. Carriers in the nonstandard market provide coverage for nonstandard customers, often at higher rates or with more restrictions.

Some catastrophic risks such as floods, earthquakes, and windstorms can be commercially insured. The excess and surplus lines market provides the majority of coverage. Unlike standard carriers, excess and surplus lines carriers are not licensed by the states in which they do business. These carriers are able to transact business through a wholesale broker, managing general agent, or an excess and surplus lines licensed agent. It should be noted that most states require standard carriers to reject the business before allowing insurance policies to be written with an excess and surplus lines carrier.

Because the social impact of uninsured risks is unacceptable, some catastrophic risks can be commercially insured through social insurance mechanisms, such as the National Flood Insurance Program (NFIP), various state windstorm plans, earthquake insurance plans, and state Fair Access to Insurance Requirements (FAIR) plans.

Flooding in residential areas is not an exposure that many standard insurance carriers consider an insurable risk. The purpose of the NFIP is to offer affordable flood insurance to property owners, renters, and businesses. The NFIP also tries to encourage communities to adopt and enforce floodplain management plans. The NFIP is a federal program managed by FEMA, or Federal Emergency Management Agency.

FAIR plans are state-mandated programs that provide "fair" access to insurance for individuals who are unable to obtain property insurance because their properties are considered high risk. Insurance carriers can consider property as high risk for several reasons, ranging from property existing where crime or claims activity levels are high, to areas prone to natural disasters.

Let's use an individual who wishes to purchase a home in Florida as an example. Chances are, that individual will need an elevation certificate prior to being able to close on the home. The elevation certificate provides information concerning the home's elevation (from sea level) and the type of flood zone in which the home is located.

Depending on the type of flood zone, the home buyer may be required to purchase flood insurance before a loan can be approved. The majority of homeowners in Florida purchase this coverage from the NFIP. Without this government-run program, flood insurance for homes in the flood zone would be unaffordable, even if it were available for purchase.

Regardless of the nature of the operation of their organization or industry, risk managers confront the same challenge—how to determine the right mix of internal funds (retention) and external funds (insurance).

An organization seeks to choose the risk financing option that is least costly but also ensures that financial resources are available to continue its objectives after a loss occurs.

Check-In

Directions: Read each statement. Then select True or False.

1. From an underwriter's perspective, an insurable risk is a risk that generates enough premium paid by the many to pay for the losses of the few.

   True **False**

2. From an underwriter's perspective, an insurable risk is a non-catastrophic risk or a risk that is unlikely to strike many simultaneously.

   True **False**

3. From a risk manager's perspective, an insurable risk is not reasonably calculable by an organization.

   True **False**

4. From a risk manager's perspective, an insurable risk stays within an organization's risk appetite.

   True **False**

5. Standard insurance carriers are admitted and licensed by the states in which they operate.

   True **False**

6. The majority of coverage for catastrophic risks such as floods, earthquakes, and windstorms is provided through the excess and surplus lines market.

   True **False**

7. Claims activity levels are a consideration in assigning the label, *high risk*, to a property.

   True **False**

8. The NFIP is a government-run program that provides flood insurance to lower the financial burden on property owners who receive limited coverage from insurance carriers.

   True **False**

9. All risk managers face the challenge of determining the right mix of internal and external funds.

   True **False**

Knowledge Check

You meet with your organization's CFO, who is reviewing the upcoming policy renewal. She asks two questions. First, why was the property insurance purchased through surplus lines? And what was the purpose of the additional NFIP policy?

Respond to both of the CFO's questions.

_____

_____

_____

_____

_____

_____

Risk Retention and Transfer

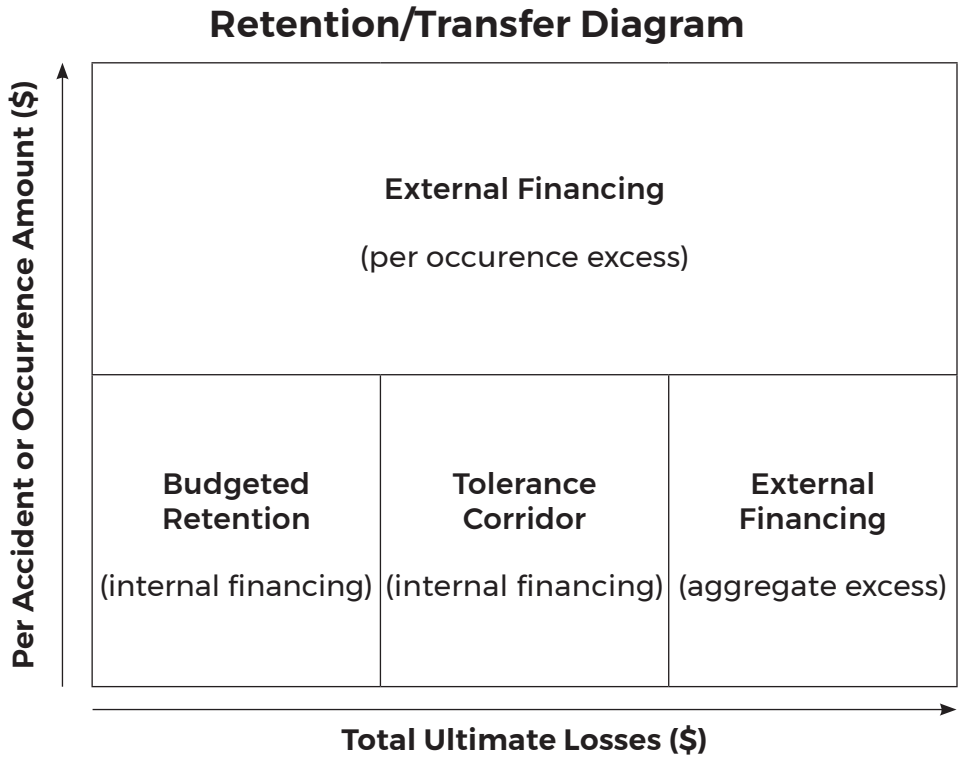
Learning Objective 3

Choose a risk financing plan appropriate for a given organization.

Visualizing Financial Ability and Risk

Determining risk tolerance includes making decisions related to setting deductible amounts, establishing limits of liabilities, and determining which, if any, insurance coverages to purchase, and which risks to self-insure. This requires both risk managers and insurance professionals to evaluate the mix of internal (retention) and external (insurance) funds needed to best meet an organization's needs. Risk managers look for ways to visually depict an organization's financial capacity—or its risk tolerance. One visualization technique is the **retention/transfer diagram**, which incorporates several major concepts.

A retention/transfer diagram is a graphic depiction of an organization's financial ability and risk appetite. Let's look at the diagram's parts.



The **vertical axis** represents the total amount per claim or per occurrence in dollar amounts. The amount at the bottom left corner is $0, and the amount increases as the line rises vertically. Typically, the top of the axis is the total combined value of the **budgeted retention** and external financing (insurance) purchased.

The **horizontal axis** represents the total amount paid for all claims during a policy period. The total amount in dollars increases, moving from left to right on the axis. The far-right amount is the combined value of the budgeted retention, tolerance corridor, and external financing.

Budgeted retention is the portion of expected losses an organization is willing and able to retain. This is the chosen deductible or self-insured retention amount that an organization is willing to pay per claim.

A **tolerance corridor** is the marginal retention beyond the budgeted retention that an organization may also choose to retain, either entirely or in some part. As an organization's risk ability grows, it may choose to begin retaining more risk. The tolerance corridor describes the organization's risk appetite.

External financing (insurance) is purchased to pay for those losses that fall outside of an organization's risk appetite and risk ability.

Consider this example. The RM Company analyzes its loss runs from the prior five years. Those loss runs show:

- $10,000 in customer injuries (less than $500 for each claim)
- Seven claims annually for $501–$2,000 each
- Five claims annually over $2,001

Knowing that the RM Company will typically incur $10,000 of expenses for customer injuries of less than $500 each, the risk manager may decide to budget for paying this retained loss amount internally (budgeted retention).

The loss runs for the RM Company show that typically there are seven claims annually that are over $500 each, but less than $2,000. Within that same time frame, there are typically five claims that cost more than $2,000, and several of these claims have exceeded $5,000.

The risk manager has already decided to retain the smaller claims that total $10,000. Now she must decide what to do about the claims in the middle. This is where the risk manager will establish a tolerance corridor. The **tolerance corridor** is simply the marginal retention beyond the budgeted retention that an organization may also choose to retain, either entirely or in some part. Both the budgeted retention and the tolerance corridor are paid for through internal financing. In this case, the risk manager may establish the tolerance corridor at $1,000, which means that the RM Company will also retain any claims that occur up to this amount. All claims above $1,000 will be insured.

At this point, the risk manager does not know how many of the claims in the tolerance corridor the company will have to pay for internally, and which will end up being insured. However, she *does* know that if the RM Company ends up having to pay for seven claims at $999 each, the company has the financial capacity to do so. Chances are, these circumstances won't happen, so the risk manager feels this is a safe amount for the tolerance corridor.

Check-In

Directions: Match each term to its purpose in a retention/transfer diagram.

A. vertical axis	_____ The portion of expected losses an organization is willing and able to retain
B. horizontal axis	_____ The marginal retention beyond the budgeted retention that an organization may also choose to retain all or part of
C. external financing	_____ Represents the total amount paid for all claims during a policy period
D. budgeted retention	_____ Insurance purchased to pay for losses that fall outside of an organization's risk appetite and ability
E. tolerance corridor	_____ Represents the total amount per claim or per occurrence in dollars

Risk Financing Plans

To determine an appropriate risk financing plan for an organization, it is necessary to consider the organization's goals, risk-taking appetite, and risk-taking ability. Plans range from simple to complex and very conservative to very loss sensitive.

Simple Risk Financing Options

Let's examine two simple risk financing options—the guaranteed cost plan and the dividend plan. We'll look at the simpler plan first.

Guaranteed Cost Plan

A new company may have very few excess funds that can be used for the purposes of financing loss. Consequently, they may wish to insure everything. This is called a **guaranteed cost plan.**

Guaranteed Cost Plan

A guaranteed cost plan provides an insured with the most stability. To obtain the premium, rates are multiplied by the exposure, adjusted by the experience modifier (if applicable), and then further reduced by a scheduled or discretionary credit. Organizations with a low risk appetite, which desire little variability in cost of risk and have no ability to manage services, will often select this type of plan.

In a guaranteed cost plan—also known as a fully insured program—all risk of loss is transferred to an insurance company. This means that the insurance company will provide 100% external financing of risk, up to a policy's limits and subject to policy terms and conditions. Any deductibles that may be imposed will be designed to handle very small claims. A guaranteed cost plan has little to no loss sensitivity from the viewpoint of the insured. The cost of insurance remains the same regardless of the number of claims. Once the premium is paid, there is no further risk of financial responsibility for losses other than the deductible.

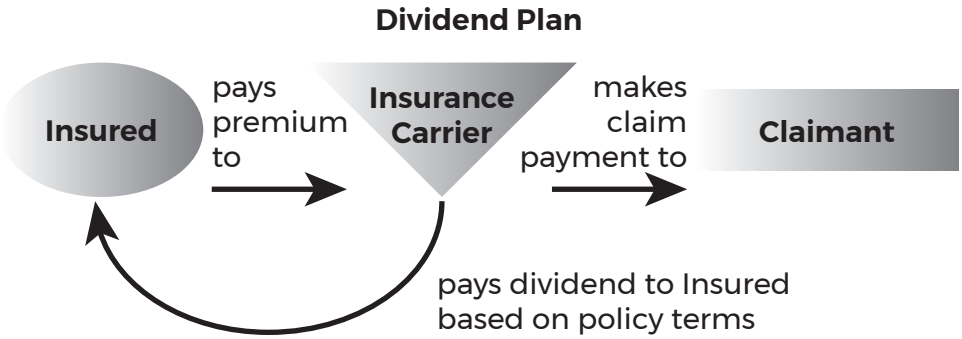
One of the advantages of a guaranteed cost plan is that the company with such a plan has a high degree of certainty when it comes to its budget for insurable losses. The company knows what the policy will cost at the beginning of the term and is aware of any deductibles that may need to be paid. It is easy, one-stop shopping.

Another advantage is that all of the services that come with the insurance policy will be provided by the insurer. The company will not have to spend time handling claims. Nor will it have any of the other responsibilities related to claims.

A third advantage of a guaranteed cost plan is that coverage is standardized. Business auto insurance is one example of when a guaranteed cost plan would be used. A company that purchases the plan would pay the premium up-front and all losses would be handled by the insurance company, excluding the deductibles.

Dividend Plan

Now let's look at a more complicated kind of guaranteed cost plan. The **dividend plan** takes the security and stability from the guaranteed cost plan and provides a return of premium based on an organization's losses. The idea is that if an insured has a good year in terms of losses, a portion of the premium can be returned in the form of a dividend.



There are two types of dividend plans—flat and sliding scale. A flat dividend plan pays a fixed amount regardless of losses. A sliding scale dividend plan pays a dividend based on the insured's incurred losses, with lower losses resulting in a higher dividend credit. There is one caveat. Dividends cannot be guaranteed by insurers, as the dividend declaration and

the amount are determined by the insurance company's board of directors based on an entire book of business after all claims have been closed. Although the carrier is responsible for the claim functions, a company that feels it has good control over losses may want a dividend plan.

Check-In

Directions: Read each statement. Then select True or False.

1. An organization that chooses to insure everything selects a guaranteed cost plan as a risk financing option.

   True **False**

2. An organization that chooses a guaranteed cost plan is likely to have few excess funds available for covering financial losses.

   True **False**

3. An organization with a guaranteed cost plan is likely to have the ability to manage claims services internally, but unlikely to have excess funds to cover losses.

   True **False**

4. One distinctive advantage of a fully insured program is that an organization has a high degree of certainty when budgeting for insurable losses.

   True **False**

5. Standardized coverage is a benefit of guaranteed cost plans.

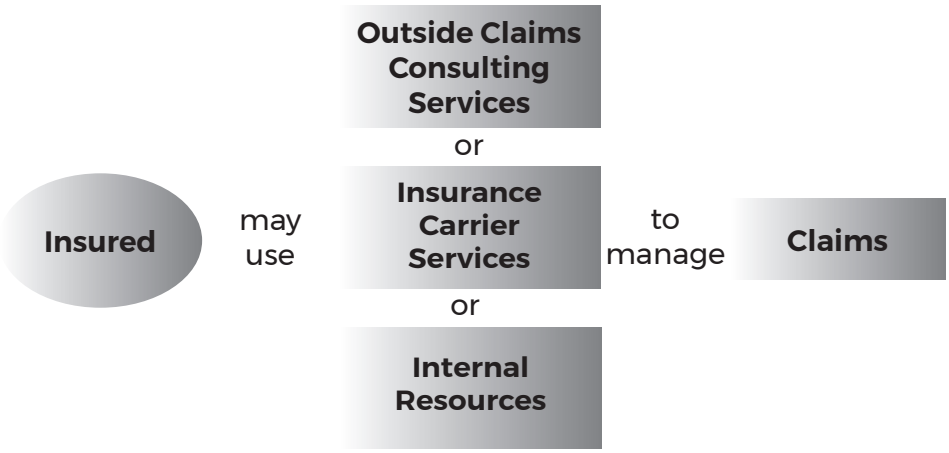
   True **False**

6. An advantage of both the guaranteed cost plan and the dividend plan is that both provide security while also providing a return of premium based on an organization's losses.

   True **False**

Loss Sensitive Financing Options

The next plans we will discuss are slightly more complicated because they involve companies that wish to self-insure some amount of their losses. The only self-insurance a company will have in a guaranteed cost plan is the amount of the deductibles. In the next two plans, risk managers must determine a company's risk tolerance, or risk appetite. The higher the deductible or retention, the more loss sensitive a plan will be. Companies want to self-insure, perhaps through much larger deductibles which will be paid with internal funds. But how large should that deductible be?



Deductible Plan

In a **deductible plan**, an insured elects to reimburse an insurer a portion of each loss up to a stated amount. Deductibles can range from a modest amount—say $10,000 to $500,000. From a retention perspective, this is not so different from a guaranteed cost plan, other than the deductibles will be much larger.

A deductible plan allows an organization to take more control of overall claims. An insured may decide to manage claims internally or outsource claims management to other providers. It may outsource to the insurance company, or it might decide to use an outside claims consulting service, such as a third-party administrator.

Self-Insured Risk Financing Plan

A **self-insured risk financing plan** is complete retention and is accomplished by maintaining access to internal or external funds to cover possible losses, as opposed to purchasing an insurance policy. In reality, most organizations are not purely self-insured, as they often purchase reinsurance or excess coverage, as seen in the following example.

In a self-insured plan, an organization makes a conscious decision *not* to purchase insurance—up to a certain claim limit. In other words, the organization will be paying for certain claims using 100% internal funding. In the situation represented in the following graphic, an insured is comfortable paying the first quarter-of-a-million dollars

for each claim. As an extra layer of protection, the organization purchases insurance above that amount, using an excess policy that provides coverage of up to one million dollars per claim.

Excess policy	$1,000,000
Self-insured retention (SIR) each claim	$250,000

Like insureds who purchase deductible plans, an insured with a self-insured plan may decide to manage claims internally or outsource claims management to another provider. The insured may also decide to outsource to an outside claims consulting service, such as a third-party administrator. Outsourcing to the insurance company is not available.

Check-In

Directions: Match each term to its description.

A. Guaranteed cost plan	_____ The insured reimburses the insurer a portion of each loss up to a stated amount.
B. Dividend plan	_____ The reimbursement from an insurance carrier when an organization experiences a good year in terms of losses
C. Deductible plan	_____ A fully insured program that transfers all risk of loss to an insurance company
D. Self-insured risk financing plan	_____ The use of internal funds to cover possible losses and possibly external funds through reinsurance or excess coverage

Knowledge Check

Select one of the following scenarios. Then explain which risk financing plan would be most appropriate.

1. Your organization is extremely risk adverse and desires a plan with the lowest loss sensitivity.

_____

_____

_____

2. Your organization has a sophisticated risk management program and prefers to retain risk as opposed to paying premium.

_____

_____

_____

3. Your organization can control most of its risk and has the financial resources to retain much of its risk. The organization is interested in retaining risk but wants coverage for large losses.

_____

_____

_____

Summary

Risk managers understand that it is less expensive for an organization to take actions to avoid risk than to finance it. However, because it is impossible for any organization to avoid or control all risk, a risk financing program is essential. An organization must decide what risk it wants to retain, when it will transfer financial responsibility, and what type of insurance program best meets its needs.

Because risk control and risk financing are related, risk managers will often use some combination of risk control and risk financing measures for different risks. That is, the risk manager will move back and forth between financing and control steps to determine the best course of action.

Determining which risk financing method is best requires the answers to several questions. The first is, which program represents the most efficient use of an organization's resources? The next two questions can be combined: which program provides the best value at the lowest cost?

While insurance is a common risk financing option, other options also exist. An organization that uses retention as a financing option uses internal funds to pay losses. An organization may also decide to transfer financial responsibility, that is, use external funds to pay for losses.

Insurance is not a transfer of risk. Instead, it is a contractual responsibility between an insurance carrier and an insured, in which if the insurer, or transferee, cannot or will not pay a loss, the obligation falls back to the transferor, or insured.

Professionals, including insurance carriers, underwriters, and risk managers, have different perceptions of insurable risk. Insurance carriers in the standard market consider six elements to evaluate risk:

- definite loss
- accidental loss
- large enough loss to cause economic distress
- large group of similar exposure units
- chance of loss must be calculable
- not likely to produce loss to a great many units at the same time

An underwriter would perceive an insurable risk as one that has the following characteristics:

- a risk shared by many
- a fortuitous risk, meaning an unexpected and unintended risk
- a reasonably calculable risk as to likelihood

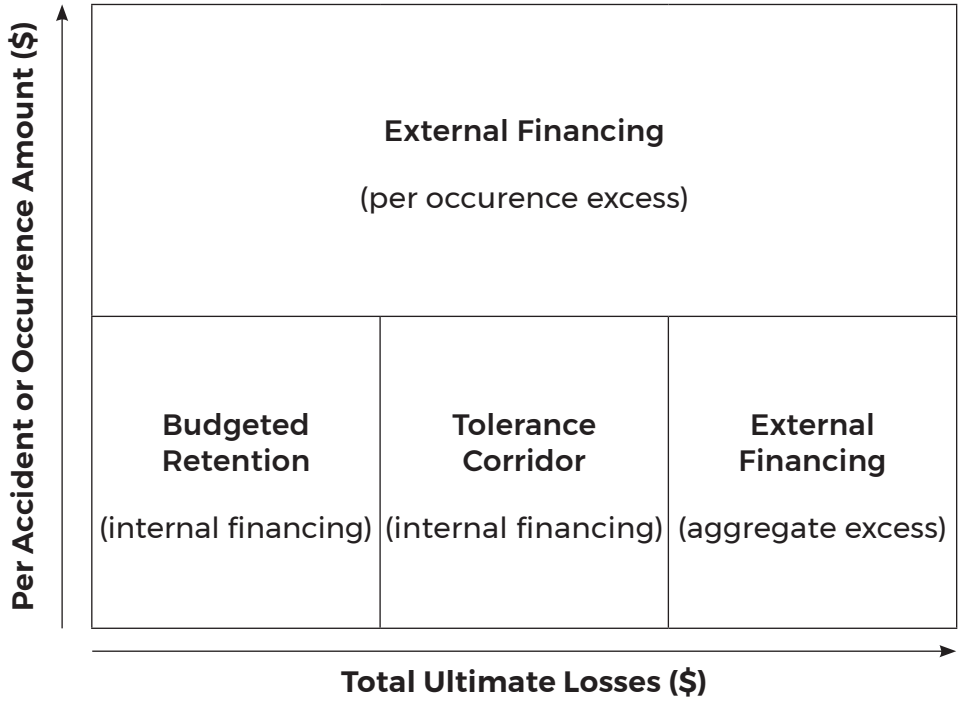
- a risk which generates enough premium paid by the many to pay for the losses of the few
- a non-catastrophic risk or a risk that is unlikely to strike many simultaneously

And a risk manager is likely to see an insurable risk as a risk that:

- is not reasonably calculable by the organization
- causes crippling severity to an organization
- needs additional services that can be provided more efficiently or conveniently by an insurer
- is less costly than the cost of retention because of insurance market conditions
- exceeds an organization's risk appetite

A risk manager advising an organization in its choice of risk financing plans has several options to consider. However, a number of matters must be considered simultaneously, as summarized in the following retention/transfer diagram.

Retention/Transfer Diagram



The simplest and most stable of the risk financing plans are guaranteed cost plans, in which organizations purchase insurance to finance all loss. Next is the dividend plan, which offers the security and stability of a guaranteed cost plan and adds a return of premium on an organization's losses in the form of a dividend.

Other plans are more complex in that they involve organizations that wish to self-insure some amount of their losses. These include deductible plans, in which insureds elect to reimburse insurers a portion of each loss up to a stated amount. These plans permit organizations to manage claims internally or outsource claims management to an insurance company or third-party administrator.

Organizations with self-insured plans choose *not* to purchase insurance up to a certain claim limit. Instead, they rely solely on internal funding. However, to cover losses that exceed internal claim limits, these organizations purchase excess policies to provide coverage up to one million dollars or more per claim.

Resources

For valuable reinforcement, some important concepts related to the learning objectives in this section are summarized in audio and video clips. Use the following link to access these helpful learning resources.

scic.com/ELRresources

Risk Financing Plans

Section 5 Self-Quiz

Directions: Complete each item. For fill-in-the-blank items, choose the term that correctly completes the sentence. Answers may be used more than once.

budgeted	**retention**	**transfer**
deductible	**risk financing**	
insurer	**standard**	

1. The acquisition of funds at the most favorable or optimal cost to pay losses is called _____.

2. The use of internal funds to pay losses is called _____.

3. The use of external funds to pay losses is called a(n) _____ of financial responsibility.

4. A(n) _____ takes contractual responsibility for the financial consequence of a risk.

5. Insurance carriers that are considered _____ are admitted and licensed by the states in which they operate.

6. A(n) _____, or transfer diagram, depicts an organization's financial ability and risk appetite.

7. _____ retention is the portion of expected losses an organization is willing and able to retain.

8. In a(n) _____ risk financing plan, an insured elects to reimburse an insurer for losses up to a stated amount.

Directions: Select True or False.

9. Insurance is a transfer of risk.

True **False**

10. Insurance is a contractual responsibility to assume the financial consequences of a risk.

True **False**

11. A guaranteed cost risk financing plan provides an insured with the most stability.

True **False**

12. Check all characteristics of an insurable risk as seen from an underwriter's perspective.

- ☐ a risk shared by many
- ☐ a risk that causes crippling severity to an organization
- ☐ an unexpected and unintended risk
- ☐ a risk which generates enough premium paid by the many to pay for the losses of the few
- ☐ a risk that exceeds an organization's risk appetite

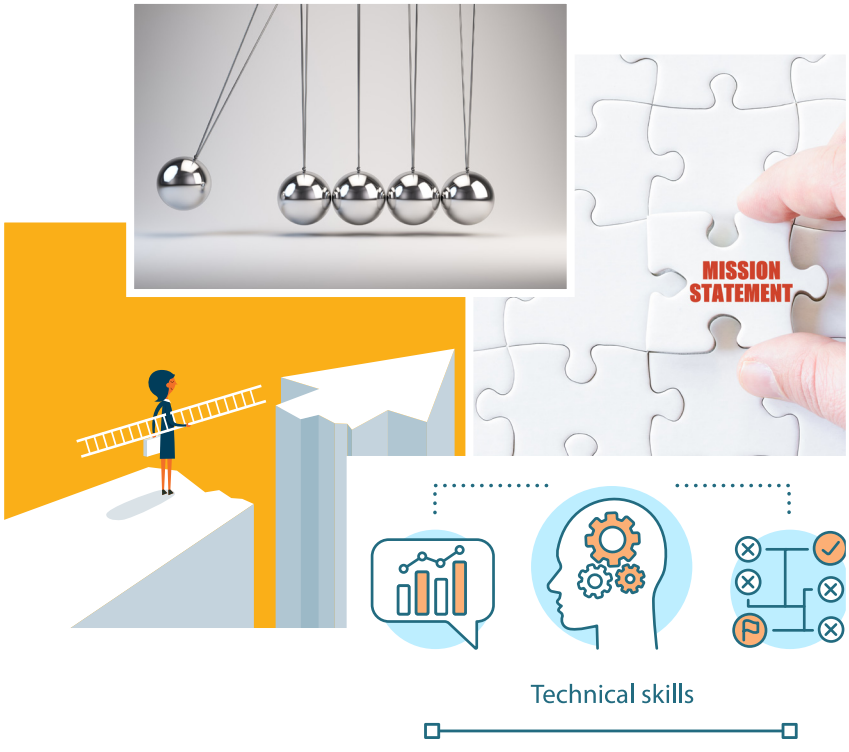
Section 6: Risk Administration

Section Goal

The goal of this section is to explain the fifth and final step in the risk management process—Risk Administration. You will build an understanding of the risk administration process, which includes the implementation and monitoring of a risk management program. Additionally, you will learn about the risk manager's role and the risk management network needed for an effective risk management program.

Learning Objectives

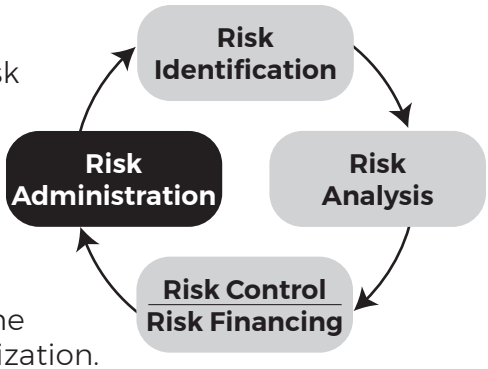
1. *Describe the implementation and monitoring of a risk management program.*
2. *Explain the role of an effective risk manager and how that role contributes to the long-term success of a risk management program.*
3. *Identify members of a risk management network and explain how to determine the best fit for network members.*



Introduction to Risk Administration

Risk Administration is step 5 in the risk management process. Up to this point, risks have been identified and analyzed, and decisions have been made regarding risk control and/or financing. Finally, program administration begins.

Risk Administration is the ongoing implementation and monitoring of risk management programs, policies, and procedures.



For a risk management program to function optimally, a risk manager must build relationships with individuals from across the company. More importantly, these individuals must understand the importance of risk management to the organization. To develop a company culture where risk management is a top priority, a risk manager must have practical leadership and communication skills. She must also USE these skills in a way that will enhance the success of the risk management program across the organization.

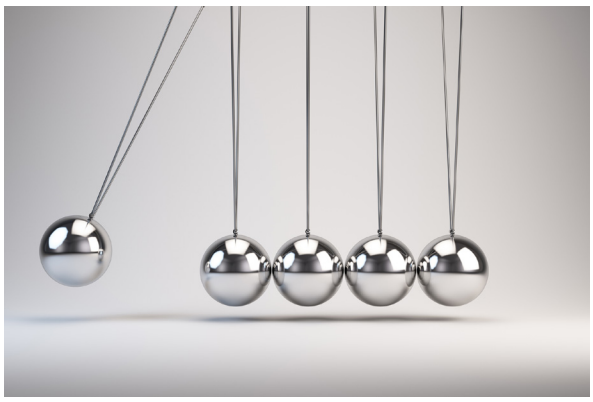
Implementation and Monitoring of a Risk Management Program

Learning Objective 1

Describe the implementation and monitoring of a risk management program.

The Final Step

There are two parts of the final step in the risk management process. First is the implementation of the risk management program. Second is the constant monitoring of the program.



Implementation is the part of Risk Administration in which the desired risk management program's policies and procedures are put in place. During **monitoring**, risk managers regularly examine and evaluate the results of the plan and then use collected information and data to modify the process.

At the outset, a risk manager must implement a cohesive and comprehensive risk management program. The program must address as many risks as possible across the organization, while simultaneously achieving the necessary buy-in from personnel.

A risk manager has two major responsibilities during Risk Administration. First, the program must be implemented. Second, it must then be monitored. But risk management efforts are often difficult to implement because people don't like change. A risk manager has to overcome these objections to ensure a program's success. A company must function in unison when it comes to safety and risk management efforts. The risk management program must be a priority for everyone, not just personnel in the risk management department.

Implementation Steps

Implementation of a risk management program relies heavily on communication. To begin, a risk manager presents the risk management program and provides a procedure manual to the members of the organization and relevant service providers. In the presentation and in the manual, the risk manager identifies risk management goals and objectives throughout the organization.

Governing Documents

It is important to understand the broader context in which risk managers operate—especially when it comes to policies and procedures. There are governing documents for risk management programs, and these documents are crafted with the specific goals and objectives of each company in mind. The major governing documents are the **risk management mission statement,** the **risk management policy statement,** and the **risk management policy and procedures manual**. Let's look at the risk management mission statement first.

The Risk Management Mission Statement

The risk management mission statement addresses a risk management program's overall goal. Thus, this statement guides a risk manager's decision-making process, as well as any implemented actions.

An organization's mission statement is relatively short, clear, and concise. It reflects the organization's goals and priorities.

The risk management mission statement is also short and concise. And it reflects the organization's mission statement. This means that it incorporates the organization's goals and priorities into its risk management program.

Let's use an imaginary bank, First Main Bank, or FMB, to demonstrate the relationship between an organization's mission statement and its risk management mission statement. Let's begin with the risk management mission statement.

FMB Risk Management Mission Statement

The mission of FMB's risk management services is to consistently inform management of risk issues facing the company, its assets, and its employees, while also treating risk using the methods that are the most beneficial, economical, feasible, and sensible for the safety, security, and integrity of the company and its partners—our employees, directors, shareholders, customers, vendors, and the communities we serve.

Now let's look at FMB's overall mission statement.

FMB Mission Statement

The mission of First Main Bank is to be a profitable, progressive company of the highest quality, offering financial services to communities in Michigan. The FMB team is to be diligent in seeking out the needs and expectations of our customers. Our unwavering commitment is to provide customers with superior service in a caring, responsive way. All partners, customers, employees, directors, communities, vendors, and shareholders will benefit from FMB's success.

When compared, it is clear that the two mission statements are closely aligned, and each emphasizes serving all of the company's partners.

Risk Management Policy Statement

In addition to a risk management mission statement, a risk management department will have a risk management policy statement. This statement:

- defines the policy for managing risks in relation to an organization's strategic plans, goals, and objectives,
- clarifies risk management goals and direction,
- is aligned with the risk management mission statement,
- outlines fundamental guidelines of the risk management function, and
- clearly specifies the responsibilities, accountability, and authority of management and the employees.

Risk Management Policy and Procedures Manual

The risk management policy and procedures manual demonstrates and communicates expected levels of performance and cooperation. It also familiarizes personnel with risk management procedures and provides a convenient reference or "how to" guide. The risk management policy and procedures manual works in concert with the risk management policy statement, the risk management mission statement, and the organization's mission statement to provide the governing documents that keep the company aligned

and working toward meeting their objectives. Thus, it is a very important part of the risk administration process.

Effective Communication During Risk Administration

To demonstrate how individuals in the organization are important to the risk management program's success, the risk manager creates an organizational chart or flowchart showing risk management's interaction with members of other departments. The flowchart shows how the risk manager partners with individuals at different levels in the organization. It also communicates individual responsibilities and accountabilities for the success of the risk management program.

Organizational Chart
Executive Management
The individuals in this group: • are actively involved in the risk management program's rollout • provide resources to achieve the program's objectives
Middle Management
The individuals in this group: • provide necessary support to achieve the risk management program's goals and objectives • engage actively in the execution of loss control programs, gathering claims information, observations, ideas, and feedback
All Other Employees
The individuals in this group: • offer cooperation, input, and insight as the risk management program affects their daily activities • participate fully in the effective implementation of the risk management program's policies and loss control procedures

Managers and supervisors provide the support necessary to achieve risk management goals and objectives. As the eyes and ears of risk management throughout an organization, these individuals reinforce the value of the risk management programs, policies, and procedures, and monitor employees for compliance. Active engagement of this group is required for executing loss control programs and for gathering claims information, observations, ideas, and feedback.

Risk managers also need to solicit input and cooperation from non-managerial employees. Risk control measures significantly affect work habits, processes, and procedures. Therefore,

employee cooperation across an organization is essential. In short, *everyone* becomes a risk manager with responsibilities and accountabilities for risk management. Both safety and risk management become part of an organization's culture.

If an organization empowers employees to look for and report hazards and safety issues, it improves workplace morale. Employees know that the organization has their best interests and safety in mind. Everyone benefits when employees share risk management goals rather than fight them.

A Summary of Implementation Steps

Below is a summary of implementation steps:

- Present the risk management policy and procedure manual to the organization and other applicable service providers.
- Communicate risk management goals and objectives throughout the organization.
- Demonstrate the organization's commitment to risk management principles.
- Create an organizational chart or flowchart showing risk management's interaction with other departments.
- Establish and communicate individual responsibilities and accountabilities for the success of the risk management program.
- Partner with various levels of the organization.

Monitoring

After implementation, a risk manager's second major responsibility during Risk Administration is to constantly monitor the success of the risk management program. Risk managers must regularly examine and evaluate the results of the risk management plan and then use collected information and data to make any necessary modifications.

A risk manager has access to a variety of materials and reports which can provide both evidence of a program's success as well as indications of where adjustments are required. Such evidence comes from:

- significant incidents/accidents
- open and closed claims
- litigated claims
- large loss claim reports
- contracts
- loss trend analysis
- costs of risk and allocations

- benchmarking reports
- analysis of the deductible/SIR levels and limits of risk financing options

A small company has decided to expand its product line. To be successful, the company will need to acquire additional machinery and equipment. The risk manager is concerned about employees using the new equipment and potential workplace injuries. After reading the operating manuals and doing some research, he decides that specific safety policies and procedures are needed. Once those are drafted, the risk manager holds a meeting to roll out the new policies and procedures for all employees. In addition, every employee who will operate the new machinery undergoes a training session to ensure they understand proper and safe machine operations. Consequences for non-compliance are also established.

This would complete the implementation process, but now the risk manager will want to know if the practices that have been implemented are effective at preventing employee injury. The only way to know for sure is to carefully monitor the results. At a minimum, on the anniversary date of the implementation of the new policies and procedures, the risk manager will review the losses and injuries associated with the new equipment. This will allow him to determine if the new policies and procedures have been effective. If the risk manager determines that changes are necessary, the policies and procedures are modified accordingly. This is how the program is monitored.

Reflection

Think about the risk management program that has been implemented in your workplace. Describe how the program is communicated across departments. Explain your role or contributions to the program.

_____

_____

_____

Reporting

During Risk Administration, a risk manager should evaluate and report on organizational risk management successes, as well as areas where improvement is necessary. This requires the risk manager to monitor all statistical data related to the risk management program and provide reports to various managers, departments, and the organizational leadership. This communication effort reassures management of the protection of the organization's assets and resources. It also lets managers know where and why additional risk management efforts are necessary in specific areas of the company.

These reports should be distributed to the board of directors, audit committee, executive management, departments and operating divisions, insurers (as required), and third-party service providers. The reports can be time-driven—monthly or quarterly, for example—or event-driven, such as at the time of insurance policy renewals. The reports can be issue-driven—for example, when employee injuries reach an all-time high or low, or perhaps after a catastrophic event.

Reports can cover a multitude of issues, including the frequency of incidents and accidents, the number of open and closed claims, and an analysis of whether claims are being resolved quickly and effectively. In addition, the risk manager may wish to report on the average cost of claims by type, especially if costs are going down. It is also important to look for and analyze trends.

Knowledge Check

Explain the differences between the implementation and monitoring of a risk management program.

_____

_____

_____

_____

The Role of a Risk Manager

Learning Objective 2

Explain the role of an effective risk manager and how the role contributes to the long-term success of a risk management program.

What Effective Risk Managers Do

Risk managers frequently lead the implementation and monitoring charge. They are often heavily involved, if not fully responsible, for insurance placement decisions.

Risk managers:

- … are mindful that the practice of risk management is constantly growing and maturing. Consequently, risk managers use the most beneficial, economical, feasible, and sensible methods for treating current and emerging risks on behalf of management, boards of directors, shareholders, employees, and the general public.

- … understand that risk management departments are uniquely positioned to be repositories of vast amounts of information which require analysis and communication to many different stakeholders.

- … ensure that risk management is understood throughout their organizations. A risk manager's success rests entirely with those who have the ability to execute risk management strategy, regardless of the individual's role in the organization.

- … may work alone as dedicated risk managers, be part of a risk management department, or be another kind of employee with particular job functions, such as a CEO or HR director. Risk managers may also work as insurance agents or outside consultants.

- … periodically review risk management policies and procedures; new products and services; new laws and regulations; changes in operations, acquisitions, and divestitures; and compile reports on results, opportunities, threats, successes, and recommendations.

- … make and communicate program decisions or recommendations regarding risk identification and analysis; safety programs and other control measures; internal risk financing and insurance programs; and program implementation and monitoring.

- … conduct annual assessments to maintain quality control.

Check-In

Directions: There are numerous things a risk manager must do to be successful. Read the scenario. Then check each example of a successful behavior the risk manager demonstrates.

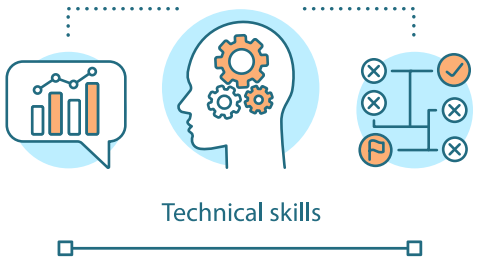
Elizabeth is the risk manager for a large widget manufacturing company with several facilities. She has earned the Certified Risk Manager (CRM) designation and regularly attends courses offered by The National Alliance to hone her skills and stay current on best practices and emerging trends in the risk management industry.

Elizabeth is also a member of the Widget Manufacturers Association (WMA.) The Association offers a Liability Pool to its members. Elizabeth recently moved her company's liability coverage to the pool after completing an analysis of rates and premiums. This move also provides her with loss control services and important information specific to widget manufacturing companies.

When she received a bulletin from the WMA detailing new federal requirements for tempered steel—which is used to make widgets—she immediately consulted with the company leadership team and corporate counsel to alert them of the change and to assist in compliance with the new regulations. Elizabeth also consulted with a manufacturing expert to determine if this change would impact the quality and performance of the company's products, or the manufacturing process as a whole. She knows that any changes in the manufacturing process will require the review of current risk management procedures and implementation of new or revised procedures.

- ☐ Remains up-to-date with changes within the risk management industry
- ☐ Seeks the most beneficial and cost-effective solutions for protecting their organizations
- ☐ Recognize themselves as sources of vast amounts of information that require communication to numerous stakeholders
- ☐ Communicates with management as well as employees in non-supervisory roles
- ☐ Constantly reviews risk management policies and procedures
- ☐ Maintains quality control
- ☐ Uses materials and reports to provide evidence of the strengths and weaknesses of a risk management program

Risk Management Expertise



There are a number of demands that fall upon a risk manager. The first is technical knowledge.

Risk managers use their technical expertise to purchase their organizations' insurance programs. This includes determining which coverages to purchase in order to protect organizations from identified exposures. It also includes selecting deductible or retention levels, as well as the appropriate insurance limits. These decisions often involve conducting cost-benefit analyses. To make good decisions, risk managers must compare potential premium savings to the financial responsibility for losses that the companies they represent will have to accept.

Expertise is also essential in other responsibilities typically assigned to risk managers. These include the periodic review of risk management policies and procedures, identifying changes in operations/acquisitions/divestiture, and analyzing the impact of those actions on an organization. Risk managers also remain informed about new products and services and new laws and regulations. They may also perform annual quality control reviews.

The Agency Connection

Risk managers may select agents or brokers to represent their companies. This task is frequently accomplished through a bidding process. Agents and brokers have different roles and responsibilities. Depending on organizational needs, risk managers may prefer one over the other.

Before choosing an agent, a risk manager will consider the agency's current client base to ensure that the agency is familiar with similar organizations. Does the agency, for example, understand the client's business? Does it represent similar accounts? Is it able to recommend appropriate coverages? Risk managers ask these and other questions to determine whether an agency is an appropriate "fit" for a company.

A risk manager making an agency selection is also interested in an agency's size and the number of personnel who will be assigned to her account. The education and experience of those individuals is also a consideration. So are the agency's reputation in the community and the agency's management profile.

The term "management profile" refers to the extent that management is involved in an agency's day-to-day activities. Is the owner or principal actively involved in daily agency operations? Is agency leadership still building a client base and developing relationships? Has the agency grown since it opened for business? What insurance companies does the agency represent? Selecting an agency partner comes only after asking numerous questions.

Check-In

Directions: Read each statement. Then select True or False.

1. A risk manager may select either an agent or a broker to represent her company.

True **False**

2. Because every organization is different, it unlikely that an agency will be familiar with similar organizations.

True **False**

3. A risk manager might ask an agent whether the agent has recommended appropriate coverages to accounts similar to the risk manager's.

True **False**

4. The competencies of an agency's personnel are of concern to effective risk managers.

True **False**

5. An agency's stage of growth is less important to a risk manager's decision than is the agency's management profile.

True **False**

Claims Management

Claims management, another important responsibility assigned to risk managers across all industries, also requires technical expertise. Risk managers review claims information and make their own assessments of coverage, liability, and damages. They work with their claims service providers and/or insurance company's personnel towards positive resolutions. Risk managers also work with defense counsel in formulating defense plans for claims. When a company has a large deductible and/or self-insured retention or is self-insured, the company's risk manager will also be responsible for approving settlements and/or extending settlement offers.

Soft Skills

Technical knowledge is essential for success as a risk manager. However, soft skills shouldn't be overlooked. Soft skills include a variety of behaviors, such as communication, a topic already covered at length in the previous learning objective. The art of dealing with people in a sensitive and effective way, sometimes called "emotional intelligence," is another valuable soft skill that a risk manager needs. Other soft skills include diplomacy, tactfulness, promoting an open exchange of information and ideas, flexibility, creativity, and adaptability. A risk manager also needs leadership skills, as well as general managerial skills.

Requirements for Long-Term Success

Risk Managers make decisions or recommendations about the risk management program which include risk identification and analysis, safety programs and other control measures, internal risk financing and insurance programs, and program implementation and monitoring.

Risk managers can also support measured risk-taking to achieve business objectives, improve planning and budgeting, reduce the frequency and severity of incidents, and prioritize proactive preparation for risks, versus reactive responses after losses occur. In so doing, effective risk managers protect their organizations' reputations and brands. Effective risk managers can also have a significant impact on financial results by controlling claims and legal costs and optimizing the total cost of risk, ultimately protecting cash flow, assets, and financial statements.

For long-term success, risk managers must:

- have objectives that align with the needs of their organizations.
- be active participants on their organizations' leadership teams.
- find advocates or influencers who reinforce commitment and encourage resource allocation.
- create adaptable processes and approaches that evolve to fit new needs, best practices, and emerging risks.
- continue using existing processes that demonstrate effective risk management elements rather than changing for the sake of change.
- select appropriate technology that supports but does not dictate the risk management process.
- seek continued professional development through education and training.

Risk Management Interactions

Risk managers' interactions within their organizations depend heavily on the organizations themselves, meaning their particular industries, cultures, and sizes. Regardless of where they work or who they work for, however, risk managers require a solid understanding of legal compliance.

For any organization to achieve sustainable growth, its risk manager should be involved in the organization's strategic planning processes. And it should provide its risk manager or risk management team with a network of support and expertise required for success.

Added Value

Risk managers add significant value to their organizations. For example, by establishing senior management's proactive support of risk management objectives and policies, they elevate the importance of risk management. They also create an understanding and acceptance of risk management policies and procedures across their organizations and illustrate the value that the discipline associated with risk management brings to an organization.

Knowledge Check

You have been asked to speak to your board of directors regarding the role of a risk manager and why your organization needs a risk management department. What specific reasons will you present to board members? Write them here.

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The Risk Management Network

Learning Objective 3

Identify members of a risk management network and explain how to determine the best fit for network members.

Internal and External Resources

Risk managers cannot perform every risk management function alone. To achieve their objectives, they require contributions from internal and external networks of people. Those networks provide risk managers with necessary information and expertise.

Risk managers often expand their networks to include people with expertise in areas such as:

- human resources
- health, safety, and environmental practices
- law enforcement
- emergency response
- functional areas within an organization
- risk management
- financial planning and consultation

And members can include:

- insurance agents, brokers, carriers, and captive managers
- RMIS providers
- actuaries

Networks can be both formal and informal and, as seen in the lists above, they can include internal and external resources. However, before risk managers can build effective networks, they must first look within. They must understand their organizations' needs and how people, both inside and outside their organizations, can help meet those needs. In other words, they need a network of professionals who will benefit their organizations.

Identifying the Best Fit

To select network members who will be the best fit for their organizations, risk managers consider several factors. One is the specific roles and responsibilities an individual would be given. Other factors may include a person's background and personal attributes, such as interpersonal skills, work ethic, availability, and ability to work as part of a team.

The Best Fit

- Background
- Roles and responsibilities
- Soft skills, including working effectively with others
- Time availability

Building a network takes time and careful consideration. Effective management is one consideration. That is, risk managers must be aware of their obligations to manage internal personnel and outside service providers effectively for the purpose of achieving risk management goals.

Clearly, risk managers need networks. And clearly, those networks are likely to need participation and contributions from people both within and outside their organizations. Let's examine those network components more closely.

Internal Networks

Because internal networks come from areas within an organization, the challenge for risk managers may be the special care required not to let internal political and jurisdictional issues cause them to overlook or underutilize these resources.

Given that the overall goal of risk managers is to implement successful risk management practices across their organizations, internal network members should include personnel from all departments. Frequently, risk managers' work with one department influences their work with other departments, justifying the need for extensive networks.

Say a risk manager has learned of new federal legislation that may affect her organization's business operations. The risk manager contacts legal representatives in her internal network for more information. She relies on their expertise to understand compliance requirements and to identify new exposures. The information she gathers from this exchange prepares her to contact another part of her network—the finance department. There, she can discuss control, financing options, and overall financial impact with internal experts.

External Networks

When risk managers network with outside service providers, they do so knowing who and what they need. Their purposes for building networks vary. Some may seek an outside or objective viewpoint. Others see opportunities for cost savings. Or, time may be a critical factor in selecting additional resources, especially for special projects or limited-term activities. And in some cases, executive managers insist that risk managers select additional resources.

Reasons for an External Network

- An outside or objective viewpoint is required.
- Time is of the essence.
- An outside expert is more cost effective.
- Upper management requests it.
- A limited term activity or special project arises.

The roles and responsibilities of external service providers may vary widely. The possible range of expertise can be broad and accessed according to specific functions that require support.

Say a company is considering purchasing a piece of property. The company's risk manager may seek the services of an environmental consultant to confirm that no pollution issues are associated with the property. If the consultant does discover issues, then outcomes may change. The company may decide not to purchase the property, may reduce its offer, or may require the owner to clean up and remediate the environmental concerns prior to negotiation.

It's worth noting that an insurance agent or broker can be one of the most important members of a risk manager's external network. As an external team member, an insurance agent or broker brings knowledge and expertise about the broader insurance market that risk managers may not have. These individuals become knowledgeable partners in discussions of risk control and financing of exposures and losses.

Reflection

Think about a time you "networked" with an outside individual or service provider. Explain what factors guided your decision to connect to this particular person or group.

_____

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_____

Knowledge Check

As the risk manager for a large organization, you have identified cybersecurity as a main threat, but you do not have much experience with this exposure. What members of your risk network could you reach out to, and how might they be able to help?

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Summary

The final step in the risk management process—Risk Administration—has two parts. First is the implementation of the risk management program, in which the desired risk management program's policies and procedures are put in place. Second is the constant monitoring of the program. Monitoring requires that risk managers regularly examine and evaluate the results of their organizations' risk management programs, policies, and procedures and then use what they learn to modify or adjust them.

Communication is essential for the successful implementation of a risk management program. Risk managers must present the goals and objectives of their programs and provide policy and procedure manuals to all members of their organizations, as well as to external service providers. Because the ultimate goal is to implement a risk management program organization-wide, risk managers use organizational charts or flowcharts to outline their interactions with members of all departments.

The implementation of a risk management program can be summarized in a set of steps:

- Present the risk management policy and procedure manual to the organization and other applicable service providers.
- Communicate risk management goals and objectives throughout the organization.
- Demonstrate the organization's commitment to risk management principles.
- Create an organizational chart or flowchart showing risk management's interaction with other departments.
- Establish and communicate individual responsibilities and accountabilities for the success of the risk management program.
- Partner with various levels of the organization.

Constant monitoring, data gathering, and modification follow implementation. Risk managers rely on a variety of materials, reports, and members of their networks to find evidence of their programs' success as well as indications of where adjustments are required.

To achieve their objectives, risk managers look to individuals within and external to their organizations for assistance. Networks of individuals provide risk managers with necessary information and expertise.

Networks can be formal or informal, but they should be the best fit for each risk manager's organization. Each individual's role and responsibilities, background, and personal attributes such as interpersonal skills, work ethic, availability, and ability to work as part of a team are among the factors risk managers consider as they build professional networks.

Risk managers have enormous responsibilities. Among them is the work they do to develop company cultures in which risk management is valued and viewed as a top priority. Such results depend on a combination of technical and soft skills, including practical leadership and exceptional communication skills.

Resources

For valuable reinforcement, some important concepts related to the learning objectives in this section are summarized in audio and video clips. Use the following link to access these helpful learning resources.

scic.com/ELRresources

The Role of a Risk Manager

Section 6 Self-Quiz

1. Check all that represent a source of evidence a risk manager might use to determine the effectiveness of a risk management program.

- ☐ open and closed claims
- ☐ risk financing plans
- ☐ contracts
- ☐ significant incidents/accidents

Directions: Read each statement. Then select True or False.

2. A risk manager provides a finance plan during the final step of the risk management process.

True **False**

3. Implementation of a risk management plan relies heavily on the risk manager's control of an organization's resources.

True **False**

4. The two parts of the final step in the risk management process are implementation and monitoring.

True **False**

5. A risk manager's success rests entirely with those who have the ability to execute risk management strategy.

True **False**

6. Risk managers conduct monthly assessments to maintain quality control.

True **False**

7. For long-term success, risk managers must be active participants on their organizations' leadership teams.

True **False**

8. For long-term success, risk managers must create adaptable processes and approaches that evolve to fit new needs, best practices, and emerging risks.

True **False**

9. To achieve their objectives, risk managers require contributions from both internal and external networks of people.

True **False**

10. To select network members who will be the best fit for their organizations, risk managers consider a person's personal attributes, such as interpersonal skills.

True **False**

Appendix

Preparing for the Final Exam

Keep in mind, the most important measure of your knowledge will be witnessed in your service to your organization. Think of an exam as a tool. Use it to come to an understanding of what you know, how it affects your work, and what more you would like to know to have even greater success in the workplace.

The exam period is one hour long. The exam itself is composed of 50 multiple-choice questions that ask you to demonstrate what you know. Each question is worth two points. You are required to earn a minimum of 70 out of 100 possible points. Questions appear in the order of presentation of the topics.

Remain aware of the time as you take the exam. Pace yourself and be aware that unanswered questions are considered incorrect.

Study Techniques

Here are some techniques you can use to help you prepare for the Final Exam. Apply these same techniques to each section in this Learning Guide.

1. Review the Section Goal.

2. Re-read the Introduction.

3. Review each Learning Objective.

4. Change each head and subhead into a question. Then answer the question. For example, header: Risk Financing Plans

   Question: What are some examples of risk financing plans?

5. Review each diagram, graph, and table. Interpret what you see. Ask yourself how it relates to a specific learning objective.

6. Check your answers to each Check-In activity. Correct your original answers, if necessary.

7. Check your answers to each Knowledge Check. Consider ways to improve your original answers.

8. Re-read the summary at the end of each section.

9. Check your answers for each section Self-Quiz. Correct your original answers, if necessary.

10. Review any comments, highlights, or notes you made in each section.

11. Rewrite important ideas in your own words. Find ways to relate your work experiences to those ideas.

12. Make flash cards to help you review important vocabulary.

Sample Exam Questions

The Final Exam has a variety of questions similar to the ones below. In this sample, correct answers have been provided.

Sample 1

1. What kind of risk situation or incident has either a loss or no loss outcome?

- **a)** speculative risk
- **b)** pure risk
- **c)** simple risk
- **d)** finite risk

Sample 2

2. Which of the following characteristics describe an insurable risk from the perspective of an underwriter? Select all that apply.

- **a)** a risk shared by many
- **b)** a risk that generates enough premium paid by the many for the losses of the few
- **c)** a risk that is reasonably calculable as to likelihood
- **d)** a risk that is catastrophic in nature

Sample 1: The correct answer is **b**, **pure risk**.

Sample 2: The correct answers are **a**, **b**, and **c**.

Glossary of Terms

accident an unexpected and unintentional event that tends to result in damage or injury

accounting rate of return (ARR) a tool that measures the percentage return of average annual cash flows on initial investment

active retention a planned financing solution in which internal funds can be used to pay losses

avoidance precludes or discontinues an activity to avoid the chance of loss, eliminating both positive and negative outcomes

budgeted retention the portion of expected losses an organization is willing and able to retain

claim a demand for payment or a company's obligation to pay as result of a loss or occurrence

contractual transfer the shift of responsibility of certain liabilities to another party; includes exculpatory agreements, waivers of subrogation, limit of liability clauses, and hold harmless agreements

cost-benefit analysis a measurement of total anticipated benefits after costs are subtracted

deductible plan a risk financing program in which an insured elects to reimburse the insurer for losses up to a stated amount

dividend plan a guaranteed cost plan that has dividend options which return a portion of the premium when an insurer has had an overall good year and the insured meets a certain loss ratio criterion

duplication establishing backups for critical systems or operations

economic class of risks risks arising from internal operations, general economic conditions, external competition, conditions in the financial marketplace, and entrepreneurial activities, such as new products or services

exculpatory agreement a pre-event exoneration of one party for events that may result in any loss or a specified loss to another party

expected losses an estimate of total losses of a given type that an insurance company can "expect" in a given period

exposure a situation, practice, or condition that may lead to an insured's susceptibility to adverse financial consequences or loss

external financing insurance purchased to pay for losses that fall outside an organization's risk appetite and ability

frequency the number of claims that occur, or an insurer expects to occur, within a given period of time

guaranteed cost plan a finance plan for organizations that have low risk appetites, desire little variability in cost of risk, and have little or no ability to manage services. The rate is multiplied by the exposure and is then adjusted by both the experience modifier and any scheduled and/or discretionary credits/debits.

hazard a factor that increases the likelihood a peril will occur

heat mapping a visual representation of complex sets of data interpretations which uses colors to indicate patterns or groupings of how risk will impact an organization

hold harmless agreement an arrangement whereby one party assumes the liability inherent in a situation, thereby relieving another party of that liability

human resources an organization's internal people exposure

implementation the part of Risk Administration in which a desired risk management plan is initiated

incident an event that may lead to a loss or a claim, or may cause a business interruption

indemnification agreement another name for a hold harmless agreement

indemnitee the party in a hold harmless agreement that is relieved of liability

indemnitor the party in a hold harmless agreement that assumes liability

insurable risk a risk an underwriter may perceive as something that has little chance of occurring and low severity should it occur. An insurable risk, from a risk manager's perspective, is an exposure that is often subject to loss and can negatively affect an organization.

insurance a promise of compensation for specified losses in exchange for payment of premium

intangible property property that has value but no physical form

juridical class of risks risks arising from decisions made by judges and juries, or adverse trends in the legal climate

legal class of risks risks inherent in compliance or arising from common law and statutory liability

likelihood the chance that something will happen

limit of liability clause a pre-event limitation of the amount, type, or method of calculation of damages available to one or both parties to an agreement

loss a reduction in asset value

loss development the process by which data are adjusted to account for lag time to settle claims, recognize frequency development, and index for inflation

loss development factor (LDF) a value used to adjust (multiply) known claims to determine an anticipated value for claims over a specific time period

loss projection the use of historical loss data to predict future risk frequency and severity; also called loss forecast

loss reduction the process of adjusting historical losses with factors such as inflation; this allows historical losses to be valued in current dollar amounts

loss trending an action taken to minimize the severity, or budgetary impact, of an unprevented loss

monitoring regular examination and evaluation of the results of a risk management plan

occurrence an "accident" that occurs over an extended period of time

passive retention an unplanned financing solution in which internal funds are used to pay losses

payback analysis a tool that measures the length of time needed to recover the cost of a capital investment

peril a cause of loss

physical class of risks risks associated with people and property

physical transfer the shift of some or all of an operational function or exposure to an outside source or third party

political class of risks risks arising from changes in the law, reinterpretations or changes in governmental policy, politics, and diplomacy, and conflict and global governance

pre-loss approach an action taken prior to loss

post-loss approach an action taken after a loss

prevention an action designed to minimize the frequency of losses

pure risk a chance of loss or no loss

reduction an action taken to minimize the severity, or budgetary impact, of an unprevented loss

retention use of internal funds to pay losses

retention/transfer diagram a graphic depiction of an organization's financial ability and risk appetite

risk a condition of either positive or negative uncertainty arising from a given set of circumstances

risk ability an organization's level of ability or inability to self-insure or assume financial responsibility for loss

Risk Administration the fifth step in the risk management process; the ongoing implementation and monitoring of a risk management program

Risk Analysis the second step in the risk management process; using the exposures identified in the Risk Identification step to assess the potential impact of those exposures upon a client; it takes two forms—qualitative and quantitative

risk appetite a willingness to accept or tolerate risks, or simply, the extent of aversion to risk

Risk Control the third step in the risk management process; it applies a set of methods or actions intended to minimize or avoid the impact of loss

Risk Financing the fourth step in the risk management process; it involves the acquisition of internal and external funds at the most favorable cost to pay losses

Risk Identification the first step in the risk management process; it involves the identification and examination of all of an organization's exposures

risk management the implementation of a process intended to minimize the uncertainty of exposures that can adversely affect an individual's or organization's assets and financial well-being

risk mapping a visual analytical tool that identifies all risks to an organization and indicates their frequency on a scale from low to high, and their potential impact on a scale from low
to high

risk register a prioritization of risks based on a scale of anticipated potential impact

root cause analysis a systematic method for drilling down to the "root cause" of an incident

segregation an action intended to isolate an exposure from other exposures, perils, or hazards

self-insured risk financing plan a complete retention plan. Risk financing is accomplished by maintaining access to funds—internal or external—to cover possible losses as opposed to purchasing an insurance policy. In reality, most organizations are not purely self-insured, as they often purchase reinsurance or excess coverage.

separation the distribution of exposures or activities over several locations

severity the aggregate dollar amount of all losses for a given period of time

social class of risks risks associated with public relations and social stability

speculative risk the possibility of loss, no loss, or chance of gain

tangible property property that can be seen or touched, and includes real property, such as buildings, and personal property, such as equipment

technological class of risks risks arising from the world's growing use and dependence upon technology, as well as risks created by emerging technologies

time value of money (TVOM) calculation a measure of the value of money over a given amount of time, considering a given amount of interest

tolerance corridor the marginal retention beyond the budgeted retention that an organization may also choose to retain, either entirely or in some part

tort liability liability for negligence

total cost of risk (TCOR) calculation a calculation of all costs and expenses associated with risks and risk management within an organization

transfer the shift of physical or contractual (or both) risk to another party

transfer of financial responsibility the use of external funds to pay losses

waiver of subrogation a pre-event agreement that prevents an insurance carrier from recovering payments it makes on a claim from a third party