

RISK MANAGEMENT— WHY AND HOW



*An illustrative introduction
to risk management for
business executives*



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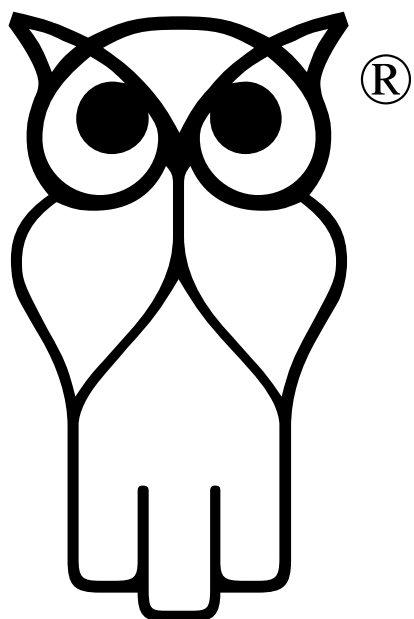
**An illustrative introduction to risk management for
business executives**

George L. Head, Ph.D, CPCU, ARM, CSP, CLU

**INTERNATIONAL RISK MANAGEMENT INSTITUTE, INC.
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At IRMI, our mission is to be the premier authority in providing expert advice and practical strategies for risk management, insurance, and legal professionals. We will continuously earn our customers' trust and confidence by empowering them with the most reliable and accurate information, maintaining the highest levels of integrity in all that we do, and quickly responding to their needs.



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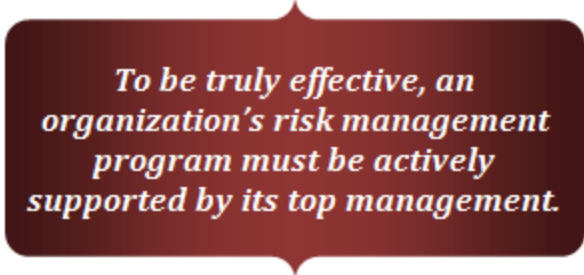
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Foreword

While it seems intimidating to many businesspeople—possibly because of the unique vocabulary that risk and insurance professionals use—the risk management process is not really difficult to understand. It is simply a common-sense approach to using a number of readily available tools to handle an organization’s risk in the most cost-efficient manner possible. To be truly successful, however, risk management must permeate an organization. A risk manager or even a department full of risk managers cannot maximize the benefits of the process without the understanding, cooperation, and active support of others within the organization.

Thus, one of the most important roles of risk professionals is educating others within their organizations (or their clients’ organizations) about the process and how to properly apply it. For this reason, we have had many requests over the years to prepare a publication that provides a simple and easy-to-read explanation of the risk management process—a guide that insurance professionals could provide to their clients and risk managers could give to business and financial managers to acquaint them with the risk management process.



To be truly effective, an organization’s risk management program must be actively supported by its top management.

That is why we jumped at the opportunity to commission Dr. George Head to write this introductory text. George is a true pioneer of risk management education, and he has learned over the years how to make it interesting. *Risk Management: Why and How* begins with a case study about a fire that destroys the Arapaho, a hypothetical garage and apartment complex in Georgia. George then explores ways the risk management process might have been employed to avoid the fire entirely, minimize the damage, or at least ensure a financial recovery by its owners.

It is our sincere hope that *Risk Management: Why and How* will fill the need for an easy-to-understand introduction to risk management and the risk management process for organizations large and small. To facilitate widespread distribution of *Risk Management: Why and How*, we have decided to make it available to select IRMI customers and friends at no cost. We have, however, taken the liberty of adding sidebars to introduce IRMI products and services that can help you apply the techniques discussed in the book. These appear in the “IRMI Toolbox” sidebars.



Access the [Glossary of Insurance and Risk Management Terms](#) on the IRMI Web site at absolutely no cost. With definitions of more than 3,000 terms, and translations of hundreds of risk and insurance acronyms and abbreviations, it is perhaps the most complete and current insurance glossary available anywhere. Risk managers: place an index of the glossary terms on your Web site or Intranet linking to the definitions on the IRMI Web site. Agents, brokers, or insurers: place this index on your Web sites to help customers gain access to definitions of key insurance and risk management terms. Print versions of this [risk and insurance glossary](#) are also available.

As you will see from the number of sidebars, the IRMI risk management library is extensive—more than 45,000 pages are included in our online library. The full library may be more than you need if you are with a small organization or if you wear many hats in a mid-size company. If this is the case, I recommend you take a look at two IRMI titles in particular: *Practical Risk Management* and *101 Ways to Cut Business Insurance Costs*. [Practical Risk Management](#) covers all the topics discussed in *Risk Management* in much more detail than here, but still in small enough bites to be digestible and useful to any business executive charged with managing risk or buying insurance. [101 Ways to Cut Business Insurance Costs](#) is an assembly of proven risk management and insurance purchasing tactics for reducing the cost of the insurance policies that businesses buy and which can be implemented by any insurance buyer.

It is a pleasure to make *Risk Management: Why and How* available to you. Please share it with your friends, colleagues, and clients.

All the best,

Jack P. Gibson, CPCU, CRIS, ARM

President

International Risk Management Institute, Inc. (IRMI)
Dallas, TX

About the Author

The holder of several professional designations in insurance, safety, and risk management, Dr. Head has been a risk management educator since he graduated in 1967 with a doctorate in economics from the Wharton School of the University of Pennsylvania and joined the American Institute for Chartered Property Casualty Underwriters in suburban Philadelphia. Throughout his career, Dr. Head developed and maintained the curriculum and examinations for the Institute's professional designation programs in risk management and safety, earning career recognition awards from the American Risk and Insurance Association, the Risk and Insurance Management Society, the Public Risk Management Association, the American Society of Safety Engineers, the Institute of Risk Management (British) and the International Insurance Society while contributing regularly to their publications as well as to the general risk management, insurance, and safety trade press.



**George L. Head, Ph.D.,
CPCU, ARM, CSP, CLU**

After retiring in 2000 as a Director Emeritus of the American Institute, Dr. Head continued to write and advise on risk management matters. From 2005–2008, he wrote a column on [risk management ethics](#) for IRMI.com. He also answered over 1,000 readers' risk management questions as part of the **Ask George Head** service sponsored by IRMI. Dr. Head currently is a theological student in Pennsylvania.

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Preface

Consider this hypothetical scenario.¹ In suburban Savannah, Georgia, in a concrete apartment house that we will call the Arapaho, a 2-story concrete garage that for 30 years had supported the weight of a 5-story, 80-unit apartment complex, almost collapsed—almost, but not quite. A Saturday afternoon fire at the west end of the lower, below-ground level of the garage caused much of the steel-reinforced ceiling of that level to collapse. Fortunately, the automatic fire-suppression system that served the entire building extinguished the fire while there was still enough tensile strength in the steel and architectural stability in the overall structure for it to remain standing. However, by Sunday morning, each of the apartment floors had tilted westward 3 to 5 degrees, prompting this suburb's civil authorities to order all the apartment units to be evacuated by sundown Monday. Tuesday morning, Chatham County building inspectors condemned the entire apartment and garage facility as unsafe.

While searching for the cause of the fire Tuesday afternoon, the Fire Department investigators found the body of one of the apartment tenants, widow Wanda Middleton, in the driver's seat of the remains of the 1978 Mercury Cougar that her husband used to drive. They speculated that the car had burst immediately into flames when she turned the ignition key. A spark from an electrical fault in the starter ignited gasoline that had leaked from an aging fuel line into the car's engine and onto the garage floor. (Modern cars have safer, but not yet hazard-free, ignition systems.)

Based on information from these fire investigators and later reports from its own building inspectors, Chatham County officials ordered the apartment and its garage to be imploded. As authority for this order they cited the county's demolition ordinance which, at the time, stipulated such an order permissible when the costs of repairs adequate to bring a damaged building into compliance with city codes equals or exceeds 50 per cent of the building's value.

Why does our discussion of risk management start with a Saturday afternoon garage fire in suburban Savannah? The fire certainly was not newsworthy beyond 3-column inches in Sunday's *Savannah Morning News*—and nothing on local television. Yet, we will explore this incident, which could have happened anywhere at any time, because it illustrates all the essential elements of all the accidental losses that happen everywhere, every day. This incident

1. This case study is completely hypothetical. Any resemblance to actual people or an actual apartment, loss, or event, including the name Wanda Middleton or the name of the complex as well as the location, is purely coincidental.

and its aftermath will hold our attention throughout *Risk Management—Why and How* because its relatively small and simple scope gives us a clear perspective on just about every major type of unforeseen event that can fall within the proper domain of “risk management” as it is practiced by those who devote their careers to preventing or paying for accidental losses. Understand risk management as it applies to the near collapse of this garage, and you are well on your way to managing all other risks that arise from any possible exposure to any accidental loss anywhere.

Yet, we will explore this incident, which could have happened anywhere at any time, because it illustrates all the essential elements of all the accidental losses that happen everywhere, every day.

Take some time with *Risk Management—Why and How*, and you will have a good start toward:

- Coping with risk to safeguard an organization’s resources from accidental loss, to grasp unexpected opportunities, and to control the overall level of uncertainty within an organization
- Using proven techniques to evaluate how potential property, key person, liability, and net income losses may adversely impact an organization’s ability to achieve its goals
- Appraising how to cost effectively apply a variety of risk management techniques to control accidental losses or to pay for those losses that cannot be avoided
- Instituting a productive risk management program within an organization
- Adjusting a risk management program so that it remains fully cost effective whenever conditions change

Before we move on, please recognize that there are other perfectly valid but quite different, kinds of “risk management.” One type is practiced by those who manage portfolios of financial investments and who strive to meet specified financial results in given time periods. This financial risk management is important—but it is distinct from the risk management of potential accidental losses. Potential accidental losses—loss exposures—will be the primary focus of the risk management we will discuss here.

Recognize as well that many individuals and organizations suffered losses from the fire, near collapse, and eventual implosion of the Arapaho apartment complex. To name just a few:

- Wanda Middleton lost her life and her Mercury Cougar.
- Arapaho tenants lost their homes and possessions, and many lost their cars.
- We have not even yet mentioned the businesses that rented space on the Arapaho's main floor which were put out of business until new quarters were secured.
- Chatham County and the State of Georgia lost property tax revenues because the apartment house and its garage were erased from the tax rolls.
- The merchants and others servicing the former Arapaho tenants lost revenue as a result of the tenants' displacement.

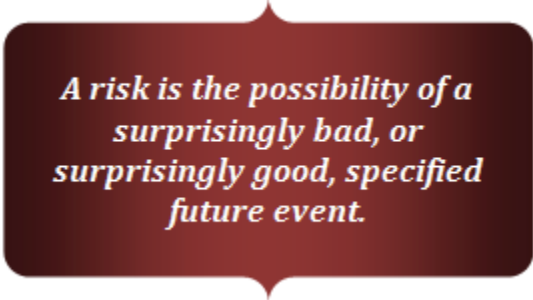
While acknowledging that many others suffered loss, we are going to explore this incident solely from the perspective of the Arapaho and what these events should have taught the owners of the Arapaho, and can teach us, about managing risk. If we succeed, the Arapaho will not have been imploded—and Wanda Middleton will not have died—in vain.

Some Basic Definitions

To manage risk, we must first define it. Yet the word “risk” is not easy to define, mainly because the word has several meanings in casual daily language and because risk, even when carefully defined, is easily confused with a number of other closely related concepts. To keep things clear, let us begin with a precise definition of “risk” and then distinguish risk from some other terms that may seem like synonyms but really are not. We will also define “risk management” as we will apply it to the Arapaho loss—as we could apply risk management to any other accidental loss anywhere.

Risk

A *risk* is the possibility of a surprisingly bad, or surprisingly good, specified future event. For example, at the Arapaho before it imploded, a surprisingly bad event could have been that a large water pipe on one of its upper floors could have burst, flooding the floors below. This is the kind of surprisingly bad accidental event with which risk management typically deals. As long as the *possibility* of such a water pipe bursting existed, the risk of bursting pipes was present at the Arapaho. If all the pipes had been removed from the Arapaho, there would have been no possibility—no risk—of water pipes bursting there. A specified risk, a given possibility, does not “almost” or “somewhat” or “perhaps” exist. At a given time and place, a specified risk either does or does not exist; there is no in-between.



*A risk is the possibility of a
surprisingly bad, or
surprisingly good, specified
future event.*

A risk of a specified future event can produce surprisingly good results as well. To illustrate, the water pipe bursting in the Arapaho, when flooding one of the lower floors, could have revealed very valuable jewelry that had been hidden under the carpet in one of the vacant apartments. Discovering this jewelry—long ago abandoned and therefore the property of the Arapaho’s owners—could have more than made up for the water damage to the building. Even though risk management typically focuses on potential *accidental* negative results, the possibility of surprisingly positive results exists.

Risk has three dimensions:

- Direction
- Degree of probability
- Magnitude of the consequences

First, the *direction* of a risk is either positive (a surprising gain, e.g., discovering jewelry) or negative (a surprising loss, e.g., flooding). A risk also has a *degree of probability*, a degree of likelihood. Discovering jewelry under a water-soaked carpet is a very unlikely possibility. But because it is still a possibility, it remains a risk. On the other hand, once water pipes burst, water damage to the Arapaho's structure is very likely—a risk (possibility) that has a very high degree of probability, almost certainty. The third dimension of any risk is the *magnitude of its consequences*. For example, the flood damage to the building may be either slight or severe; the value of the discovered jewels may be either negligible or a true “king's ransom.”

The three dimensions of a risk are independent: a positive or a negative risk may be either highly probable or very unlikely, and the extent of its consequences may be very small or very large. For the risks with which risk management typically deals, the direction is negative, the probability is slight, but the consequences may be disastrous.

Risk Management

“Management,” like “risk,” can have many meanings, each valid in the appropriate context. For risk management of potential accidental losses, it is best to define “management” as a *process*: the process of planning, organizing, directing, and controlling resources to achieve given objectives. Putting this definition of “management” together with our earlier definition of “risk” gives us a precise, quite concise, definition of “risk management”:

*“Management” is a process:
the process of planning,
organizing, directing, and
controlling resources
to achieve given objectives.*

Risk management is the process of planning, organizing, directing, and controlling resources to achieve given objectives when surprisingly good or bad events are possible.

Many experts have defined “risk management” in different words but still quite accurately, and even

more concisely. To those who fully understand it, a superb definition of “risk management” (adapted from a definition once proposed by H. Felix Kloman) is: “Risk management is analyzing, and then acting appropriately on, risk.”

The risk management process on which *Risk Management—Why and How* focuses also is an adaptation of the centuries-old scientific problem-solving process, where the “problem” is risk. Despite the fact that risk can be either positive or negative, we will be viewing risk as a “problem”—rather than an “opportunity”—because risk management traditionally has dealt only with surprisingly bad outcomes, not surprisingly good ones.

Throughout our discussion, the risk management process will have four steps:

1. Evaluating loss exposures
2. Appraising the feasibility of alternative risk management techniques
3. Establishing a risk management program
4. Adapting to change

Each of these is the subject of the four “core” chapters of *Risk Management—Why and How*. The first two—evaluating loss exposures and appraising alternative risk management techniques—constitute *analysis*, that is the first part of risk management as Kloman describes it. The last two—establishing a risk management program and adapting to change—are the second, action part of Kloman’s definition of risk management.

Probability

Many people mistakenly confuse risk with probability, often calling it “chance.” In fact, probability is one of the dimensions of risk. Every event has some probability of occurring, ranging from 0 to 1. An event with a probability of 0 is impossible: an event that is certain to occur has a probability of 1. In flipping a coin, the probability of a “heads” is 0.5, equal to the probability of “tails.” (We assume that the probability of a coin landing on its edge is 0.)

As we have said, risk management of potential accidental losses is concerned mainly with events that are quite unlikely, perhaps 1 chance in 100 (having a probability of 0.01) or per-

haps having 5 chances in 1,000 (having a probability of 0.005). Because these events are so rare, they can truly be surprising.

In other situations, where the chance of loss rises to perhaps 60 or 75 percent (a probability of 0.60 or 0.75), such as with hurricanes during the summer in certain parts of the U.S. Gulf Coast, the probability of loss rises, but the actual risk declines. This is because a hurricane is not a surprising event to residents in these areas. The “surprise” would be a hurricane season with no significant storms. In short, chance of loss and risk are two separate concepts.

Chance of loss and risk are two separate concepts. A loss is an unplanned reduction in the value of something. A risk is the possibility of a surprisingly bad, or surprisingly good, specified future event.

There is no risk of an event whose probability is 0, an event which is not possible. There is also no risk associated with an event which is certain to occur. Thus, risk arises with the possibility of an event that is neither impossible nor totally certain. Within possibility, as with certainty, the future is determined; surprises—good or bad—cannot occur. Therefore, such situations do not involve risk.

Loss

A *loss* is an unplanned reduction in the value of something. At the Arapaho, the burning of Wanda’s Mercury Cougar is an example of a property loss. Destruction of her personal items in the car provides other examples of physical losses. Her death is also a loss, particularly to her family members who loved her.

Stepping back from Wanda Middleton and her car, the resulting physical damage to the apartment structure also caused economic losses to other Arapaho residents, who no longer had a place to live, and an even greater economic loss to the owners of the Arapaho, who could no longer collect rents from their tenants (“net income” losses, discussed later). Furthermore, if court rulings eventually determine that the owners of the Arapaho could have prevented these losses—perhaps by regularly inspecting the garage and removing/fixing any vehicles leaking oil—harsh liability judgments could be imposed, causing financial ruin. These are classified as “liability losses” (also discussed later) to the apartment owners.

A loss always involves the unplanned reduction in the value of something; a planned reduction in value is not a loss.

Considered together, these examples of losses illustrate some important aspects of the general notion of “loss.” First, a loss may or may not have a physical component: destruction of the Mercury Cougar was physical; loss of Wanda Middleton’s companionship was not.

Second, a loss may or may not be financially significant. Depending on its condition, the aging Mercury Cougar may have had great value as an antique vehicle, or it may have been a financially worthless “junker.” The personal effects that Wanda Middleton kept in the car probably had no financial value to anyone else, but mementos could well have been of great sentimental value to her.

Third, a loss can be totally financial without having any physical component. For example, if one of the Arapaho’s residents had kept in her apartment an extensive collection of a popular singer’s personal effects, this collection could have been of great value, both financially within the community of collectors and emotionally to this individual collector. Physical loss of the collection when the Arapaho was imploded would result in a financial loss. On the other hand, if this singer’s reputation were ruined by notorious indiscretions he committed in his personal life, both the financial and emotional value of this collection may be lost even though the collection was not physically damaged.

A loss always involves the *unplanned* reduction in the value of something; a *planned* reduction in value is not a loss. For example, the owners of the Arapaho may have owned various items of maintenance equipment—perhaps vacuum cleaners, snow blowers, holiday decorations, or lawnmowers—which eventually just “wore out” due to use. When these items had to be thrown out to make room for replacements, discarding the old ones was not a loss—their value had been transferred to the objects of value.

Peril

A *peril* is a direct cause of loss. At the Arapaho apartments, fire was the most immediate cause of the damage to the garage, although it was a legal order of the Chatham County offi-

cials which brought about the eventual implosion of the Arapaho complex. Perils can be grouped into three categories:

- Natural perils, such as flood, wind, and earthquake
- Human perils, such as theft, various kinds of violence (including war), and carelessness (which the law often considers negligence)
- Economic perils, such as recession or changes in consumer preferences and in technology

Several perils often join together to cause a loss. For example, fire may have been the most immediate cause of the damage to the Arapaho's garage. But perhaps an even more important cause of this damage was Wanda's carelessness in not realizing that gasoline had been leaking from her car.

Hazard

A *hazard* is a condition or an action that increases the probability or the magnitude of a loss. To illustrate, an accumulation of trash is a fire hazard because, once ignited, trash provides more fuel for any fire. Similarly, the carelessness with any ignition source—be it a cigarette lighter or a backfire from a passing automobile—increases the probability of fire.

For the Arapaho implosion, hazards which probably made this loss more likely or more severe included the age of the structure, failure to patrol the garage and to discover gasoline leaking from the vehicle, and the “closed” design of the structure (leaving few exits through which to empty the parking area). This last hazard could have been reduced if the entire

garage had been above ground and of a more “open-aired” design. All these illustrations are examples of physical hazards that can make property losses more likely or more destructive. (Later we will see illustrations of hazards that can intensify personnel, liability, and net income losses.)

A hazard is a condition or an action that increases the probability or the magnitude of a loss.

Loss Exposure

A *loss exposure* is a possibility of a loss—more specifically, the possibility of loss arising from a particular peril striking a particular thing of value. There are three dimensions to a loss exposure:

1. The value exposed to loss
2. The peril that causes loss
3. The likely financial consequences of that loss

Thus defined, a loss exposure brings together several of the aspects of risk, peril, hazard, and loss as we have previously defined them. A loss exposure and a risk are both possibilities.

However, a risk can be positive (bringing unexpected gain) or negative (bringing unexpected loss). By definition, a loss exposure can bring only loss.

It is important to distinguish among potential loss exposures because each loss exposure calls for separate safety measures and usually separate insurance coverages or other risk financing arrangements.

Surprise is an essential element of any risk, but many loss exposures present no potential surprise at all. For example, perhaps to many who parked their cars in the Arapaho's garage, there was "bound to be" a fire in that garage "some day." The only question was when the

fire would eventually break out. For those who felt it was coming, there was no surprise, no risk—only a moral certainty.

Almost anything of value can suffer loss from any number of perils. Wanda Middleton's Mercury Cougar could be damaged by fire (as it was at the Arapaho), it could have been damaged in a traffic accident, or it could have been stolen by thieves. The separate threats posed by these three perils (or any number of other potential causes of loss) are each separate loss exposures. For the Mercury Cougar, fire, highway accident, and theft are three separate loss exposures, even though they all threaten the same vehicle. It is important to distinguish among these exposures because each loss exposure calls for separate safety measures and usually separate insurance coverages or other risk financing arrangements.

The third dimension of any loss exposure is the financial consequences that may arise from a given peril striking a given thing of value. The Arapaho loss demonstrates that perils like fire and the implosion can bring about immediate total losses to vehicles and to buildings. It is unlikely, however, that other perils which may strike vehicles or buildings—perils such as insect damage or corrosion—will cause complete destruction to a vehicle or a building. These slower-acting perils offer opportunities for preventive action before their damage becomes severe. Indeed, damage from these less violent perils can even be completely prevented through, for example, treating the surface of a building during its construction or housing vehicles in garages to protect them from many perils.

Why We Manage Risk

Almost all people and organizations strive to manage risk for three fundamental reasons:

- To safeguard resources from surprising losses
- To be prepared to seize surprising opportunities
- To limit uncertainty, both in their minds and in the world

These three goals stem from the nature of risk itself, which we defined earlier as the possibility of a surprisingly bad, or a surprisingly good, event.

Safeguarding Resources

Safeguarding the resources which a person or organization already possesses involves either reducing the surprising losses to which these resources are exposed or restoring them from losses that they experience. These two basic strategies for safeguarding resources rely on either risk control or risk financing techniques. These two groups of techniques constitute the remainder of *Risk Management—Why and How*, so we do not need to detail them further here.

Two basic strategies for safeguarding resources may be categorized as risk control and risk financing techniques. These are used to reduce surprising losses to resources or restore them from losses that these resources suffer.

Preparing for Opportunities

Remember that risk can bring surprisingly favorable outcomes as well as surprisingly unfavorable ones. People and organizations that safeguard their resources against the surprising losses that often come from unfavorable outcomes are in a better position to seize surprising opportunities than are those who have not protected what they already have.

For example, if a national organization chooses to hold its annual convention near the suburb of Savannah, where the Arapaho has stood for 30 years, the Arapaho's owners may well have the opportunity to charge premium rents and parking fees to those conventioners who choose to use its facilities during their visit. However, if the Arapaho no longer has vacant garage or apartment space because it has suffered a fire and eventual implosion, its opportunity for these windfall revenues will have "gone up in smoke and ashes" along with its building.

Limiting Uncertainty

Those who practice effective risk management have a better grip on their future. They know that they have done all they cost effectively can to prevent accidental losses, to reduce the probability and magnitude of any losses they cannot prevent, and to secure funds to finance recovery from any surprising losses they cannot control. They also know that they are ready to act on any unexpected opportunities they may encounter.

Overall, therefore, effective risk management has enabled them to limit the range (particularly the downside range) of the consequences of any surprising events that may arise. This means they will be better able to carry out their plans—to achieve their personal and organizational objectives—despite the uncertainty of the events in the world in which they function.

Uncertainty can be a state of mind as well as a condition of the objective, physical world. Psychological uncertainty, while often related to the unpredictability of external events in the world, can be quite independent of external conditions. For example, a timid person taking his or her first transcontinental airplane flight may be filled with uncertainty about his or her personal safety despite the statistical fact that commercial air travel is one of the safest modes of transport. Conversely, many adolescents are said to be convinced that they are "indestructible" even when they are doing highly dangerous things. Psychologically, the objectively safe aircraft passenger is filled with uncertainty; an adolescent drag racing on winding mountain roads is totally confident of his or her invulnerability. In contrast to either of these extremes, people and organizations that rationally practice effective risk management can better predict and control their futures.

Please note another link between risk, on the one hand, and an individual's personal (or organization's collective) state of mind, on the other. Recall once again that a risk is the possibility of a *surprisingly* good or a *surprisingly* bad specified future event. Whenever a person or an organization reduces its surprise about whatever good or bad events the future may bring,

that person or organization reduces its risk. Increasing the ability to forecast the future, or widening the range of outcomes with which an individual or organization is prepared to deal without surprise or alarm, reduces their risk. Fewer possible extreme events can fall outside the bounds of what such well-prepared people or organizations consider “normal.” Thus, those who are more psychologically prepared for a varied future have limited their risk by reducing what will surprise them in that future. These people are in a better position to achieve their objectives in the future.

How We Manage Risk

In the opening Preface, we summarized the four phrases of how to manage any risk of accidental loss:

- Evaluate loss exposures.
- Appraise feasible risk management techniques.
- Establish a risk management program.
- Adapt to change.

These four phrases, which together encapsulate the essence of how to manage risk, make up the most important cluster of concepts in *Risk Management—Why and How*. To get the most from the rest of our discussion, commit to memory the four phrases in this “concept cluster.” Together, these four phrases form the framework that supports other clusters of concepts needed for practicing good risk management.

Now we will examine the concepts in each of these clusters and how each applies to risk management generally and to the fire and implosion at the Arapaho specifically. When you have grasped each concept, remembered the concept cluster to which it belongs, and can reconstruct the basic framework into which these clusters fit, you are ready to begin managing the risks of surprising accidental losses in your own or in any other organization’s daily activities.

All of the concept clusters are brought together and properly arranged in the chart, “How We Manage Risk.” The headings down the center of this chart—“Evaluating Loss Exposures” and “Appraising Feasible Risk Management Techniques,” for example—are the four phrases that identify the universal steps in the risk management decision process. Remember that these four steps themselves constitute a concept cluster.

Within each of these four steps there are a number of other clusters of concepts (italicized here, and shown as headings below) that are useful in performing that step. Thus, evaluating loss exposures requires being familiar with types of *values exposed to accidental loss*, *tools for evaluating loss exposures*, and *the likely influence* that these losses may have on an organization’s ability to achieve its goals. Appraising the feasibility of possible risk management

1

Evaluate Loss Exposures

Values Exposed to Loss

- Property
- Key Personnel
- Freedom from Liability
- Net Income

Evaluation Tools

- Questionnaires
- Loss Histories
- Financial Statements and Records
- Flowcharts
- Personal Inspections
- Experts

Impact on Organizational Goals

- Legal Requirements
- Operating Results
- Continuous/Stable Operations
- Growth
- Humanitarian Concerns

2

Appraise Risk Mgmt. Techniques

Appraisal Criteria

- Effectiveness Standards
- Financial Standards

Risk Control To Stop Losses

- Exposure Avoidance
- Loss Prevention
- Loss Reduction
- Segregation of Exposures
- Contractual Transfer for Risk Control

Risk Financing To Pay for Losses

Retention

- Current Expensing of Losses
- Unfunded Reserves
- Funded Reserves
- Borrowing
- Captive Insurer

Transfer

- Commercial Insurance
- Contractual Risk Transfer for Risk Financing
- Governmental Programs

How We Manage Risk

3

Establish Risk Mgmt. Program

Make Technical Decisions

- What needs to be done, when

Make Managerial Decisions

- Who is to do it, under whose direction

Assure Proper Implementation

4

Adapt to Change

Performance Standards

- Results Standards
- Activities Standards

Types of Changes

- In Values Exposed to Loss
- In Organizational Goals
- In Risk Management Techniques
- In Cost and Benefits
- In Attitude Toward Risk

techniques, the second step in the risk management decision process, brings into play clusters of concepts relating to criteria for evaluating risk management techniques.

These criteria can then be applied to a set of risk control techniques to stop losses from happening and risk financing techniques to finance recovery from losses which cannot be prevented. These risk financing techniques encompass both *retention* and *transfer* of risk. Once the most appropriate risk management techniques for a given exposure have been determined, they must be brought together to establish a risk management program. Creating such a program involves both technical decisions about what needs to be done when, and managerial decisions about who will do what under whose direction.

These three steps—evaluating loss exposures, appraising the feasibility of alternative risk management techniques, and molding these techniques into a coherent program—establishes risk management as an ongoing function within any organization.

Once a risk management program has been established, however, it must adapt to change. This ongoing adaptive process requires *performance standards* that define risk management “success” within a particular organization and a clear understanding of the types of changes to which a successful risk management program must be prepared to adjust.

With these concepts clustered and arranged before us, we are now ready to explore each as it relates to the fire and ultimate implosion of the Arapaho garage and apartment complex. Our examples will be drawn from the Arapaho loss, but it is important to remember that each concept is, in principle, applicable to any accidental loss.

1 Evaluate Loss Exposures

The first of the four essential steps in risk management is to evaluate loss exposures. In many ways, this first step is the most important of the four because a loss exposure which has not been identified and analyzed cannot be managed. The three clusters of concepts underlying proper evaluation of many loss exposures include:

1. The categories of values exposed to loss

2. An established set of techniques (or “tools”) for evaluating loss exposures
3. A set of concepts for determining how significantly each loss exposure may impact an organization’s ability to meet its goals

We will be evaluating the loss exposures to the Arapaho fire damage and Wanda Middleton’s Mercury Cougar, which lead to the eventual implosion of the entire Arapaho complex.

Values Exposed to Loss

Any organization’s values potentially exposed to loss can be grouped as: property losses, key person losses, losses of freedom from liability, and net income losses.

Property. Every conceivable property loss strikes either real property or personal property. Real property is real estate (land and structures permanently attached to land). Personal property is a very broad category of values, which may be categorized as either tangible property (such as the Mercury Cougar and all of Wanda Middleton’s possessions in the Cougar) or intangible personal property. Intangible personal property encompasses the various legal rights, such as copyrights and patents or (more meaningfully here) the rights to use or to occupy property or resources.

When the Arapaho garage fire forced the evacuation of the Arapaho apartments, all of the tenants lost the true value of their leases because there was no longer any safe structure for them to comfortably occupy. As real property, the structure remained for a brief period until it was actually imploded, but the tenants’ intangible personal property (their right to occupy the structure) ended when Chatham County officials ordered that the building be evacuated within hours of the Mercury Cougar fire.

Key Person. Most organizations can identify people who are very important, or key, to their firms—usually employees, but sometimes members of boards of directors or of outside committees, and occasionally even volunteers. These folks possess special talents, knowledge, reputations, or other characteristics that make them outstandingly valuable to that organization. For example, a key person for a computer manufacturer may be an especially creative programmer, in a symphony orchestra—an especially talented flutist who attracts large audiences, on a professional sports team—an athlete who brings fame to the team and many spectators to the stadium, or in a hospital—a renowned surgeon who draws difficult cases and extra revenues to the hospital. Any event that deprives an organization of the services of

such a key person—be it death, disability, or simply the key person’s resignation—causes the organization significant losses, regardless of whether these losses are directly measurable in financial terms. By definition, a key person’s vital characteristics cannot be readily replaced.

Key persons possess special talents, knowledge, experience, reputations, or other characteristics that make them outstandingly valuable to that organization. Organizations need to assess the possible loss of such individuals when evaluating loss exposures.

At the Arapaho garage fire and implosion, we have not yet mentioned any key person or any key personnel losses. However, the complete destruction of the Arapaho complex could very easily have left some key people at the Arapaho—perhaps the apartment manager or a reservations computer operator—without a job in the foreseeable future. Given their special talents, these key people may not have the patience or the finances to wait for the possible reconstruction of the Arapaho or to see if their

employer has plans to move quickly to a new, substitute facility. Quite likely, unless the Arapaho agrees to continue their salaries until the facility reopens, these key people will find other jobs. In short, the fire in the widow Wanda Middleton’s Mercury Cougar may well cause the Arapaho loss of the services of some key people, even though none of them were directly touched by this fire.

Freedom from Liability. There are a number of ways in which any organization can be held responsible for harm that others suffer. For example, the organization may somehow be at fault in causing them harm:

- By tort (such as negligence or slander committed directly by the organization or by one of its employees in the course of his or her work)
- By a crime (such as theft of a customer’s property or violence against a customer)
- By an action that is a wrong against society rather than against any individual or other specific entity (such as environmental pollution)

In addition, a legislature or a court may determine, as a matter of public policy, that an organization should be financially responsible for particular types of losses even though the organization has not been directly at fault in causing those losses. A primary example of such “no-fault” liability is an employer’s financial responsibility for any injury or disease an employee

may suffer during or arising from his or her employment for that organization. Such workers compensation benefits are an expense to the employer even if the employer was in no way at fault. Indeed, this is the case even if the employee was significantly to blame. Finally, as we will see momentarily with the Arapaho, an organization may face contractual liability for others' losses simply because, as a business matter, that organization agreed to cover these losses.

In short, whether because of tort, crime, contracts, or public policy, regardless of fault, an organization may be legally bound to pay others' losses. The financial burden of the resulting liability losses truly can destroy an organization, such as compensating others for their losses, paying fines for criminal or administrative law violations, paying legal defense and court costs, and loss of customer loyalty when an organization's legal problems damage its public reputation. Thus, freedom from liability to pay such losses is an important value that an organization should strive to protect.

Potential Liability Losses

- **Compensating others for their injuries or losses caused by your negligence**
- **Compensating others for their losses due to contractual liability**
- **Fines for criminal or administrative law violations**
- **Legal defense and court costs**
- **Loss of reputation and customer loyalty**
- **Workers compensation costs**

We have not had occasion to note any potential liability losses to the Arapaho because of its garage fire and the ultimate implosion. It is entirely possible, however, the widow Wanda Middleton's survivors will sue the Arapaho for the supposed negligence of its staff in failing to detect and to correct the fuel leakage from her car. While it may seem unlikely that these survi-

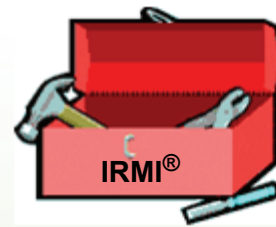
vors would win legal damages in court, the fact that the Arapaho probably would prevail in court would not completely save it from liability losses. Having to appear in court, pay court costs, and devote senior management time to this legal defense, even against a groundless suit, would itself impose liability losses on the Arapaho.

An organization incurs liability losses as soon as a claim is brought against it, and it must incur costs to respond to that claim. Thus, it is the bringing of a claim—not any court judgment—that is the peril that directly causes all liability losses. Of course, any Arapaho garage employees injured in the fire would also be entitled to workers compensation benefits.

The county's official order for imploding the Arapaho complex, more than the fire itself, is likely to bring liability claims against the Arapaho's owners. Such claims may arise because, in competing for garage space rentals, the owners of the Arapaho agreed in writing that if any garage spaces became unusable because of damage to the garage structure, the Arapaho would find and pay for new, conveniently located indoor parking space for the displaced garage rental customers. Perhaps the owners of the Arapaho foresaw only a few parking spaces, or even a section of the garage, becoming damaged and unusable; they may not have considered the possibility that the entire structure would be demolished, leaving them obligated to find and pay for 200 indoor parking spaces elsewhere.

This is an example of the often overlooked contractually based liability loss exposures to which organizations commit often themselves, often unthinkingly. Fortunately for the Arapaho, its owners did not make the same sort of replacement guarantee to each apartment renter.

Net Income. Every organization exists and conducts all its activities to generate net income: the amount by which its revenues exceed its expenses during the current accounting period. This net income—whether labeled “profit,” “change in surplus,” or given some other label—typically arises from the planned, efficient internal operations of the organization. Any event



The IRMI [*Exposure Survey Questionnaire*](#) is a comprehensive set of questionnaire forms for identifying operations, assets, and practices that lead to loss exposures. Use it to perform a systematic inventory of exposures faced by any organization.

that interferes with these operations will almost certainly reduce the organization's net income, either by reducing its revenue or raising its expenses for that period. If such a disruptive event stems from an accident, the resulting net income loss is a risk management concern. (Other events not related to accidents, such as increases in the cost of raw materials or labor, or decreases in the selling prices of the goods or services an organization sells also can reduce the organization's net income.) However, reductions in net income that do not stem from essentially accidental events typically are a general management, rather than a risk management, concern.

Net income is the amount by which an organization's revenues exceed its expenses during the current accounting period.

For the Arapaho, its largest potential loss always had been a net income loss: loss of the rental income from damage to apartment units. Fire or other damage to a few units every few years—interrupting the rental income from those damaged units and forcing the Arapaho to incur some expense in restoring

these units—would have been foreseeable losses—perhaps even almost budgetable expenses. However, the risk of losing the entire complex to a seemingly minor event as a single fire in a single vehicle in the basement garage calls for sound, insightful risk management.

The next step in such enlightened risk management would be the creative use of proper tools for discovering such unusual loss exposures and for estimating how often and how large the losses from these exposures might be.

Evaluation Tools

Only true wisdom, insight, and perhaps simply “good luck,” enable anyone to foresee and prepare adequately for all the property, key person, liability, and net income losses an organization may suffer. Nonetheless, rather than relying on such mystical sources of inspiration, risk management professionals have developed a number of routine, standardized tools that any thoughtful person can employ to help in envisioning the loss exposures that can arise from various accidental events.

Examining these tools and how each tool could have been helpful in evaluating the Arapaho's losses from the garage fire and resulting implosion can be a helpful risk management exercise. These tools, with respect to the organization being examined, include:

- Questionnaires
- History of past losses
- Financial statements and records
- Flowcharts of operations
- Personal inspections of facilities by someone with risk management experience

Questionnaires. Risk managers, property and liability insurers, as well as safety engineering and consulting firms, routinely use questionnaires to help highlight useful information about various businesses, such as apartment complexes, flower shops, hotels, or sports stadiums.

One or more sections of the questionnaire will deal with any garaging facilities asking, for example, the architectural arrangement of the garage, its capacity and hours of operation, traffic patterns for entering and leaving the garage, fire suppression systems, security, service, and staffing arrangements. Responses to these questions may have drawn attention to the need to be aware of the possibility of vehicle fires—attention that would have been helpful in perhaps preventing Wanda Middleton’s Mercury Cougar from catching fire in the first place.

Loss Histories. Any organization that has suffered accidental losses in the past is likely to experience similar accidents in the future, at least until significant additional loss control measures are taken. In a garaging operation, such accidents might well include collision damage to vehicles, theft and vandalism, injuries to employees and others who are struck by moving vehicles, as well as fires. Any such accidental losses, most of which will be relatively minor, are indicators of similar or even larger losses that may recur. (A major fire, such as that which



The [Practical Risk Management](#) reference service is the one-stop source for risk management practices, policies, and processes. It is ideal for financial executives who need a concise yet comprehensive reference as well as for experienced risk managers who need ideas to enhance their programs. Easy-to-understand overviews of the risk management process and techniques are perfect to share with the executive team and clients.

struck the Arapaho, is likely to be remembered for a long time. Should the Arapaho ever operate a comparable garage, we can be assured that proper fire loss control measures will be taken.)

Because accidental losses are by definition surprisingly unexpected, the typical organization will itself generate relatively few loss histories. A much more important and instructive set of loss histories can come from the experience of other organizations. Some trade associations compile loss data and incident reports from their members to share with all members. Additionally, insurers have knowledge of the types of losses similar clients have experienced and are often willing to share this knowledge with their insureds. Therefore, the Arapaho likely had access to information of this type if it was a member of a garage owners' association or through its insurance. This might have provided insight into garage fire and implosion losses that would have been helpful to the Arapaho's management in preventing or reducing the size of the devastating loss it experienced.

Financial Statements and Records. An organization's financial statements, principally a balance sheet of assets and liabilities, and profit and loss statements of revenues and expenses, indicate the overall impact that accidental losses have on the organization's overall revenue and expenses, additions to surplus for nonprofit organizations, and asset base. The more detailed accounting records help indicate where the organization's values—particularly its assets and revenue streams—lie and, therefore, which values need to be especially well protected.

While these financial statements and supporting records may not give details about the circumstances of any particular loss, they can indicate significant trends in the organization's loss experience, particularly signaling where loss prevention measures are most needed. These financial records are especially useful for large organizations with multiple locations (some of which are likely to be operating more safely than others). In the wake of a truly major loss such as the Arapaho suffered, these financial records provide some basis for estimating the asset and net income losses to be reported to insurers.

Flowcharts. Flowcharts generally show the routes of raw material into an organization, the processing of those materials within the organization, and the flow of finished goods or services to customers. Flowcharts can also show where goods or people are most likely to accumulate and, therefore, where potential losses may be the greatest. In nonmanufacturing or ser-

vice-related organizations, the flows are more likely to be of values or of people rather than physical goods.

Some flowcharts may cover wide geographical areas; others may be of quite small physical scope. For example, at the Arapaho before the fire, a well-constructed flowchart would have shown a quite significant concentration of vehicles (and therefore of property values and possible liability exposures) in the garage beneath the apartment structure. This would have been a red flag to focus risk management activities there.

Personally viewing a property can alert a risk management practitioner to exposures he or she may not have previously considered.

Personal Inspections. Persons with significant risk management experience often learn to gather much information about loss exposures simply by looking at paper records—questionnaires, loss histories, financial statements/records, and flowcharts. These documents—coupled with their personal experience—lead risk management practitioners to expect certain typical assets, operations, and types of exposures. However, only a personal inspection of the premises can confirm these expectations. Personally viewing a property can alert a risk management practitioner to exposures he or she may not have previously considered. For example, visiting the lower level of the Arapaho's garage may have helped the practitioner see or even smell the hazard presented by fuel leaking from vehicles garaged there.

Experts. Even after touring the Arapaho's garage, a risk management practitioner may not fully appreciate the hazards—the conditions or actions that are likely to make losses more frequent or more severe—in this particular garage. Perhaps they have seen few underground garage facilities. Therefore, they would be wise to turn to a person or an organization that has meaningful experience with the dangers that these garages can pose. Likely sources could be people who have worked many years in garages, a local member of an association of garage owners, or an experienced safety professional provided by an insurer or independently retained by the Arapaho to do an inspection. By knowing when to call in an expert, risk management practitioners can broaden their own expertise many times over and provide the capacity to cover many locations for large organizations.

Impact on Organizational Goals

All the activities of a well-managed organization should contribute to achieving that organization's goals. The more important a specific goal is to an organization's owners and managers, the more the organization's resources should be focused on that goal. These resources include the organization's risk management efforts. Therefore, these efforts should give primary attention to protecting the resources and activities that contribute most to achieving the organization's most critical goals.

In general, these goals can be grouped for risk management purposes into six categories:

1. Meeting legal requirements
2. Achieving specified financial operating results
3. Maintaining continuous/stable operations
4. Reaching growth targets
5. Addressing humanitarian concerns
6. Serving any goals which may be of particular importance to a specific organization

Good risk management often is crucial to meet goals in any of these six general categories.

Legal Requirements. To remain in business, an organization must fulfill certain legal requirements. Consequently, meeting some basic legal requirements that relate to preventing or paying for some common accidental losses is a threshold risk management goal for any organization. Some legal requirements apply to all businesses, while others are specific to particular types of operations. If an organization does not meet both general and specific legal requirements, it runs the risk of being shut down.

For example, like all employers, the Arapaho had a duty to meet the safety standards imposed by the federal Occupational Safety and Health Act (OSHA) together with any additional requirements of the Georgia OSHA law and provide workers compensation benefits to any of its employees injured or sickened by any of its activities. In addition, in its garaging activities, the Arapaho would have had to comply with specific minimum standards for fire suppression,

ventilation, lighting, and entrance and exits to and from the garage area. If it failed to meet these fundamental legal requirements, the Arapaho faced the possibility that its garage—and, therefore, potentially all its operations on this site—could be closed down by regulatory authorities.

Operating Results. Most businesses measure progress in financial terms, such as monthly, quarterly, or annual profits, or additions to surplus. Effective risk management enhances financial results by adding to the organization's revenues or by decreasing expenses. Risk management's additions to revenue arise when the organization's ability to control accidental losses enables it to undertake activities that would be otherwise too hazardous. Sound risk management also reduces operating costs by, for example, reducing outlays to restore damaged property or pay liability claims.

"Cost of risk" is another financial concept that risk management practitioners often use to document the financial contributions their activities make to an organization's financial progress. Cost of risk is the sum of four types of expenses that actual or potential accidental losses impose on an organization:

- Insurance premiums
- The cost of restoring uninsured losses (including deductibles)
- Expenditures for safety measures
- The administrative costs of operating the organization's risk management program.

For example, the cost of risk arising from the Arapaho's potential fire losses from its garage activities would be:

- The portion of its overall property insurance premium that is attributable to the garage.
- The Arapaho's out-of-pocket costs of minor fires in the garage, such as those that employees there could rapidly quench with fire extinguishers as well as the deductible for the property insurance on its catastrophic loss.
- The expenses of installing and maintaining a fire suppression system in the garage area.

- An appropriate portion of the Arapaho's overall operating expenses attributable to its staff's efforts in maintaining fire safety in the garage and purchasing/administering its insurance portfolio.

Effective risk management strives to minimize an organization's overall cost of risk, either as an absolute annual dollar amount or as a percentage of the organization's annual revenues. (Given that the Arapaho complex was completely destroyed as the ultimate result of a fire in its garage, one might argue that Arapaho's management

ought to have spent more on the cost of risk arising from a fire in its garage, particularly on the cost of routine garage inspections that might well have discovered the fuel leak. Cutting some costs of risk too far is not good risk management.)

"Cost of risk" is another financial concept that risk management practitioners often use to document the financial contributions their activities make to an organization's financial progress.

Continuous/Stable Operations. Many organizations—hospitals, city bus systems, dairies, newspapers, and many others—cannot tolerate any shutdown in their operations. To go completely out of business even for a brief time severely threatens their ability to reopen, either because normal operations cannot be restored or because the organization will have lost all meaningful market status. These organizations need to devote much risk management attention to safety measures that will allow them to continue operating in all but the most extreme circumstances.

Other organizations should strive to meet even higher standards because even instability in their operations threatens their existence. For example, a public school system must be able to provide teachers and facilities for all its students, even if some of its regular school buildings must be closed for maintenance or repairs, and even if a substantial percentage of its teaching or administrative staff is absent.

Well-planned risk management can help such organizations avoid complete closures and provide at least minimally acceptable operations. For example, a group of neighboring hospitals in a particular city or region often arrange to share one another's facilities. Public schools can do much the same by temporarily relocating students, teachers, and administrative staff among the buildings in a given school district or even metropolitan area.

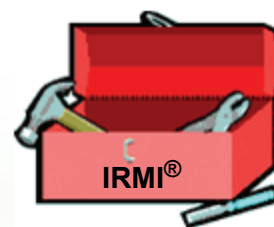
Similarly, if the Arapaho's management had recognized that having a good garage facility would better enable it to attract and hold apartment tenants, it could have arranged with other apartment operators (or even with commercial parking facilities in the area) to allow Arapaho tenants to use these other parking facilities if needed. Given the eventual severity of the Arapaho's fire and implosion loss, the availability of temporary substitute garage space would have proved to be relatively meaningless. However, for less severe disruption of the Arapaho's garaging capacity—such as perhaps partial damage to the garage depriving it of 40 or 50 parking spaces—these substitute facilities could have enabled the Arapaho to maintain convenient parking for all its tenants.

Growth. Managing risk well—finding and implementing cost-effective ways of preventing and paying for accidental losses—helps an organization grow in at least two vital ways. First, good risk management helps to preserve the resources an organization already possesses by minimizing the damage suffered by its assets, human resources, and net income. In the same vein, effective risk management also reduces the liability losses an organization may incur. Without good risk management, especially risk control to minimize losses, any accidents force an organization to “step back,” using its resources to restore its former position rather than to move forward. With good risk management, an organization can continue growing rather than taking “detours” to recover from accidents it need never have suffered.

Second, risk management preserves a steady stream of net income—revenue less expenses. This regular net income flow, perhaps even an increasing net income flow from one accounting period to the next, generates cash that the organization can use to seize opportunities when they often unexpectedly arrive. As we mentioned earlier, the style of risk management on which we are focusing emphasizes risks that inflict losses on an organization, not risks that open doors of opportunity for it. However, it remains true that the two styles of risk management are linked: preserving, even enhancing, regular flows of net income, protecting these flows from the effects of accidental losses, providing resources essential for grasping opportunities when they surprisingly arise.

In dealing with the garage fire and its consequences at the Arapaho, we have not had occasion to deal with any anticipated expansion or diversification of the Arapaho's operations. However, if the Arapaho's owners had been considering any growth—perhaps by using past accumulated profits to add another wing at their present location or to buy another comparable property elsewhere—the flames that started in the widow Middleton's car reduced these plans to fire and ash.

Humanitarian Concerns. The senior management of some organizations view risk management primarily as a tool for serving others. Their goal is to prevent harm to those the organization serves, rather than generating profits or larger incomes for owners or employees. Any financial advantages that risk management may bring to this organization are secondary to the organization's perceived mission of benefiting others. Thus, if the owners of the Arapaho viewed their risk management activities from this humanitarian perspective, they would want the Arapaho complex to remain standing, free of hazards, so that its residents would have an enjoyable, secure place to live and the Arapaho's operations would continue generating tax revenues to benefit the community. For other organizations, such as hospitals or schools, risk management activities emphasizing humanitarian goals would target improved healthcare or education for those who relied on these facilities for their well-being as patients or students.



Insurance Continuing Education is vital for today's risk management and insurance practitioner. Hone your skills and keep apprised of developments by taking online commercial lines insurance, personal lines insurance, life insurance, and health insurance courses. IRMI online insurance CE self-study is fast, easy, and convenient and provides all the CE credit you need to satisfy your license requirements in most states for a very low price.

2 Appraise Feasible Risk Management Techniques

After evaluating loss exposures, we now turn to the second step in the risk management process: appraising feasible risk management techniques for dealing with any particular loss exposures, any possibility of a given accidental loss. The risk management techniques we will be appraising fall into two broad categories: *risk control techniques* to stop accidental losses from happening (more precisely to reduce the probability, size, and unpredictability of accidental losses), and *risk financing techniques* to pay for those accidental losses that do inevitably occur.

Risk financing techniques, in turn, fall into two major categories: *retention*, which draws on funds that originate within the organization, and *transfer*, which draws on funds that originate

outside the organization. Before appraising any potentially feasible risk control or risk financing technique in any given situation, we need to be clear on two broad types of appraisal criteria—the likely effectiveness of a given technique in dealing with a particular exposure, and financial standards focused on how using that technique is likely to affect the organization’s financials.

Appraisal Criteria

In appraising the various risk management techniques that an organization could feasibly apply to a given loss exposure to either control losses or finance recovery, an organization should consider two types of standards: the effectiveness of that technique (how well it will do the risk control or risk financing job), and the financial standards (how much will that technique cost and/or how much will it benefit the organization in terms of dollars and cents).

To illustrate effectiveness and financial standards, consider just one of the many loss exposures, perils, and related hazards that eventually resulted in the fire and implosion losses to the Arapaho complex. Consider the fuel leakage hazard from cars left parked for extended periods in the Arapaho’s garage. Good risk management by the Arapaho would call for detecting fuel leaks when they occur (some risk control tool) and a way of paying for any fire losses that these leaks might fuel (a risk financing tool).

Effectiveness Standards. For alternative risk control techniques, these pertain to how well that control technique will reduce the frequency, reduce the severity, or increase the predictability of hazards and resulting losses. For detecting fuel leaks in the Arapaho’s garage, three possible options could be:

- Post signs asking apartment tenants to be alert for fuel leaks.
- Have Arapaho garage employees perform scheduled inspections for leaks.
- Install air sampling devices in the garage to identify and signal potentially dangerous levels of airborne fumes in the garage.

Merely asking tenants to watch and sniff for fumes probably would be the least effective detecting option. The relative effectiveness of the other two options—employee inspections or air-sampling devices—is more difficult to assess without some experimenting and may vary with the circumstances. Perhaps the Arapaho’s management would choose to use both in-

spections and air sampling devices, depending on the level of its concern about fuel leaks. Applying both options would be more expensive, but the concern should be on reliable detection of dangerous levels of fumes—not on the cost of detection.

The key effectiveness standard for a risk financing alternative focuses on how reliably that alternative will generate the funds needed to restore the damage following any potential loss. For small losses, an organization can safely rely on some form of retention, some internal source of the funds. For larger losses, that could quickly exhaust an organization's capacity to retain its own losses, some form of transfer—such as through insurance or governmental disaster relief funding—is essential.

Financial Standards. Appraising feasible risk control or risk financing techniques can be viewed in either of two ways. The first, essentially intuitive way, can be labeled as the “biggest bang for the buck” approach. The second, more technical and more accurate way, uses the “present value of net cash flows” as a yardstick for choosing among alternative risk control and risk financing measures.

The key effectiveness standard for a risk financing alternative focuses on how reliably that alternative will generate the funds needed to restore the damage following any potential loss.

To illustrate, for detecting dangerous levels of gasoline fumes in the garage, Arapaho's management could well have decided years ago that having employees conduct scheduled inspections of the garage area

at essentially no extra cost was “good enough,” and that there was no need for a seemingly expensive air-sampling system, even though such a system might have been admirably precise. The more technical and accurate approach would assess how purchasing a mechanical system would change the amount and timing of cash flows into and out of the Arapaho. Purchasing the equipment for such a system would require a single cash outflow, the cost of buying and installing the system. Maintaining the system would require cash outflows for inspecting and repairing the system.

On the other hand, having the system probably would generate some implicit cash inflows for the Arapaho: reduced property insurance premiums, fewer and smaller retained fire losses to pay from with its own cash, and less staff time (less wage expense) for employee inspections of the garage. Some of these cash outflows and inflows would occur immediately (e.g., cost

of purchasing the system) while others would be spread over time (e.g., fire insurance premium savings).

The present value approach assigns greater value to the flows that happen immediately and “discounts” flows which occur in the future by an appropriate interest rate. Thus, flows that are truly distant in time count for much less on a present value basis than cash flows (either into or out of the organization) which come earlier. In guiding the Arapaho’s management in evaluating and choosing between, say, employee inspections and a mechanical air-sampling system, the approach that forecasts present value of net cash flows would look at the amounts and timing of the cash flow effects of each alternative and would choose the alternative which promised to generate the larger positive or the lesser negative net cash flow.

In using effectiveness standards and financial standards for appraising the feasibility of applying various risk control and risk financing techniques to a given loss exposure, the choices are not always “either-or” alternatives. Indeed, more often, the decisions are of the “both-and” variety.

For example, both employee inspections and a mechanical air-sampling system may each intuitively be “good enough,” but together may be “even better” or “really fine.” This is especially true if Arapaho’s management, in planning to reopen new facilities, remembers how devastating the original fire and implosion were. In the same vein, both the employee inspections and an air-sampling system may generate a positive present value net cash flow, but together promise an even more positive financial result. Similarly, in appraising risk financing alternatives for garage fires, the Arapaho may be able to retain some fire losses, but its risk management program would be stronger if it bought insurance for other large fires that may start in the garage. Therefore, on either an intuitive or cash-flow basis, some combination of a specific retention technique and a particular transfer technique for financing may be its best option.

Neither risk control nor risk financing alone makes for successful risk management. That is why it is extremely important to apply the “both-and” approach to choosing risk management techniques—rather than the “either-or” approach.

It is extremely important to apply the “both-and” approach to choosing risk management techniques—rather than the “either-or” approach—for another crucial reason. Nature itself dictates that neither risk control alone nor risk financing alone makes for successful risk management. For every significant loss exposure an organization faces, risk control and risk financing techniques must be combined. Risk control alone will eventually fail—some significant loss is bound, someday, to occur, and risk financing must be available to finance recovery from such an eventual loss. Risk financing alone wastes money because it pays for losses that could have been more cost effectively reduced in number or in size. Therefore, any risk management program which applies only one risk management technique to any particular loss exposure must be, with respect to that exposure, somehow deficient.

Risk Control

All risk management techniques for dealing with specific loss exposures can be classified as either risk control or risk financing techniques. Risk control techniques stop losses from happening (by reducing the number/size of the accidental losses an organization suffers) or increases the predictability of accidental losses. We will examine and provide examples of the five basic risk control techniques, and later do the same for risk financing techniques to pay for losses either through retention or transfer. (While reading about all these risk management techniques, you may want to refer to the “How We Manage Risk” chart that appeared earlier.)

Exposure Avoidance. Exposure avoidance aims to completely eliminate a loss exposure faced by an organization, ideally making impossible any accidental loss from that exposure. (Remember that a loss exposure is something of value—property, key person, freedom from liability, or income that is subject to a particular peril with potential adverse consequences. Change the type of value or the peril, or eliminate the adverse consequences, and you change the exposure.)

For example, for the Arapaho’s garage pre-fire, to avoid exposure to armed robbery of cash within the garage, all cash could be eliminated from within the garage so there would be no cash for any robbers to steal. However, exposure avoidance is the most difficult risk control technique to use because employing it often requires great disruptions of an organization’s normal activities.

To illustrate, it may not even be possible to operate the garage without having some cash on hand. Also, there are many more exposures to property and other losses arising from the garage: vehicle damage, workers compensation claims, and physical damage to the garage structure. Thus, the only way to apply exposure avoidance to all of the property, key person, liability, and net income losses related to the garage would be to eliminate the entire garaging operation—leaving the Arapaho’s tenants (and perhaps others who may have paid to park there) to find other parking arrangements. Without garage facilities, the Arapaho’s apartment-leasing activities probably would be much less competitively attractive or profitable.

In short, while exposure avoidance can be a very powerful risk control tool, it can be used only very selectively. Often it is reserved as a technique to apply to the most burdensome exposures. For example, in the 1970s and 1980s, many contractors made the decision not to enter the potentially lucrative pollution abatement business because they decided the risks offset the potential rewards.

Loss Prevention. As a risk control technique, the goal of loss prevention is to reduce the *probability* of losses from a given exposure thereby reducing the number of losses from that exposure over time and cutting the cost of paying for those losses. Properly done, loss prevention does not need to be as potentially disruptive as exposure avoidance. Some examples of loss prevention within the Arapaho’s garaging operations could include:

- Keeping any cash that is needed for garage operations in a locked box or even a safe, so that any potential robbers would have great difficulty getting to it.
- Training garage employees in how to do their jobs safely, and monitoring their job performance so that vehicle accidents and injuries to garage employees would occur less frequently.
- Increasing clearances between parking spaces in the garage area so that collisions (and the resulting property damage and potential liability claims) would be less likely and less expensive in the long run.
- Eliminating unnecessary fire ignition sources and fuels from the garage area, such as by performing all welding activities at some facility other than the garage.
- Clearly marking the garage exit so that pedestrians would be alerted to the danger of stepping in front of an auto leaving the garage.

Notice that eliminating welding activities from inside the garage would help to prevent potential fire losses, but it would not completely avoid the fire loss exposure—even from welding. There is still a possibility that some apartment tenant might try to do some spot welding on his or her car over the weekend when the normal garage staff is largely absent. Again, successful exposure avoidance can be very difficult, even though loss prevention is being conscientiously practiced.

Risk Control Techniques

Exposure avoidance completely eliminates an organization's loss exposures.

Loss prevention reduces the probability of losses.

Loss reduction reduces the size or severity of potential losses.

Segregation of exposures divides a single exposure into several smaller, more easily handled, exposures.

Contractual transfer separates several exposures from one another legally rather than physically.

Loss Reduction. Much as loss prevention reduces the *probability* of accidental losses from a given exposure, loss reduction aims to reduce the size or *severity* of such a loss. To illustrate:

- An automatic fire detection and suppression system in the Arapaho's garage would tend to reduce the size of any fires which broke out in that area. So would hand-held fire extinguishers—provided the garage staff was trained in their proper use. (*Note:* Neither the automatic nor the manual systems prevent fires; they are examples of loss reduction, not loss prevention.)
- Keeping no more than \$500 dollars cash in the garage cash register could well reduce robbery and embezzlement losses from within the garage, even if the cash register

was occasionally left unlocked. There would be no more than \$500 dollars there for any embezzler or thief to steal.

- Requiring Arapaho tenants with extremely large or valuable vehicles (such as Lincolns or Hummers) to park elsewhere or to sign contracts that would limit the expected dollar amount of the Arapaho's liability for theft of or damage to these vehicles.
- Keeping first-aid kits in the office area of the garage and training employees in their proper use would be likely to reduce severity of garage-related injuries to both employees and others in the garage. This should in turn reduce the size of any liability claims against the Arapaho for such injuries. (*Note: Improper use of these first-aid supplies actually could increase the liability claims against the apartment complex.*)

Segregation of Exposures. As a risk control technique, segregation of exposures focuses on dividing a single exposure into several smaller exposures. For example, rather than operating a single garage facility in the basement of its apartment complex, the Arapaho could have several smaller parking lots or enclosed garage areas within a block or two of the apartment house. Therefore, if a vehicle in any one of these separate garage areas caught fire, the maximum potential vehicle damage would be limited to the vehicles in that particular area, not *all* of the tenants' or others' vehicles. Furthermore, even if there was a severe fire in one of these lots, perhaps the remaining undamaged vehicles that used the fire-damaged lots still could find convenient parking space in one or more of the other lots. There would be no need for the Arapaho to completely close its garaging operations—which, if complete closure were necessary, could make it difficult for the Arapaho to hold its current tenants or attract new ones. As this example of segregation of property exposures illustrates, such segregation can also achieve loss reduction of net income or other types of loss exposure.

On a broader scale and over an extended period, but in the same garaging context, the Arapaho's management might decide to operate two or three apartment-garage complexes in or near Savannah rather than its current unified operation. Doing so would create several separate sets of exposures to property, key person, liability, and net income losses rather than "putting all its eggs in one basket." Each apartment complex would be sufficiently distant from the other so that no reasonably foreseeable peril could strike all the Arapaho's operations simultaneously. (Remember, however, that, though very unlikely, there are perils that could affect the entire area, such as a hurricane, terrorist attack, or meteor impact.)



Contractual Risk Transfer

is the most comprehensive reference on this important risk management technique. Not only does it discuss the proper use of liability releases, but also indemnity clauses and insurance requirements for all types of contracts, such as leases, construction, rental agreements, purchase orders, and much more. Included is an extensive discussion of additional insured status and boilerplate insurance clauses to help you implement feasible and enforceable requirements. *Contractual Risk Transfer* will help you avoid assuming risks in contracts that you shouldn't and implement effective transfers to others. This is a popular tool for general counsel, purchasing managers, risk managers, and their risk and insurance advisers.

Operating more than one apartment-garage complex is also a valid example of loss reduction because the values exposed to loss at each separate complex would be smaller than if the aggregate exposures were all brought together in a single complex. The reason segregation is different from loss reduction is that segregation is a distinct application of loss reduction—loss reduction achieved by creating several similar, essentially identical sets of exposures each comparable to the others.

Contractual Transfer for Risk Control. Contractual risk transfer is unique in that it sometimes is a risk control technique and other times is a risk financing technique. As a risk control technique, contractual transfer separates several exposures from one another legally rather than physically through the use of contractual agreements with others.

For example, as the Arapaho apartment-garage complex stood before the fire and eventual implosion, the apartment rentals and the garaging activities were combined under unified management. As an alternative, the owners of the Arapaho could have leased its garage to a totally different organization that would then handle its operations. This company would be responsible for the liability losses and, at least to some extent, the net income loss exposures arising from the garaging activity (the lease would possibly have a rental abatement provision in the event of the garage's destruction). The tenant garage operator would then earn income from these garaging activities

but would also be responsible for most of the exposures from this activity. The net result would be that the Arapaho would be in the leasing business, and the garage company would be in the garaging business, although nothing would have changed from the tenants' and other garage users' perspectives.

As another example, the Arapaho could have included a liability waiver (or release) provision in its contracts with each of the tenants, on signage posted in the garage, and on the back of the garage tickets it issues to single use garage patrons. These waivers inform users that they are parking at their own risk and the Arapaho is not responsible for bodily injury or property damage suffered by garage users. This is a commonly employed technique, and, while state laws vary, these waivers are much more enforceable than most people think.

Risk Financing

Only exposure avoidance totally eliminates a given loss exposure. Each of the other risk control techniques leaves open the possibility—no matter how unlikely or how small—of some accidental losses arising from each loss exposure. As long as these possibilities exist, effective risk management calls for arranging one or more sources of funds to pay for every possible accidental loss. These possible risk financing techniques can be classified as either retention (drawing on funds that originate within the organization) or risk transfer (drawing on funds that originate outside the organization).

Retention. Risk retention uses funds from within an organization to pay for losses it incurs. Using risk retention is usually less expensive than purchasing insurance because many frictional costs (e.g., administrative costs of purchasing insurance, commissions to insurance sales people, premium taxes, insurer profit) are reduced or eliminated, and the organization benefits from the use of the cash that would otherwise be paid in premiums until such time as it is needed to pay losses. Risk retention, however, does come with its own costs (e.g., administration of the program and deferral of tax deductions until losses, rather than premiums, are paid), and large uninsured losses can cause severe fluctuations in cash flow or earnings from one



[Risk Financing](#), the IRMI flagship reference service for this vital risk management technique, explains all the risk finance alternatives and lays out a logical process for selecting the best option. It teaches you how to forecast losses to use in your decision-making process, informs on the positives and negatives of each, and provides many practical guidelines and factors to use in feasibility studies. Constantly updated since first published in 1983, [Risk Financing](#) is the most comprehensive and up-to-date reference on the alternative market and risk finance techniques available to risk managers and insurance professionals.

accounting period to another. Of course, very large losses, such as occurred with the Arapaho, can bring financial devastation if uninsured.

Risk retention can take many forms. The most basic is simply forgoing the purchase of insurance for a given risk. Deductibles and loss-sensitive insurance rating plans are the next most complex form of retention. These options avoid the assumption of catastrophic losses while saving some of the frictional costs of first dollar insurance. The most complex forms of retention are qualified self-insurance programs and captive insurance programs.

The funds for paying retained losses are generally secured from several alternative sources:

- Current expensing of accidental losses
- Use of unfunded reserves
- Use of funded reserves
- Drawing on borrowed funds
- Creating and relying on a “captive insurer”

These retention-funding alternatives are sequenced here in order of their increasing operating complexity and increasing size of the accidental losses with which they are best suited to deal. Furthermore, these retention alternatives all typically are less complex than any of the transfer financing techniques that we will consider later.

Current expensing of accidental losses—used for minor accidental losses that occur more frequently than major ones, and thus can be anticipated and absorbed. Current expensing of a fairly common loss is so routine that it is planned for, thus there is no need to borrow money or notify insurers for these types of minor losses. If, for example, in moving a customer’s vehicle within its garage, the Arapaho’s garage crew breaks a taillight, the garage is likely to replace the taillight as a courtesy, simply writing off the cost as a current expense.

Use of unfunded reserves—used for accidental losses that are more frequent or severe than can be conveniently absorbed through current expensing. An unfunded reserve is an accounting recognition of a likely expense without setting aside actual money to pay that expense when it arises. For example, if the spring rains in Savannah flooded the lowest levels of the garage every 3 or 4 years, the Arapaho’s accountants might well anticipate having to

pump water from these lower levels, perhaps every third year—an expectable, but not annually budgetable cost—rather than have its net profits from garaging activities fluctuate substantially every few years. The Arapaho might normally deduct a quarter or a third of these costs from each year’s net garage income as an unfunded (or “accounting”) reserved expense.

Use of funded reserves—used for loss exposures for which the firm does not have or chooses not to use its insurance when an unfunded reserve would not provide sufficient financial security. This earmarked fund pays for a particular loss, thus avoiding/preventing increased liability premiums, harm to reputation, lawsuits, etc. For example, the Arapaho garage would be exposed to loss from damage to a tenant’s parked vehicle under circumstances where the garage’s liability is manifestly clear—perhaps from a vehicle driven by a garage employee colliding with the tenant’s vehicle. Rather than denying fault or inviting a lawsuit and increased liability insurance premiums, the Arapaho may negotiate a private settlement with the wronged tenant garage user. Here, the Arapaho might simply estimate its cost of “making tenants whole,” put sufficient funds in an earmarked account, and negotiate settlement amounts with the tenants or their attorneys.

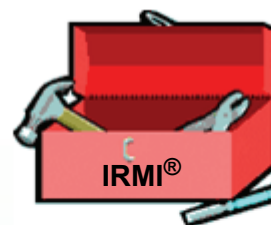
Drawing on borrowed funds—used for a serious accidental loss for which there is no applicable insurance (perhaps no insurance was available), and absorption as a current expense or through an unfunded or funded reserve would seriously disrupt the organization’s accounting results, reported income, and, if its stock is publicly traded, greatly reduce the market value of that stock. Note that borrowing money from a bank is both a form of retention (i.e., drawing on internal financial assets—borrowing power) and transfer (i.e., by using external sources of funds).

Creating and relying on a “captive insurer”—typically used for losses which occur frequently and are at least to some extent budgetable, a captive is a highly formalized arrangement for retaining losses. A captive is essentially an insurance company that has as its primary purpose the financing of the risks of its owners or participants. Captives are typically licensed under special purpose insurer laws and operated under a different regulatory system than commercial insurers. Often used by large, geographically diverse firms, captives help improve risk control efforts, lower risk financing administrative costs, and provide access to the reinsurance marketplace where exposures beyond its ability to retain can be insured.

As a single, relatively small organization, the Arapaho would have little opportunity to use captive insurance as a risk financing technique. However, if the Arapaho were part of a larger organization that owned numerous apartment complexes in a geographic area or spread across the country—or if the Arapaho were a member of an association of apartment-garage operators—use of a captive insurer might well make sense. In such diversified uses of captive insurance, the lines separating retention from transfer can be very dim indeed

Transfer. Risk transfer shifts the financial burden of paying for specified types of losses when they occur under specified circumstances without necessarily transferring the responsibility for conducting the operations that may generate these losses. (Note the contrast with *contractual transfer used for risk control* as discussed above, which actually *shifts responsibility for certain operations as well as the loss exposures which those operations generate*, i.e., garaging activities.) The organization to which this risk financing obligation is shifted is known as the “transferee,” and the organization that suffers the losses is the “transferor.” For example, when you buy insurance on your car, you are the transferor, and the insurer is the transferee.

The three most common forms of transfer for risk financing are commercial insurance, contractual (or noninsurance) transfer for risk financing, and by operation of general law (tort law and statute). The fundamental distinction among these three forms of risk financing transfer is the identity of the transferor—that is, whether the burden of paying for potential losses is shifted to an insurance company; to an organization that is not an insurance company (a noninsurer, such as a subcontractor); to a wrongdoer by common law legal principles or statutes; or to the federal or state government that makes payments to



IRMI publishes two popular books and a monthly newsletter on the use of captive insurance companies in risk management. [*Captives and the Management of Risk*](#) is a 220-page primer that explains captive insurance and how it is used. The 190-page companion book, [*Captive Practices and Procedures*](#), provides insight on how to structure and operate a successful captive insurance program (or how to assure a group program is being well run). Both are written by Kathryn Westover, CPCU, a highly respected captive insurance manager, consultant, and educator. [*Captive Insurance Company Reports*](#) provides a monthly insider's view of the captive scene, focusing on the latest tactics, trends, and developments to help you maximize the benefits of the captive insurance approach.

individuals and organizations that suffer losses from natural disasters or other circumstances which these statutes recognize as politically calling for some financial relief. These three common forms of risk transfer are discussed briefly below.

Insurance—In exchange for the insured's periodic premium payments, an insurer (the transferee) contracts to pay an insured (the transferor) for losses that fall within the scope of the insurance coverage described in the policy and its endorsements. Most insurance policies also contain an element of risk retention in the form of a deductible or loss sensitive rating plan (which adjusts the premium at the end of the policy period based on the actual loss experience during the policy period). Since the fixed premium is reduced as the insured assumes more risk through higher deductibles, an important key to controlling the cost of risk is to find the right balance between the additional risk retention and the premium savings. While this is not a perfect science, a financial analysis using loss forecasts and present value concepts can provide valuable guidance in making these decisions.

Contractual risk transfer for risk financing—Like insurance, this transfer is implemented through a contractual relationship between two organizations but, unlike insurance, the transferee is not an insurer, and the transfer is generally only an incidental part of the contract (whereas, it is the sole purpose of an insurance policy). These transfers are implemented by way of indemnity or hold harmless provisions, insurance requirements, and other risk transfer provisions contained in most types of business contracts.

For example, premises leases generally transfer the obligation to pay for losses arising from certain liability exposures from the lessor to the tenant, construction contracts typically transfer responsibility for certain property and liability exposures from the owner to the general contractor, and rental agreements usually transfer responsibility for certain liability exposures from the rental company to the renter. It is important to note that, with respect to risk transfer of liability exposures, only the financial responsibility is transferred, and the transferor is still legally liable to an injured party if the transferee does not have the financial wherewithal to respond to its contractual obligation. For this reason most contracts require liability insurance of transferees to help assure that they will have the funds necessary to meet their contractual commitment.

General legal principles—Tort law and statutory law provide other avenues for transferring the financial consequences of accidental losses. Tort law operates when one individual or organization is at fault for causing another's loss, giving the party who has been legally

wronged the option of suing for money or restoration. Federal and some state statutes have established disaster relief programs for natural perils (e.g., flood, hurricanes, earthquakes) which transfer much of the financial burden of widespread natural disasters from the entire community to the governmental entity that provides the statutory relief. Unlike insurance and contractual transfers for risk financing, neither disaster relief nor compensation under tort law can be secured in advance by contract. Thus, since risk financing arrangements, like all of risk management, strive to reduce uncertainty in the face of actual or potential accidents, tort awards and disaster relief funding should not be a significant part of any dependable risk financing plan.

Looking at the Arapaho fire and eventual implosion, it is likely that the Arapaho's owners had purchased insurance, and would be covered by those policies, up to policy limits, for at least the following:

- Under the property policy—for fire damage to the building and its equipment as well as any damaged personal property of the Arapaho's owners
- Under the business income coverage of the Arapaho's property policy—for the Arapaho's loss of rental and other income for such time as it would take to repair or replace the property with "due diligence and dispatch"
- Under the Arapaho's general liability and umbrella liability insurance policies up to their per-occurrence, and annual aggregate limits:
 - ❖ for the property damage, wrongful death, and bodily injury liability claims likely to be brought against the Arapaho by the family of Wanda Middleton
 - ❖ for claims by other tenants for damage to their vehicles or personal property in their apartments
 - ❖ for any fire-related injuries suffered by tenants or anyone else who was not an employee of the Arapaho
- Under the Arapaho's statute-mandated workers compensation insurance—for any Arapaho employee's medical expenses and loss of earned personal income because of injuries sustained in the fire or implosion

The Arapaho's commercial insurance policies may not cover all its losses, however, even in these four areas. For example, its property insurance will almost certainly cover the fire damage to the complex, but coverage for the much more devastating implosion loss is less certain.

Destruction by order of governmental authority is generally an excluded peril in almost all property insurance policies. Therefore, a standard property policy would not pay for loss of the portions of the building that were not damaged in the fire but subsequently destroyed in the implosion. However, ordinance or law coverage that would pay for this loss is generally available for an additional premium. This illustrates why it is so important to thoroughly identify loss exposures and tailor risk management techniques—in this case, insurance coverage—to deal with them.

To illustrate a noninsurance transfer for risk financing within the Arapaho example, assume that the Arapaho agreed in its contract with Spotless-R-We, Inc., its cleaning company, that the Spotless could store its supplies and a few items of its equipment in the Arapaho's garage area and that it would indemnify the Arapaho for liability arising from the stored items. Now assume that the fire started not in Wanda Middleton's car, but when cleaning solvents placed too near a water heater burst into flames. Although the Arapaho and Spotless may not have realized it at the time, these storage and financial responsibility arrangements were a noninsurance transfer for risk financing from the Arapaho (as transferor) to the cleaning contractor (as transferee). Thus, Spotless would be required to pay for any liability to others that the Arapaho might have as a result of the fire. Let's only hope that Spotless has adequate contractual liability insurance to pay for its obligation!

Back to the original Arapaho fire, it is theoretically possible that the Arapaho could bring a tort claim against the deceased widow Middleton's estate on the basis of her negligence (1) in failing to notice that a significant amount of gasoline had leaked from her car, and (2) in trying to start her car despite this great hazard. In reality, however, it is unlikely that the Arapaho could have collected from Wanda Middleton's estate an amount of money that would have offset a meaningful portion of the Arapaho's fire losses.

Insurance Essentials. Insurance is such an important and complex risk transfer technique that the basics of commercial lines insurance warrant some additional discussion. First, it is important to understand that there are really two separate and distinct insurance industries in the United States: the property and casualty industry and the life and health industry. While



Optional coverages must often be added to insurance policies to assure that coverage properly matches an organization's exposures. Extreme care must be taken to identify and request the necessary coverages, and check issued policies to assure they have been properly constructed. [*IRMI Insurance Checklists*](#) provides a convenient and thorough process for identifying needed coverage and checking policies to ensure they comply. [*Guidelines for Insurance Specifications*](#) provides boilerplate requests for proposals (RFP) and insurance specifications to use for competitive insurance bidding. Agents and brokers use these tools to standardize their processes and reduce their errors and omissions exposures. Risk managers and insurance buyers use them to obtain competitive proposals and audit the work of their agents and brokers.

many insurance organizations, such as insurance company groups, have companies that write each type of insurance, most insurance professionals specialize in one or the other. Most insurance companies focus on only one area. While life and health insurance comes into play as a tool to cover key people in an organization and certain other uses, risk management makes most extensive use of property and casualty (P&C) insurance. Indeed these are the types of insurance that will be called on to help the owners of the Arapaho recover from their losses.

The scope of the coverage that a given insurance policy provides is described in standardized policy provisions or individualized endorsements which state positively or which limit the following:

- The persons or organizations insured
- The perils and types of events that qualify as causing covered losses
- The kinds of losses (such as property damage, bodily injury, liability claims, loss of income, or others) that are insured
- The maximum and minimum dollar amounts (policy limits and deductibles) the insurer will pay for any specific insured event or collective series of events in a given time period
- The time interval ("policy period") during which an insured event must occur for a resulting loss to be covered
- The specific location(s) or territorial area where an insured event must occur for the resulting loss to be covered

In addition, every insurance policy specifies, as a prerequisite for having any claim paid that the insured comply with a detailed procedure for notifying the insured of a claim that the insured cover a loss.

With these generalities behind us, let's take a slightly closer look at some of the essential elements of both property and casualty insurance, beginning with property insurance.

Property insurance is a “first-party” insurance because its purpose is primarily to insure against loss from damage or destruction of the property of the named insured (the first party). It covers “direct damage,” which is the cost to repair or replace the property. The loss of the Arapaho garage and apartment building structure would constitute direct damage from the fire and subsequent implosion.

Property insurance may also optionally be arranged to insure “indirect loss,” which would be represented by the interruption of the income stream generated by the property or the extra expenses associated with conducting operations at an alternative facility. Since the amount of loss is a function of the duration of the business' interruption, this is often called a “time element loss.” In the case of the Arapaho, this involved the loss of rental income. A manufacturing or retail business would suffer loss of sales if its plant or store was lost. A service organization might feel it necessary to continue its operations elsewhere, regardless of the increased costs of doing so.

There are many options to consider when purchasing property insurance and the choice of which options to purchase is largely based on the exposures faced by the organization. One important consideration is what perils to insure. There are two approaches to choose between: named perils and all-risk or open perils. As the moniker implies, a named-peril policy only covers loss resulting from a list of perils specified in the policy, and this list can be very narrow or very broad. An



Commercial Property Insurance is the authoritative IRMI reference service covering all aspects of property, inland marine, crime, equipment breakdown, and other direct damage insurance. It explains the nuances of coverage in plain English, detailing industry practices and court interpretations of policy language. Included are recommendations for assuring broad coverage with explanations of important issues that may arise when determining how coverage applies to claims.



Commercial general liability and umbrella policy forms are complex with many coverage options built in or added by endorsement. Risk managers must carefully identify liability exposures and assure their policies are properly tailored to cover the identified exposures.

[Commercial Liability Insurance](#) is designed specifically to assist this process by carefully explaining the policy's provisions and the effect of each endorsement included in the standard forms portfolio used by most commercial insurers. The detailed and authoritative coverage interpretations and drafting history also make this reference service uniquely suited to assist in determining if coverage applies to a questionable loss scenario and negotiate with others regarding the true coverage intent.

all-risk or open perils policy, on the other hand, covers loss from any peril other than those that are specifically excluded.

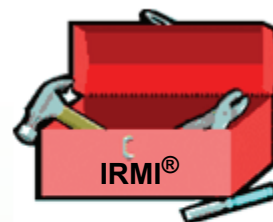
Though all-risk policies have many exclusions, they usually provide broader coverage than named perils policy and have an additional advantage. All-risk policies place the burden of proof that coverage does not apply to a questionable loss on the insurer, which must show how an exclusion would preclude coverage. On the other hand, with a named-perils policy, it is the insured who has the burden of proof with a requirement to demonstrate that the loss was caused by one of the named perils. Fortunately for the owners of the Arapaho, fire would be clearly covered under either type of policy.

Whether all risk or named perils coverage is purchased, many policies exclude two important perils: flood and earthquake. Coverage is usually available for these perils, however, and should be carefully considered. For example, if the Arapaho was considered to be at all vulnerable to storm surge from hurricanes, the owners would likely have purchased flood insurance.

Another important property insurance consideration is the valuation basis where, once again, there are two choices: actual cash value and replacement cost. The choice will affect the limit of insurance purchased and therefore the cost of the insurance. Replacement cost will pay the cost to repair or replace the property while actual cash value will make a deduction for physical depreciation. While it costs more, replacement cost coverage is generally preferred.

Associated with the amount of insurance to be purchased (i.e., the insurance limit) is the insurer's requirement that the limit represent a certain minimum percentage (usually at least 80 or 90 percent) of the property's value. Property insurance policies typically include a coinsurance provision that will penalize the insured by deducting an amount proportionate to the amount of underinsurance from loss recoveries. However, insurers will often agree to delete this requirement from the policy if the underwriter is convinced the limit of insurance being sought is appropriate.

As the case of the Arapaho clearly shows, time element losses can be significant. In fact, it is not uncommon for the loss of business income to equal or exceed the value of the damaged or destroyed property. Therefore, business income insurance is very important element of any property insurance program. This insurance is usually provided as an endorsement to the property insurance policy rather than as a separate policy, and the premium for this coverage will often approach and sometimes exceed the premium associated with the direct damage coverage. For this reason, owners of small businesses sometimes choose to forego the coverage. Studies have shown, however, that few small businesses that fail to purchase this insurance reopen their doors after a major property loss. By the time the premises or plant is rebuilt, their employees have found other jobs and the owners have run out of money. Think twice about going without time element coverage if your business has the exposure.



The [Commercial Auto Insurance](#) reference service explains the nuances of the standard business auto, motor carrier, trucker, and garage liability policies, including the endorsements used to tailor coverage. Since many auto exposures stem from state laws, this publication includes many state specific summaries and discussions. For example, summaries of laws related to uninsured motorists, underinsured motorists, financial responsibility, what is considered an "auto" versus "mobile equipment," and no-fault systems are provided and regularly updated.

There are numerous other property insurance issues and coverage options as well as ancillary insurance policies that cover direct loss to property that must be considered when designing a business insurance program. These include such things as the law and building ordinance coverage that would be so important to the owners of the Arapaho, equipment breakdown insurance that would, for example cover loss arising from an explosion of the

Arapaho's boiler, and commercial crime insurance to pay for robbery of the garage attendant or embezzlement losses caused by the Arapaho's bookkeeper. Additional explanation of all these details is beyond *Risk Management: Why and How*, but covered thoroughly in other IR-MI publications.

Where property insurance covers "first-party" losses, most lines of casualty insurance cover third party losses, such as when the named insured (the first party) is sued by someone (the third party) who is injured by the named insured's product, premises, or service. You might think of casualty insurance as "lawsuit insurance." The most commonly purchased casualty policies of businesses such as the Arapaho (as well as not for profit and public entities) are general and umbrella liability insurance, auto liability (and physical damage) insurance, and workers compensation insurance.

Commercial general and umbrella liability insurance policies cover claims by non-employees for bodily injury and property damage caused by the named insured's negligence with respect to practically all its operations except automobiles. These policies will pay both the cost to defend claims against the insured as well as any judgments or settlements of those claims. The commercial general liability (CGL) policy is the primary policy, meaning that coverage under it applies first—until its limit of liability is exhausted. The umbrella policy sits on top of the CGL policy (and the auto liability policy) to provide additional limits.

For example, the Arapaho might have purchased a CGL policy with a \$2 million each-occurrence limit and \$5 or \$10 million of umbrella liability insurance on top of the CGL policy. These policies would cover claims brought by apartment and garage tenants for damage to their autos and other property, as well as claims for injuries from the fire sustained by anyone other than an employee, perhaps a tenant or firefighter, for instance.

Commercial general liability and umbrella policies also fill an important role in assuring that contractual risk transfers have the financial backing necessary to be effective. Subject to their exclusions and other limitations, these policies cover contractually assumed liability of others.

For example, think back to the agreement the Arapaho had with Spotless-R-We, Inc., where Spotless agreed to hold harmless and indemnify the Arapaho for liability arising from its stored cleaning agents and chemicals in the garage. If the fire had arisen from these agents, the Arapaho would invoke the hold harmless provision to force Spotless to pay the cost to defend the Arapaho from claims brought by tenants or others as a result of the fire and pay any judgments or settlements of those claims. Knowing that Spotless probably wouldn't have the



A truly unique reference service developed for use by risk professionals, [*IRMI Workers Comp*](#) tells you what you need to know to deal with varying state workers compensation laws, properly tailor insurance coverage to insure an organization's unique risks, and control workers compensation cost of risk. It explains the standard policy form and all the countrywide endorsements, discusses the application of maritime law, the USL&HW Act, and other federal acts, and provides a detailed summary of the workers compensation law and benefits levels for each state. This is an ideal reference for a risk manager with multi-state operations as well as for agents, brokers, and insurers.

assets to pay for such claims, the Arapaho's owners probably included a requirement in the contract to purchase CGL and umbrella liability insurance subject to some minimum limit and to provide the Arapaho with evidence of compliance in the form of a certificate of insurance that is issued by Spotless's insurance agent or company. This would give the Arapaho's owners even more protection than they would have by relying solely on their own insurance.

The **business auto policy** is somewhat unique in that it covers both first-party losses (physical damage to insured vehicles) and third-party (liability) losses arising from the operation of those vehicles. It will generally have a limit of liability that applies to each accident, and the umbrella policy is purchased to provide limits beyond those in the auto policy. Optionally, the policy can be arranged to cover liability arising from the use or operation of only owned vehicles, only hired vehicles (e.g., leased), only non-owned vehicles (e.g., those of employees), or any or all of these types of vehicles.

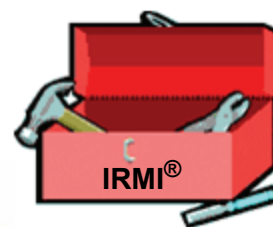
There are two forms of physical damage coverage: collision and comprehensive. Collision coverage covers damages to the vehicle sustained in an accident, whereas comprehensive coverage covers other forms of damage, such as by fire, hail, theft, or vandalism. When purchased, physical damage coverage generally applies only to owned and hired vehicles.

Many large organizations choose to retain the collision damage exposure because it is easily measurable and budgeted. Some also retain the comprehensive exposure if the fleet is not stored in one place. If the Arapaho had owned autos that were damaged in the fire, its comprehensive coverage would cover the loss.

The CGL, umbrella, and business auto policies contain exclusions to keep them from applying, in most cases, to injuries to the insured's employees. **Workers compensation insurance** is purchased to cover this exposure. This insurance operates hand in hand with state workers compensation statutes. While they vary from state to state, these statutes provide a benefit for any worker injured on the job from virtually any cause, regardless of whether the employer was negligent in causing the injury. The benefit includes medical care to treat the injury, rehabilitation, and salary continuation (usually at two-thirds the employee's normal rate of pay) while the employee is unable to work as a result of the injury.

Some types of businesses or professionals also need **errors and omissions (E&O) or professional liability insurance**. The primary distinction between these two forms of insurance is whether the type of activity the insured performs is considered "professional" with an attendant higher standard of care.

For example, the Arapaho's real estate agent, computer consultant, and insurance agent would have E&O loss exposures that they would cover with an E&O policy. Its accountant, lawyer, and the physicians who treat anyone injured in the fire all would need to purchase professional liability (insurance also known as "malpractice insurance"). The Arapaho itself probably does not face an E&O or professional liability exposure for which it buys specific insurance. However, the architect who designed the garage and building would have bought a professional liability policy and would be looking for protection from it in the event the implosion was made necessary due to design flaws in the garage. Similarly, the agent who



IRMI publishes the most extensive professional and E&O insurance reference library available. For a single source guide on all forms of professional, management, and errors and omissions liability insurance available turn to [*Professional Liability Insurance*](#). This unique reference service covers practically every type of policy in sufficient detail to assure your organization is properly protected, and includes market directories for each line of coverage. [*D&O MAPS*](#) gives you detailed analyses of each major insurer's D&O policy forms to help you choose the best coverage for your organization or clients. [*EPLiC*](#) is a quarterly journal that equips risk professionals with the latest news and insights into the ever-changing world of employment practices liability and the insurance policies used to cover them.

arranged the Arapaho's insurance program would have E&O insurance to defend against claims for any alleged errors in arranging the Arapaho's insurance program.

Many organizations elect to purchase directors and officers (D&O) liability insurance, employment practices liability insurance (EPLI), and fiduciary liability insurance—a category of errors and omissions insurance often called “management liability.” These policies protect management employees, directors, and trustees of employee benefit plans (and, in some cases, the entity itself) against liability suits.

D&O liability insurance covers liability arising from negligent management of the business. Virtually all publicly held companies buy D&O insurance to enable them to attract and keep quality directors, but privately held companies also face D&O exposures that should not be overlooked. Suits by employees alleging discrimination, harassment, wrongful termination, and similar torts are insured under EPLI policies. Fiduciary liability insurance covers claims alleging violations of the Employee Retirement Income Security Act (ERISA) or errors and omissions in administering employee benefits plans.

Of these, the Arapaho probably purchased fiduciary and EPLI insurance, and perhaps even D&O insurance. However, it is unlikely any of these policies would have been called on for claims arising from the fire and implosion.

These are the most commonly purchased forms of liability insurance protection, but there are many others available for which a thorough exposure identification process may reveal a need. For example, many businesses need to purchase environmental liability, aircraft liability, Internet liability, media liability, or watercraft liability insurance since CGL and umbrella liability policies provide little or no coverage for these exposures.

3 Establish a Risk Management Program

After first evaluating the exposures of an organization like the Arapaho to accidental property, key person, liability, and net income losses, and then appraising the feasibility of the various risk control and risk financing techniques for each of these exposures, we are ready for the third of the four essential steps in risk management: establishing a risk management program. This third step entails only two, almost self-evident actions: making *technical decisions*

about precisely what should be done to implement a chosen general risk management technique and making *managerial decisions* about how and when that technique should be implemented, and who should have authority and responsibility for making sure the technique operates as intended.

To illustrate the importance of this seemingly obvious step in managing risk, let us turn again to the Arapaho garage fire and implosion. Suppose that, well before Wanda Middleton inadvertently started a chain of events that destroyed the Arapaho, someone—perhaps one of its owners, its insurance agent or broker, or a risk management consultant prospecting to make the Arapaho a new client—undertook to evaluate the Arapaho’s loss exposures arising from accidental fires. Suppose further that weighing these fire exposures and evaluating the cost and likely effectiveness of the risk control and risk financing measures available for coping with these exposures (in light of both legal requirements and cash flow considerations) led to three recommendations with respect to potential fires in the garage:

- Install a new, much more effective fire-protection system to detect and extinguish any fires in the Arapaho’s garage.
- Redesign the garage space to improve traffic flow into and out of it, especially by eliminating a few, largely unused parking spaces, and by widening the garage entry/exit door from two to three lanes (especially since the partially subterranean architecture would not allow for separate entry and exit doors at opposite ends of the garage).
- Purchase “business income” insurance to protect the Arapaho’s owners from potential loss of rental income if a fire makes any part of the Arapaho complex uninhabitable—an insurance coverage which these owners had never before even considered.

Deciding that a new fire protection system, a better garage design, and adequate business interruption insurance would significantly strengthen the Arapaho’s fire risk

Establishing a risk management program involves making technical decisions about precisely what should be done to implement a chosen general risk management technique and making managerial decisions about how and when that technique should be implemented and who is responsible for making certain the chosen technique operates as intended.

management are important decisions. But deciding on them does not make them so. Building these into a risk management program requires both technical and management decisions within the Arapaho organization. For discussion purposes, we will look at these technical and managerial decisions as they would have been made while they were still relevant—before Wanda Middleton started her car in the Arapaho garage.

Technical Decisions

The technical decisions that must be made to build any risk management measure into an existing risk management program (or to create a meaningful program from scratch) focus on precisely what needs to be done to implement that measure. Here are some examples:

- Once the decision is made to install a new fire-protection system, technical decisions would have to be made about the system's size, brand, extinguishing agent(s), smoke or heat sensor and extinguisher head locations, and type of maintenance/service.
- Once the Arapaho's top management decided to redesign the garage area, technical decisions had to be made regarding how the new parking spaces would be configured, where the extra lane for entry/exit travel would be placed, and how the one entry/exit for the garage could best be widened.
- Once these same senior executives opted to buy business income insurance to protect the Arapaho's rental income, further technical decisions were required regarding such matters as the precise wording of the most appropriate insurance policy language, the amount of insurance needed, and the best insurer from which to buy this coverage.

These and many other technical decisions are beyond the normal expertise of the people who generally work for organizations like the Arapaho, requiring specialized knowledge and skills of outside professionals, such as fire engineers, architects, and insurance agents or brokers. Therefore, for these and similar technical decisions, the person most directly responsible for the Arapaho's overall risk management efforts would have to consult with the appropriate experts.

Managerial Decisions

After all the necessary technical decisions have defined precisely what must be accomplished to achieve a better fire-suppression system, garage redesign, and insurance coverage, the stage is set for making the appropriate managerial decisions. The Arapaho's managerial staff will need to define who will have the responsibility and authority for the suppression system, how the new layout will work, and what insurance will be purchased—and when these will occur. For other decisions, the same outside experts who gave advice on the earlier technical decisions may need to be consulted, such as where to install the fire suppression system or how best to widen the exit/entry door.

In the process of making and carrying out these technical and managerial decisions to establish any given component of a risk management program, an organization like the Arapaho will have built a part of a risk management program. Eventually, an organization's staff will have built an entire risk management program, complete with seemingly appropriate risk control and risk financing measures. If a program has been well designed, *and if nothing changes*, then a stable risk management program is likely to remain effective in a stable world for years to come.



For more than 30 years, [*The Risk Report*](#) has been helping risk and insurance professionals with analysis and interpretation of the latest innovations in insurance coverage and risk management. Effective programs require proper application of fundamental practices and programs as well as the implementation of innovative responses to changing loss exposures, technologies, and insurance markets. This monthly newsletter—devoted to one topic per issue and written by national experts in their respective fields—is a must-have tool in any risk manager's or insurance professional's toolbox.

4 Adapt to Change

Risk management exists precisely because the world is not stable—surprising things, both good and bad, happen. Even the once most nearly perfect risk management program needs to evolve in response to changes in any of the factors that shaped the original program. These changing factors can be categorized as changes in:

- Loss exposures
- Organizational goals
- The cost and benefits of these techniques
- The attitudes management holds toward risk

Adapting to the changes in these clusters of factors—changing the program in response to, or in anticipation of, these changing factors—is the last of the four essential steps in risk management. Because change never stops, the process of managing risk never ends. Consider some examples of how change might have affected the Arapaho before that Saturday when Wanda Middleton started her car.

Loss Exposures

Any change to loss exposures the Arapaho faces because it operates a garage for its apartment tenants could influence its risk management program. For example, suppose the Savannah town council passes an ordinance requiring that all indoor garage facilities of more than 20 parking spaces be equipped with fire suppression systems that exceed the standards of the Arapaho's then current system. The ordinance specifies that those in noncompliance will be liable for any fire damage to vehicles they garage.

To avoid the cost of a new system, the Arapaho owners may decide to close their garage and offer only outside parking on the property of another organization with which the Arapaho has contracted. However, since the new parking is a block away from the Arapaho complex, the Arapaho may lose tenants or be forced to lower rents. Furthermore, some tenants may be injured or attacked while walking to and from their cars, creating a liability exposure for the Arapaho owners.



IRMI publishes several free e-mail newsletters that will help you keep up with changes and developments in loss exposures and risk management techniques. [IRMI Update](#), our flagship newsletter, includes commentary from the IRMI president and outside risk professionals on industry developments, tips for handling risk, and links to free informative risk management articles on IRMI.com. Sign up without fear of getting spam—your address is safe as we won't provide it to others. Learn more about other [IRMI newsletters](#) and sign up for your free subscription on IRMI.com.

In short, in trying to reduce its new statutory liability for fire damage to vehicles garaged on its premises, the Arapaho may be increasing its potential common law negligence liability for injury to its tenants. Reducing one exposure often increases another.

Most types of loss exposures change to some degree over time, and new ones continually arise. For example, terrorism has always been a loss exposure, but most would agree that it is a more significant exposure today than it was before the tragic events of September 11, 2001. The risk of hurricanes is considered higher today than it was years ago due to certain climatic conditions and, possibly, global warming. New technologies, such as bioengineering and nanotechnology, bring with them new loss exposures that must be considered by those organizations that develop or deploy them. Those responsible for managing risk must keep up with and make certain their programs contemplate these types of changes and developments.

Organizational Goals

Most organizations are continuously seeking to develop new products and services, acquire other organizations, divest certain operations, and improve the ways they do business. All of these activities will affect an organization's unique risk profile and require changes in the risk management program.

To illustrate how a change in organizational objectives may alter an organization's risk management program, suppose the owners of the Arapaho decide to open a daycare center for young children. These owners use several vacant apartment units within the Arapaho as a nursery, classrooms, and a cafeteria for the children and staff. Before jumping into this endeavor, the Arapaho's owners should be aware of the increased loss exposures and heightened hazards—especially to property loss and bodily injury liability—that the daycare activity brings to their enterprise.

Cost and Benefits

Consider a change in the costs and/or benefits that a given risk management technique generates. Perhaps a significant advance in fire-suppression technology will make a new garage sprinkler system even more cost effective for the Arapaho. Or a general increase in premium rates for business income insurance to protect the Arapaho against loss of rental income may lead the owners to set aside funds as reserves against these losses or to increase the deductible on this coverage so that the Arapaho absorbs all rental income losses from any one event that damages five or fewer apartments. (As things turned out, the mandatory implosion of all 80 apartments in the Arapaho in the wake of the garage fire would still have resulted in an insurance recovery for the Arapaho's owners for their loss of rents on 75 of those units—at least until this insurance had paid its overall limit or until the Arapaho was rebuilt and its business has returned to normal.)

Management Attitudes

Lastly, a change in the attitude with which an organization's management regards risk, its tolerance for uncertainty, can alter many aspects of the risk management program. If this tolerance diminishes, and management becomes more conservative, the organization will tend to withdraw from hazardous activities, institute more safety measures, and purchase more insurance with higher overall limits and lower deductibles. On the other hand, increased tolerance of risk is often reflected in more risk retention than would otherwise occur.

As one might imagine, business conditions and the financial performance of the organization often affect management attitudes toward risk. When an organization is highly profitable and generating substantial positive cash flow, for example, management is often more risk tolerant. On the other hand, management usually becomes more risk averse in times of financial hardship since the organization is more vulnerable.

Another problem often faced by risk professionals is when senior management becomes over time less sensitive to—even less aware of—risk. For example, if the present owners of the Arapaho were to be succeeded by their children, and if the Arapaho complex had never been demolished, it is entirely possible that this next generation of owners, having never experienced a catastrophic fire, would have become quite complacent about fire loss exposures.

This often occurs with exposures that gain a high profile, such as when a terrible disaster occurs or through heavy media attention for a period of time, and that profile later subsides. Terrorism exposures and the need for business continuity planning received substantial attention following the 9/11 attacks, but this seems to be of less concern today. This also may occur with the risk of severe acute respiratory syndrome (SARS), mad cow disease, avian flu, or other pandemic. But the probability of these exposures resulting in actual losses is probably not much different today than it was when they were receiving all the attention.

Managerial alertness to risk and its potential consequences usually leads to a safer, more productive organization—and ultimately a safer, more productive, community and world—than managerial complacency toward risk. It takes ongoing analysis and communication to maintain a balanced and constant level of alertness to risk.

Where To Start—How To Continue

In the context of what happened to Wanda Middleton and the Arapaho, we have now completed our overview the four essential steps in the risk management process:

1. [Evaluate loss exposures](#)
2. [Appraise feasible risk management techniques](#)
3. [Establish a risk management program](#)
4. [Adapt the program to change](#)

As we have learned, risk management is a process of thought and of action that applies to any potential accidental loss that any person, organization, or other entity may experience. It is a process that enables any entity to meet its goals as fully as possible despite any potential or actual accidental losses. We have been viewing this process somewhat in hindsight, looking backward after the fire and implosion at the Arapaho.

In this section of *Risk Management—Why and How*, we will be looking forward, dealing with how to start a new risk management program and how to keep that program going and improving. Let us conclude by pulling out of the ruins of the Arapaho some guidelines for starting and strengthening any sound risk management program so that other organizations do not have to suffer, or can at least survive, accidents that befell the Arapaho.

Anticipate Change

The most essential place to start is to recognize risk—the possibility of surprising change. Change is going to happen; for better or worse, it is not going to stop, ever. Risk management should work with change, in principle seizing unexpected opportunities for gain where possible—but more importantly, thwarting threats of accidental loss wherever they emerge. A good risk management program begins with an appreciation, almost a welcoming, of change.

Link Risk Management to Your Mission

Those who work effectively in a thriving organization subscribe personally to its mission. Two practical steps for integrating risk management into an organization's mission are to:

- Use words and phrases like “safely,” “without harming others,” or “with due regard for the rights of others” in the actual mission statement.
- Review every significant accidental loss (or major “near miss”) the organization suffers with its key personnel, pointing out specifically how the accident was (or would have been) inconsistent with the organization's mission.

For an organization to thrive in a hazard-filled world, that mission must encompass effective control of, and recovery from, the threats that are inherent in carrying out that mission. Success in not merely achieving X, it is achieving X with as little loss of life, property, income, and other things of value—ours and others—as possible. To achieve X while causing or allowing great “collateral damage” is not success. And it certainly is not good risk management.

Follow a Definite Risk Management Process

Any organization's, department's, or person's commitment to preventing or paying for accidental losses is greatly strengthened when risk management ceases to be a vague concept and becomes a concrete, almost automatic, process of thought and action to follow. The exact number of steps in the process does not matter—we have been discussing 4 steps, but others describe 5 or 6, some as many as 12. What does matter is that the steps encompass the whole risk management process, from the recognition of a threat



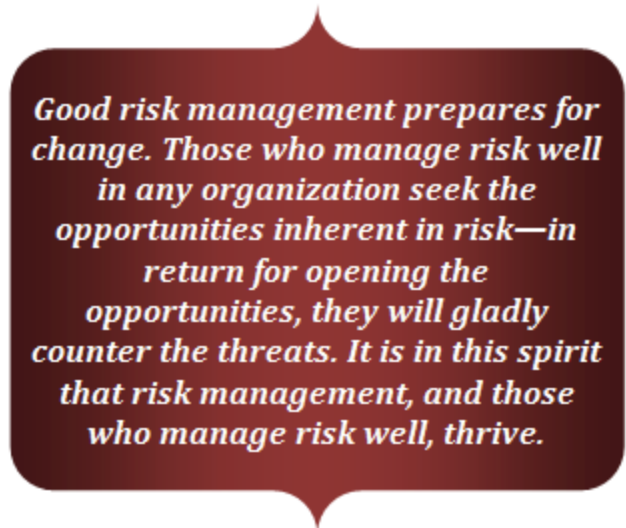
Practical Risk Management is a one-stop source of information on risk management practices, policies, and processes. Designed to help risk management and financial executives start and maintain a risk management program, it discusses the entire process from exposure identification through implementation and monitoring of the program, suggests risk management practices to implement, and provides concise and understandable explanations of most types of insurance coverage along with tips on the best coverage issues.

to reliable, complete, cost-effective, and equitable financing of recovery from loss. In this sense, managing risk is like eating an orange: the number of sections into which you slice it does not matter, as long as you get it all.

It also matters that everyone, all an organization's personnel, "gets it." Each employee must understand the essence—not necessarily the more complex details—of risk management. Therefore, the fundamental steps in risk management should be explained to all of an organization's personnel and should be given in writing to each key employee, with illustrations linked to each employee's job situation.

Assign Every Employee Some Risk Management Responsibility

To underscore that everyone is on the "risk management team," it is good to assign general risk management duties to each employee. These duties may be as basic as, "Report to our risk manager any significant hazards you see in your daily work here," or "If you come across a safer way you or your department can work more safely, let Risk Management know about it."



Good risk management prepares for change. Those who manage risk well in any organization seek the opportunities inherent in risk—in return for opening the opportunities, they will gladly counter the threats. It is in this spirit that risk management, and those who manage risk well, thrive.

Besides alerting all personnel to risk management concerns, this kind of encouragement can stimulate positive communication between everyone who works for an organization and those who specialize in just risk management. Note that these quoted suggestions do not say, "Tell your supervisor," or "Let your department head know." This behavior only builds risk management communication barriers and keeps secrets about unsafe conduct that middle managers are reluctant to admit and, therefore, cannot openly correct.

Effective risk management cannot flourish in organizations where hazards are secret sins, and accidents are unspeakable crimes. Removing hazards and preventing accidents requires an open, constructively cooperative "team" setting in which everyone contributes to a shared mission.

Pair Risk Control and Risk Financing

Grouping all risk management techniques into the two large families we discussed earlier—risk control and risk financing—is more than a learning device. This grouping also is very meaningful in designing a risk management program for every significant loss exposure that any person or organization faces. Properly managing any loss exposure requires combining, pairing, and devoting equal attention (although not necessarily equal resources) to risk control and risk financing for that exposure.

Risk control to reduce the probability, size, or unpredictability of losses from a given exposure is never enough. Ultimately, risk control fails. Accidents and resulting losses, given enough time, always occur. Planned risk financing to generate enough funds to finance recovery from these losses will someday be needed.

Similarly, risk financing alone cannot be sound, cost-effective risk management. Simply paying for losses without trying to prevent them, make them smaller, or make them more predictable wastes money that even the most elementary risk control could have saved. In a world of good risk management, risk control and risk financing are an inseparable pair.

Manage Risk Ethically

Managing risks well requires the cooperation of many others. It requires the cooperation of many who are directly linked to an organization because they work for it (as employees, volunteers, or directors), because they buy from it or sell to it (as customers, clients, or providers of goods or services), or because they are neighbors (geographically or brought together in a shared cause).

Good risk management also requires the cooperation of others quite remote from an organization. Risks, hazards, perils, and losses bring us together—either to combat or fall victim to. In managing risk, none of us, as an individual or as an organization, is an island.

Golden Rule of Risk

Manage your own risks as well as you would others to manage theirs.

Because risk closely or remotely links us all, we should act ethically toward one another in managing risk for our shared well-being. More specifically, in managing risk, we at least ought to provide and expect total honesty our dealings, consider the risk-related rights and duties of all those in our local and global communities, and apply the Golden Rule of Risk.

As a closing example to illustrate this point, let us return to Wanda Middleton, the widow who died on the bottom floor of the Arapaho's garage when the hazardous (but when made, state-of-the-art) ignition system of her 1978 Mercury Cougar ignited the gasoline that had leaked from her car. Suppose Mercury's competitor discovered how to make a safer ignition system, one much less likely to cause explosions. This discovery actually lowers the true cost of its product because it does not have to defend or pay as many product liability claims caused by ignition systems that cause more explosions. The competitor's cars would kill fewer people in explosions; therefore, lead to fewer building implosions; force fewer apartment dwellers to find homes; and deprive fewer landlords of rental income and fewer municipalities of anticipated property and sales tax revenues.

Here's the conundrum: If it were possible to keep secret the new, safer ignition system so that other automobile manufacturers could not use it, should the manufacturer do it? Should it force other manufacturers to produce cars less safe than to maintain a competitive advantage?

The only ethically defensible answer clearly is "No." Exposures to accidental losses affect us all. Hazards our neighbors across the street fail to control can endanger us as much as the hazards set free from our neighbors who live several time zones away. If we want our immediate or global neighbors to be mindful of our safety, then we must be just as mindful of theirs. Safety—and risk management generally—is not a proper arena of competition.

So, how should we ask others to manage their risks? As well as we would manage our own. This is the Golden Rule of Risk: Manage your own risks as well as you would like others to manage theirs. Doing so would make the world, including our corner of it, a far better place.