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I) PARAMETERS OF RISK MANAGEMENT

A. Introduction

Risk Management is the treatment of loss exposures. It is one specialty within the general field of management. Management, the process of planning, organizing, leading and controlling the resources and activities of the organization, is an essential aspect of the success of any enterprise.

Organizations may have any number of objectives -- for example, attainment of profit, attainment of growth, provision of public (or governmental) service. However, in order to achieve any of its objectives, it is essential that the organization be able to survive the effects of unforeseen, and potentially crippling, losses. Thus, the specialty of risk management is essential to the success of the organization.

Broadly, risk management is a decision-making process for sequentially

1) Identifying exposures to accidental losses;
2) Examining feasible risk management techniques for dealing with identified exposures;
3) Selecting optimal risk management techniques;
4) Implementing the techniques which have been selected; and
5) Monitoring the effectiveness of the techniques implemented.

. Treatment of loss exposures
. Survive crippling losses
. Identify
. Examine
. Select
. Implement
. Monitor
Insurance is one very important technique that is used in the treatment of loss exposures by risk managers. However, it is not the only such tool, and other means may be used as well. Regardless of the techniques finally chosen and eliminated, in order to maximize effectiveness, all of the steps in the risk management process must be followed.

B. The Elements of Loss Exposures

Organizations may face any number of types of losses. However, the only losses which are critically important to the organization are those which might interfere with achievement of the organization’s objectives. A loss exposure is a set of circumstances which present the possibility of such a loss, regardless of whether the loss actually occurs. It is incumbent upon the risk manager to assess loss exposures in some orderly way in order to apply the appropriate risk management technique.
Loss exposures have three elements:  

1) The item subject to the loss;  

2) The perils, or forces which may cause the loss; and  

3) The potential financial impact of the loss.  

Fully identifying and describing any loss exposure requires specification of each of these three elements. Loss exposures must be fully identified and analyzed in order to be treated. A loss exposure which is unrecognized typically will not be treated at all.  

**Items Subject to Losses**  

The very concept of a "loss" implies the existence of something which may experience a decline in value. Orderly analysis and treatment of loss exposures requires the identification and classification of such items.  

A variety of classification systems can be used. For example, one method might involve classification according to the item suffering the loss. Typically, such items are either assets or income. An asset is a possession having value; income is that which is produced by assets' and net income is revenues less expenses. Thus, a loss which results in increased expenses will reduce net income, as will a loss which results in decreased revenues.  

Any loss, no matter what its cause, will ultimately take the form of a reduction in value of either an asset or income, or both.  

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Alternatively, items subject to losses can be classified as:

1) Property, and its associated use;

2) Freedom from legal obligations; or

3) Personal health or earning capacity.

Property is either tangible or intangible. Tangible property has physical characteristics, and can be touched. Tangible property can refer to either real or personal property. Real property is real estate, including land and things permanently attached to it, such as buildings. Personal property is all property other than real property.

Intangible property is not physical in nature, but can be considered to be a legal right. For example, intellectual property is intangible property evidenced by the existence of a patent, trademark, copyright or trade secret. Rights under a right-of-way agreement or a license agreement are other examples of intangible property.
As one example, damage to a building owned by a business would result in a loss to its property (or its use) under this approach. Under the first approach described above, this would constitute damage or loss to an asset. If the building were used to generate income directly, as a retail facility might, this would also result in a reduction in income under the first method.

As a second example, suppose that a third person was injured when the property was damaged. This would result in a potential legal obligation, or liability, under the second method, and under either the asset or income classifications under the first method.

Personal earning capacity could also be affected by a loss. If the operator of a service providing business suffers a debilitating injury, his ability to earn an income will be affected. This will be classified under income under either of the classification methods.

Both methods are commonly used by risk managers to help identify and analyze risk exposures.

**Perils (Forces Which May Cause a Loss)**

Perils are the forces or conditions which may bring about or cause the loss, either directly or indirectly. They may be classified according whether they are:

1) Natural;
2) Human; or
3) Economic
Natural perils include natural forces and acts of God over which people have no control, such as fires, storms, earthquakes and illnesses. Human perils, on the other hand, are conditions that result from the actions of individuals or groups of people, and might include burglary, riots, labor actions, or simply incompetence. Economic perils are conditions which arise in the business environment, and may include such conditions as inflation, depression, technological advances or obsolescence, or changes in market patterns.

All of these perils are elements of loss exposure, and require identification and analysis by the risk manager in order that the loss exposure be properly treated. Unrecognized perils will result in untreated loss exposures.

**Potential Financial Impact**

This element of a loss exposure is quantitative, and provides the standard of measure of the loss, or decline in value suffered. While the items subject to losses and the perils causing losses are both concepts concerned with events that might happen, financial impacts are concerned with losses which have occurred.

Financial consequences of a loss may not be directly proportional to the "size" of the physical damage or loss. To illustrate, the slightest damage to a computer chip in an important computer could have potentially huge financial consequences for a business. Obviously, the financial consequences will be greater if either the a) frequency of the losses; or b) the severity of the losses is great.
Loss exposures can be classified for convenience as either "pure" losses or "speculative" in nature. A pure loss exposure is characterized by having only two potential outcomes: a) loss; or b) no loss. Neither outcome is beneficial, and both are abhorrent to organizations. The best the organization can expect is a neutral, no-loss, outcome. An example would be a structure at risk of damage from flooding. The nonoccurrence of a flood would result in no damage--the best which could be hoped for. Typically, one of the organization's goals is to avoid pure exposures in any way possible.

Speculative loss exposures have the potential for adverse or neutral outcomes, but could also result in a positive outcome, or gain, to the entity. An example would be the exposure created by the research, development and marketing of a new product. The investment could be lost if the product is unsuccessful, or could be returned multiple times if the product is successful.

The focus of this course will be primarily on pure loss exposures. Discussion of speculative exposures is handled elsewhere.
The Definitions of Risk

Regardless of the type of loss exposure, there is the risk of a loss. The term "risk" is used throughout the insurance profession, to indicate several different positions. As used in risk management, the term can mean any or all of the following:

1) The possibility of a loss;
2) The probability of a loss;
3) A peril; or
4) A hazard.

When used to refer to the possibility of a loss occurring, "risk" has no measure. If the term refers to the probability of a loss, it indicates the relative likelihood of the loss actually occurring, and in that sense can be measured. A probability of zero (0), for example, would indicate that there was no risk that the loss would occur. On the other hand, a probability of one (1) would indicate that the loss was certain to occur. Consideration of risk as a probability of loss is a key factor in the pricing of insurance and other risk control devices.
A peril is the cause of a loss. Perils are often referred to as risks. For example, common property and casualty policies are often described as “all-risk” policies, with the term referring generally to the perils covered by the policy.

Hazards are conditions that increase the likelihood of a loss or the magnitude of an expected loss. Hazards can be classified according to type. Physical hazards may exist as a characteristic of property, organizations or individual persons. For example, a building which is used to store explosives is subject to an increased probability of damage from explosion if it does not have adequate temperature and humidity controls. Similarly, a building is subject to an increased risk of fire if circuit breakers which are not adequate to handle the anticipated current load are used in its construction. Both of these conditions are examples of physical hazards.

Moral hazard is a condition which results from the attempt of a person or organization to intentionally cause or increase a loss. Generally, such an attempt would be made because the owner perceived an advantage from the likely result. This occurs when, for example, the owner of an underutilized but fully insured property considers arson as a means to collect the insurance.

As opposed to a moral hazard, hazards resulting from mere negligence on the part of a person or organization is usually referred to as a morale hazard.
Assessing Loss Exposure

For pure loss exposures, there are no offsetting benefits. As stated previously, the best possible outcome of a pure loss exposure is neutral, or no loss. Therefore, the operators of enterprises are very concerned with the management of such exposures. The risk management program has responsibility for this effort. Primarily, risk managers are concerned with 1) the costs which arise from losses which have actually occurred; and 2) the costs of losses which may occur.

In this respect, costs are not only financial, and they cannot always be measured with precision, as financial losses can.

The Cost of Losses Which Have Occurred

Enterprises may suffer losses which range from the insignificant to the catastrophic. Insignificant losses do not seriously affect the operation of the enterprise. Catastrophic losses, on the other hand, may require that the enterprise significantly alter its operations, or even terminate operations.

The direct loss to the enterprise is, in a broader sense, an indirect loss to society in general. This is particularly true if, because of the loss, unemployment should increase or inflation should rise. While the loss to the enterprise itself may be capable of precise measurement in dollar terms, the overall cost to society may not be.
The Cost of Losses Which Are Yet to Occur

If indirect losses which have already occurred are difficult to measure, those associated with losses which have not yet occurred are even more so. Nevertheless, there are costs involved. The enterprise, in attempting to anticipate and prepare for losses which might occur, might allocate its resources inefficiently. Money might be spent, personnel assigned, or activities undertaken in a manner which reflects the management's concern with the problem.

The actions of the enterprise may ripple throughout its business environment and, eventually, all of society. For example, excessive concerns with liquidity may result in the refusal of a firm to buy supplies of needed material for a long period ahead. This may impact the operation of the material supplier. The ripple effect spreads throughout the business environment and society.
C. Reducing Costs of Loss Exposure

As stated above, risk management comprises the steps of:

1) Identifying exposures to accidental losses;
2) Examining feasible risk management techniques for dealing with identified exposures;
3) Selecting optimal risk management techniques;
4) Implementing the techniques which have been selected; and
5) Monitoring the effectiveness of the techniques implemented.

Each of the steps must be performed in order for the process to be successful.

Identifying and Analyzing Loss Exposures

Identification of loss exposures is an extremely difficult task. Not only are some exposures difficult to identify, but they are dynamic, in the sense that as an enterprise or organization grows and changes, so do the elements of loss exposure which surround it.
Nevertheless, identification of exposures is probably the most important step in the risk management process, since unidentified exposures are not analyzed nor treated. The process can benefit from a systematic approach. Some systematic approaches that are commonly employed by risk managers include 1) checklists or standardized surveys; 2) financial statement analysis; 3) the analysis of other corporate records, such as operational flowcharts; 4) personal inspections; and 5) consultation with experts.

**Techniques to Identify and Analyze Loss Exposures**

No single approach is completely effective by itself. A combination of approaches is normally used. However, even in combination these devices produce only raw data. Much depends on the ability of the risk manager to see the implications from the data—in other words, the "big picture."

Standardized risk analysis checklists, which can range up to 100 pages or more, ask general questions. Typically, the checklist questions are relevant to all organizations, and often the questions relate only to loss exposures which can be insured. This is both a strength and a weakness of these tools. If used, the checklist can be expected to be relevant and helpful, but cannot be expected to be complete regarding any individual organization or enterprise.
An organization's financial statements can likewise reveal much about the loss exposure profile of the organization. Typically, the risk manager examines each item in the financial statements to ascertain the loss exposures the item indicates. Examination of the accounts summarized in the balance sheet, the profit and loss statement and the sources/use of funds statement provide a broad outline of the exposures that the organization or enterprise faces. This understanding can be used to investigate each exposure more fully in order to develop a more complete loss exposure profile.

Detailed analysis and descriptions of each type of financial statement are beyond the scope of this course. However, examination of even rudimentary statements will enable the student to appreciate the information which can be gleaned from them.

Other records of the enterprise, such as flowcharts graphically representing its operations, are extremely useful in identifying key elements in those operations. Often called "bottlenecks," these are the points which, if damaged or interrupted, would affect the overall operations of the enterprise. For example, a flowchart of a manufacturing process would indicate all operations from the purchase of the raw materials to the delivery of the final product.
Overall, the flowchart depicts what the organization does, the sequence in which its activities occur, and the inputs and outputs of each step in the process. From examination of the flowchart, the risk manager can synthesize and identify critical loss exposures in the system, and may suggest alternative approaches for accomplishing critical steps. One weakness of flowcharts, however, is that they are process-oriented. In a service organization, the information provided by a flowchart would not be as useful. Therefore, the risk manager cannot rely on flowchart analysis alone.

Although the use of the methods previously discussed would enable an imaginative risk manager to identify loss exposures to which the enterprise is subject, there is no substitute for personal inspection of the critical property and operations by risk management personnel. The personal inspection will supplement information obtained by the other methods, and will facilitate the assessment of potential economic impact of accidents or interruptions which may occur in those areas. A personal visit to the site should afford the opportunity to speak with personnel most directly involved with the exposure or operation, many of whom can provide much more detailed information.

Similarly, outside experts and consultants can often provide useful information. Many individuals or organizations have developed extremely specialized knowledge regarding certain aspects of operations or property. In addition, there are commercially available databases of information which can be accessed. All of this material can be used by the risk manager to develop the most complete possible assessment of loss exposures facing the enterprise or organization.
Utilizing Selected Techniques

Risk management involves either stopping losses from occurring or paying the cost of those losses which actually do occur. Stopping losses from occurring is referred to as risk control, while paying the costs of losses that are actually suffered is risk financing. Thus, techniques for treating loss exposures can be classified as either control techniques or financing techniques.

Control techniques attempt to change the exposure itself. Application of these techniques typically results in reduction of loss frequency, loss severity or the annual variation in potential losses. Control techniques include:

1) Exposure avoidance;
2) Loss prevention;
3) Risk financing; and
4) Certain types of transfers.

Avoidance techniques seek to eliminate, or at least reduce, the possibility of loss. *Exposure avoidance* eliminates the possibility of a loss entirely. This is accomplished by never undertaking certain activities.
Loss prevention techniques reduce the frequency or likelihood of a particular loss, or of the perils reducing the loss. For example, if a known exposure exists, the organization may choose to take direct action to eliminate it. Similarly, loss reduction would seek to lower the severity of a particular risk. Some transfers, typically noninsurance transfers, may be control techniques. The organization to which the transfer of the risk is made then bears the financial and legal responsibility for any losses which the transferring organization may have suffered due to an occurrence. A typical noninsurance control technique would be the leasing of property to a third party.

Risk financing techniques are designed to provide funds to handle the losses that do occur. These are principally techniques for generating funds, and include:

1) Risk retention; and

2) Transfers including, but not limited to, insurance.

Risk retention is the most basic risk management technique. It is quite simple, since it consists of keeping all of the elements of the risk exposure. The retaining entity bears the entire financial burden, and suffers the consequences of any loss which is ultimately suffered. Retention can occur intentionally or unintentionally. Unrecognized exposures are unlikely to be treated, and the risk of those exposures may be retained unintentionally.
On the other hand, the organization may choose to retain all or a portion of an identified risk exposure. It might do this if, after analyzing the exposure, it felt that the probability of a loss was small. An additional option is that a portion of risk might be retained for the purpose of reducing premiums for transfer arrangements. Either type of retention would be intentional.

*Contractual transfers* of financial risk, particularly in the form of insurance, are commonly utilized risk financing techniques. Under an insurance contract, responsibility for the financial consequences is transferred to the insuring entity. The transferor, or policyholder, provides a premium payment to the insurer in return. The arrangement is documented in a contract for insurance. In the event that a loss occurs, the financial consequences are born by the insurer to the extent set forth in the contract. The insurer, of course, may choose to transfer a portion of its own risk to a retrocessional provider. Most types of pure loss exposures can be treated in this way. Insurance is obviously a critically important tool for risk managers.

It should be noted that insurance, important as it is, is not the only transfer method which can be employed for financial control. The entity can also transfer risk to a third party by means of a noninsurance contractual arrangement, or indemnification. Under an indemnification agreement, the risk of the financial consequences of an occurrence are born by another.

Whichever type is used, the characteristics of a contractual transfer are that the transferee agrees to pay for the consequences of the loss, but only for those losses that fall within the definition in the contract.
As a general rule the enterprise should apply at least one risk control technique and one risk financing technique to each significant exposure which has been identified. Both control and financing techniques are somewhat fungible, in that they can often be substituted for each other. Generally, any control technique can be effectively combined with any financing technique.

**Tracking Effectiveness and Making Changes**

After the particular techniques to be used have been selected and implemented, the effectiveness of the program must be monitored. Constant monitoring allows assessment of the usefulness of the program, and identifies areas of weakness in the program which will require modification. In addition, the experience with the program gained through constant monitoring will allow fast response to changing conditions. Monitoring the risk management program put in place is normally the responsibility of the risk manager.

Effective monitoring of the program requires the risk manager to:

1) establish performance criteria;

2) compare and check whether or not the program complies with those criteria; and

3) decide what degree of noncompliance would demand a modification of the program.

These three above steps constantly recycle as management monitors its program.
A major barrier is the fact that there are no generally accepted standards for judging risk management performance. Several different methods are used. Two such methods are results standards and activity standards.

Results standards give an indication of whether the risk management function has been successful in terms of losses suffered. However, this measurement is unpredictable due to the nature of accidental losses. The proper time period over which to measure is itself difficult to determine. Activity standards measure the number of activities in which the risk manager has engaged in order to measure the quality of the contribution by the risk manager. Use of these standards can also provide an idea of program effectiveness. In order to obtain a reasonably accurate picture, both standards should be considered.

Comparison With Standards

Presumably, whatever the objective standards established, there will be a quantitative way by which current actual performance can be compared to the target level of the standards. Observation of current performance against the objective standards will highlight areas in which improvement is required.

Modification Where Necessary

The modifications which are required will be revealed by the comparison of performance to standards. Once the need for a modification is revealed, the change should be immediately implemented. If the standards have been properly articulated, changes and modifications should flow automatically.
The entire monitoring program recycles continually, so that as they become necessary, modifications can be accomplished in order to attain corporate risk management objectives.

**Risk Management Responsibilities**

The risk management function, as opposed to process, ranges from the informal (in smaller organizations), to the extremely formal (in large organizations). Whether formal or informal, risk management is definitely one of the most important management functions of the corporation. Organizations of any and all sizes or complexity must regularly deal with loss exposures. This is proven by reference to the corporations represented in the membership of the Risk and Insurance Management Society. This professional risk manager's organization cites well over three thousand corporations as members.

The responsibility for this organization lies with the risk management professional. If the organization is a large one, and the risk management function formalized, it is likely that the risk management professional will be an executive-level person who will bear a title like "risk manager" or "loss controller." Normally, the head of this function will be a Vice-President of the organization. Another common title is Director. In either case, the breadth of membership in RIMS, and the titles used to designate risk management professionals reinforce the importance of this function within the organization, regardless of size.
Activities of the Risk Manager

The risk manager, or risk management professional, (for convenience, we will refer to the risk manager) must primarily decide, either alone or jointly with other senior management, how to manage exposures and manage the risk management program. Risk managers are therefore, much more than merely insurance buyers. Unless the organization is quite small, no single person can carry out all the responsibilities of the risk management function. Not only must the risk manager deal with loss exposures, but (s)he must also manage the personnel assigned to the risk management function; in other words, the risk management department.

Functions and Duties of the Risk Manager

Most risk managers engage in treating and managing property and liability exposures. A large number of risk managers are also responsible for employee benefit plans. In order to do this the risk manager, or risk management department, typically engages in activities which involve:

1) The organization’s overall risk management program;

2) The organization’s use of risk control techniques; and

3) The organization’s use of risk financing techniques.

Risk Manager Functions

- Manages exposures
- Manages risk management program and personnel

- Risk management program
- Use of risk control techniques
- Risk financing techniques
The organization’s risk manager knows more about its risk management program than any other person in the organization. Therefore, it is the responsibility of the risk manager to communicate aspects of the risk management program to management, by:

- Assisting and guiding other management personnel in setting the organization’s risk management policy;
- Planning, organizing and directing the risk management department;
- Establishing channels of communication on risk management matters within the organization;
- Define the responsibilities and actions of personnel throughout the company with regard to the risk management program;
- Apportioning the cost of the program among the organization’s departments; and
- Adapting the program to meet dynamic conditions.

The risk manager selects and implements the organization’s risk control techniques, which may include exposure avoidance, risk reduction, and other risk control devices. In doing so, a) management must be advised on how to emphasize safety, b) safe employee performance must be encouraged, and c) every employee must be educated to recognize and report hazards.
In risk financing, as in its other responsibilities, the risk manager can employ any of a number of tools. In applying either retention or insurance transfer techniques, the risk manager must work with other executives, particularly financial executives, to explain the need for the technique and apportion the cost. Once the technique has been selected, its performance must be monitored and reported.

In short, regardless of whether the organization or enterprise is large or small, the activities and responsibilities of the risk manager are similar. In larger organizations the risk management function is more likely to be formalized as a separate department. Regardless of how the risk management function is organized or staffed, however, the activities it performs are essential to the organization.
The Role of the Risk Management Manual

Particularly in large firms, the risk manager often develops a manual for use by its own personnel and other departments of the organization. The purpose of the manual determines the content, but most manuals contain at least some of the sections recommended by the Risk and Insurance Management Society, which include:

1) A risk management policy statement;
2) A list of insurance contracts;
3) Description of the public insurance programs in which the organization participates;
4) A description of the organization’s fidelity and surety bonds;
5) The mission statement of the loss control program, and a description of each department’s responsibilities regarding the program;
6) A description of the organization’s various safety programs;
7) A statement of the organization’s security programs;
8) Summary of relevant laws; and
9) The plan or responses to legal actions involving the organization.
The risk management manual may include these and other statements and descriptions. It is a useful reference for the risk manager as well as other departmental managers; and it is also a useful educational device.

II. LIMITING LOSS EXPOSURES WITH RISK CONTROL

As stated previously, the entire focus of the risk management function is the treatment of loss exposures. The risk manager employs each risk control and risk financing techniques in order to do so. One risk control technique used by risk managers is avoidance.

A. Avoidance

Probably the most effective risk control measure that the risk manager can employ, and one of the most difficult to implement, is risk avoidance. Avoiding an exposure entirely eliminates the possibility of a loss. However, complete avoidance is extremely difficult to accomplish. Obviously, the success of the avoidance attempt is completely dependent on the success of the identification and analysis performed as a critical component of the risk management function. Risks which are not identified and known cannot be avoided.
Avoidance presents both advantages and disadvantages, as do several risk control techniques. In some cases, the technique may be the optimal approach due to the expense of some other technique. For instance, in a case where a transfer is impossible, either due to the expense or unavailability of insurance, avoidance may be not only the best but the only way of dealing with an exposure.

**Advantages**

The primary, and most obvious, advantage resulting from the technique of avoidance is that the possibility of a loss resulting from the exposure can be severely limited or eliminated entirely. As stated above, once identified, an exposure can be either avoided or abandoned by the enterprise. However, even if a risk is identified, it may not be in the interest of the enterprise or organization to do either.

The best way to avoid exposures associated with an activity is to never undertake the activity or discontinue the activity. For example, an organization which identifies a peril with regard to a piece of property, or with a manufacturing process, can either sell the property, discontinue the process, or eliminate that element of the process which creates the peril or hazard. In this way, the risk is eliminated, the peril discontinued and the possibility of a loss is reduced or is nonexistent. If the loss exposure is eliminated completely, the possibility of a loss is zero. If the loss exposure is abandoned, the possibility of the loss is at least significantly reduced.
Disadvantages

This is not always, and maybe even not often, a feasible or desirable result. As stated above, avoidance as a risk control technique involves certain disadvantages as well as potential advantages. These arise because:

1) Total avoidance may not be possible;
2) Total avoidance may not be feasible;
3) Total avoidance may not be desirable;
4) The avoidance of an exposure may unwittingly result in the creation of other exposures.

Total avoidance may not be possible, because some exposures do not lend themselves to such a result. Generally, the broader an exposure the more difficult it is to completely avoid. For example, an individual may never avoid his exposure to loss of his health or earning capacity. Similarly, an organization or a government has no control over acts of God, or some acts of humans, such as riots or crimes. In addition, it may not be possible to completely avoid an exposure associated with an activity, especially if the activity has been undertaken previously. For example, the potential products liability risks associated with products manufactured by the organization does not terminate merely because the organization terminates the manufacture of the products themselves. This is due to the fact the products previously manufactured and sold are still present in society.
The bottom line is that even if avoidance is selected and implemented, it may not eliminate all conceivable losses.

Similarly, total avoidance may not be (realistically) feasible, even for a narrower exposure. For example, although a mining company may avoid the risk of liability for damage or injury due to explosion by either avoiding or abandoning the use of explosives in its operations, it is not feasible for a mining company to do this. Therefore the organization is unlikely to pursue such a course of action. Analogous situations could be identified for almost any type of undertaking. While the organization could avoid exposures by not conducting business operations, it is not feasible in terms of continued existence for the firm to eliminate all such business operations.

Regardless of feasibility, it may not be desirable for the organization to avoid an exposure. If avoidance of an activity because of an exposure would require the organization to give up a significant advantage which may be detrimental to it, the organization would not desire to avoid or abandon the activity. For example, the liability exposures inherent in building a new plant could be avoided by not building it. However, if the plant were necessary for the firm to maintain it profitability, avoiding its construction would not be desirable from the organization's point of view.
The more narrowly the exposure is defined, the easier it is to avoid. However, it is possible that avoiding one exposure may result in the creation of other exposures. For example, suppose that a firm decides to avoid the risks inherent in using company trucks to deliver its goods. Although certain exposures are avoided, the firm will not only still have a general transportation exposure, it will now be subject to exposures resulting from the use of common carriers, messengers or whatever new method of transportation employed. Such exposures could include both liability and financial exposures.

**Implementing Loss Avoidance Techniques**

In order to avoid a risk, the risk must be identified. Complete analysis of the exposure follows its identification, as set forth above. Once a complete understanding of the exposure is developed, the risk manager can determine whether the exposure can be avoided. Even if the exposure can be avoided, however, alternative risk control measures should be tested.

For example, identification of an exposure created by a manufacturing process may reveal that the exposure can be avoided. However, the manufacturing organization cannot eliminate all such exposures, or it will no longer be in business. Therefore, alternatives will be needed, since in this case avoidance may not be feasible. The flowchart of the process, and inspections by risk management personnel, may suggest some other techniques for limiting or treating the exposure.
Similarly, exposures relating to the ownership of property can be avoided by selling the property. If the organization still requires the use of property, an alternative might be to lease the property. Some other exposures may be created, but they may be considered to be acceptable by management.

Identifying the exposure, analyzing it and deciding whether to avoid the risk exposure altogether or implement an alternative technique illustrates the functioning of the risk manager in the context of the relationship between risk management and the rest of management, as discussed above. The entire process requires reference to the overall risk management plan, communication between departments, and organization and operation of the risk management function.

**Tracking Avoidance Techniques Once Implemented**

Once the avoidance technique is implemented it must be monitored to assess its effectiveness. Such monitoring is an absolute necessity regardless of the technique employed, as set forth above. With avoidance, however, it is difficult to determine with perfect accuracy whether the technique has been effective. This is due to some extent, to the fact that avoidance of an exposure may create other exposures which must be considered when assessing the effectiveness of the avoidance.
Continual monitoring of the effectiveness of the avoidance will enable the risk manager to determine whether:

1) The technique has been properly implemented; and

2) Whether the technique is still appropriate.

It should be noted that the mere absence of losses, although a significant indicator, is not determinative as to effectiveness. Simple good fortune may have been the determining factor, and this must be taken into consideration.

If the avoidance has been properly implemented, the risk of loss from the identified exposure should have been either significantly reduced or eliminated. If, upon inspection, it is obvious that the original exposure still exists, the risk manager will know that the avoidance has not been completely or correctly implemented. Steps can then be taken to correct the situation.
Similarly, although the technique may technically have been implemented properly, if new exposures have been created as a result of the avoidance, the monitoring program will reveal the severity of the new exposures as compared to the original exposure. If the newly created exposures are worse, modification of the avoidance may be required.

It is possible with avoidance, as with any loss control technique, that even if the technique was properly implemented and other exposures have not been created thereby, that the avoidance may no longer be appropriate. This may be the situation if the conditions that made the avoidance originally necessary have changed or been eliminated. For example, an organization which has avoided building a new facility may be required to build such a facility if another of the organization’s assets is destroyed by fire. The change in conditions due to the fire has rendered the avoidance inappropriate.

These conditions are best revealed in the monitoring process which, as has been set forth above, is a critical element of the success of any risk management program.

**Other Risk Control Measures, Generally**

The area of risk control (also referred to as "loss control") also includes other techniques, the purpose of which is to reduce the frequency or severity of losses. These techniques are applied to exposures which the organization has identified and, as a result of analysis by the risk manager and consultation with management, has decided not to avoid.

**Other Risk Control**

- Purpose--reduce frequency or severity of losses
These techniques deal with the loss exposure itself, as does avoidance. For this reason, risk control techniques are sometimes confused with avoidance. To the extent that neither deals with the financing of losses, they are similar. However, risk control measures deal with those exposures which the entity cannot, or will not, avoid. The purpose of risk control is to change the characteristics of the exposure in order that the exposure might be made acceptable to the enterprise. However, the risk of loss inherent in the exposure remains even if risk control techniques are employed.

The effectiveness of the many types of loss control techniques can be measured. Investigation of the causes and effects of accidents and losses will give perspective to the study of those techniques and will be useful when deciding which should be implemented.

There is no single dominant theory of accident cause and effect. However, of the many theories which have arisen, two have become generally accepted. The following section outlines each of these theories.

- Deal with the exposure, not loss financing
- Change characteristics of exposure
- Effectiveness can be measured
- Investigate causes and effects
- No dominant theory
Heinrich's Domino Theory

The "Domino" theory was developed by safety engineer H. W. Heinrich, an early industrial safety expert. The theory is still widely cited.

According to this theory, an "accident" is one factor in a sequence that may, but not necessarily will, result in a loss. Under the theory, the sequence of occurrences is as follows:

1) The loss occurs as a result of the accident;
2) The accident occurs as a result of a person's unsafe action or a mechanical hazard;
3) The hazards exist only because of errors made by persons; and
4) The errors are made by persons as a result of the environment.

Converses of each statement are not necessarily true. For example, a personal action or mechanical hazard does not always result in an accident. Nor does the occurrence of an accident necessarily result in a loss.
The primary focus of the theory is that if a loss has occurred, all of the conditions (the "dominos") occurred in sequence. In other words if a loss has occurred, the environment must have caused the errors, which caused the hazards or unsafe acts, which resulted in the accident, which produced the loss. Each element is a necessary precondition to the occurrence of the next, and all are required in order for the loss to occur.

This implies that if one of the dominos, (or steps or conditions) can be removed, the loss can be prevented. The risk manager, then, should be concerned with the factors preceding the accident--the hazard or the unsafe action. If these can be eliminated, the loss can be eliminated.

After a very large study, involving thousands of industrial accidents, Heinrich concluded that 98% of them were preventable. Assuming this to be true, even within an order of magnitude, the costs of losses should be controllable, or at least be capable of being reduced. The same study attributed 88% of accidents to the unsafe acts of persons. Thus, under the Domino Theory, the acts of persons with regard to each particular loss exposure should be studied in detail, with an eye toward reducing or eliminating those methods of acting which are likely to cause accidents.
The primary point of attack, according to Heinrich, should be the accidents themselves. Not every accident, as stated previously, results in a loss. But every accident has the potential to cause a loss. Property and people are injured as a result of accidents. Indeed, Heinrich's definition of injury is merely "the result of an accident."
After determination that most injuries and losses as a result of industrial accidents occurred because of the unsafe acts of persons in connection with the loss exposure, Heinrich determined that many unsafe acts, especially if repetitive, do not result in injuries. Hundreds of accidents may be required before an injury or a loss is actually suffered. This logic may be applicable to any situation in which the voluntary acts of the victim play a part.

**Haddon’s Energy Release Theory**

Rather than human behavior, with its infinite variety, the theory "Energy Release" theory considers accidents to be the results of physical engineering problems. This theory was developed by Dr. William Haddon, Jr., who is a contemporary safety expert.
According to this theory, when uncontrolled energy stresses a structure beyond its tolerance limit, creating a hazard and resulting in an accident. Loss or injury may be suffered as a result of the accident having occurred. The theory suggests several strategies for controlling the energy for the purpose of suppressing accidents. These include:

1) Preventing the creation of the hazard;
2) Reducing the hazard;
3) Preventing release of hazard already in existence;
4) Modifying the distribution of the hazard released;
5) Separation of the hazard from that which is to be protected;
6) Modifying the basic qualities of the hazard;
7) Modifying the ability of that which is to be protected to withstand damage;
8) Remediate the damage which has already occurred;

For example, imagine that a paper goods manufacturing enterprise is exposed to loss from fire in its in-process stockage area. The hazard has already been created, so the first strategy cannot be employed. However, strategies (2), (4), (5), and (7) certainly can be employed by the enterprise.
Comparison of the Theories

The difference between the two theories discussed above is one of emphasis. The domino theory emphasizes the actions of the persons which are part of a sequence of events leading to an accident and an eventual loss. The energy release theory, although it also considers sequences of events, is concerned more with the engineering characteristics of the hazards present in the loss exposure environment.

To illustrate, consider a manufacturing concern which identifies a pile of oily rags on the manufacturing floor, and then suffers damage due to a fire which started in the pile of rags. The domino theory would emphasize the unsafe actions of the human managers in allowing a known fire hazard to collect on the manufacturing floor. The energy release theory, on the other hand, would emphasize the physical conditions surrounding the collection of the rags, including why they collected, why they were allowed to collect in the spot which they did, and how the rags became oily in the first place.
III. CLASSIFICATION OF RISK CONTROL MEASURES

Risk (loss) control measures can be classified in different ways. Leaving aside risk avoidance, which has been addressed above, the three most common classes are:

1) By objective;
2) By approach; or
3) By timing of their application.

Any loss control technique can be classified according to any of these classes.

A. By Objective

In classifying risk control measures by the objectives which they seek to accomplish, those which seek to reduce the probability of a loss are referred to as loss prevention measures. Loss control measures aimed at reducing loss severity are called loss reduction measures.
Loss Prevention Measures

Loss prevention measures seek to reduce the frequency or probability of a loss. Examples of loss prevention techniques are:

. Enacting and enforcing building codes to assure minimum safety standards of construction

. Periodic boiler inspections to identify potentially explosive malfunctions

. Administering driver examinations as part of the licensing process to assure that all drivers possess a minimum standard of competence

. Performing quality control checks on manufactured products to eliminate the likelihood of future injuries

. Placing safety locks on doors as a disincentive to burglars

. Labelling poison containers to stop the unwary from ingesting the poison

. Repairing defective structures on property to avoid structural collapse

. Placing guardrail or safety islands in divided highways to eliminate crossovers into oncoming lanes

. Examining airport luggage for explosives before they board the aircraft

. Reduce frequency of losses
Note that most of these techniques are capable of substantially reducing losses, even if they do not meet the objective of completely eliminating losses. The employment of any of these techniques has an inherent cost. However, these measures are commonly thought to provide a good return on the investment required to implement them. It is through steps such as these the frequency of losses, and therefore the relative probability of losses, are reduced. Each technique has been statistically proven to be effective, which explains their common use in industry.
Loss Reduction Measures

Other techniques are directed primarily toward the reduction of losses. These techniques have as their objective lessening the severity of losses which do occur. Common loss reduction steps which can be taken include:

- Using automatic fire sprinklers and other extinguishment systems within structures
- Making sure that injuries are treated early for the purpose of reducing the likelihood of infection or other complications
- Limiting the amount of cash to which employees have access to reduce the likelihood of loss due to theft
- Rehabilitating injured workers to enable them to return to work, minimizing the likelihood of further lost time.
- Salvaging lost personal property

A loss reduction technique known as separation has the special characteristic of breaking an item of value into independent components. An example of separation as a loss reduction technique occurs when a distribution firm separates its inventory among several widely dispersed warehouses. In this way, the risk of loss of the entire inventory by fire is eliminated. Likewise, in the event of a catastrophic fire, the entire inventory will not be lost, and thus the severity of a potential loss reduced. Separation, therefore, has characteristics in common with both loss prevention and loss reduction techniques.
B. By Approach

When classified by their objectives, risk control techniques may focus on either the prevention or reduction of losses. However, when described by the causes with which the techniques attempt to deal, they may take either an engineering approach or a human behavior approach.

The Engineering Approach

The engineering approach stresses the elimination of unsafe physical conditions. This approach has developed from Haddon's Energy Release Theory of accidents and causes. Preventative methods of construction and operation are utilized freely, as might any of Haddon's other strategies.

As an example, a risk manager following the engineering approach to treating a fire loss exposure in a manufacturing plant might make sure that fire-resistant construction is used in the plant. In this manner, the cause of the risk will be treated. The fuel for any fire which might otherwise occur will be impervious to flame. An unsafe condition will have been eliminated by use of the engineering approach.

The Human Behavior Approach

The human behavior approach emphasizes education and communication regarding loss exposures, and so seeks to eliminate careless or dangerous human actions, thereby reducing the likelihood of an injury resulting from an accident. In this sense, this approach flows directly from the domino theory of accidents, as set forth by Heinrich and discussed above.
An example of this approach would be the implementation of a program to educate production workers to avoid industrial accidents by taking systematic precautions. By so doing, the workers will act less often in careless or dangerous ways. The middle "domino" in the sequence will be removed, and the likelihood of a loss reduced.

Both the engineering approach and the human behavior approach are effective, and both can be actively utilized in an effective risk management program. The circumstances of the loss exposure may determine which of the two approaches is best.

C. **By Time of Application**

If risk control measures are considered by the time frame in which they are applied, one could consider measures which are applied:

1) **Prior to the accident** or occurrence;
2) **During the accident** or occurrence; or
3) **After the accident** or occurrence.

It should be noted that measures taken prior to the occurrence of an accident are directed toward eliminating the probability of a loss, and are akin in many ways to loss prevention techniques. By the same logic, those that are applied contemporaneously with the occurrence of the accident are concerned with minimizing the damage, and are akin to loss reduction, or *minimization* measures. Measures applied after the accident has occurred and the loss suffered have characteristics both of loss reduction and *salvage*.
**Prior to the Accident**

Loss prevention techniques seek to prevent the occurrence of an accident and therefore must be applied after the identification of the loss exposure, but before the loss has occurred. Several of the Haddon strategies require application prior to the occurrence of an accident. For example, eliminating the creation of the hazard or reducing the hazard, the first two strategies, require application within this time frame.

**During the Accident**

Measures that are applied contemporaneously with the occurrence of an accident are directed toward minimizing the damage or loss resulting from the accident. In this sense, these measures can also be classified as loss reduction measures, since they seek to reduce the financial impact of losses. These techniques are also referred to as *minimization* techniques.

**After the Accident**

Once the accident has occurred and a loss suffered, the possibility remains of reducing the impact of the loss by *salvaging* the damaged property.
**Other Timing Classifications**

In addition to the timing considerations discussed above, techniques can be classified by other timing indexes. For example, actions are taken during the:

1) The planning phase;  
2) The safety-maintenance phase; or  
3) The emergency phase.

Loss prevention activities, as described above, typically occur initially during the planning phase. Loss reduction activities occur recurrently during the safety-maintenance phase. As the accident occurs, the emergency phase allows loss reduction activities to take place.

It can be seen from this analysis that the same activities can be classified in any of several different manners. Regardless of which classification nomenclature is used, the techniques to control risk by eliminating or reducing losses are applied by risk managers in the normal course of their duties.
IV. STRUCTURAL AND LEGAL ASPECTS OF PROPERTY AND LIABILITY INSURANCE

A. Introduction

Assuming that a loss has actually taken place, the next step is to determine its extent. This chapter will examine the policy provisions and legal doctrines that affect the amount of recovery under property and liability insurance policies. There are many factors that determine this recovery. Some factors include:

- Policy limits
- Deductibles
- The Principle of Indemnity
- Loss valuation provisions

Unsurprisingly, the primary determinant of the maximum amounts payable for covered losses is the limits provided by the policy. For the purpose of discussing the extent of the loss that has occurred, assume that there has been no breach of policy condition or fraud which might release the insurer from its obligations to perform.
B. **Policy Limits**

*Reasons for Policy Limits*

Limits on policies serve important functions related to the areas of:

1) Clarifying the insurer's obligations
2) Achieving goals
3) Enforcing the Principle of Indemnity
4) Confining coverage to an insurer's capacity

**Clarifying the Insurer's Obligations**

Since larger dollar losses are invariable less frequent than smaller losses, larger losses are more difficult to predict with confidence unless data is available on a wide range of exposure units. Without upper limits, potential losses under some insurance policies might have a range anywhere from zero to infinity. This extremely wide variation in potential losses would make it difficult to predict the insurer's future losses in the short run with an acceptable degree of accuracy.

The failure of any upper limit could also give rise to legal problems. Without a limit, a insured could submit claims involving many "extras" that he wishes to be included in his coverage for an accident that the insured was involved in. An upper dollar limit would at least minimize the impact of the claim by putting a lid on the insurer's obligation.
Achieving Goals

In general, all insurance rating laws generally require property and liability rates to be adequate, reasonable and equitable. The reason the rates must be "adequate" are to insure that they must be sufficient to pay losses and expenses and prevent insolvency. On the other hand, the rates must also be "reasonable" and low enough to prevent excess insurer profits or gains from operations.

Policy limits also help in preventing excessive short run profits that might otherwise be made. For example, an insurer faced with an open-ended obligation would quite normally add to the rate structure, extra margins of safety necessitated by the insurer's inability to predict losses with sufficient accuracy.
Giving Consumers a Range of Choice

Limits on policies have the additional function of accommodating the differing consumer preferences with respect to coverage amounts and premium levels. When consumers are given a choice of coverage amounts, these choices of optional coverage limits are determined not only by competitive considerations, but also by questions of equity. For example, many car owners choose to purchase the minimum liability limits that will satisfy the requirements of financial responsibility and compulsory auto insurance statutes. Since knowledgeable insurance advisors will try to convince consumers that such risk management decisions are ill-advised relative to the amount of the premium savings and the potential consequences of being underinsured, consumers do not always follow competent advice. However, it is important to remember that the consumer's desire for the minimum required limits is entirely rational in some situations, such as where optionally higher limits for no-fault auto benefits would simply serve to duplicate broader group health insurance coverage already being provided free of charge by the consumer's employee.

Enforcing the Principle of Indemnity:

The principle of indemnity enforces the concept that the function of insurance make the insurer whole again by putting the insured in the same financial position that he or she enjoyed before the occurrence of the insured event. Essentially, the principle of indemnity attempts to prevent the insured from profiting from an insured loss.

Range of Choices
- Accommodate consumer preferences

Principle of Indemnity
- Prevent insured from making a profit due to his loss
Under property policies written as contracts of indemnity, the insured cannot recover any greater amount than the loss sustained. The policy limits really only affect the amount of recovery when the loss is greater than the policy limit.

Under property insurance policies written on a valued basis, policy limits potentially have their most significant role as preservers of the principle of indemnity. For instance, assume someone insures a vase for $25,000 on a valued basis. If the vase is destroyed by an earthquake while the coverage is in effect, the insurer would have to pay the $25,000, regardless of how much the vase was actually worth. In theory, the insurer could simply continue to maintain the same value of the vase regardless of the loss of value over time. To avoid profiteering over time, the insurer would have to adjust the policy limits to correspond to any decrease in the property's insurable value.

**Confining to an Insurer's Capacity**

Occasionally, an insurer may impose an upper policy limit in order to keep the extent of its obligation within its financial capacity to absorb losses. For instance, an insurer for earthquakes might refuse to allow more than $200,000 worth of coverage on a $2,000,000 unprotected farm or house. The important concept to observe in this example is that *limits on policies sometimes have the function of confining the coverage to an amount which is considered safe in relation to the individual's financial capacity to absorb losses.*
Various Limits on Policies under Property Insurance

Scheduled Limits

Property is considered to be "scheduled" when the following occurs: the policy covers a schedule of particular items of property that are listed separately and identified precisely with descriptions, serial numbers, or other marks or characteristics used to identify the property. An "unscheduled" property is one that does not have to be specifically identified until a loss occurs. Generally, unscheduled property is covered automatically.

Scheduled property is most often applied to personal property items identified on an endorsement or policy covering only personal property. Specific limits are indicated separately for each covered item or class of property. Unlike other specific limits however, scheduled limits are seldom limited to property at one location. Most often, coverage applies to any location in the world, and it is usually not subject to sub-limits. In essence, scheduled limits are types of separate limits used to provide broad coverage on valuable items of movable personal property.

Specific and Separate Limits:

A specific limit can be defined as a dollar amount that serves to set the upper limit on the amount the insurer is prepared to pay for each loss associated with a particular item or class or property. Specific limits are by far the most common type of limit in property insurance. Whether applicable to a designated item of property such as a building, or a designated type of indirect loss such as extra expenses incurred to maintain operations after damage from an accident that is covered, specific limits is essentially a per-occurrence limit.
Separate limits are the same as specific limits found in one policy except that they apply separately to any of several locations or to several classes of property. For instance, a property insurance policy might allow a specific limit of $85,000 on one house located in Chicago, and a separate, but still specific limit, of $65,000 on another house located in another section of Chicago. These two limits are actually separate limits because the limit on one house cannot be applied to the limit on the other. If a fire destroyed all of the property in both locations, the insurer would have to pay as much as $150,000 for that occurrence in and of itself.

Blanket Limits
A blanket limit is a policy limit that applies to two or more items or classes of property and/or to property at two or more locations. These limits are often used to insure movable property of business firms. Blanket limits are useful when the aggregate value of property is fairly constant but the values may shift between or among several locations. For example, suppose an art dealer has four stores located in four different cities. Although the aggregate value of the paintings remains fairly constant at $250,000, it is rare that the value of the paintings is evenly distributed between the four stores. Two of the stores might be larger than the other two, and thus, these larger stores may be holding as much as $175,000 worth of paintings at one time. If the owner buys a separate limit of property insurance for the contents of each location, the merchant will likely be underinsured or over insured at the time of the loss due to the shifting values in the stores. A blanket limit, however, can help solve this problem. If the owner buys a $250,000 blanket limit and designate all four stores in the policy declarations, the limit would apply as needed at the time of the loss, to any one of the four stores.
Blanket limits differ from scheduled limits in several areas.

1) Blanket limits apply to property at any one of several designated locations, while scheduled limits apply to a designate item or narrowly defined class of scheduled property at any location in the policy territory.

2) Blanket limits are a limit for all covered property, while scheduled limits are one of several separate limits for each item or narrowly defined class of covered property.

3) Blanket limits are suited more for indemnity coverage, while scheduled limits are appropriate for either indemnity or valued coverage.

**Various Limits on Policies under Liability Insurance:**

In liability insurance policies, vastly different types of upper limits are used for the different types of coverage, and most policies contain multiple coverage.
Defense and Supplementary Payments Limits:

There are a few specialized liability policies that include the defense costs in the limit specified for the payment of damages. For example, if this a policy had a single limit of $50,000 for every occurrence, the insurer would pay a maximum of $50,000 per occurrence for the combined total of damages as well as the defense costs. If the policy also contained an aggregate annual limit, the aggregate limit would be applied to the cumulative total of damages and defense costs from all occurrences during the policy period.

Under the majority of the liability insurance policies, the defense costs are paid in addition to the maximum amount payable for damages. In this type of set up, there is theoretically no dollar limit on the amount the insurer might be required to pay for defense costs and other supplementary benefits. However, this statement is true only with respect to defense costs and claims expenses incurred prior to the payment for a negotiated settlement or a court judgment.

Although the insurer will most likely agree to pay the premiums on litigation bonds and certain first-aid expenses incurred by the insured, these particular items rarely lead to an inordinate amount of money. Also, in many policies the insurer agrees to pay the insured for any loss of earnings that has been necessitated by the insured's involvement in the investigation or defense of a claim. However, the involvement giving rise to the loss of earnings must be at the request of the insurer.
The most important qualification on the defense obligation of the insurer is that the insurer is allowed to select the defense counsel of its choice and monitor the case from beginning to end. The insurer can also keep tabs on the defense costs, and attempt settlement if they become disproportionally high. Insurers are frequently required to pay out amounts that are well in excess of the limit of liability for damages.

Medical Payments Limits and Limits on Damage to the Property of Others

As background for this section, it is necessary to mention that section II of the homeowners policy automatically includes coverage for "medical payments to others" and "damage to property of others." Both of these payments are provided by the insurer without regard to whether the insured was or would be legally obligated to pay them.
Under the homeowner forms, the upper limit for damage to the property of others is a specific limit of $250 per occurrence. Most insurers will not increase this limit, even if the insured is willing to pay an additional premium charge. The reason for this lack of increase is due in part to the fact that the insured already has a single limit which the insured is legally liable for. There is also the possibility that the homeowners insured who has more than $250 of coverage for the property of others might be less careful in handling others' property, or might even conspire with their peers or business partners to cover their otherwise uninsured property losses. As a result, the homeowner policy, as well as other policies providing comprehensive personal liability coverage, are about the only forms that provide this type of coverage. Most of the other liability coverage specifically exclude liability for damage to property which is in the care, custody or control of the insured.

**Workers’ Compensation and Employers Liability Limits**

The standard workers' compensation and employers' liability policy provides the insured employer with two broad kinds of coverage. Coverage A pertains to the workers' compensation benefits that are embodied in the applicable statute(s). Coverage B pertains to the employers' liability exposure under common law. The two coverages are governed by separate and distinct types of upper limits.
Coverage A

The insurance agreement for Coverage A is relatively simple. It states: "To pay promptly when due all compensation and other benefits required of the insured by the workmen's compensation law." "The workmen's compensation law" is defined to include the workers' compensation and occupational disease law of any state or other jurisdiction that is specifically designated in the declarations. Once the statutory jurisdiction(s) is (are) designated in the policy, it is not necessary to spell out the limits for Coverage A because all the statutory limits will have been incorporated by reference in the language of the insurance agreement.

In general, all of the statutes require covered employers to pay medical expenses and compensation for disability or death due to the job-connected injuries and diseases of their covered employees. The greater number of states now require the payment of medical expenses without any upper dollar limit. However, it is important to keep in mind that the amounts that are payable as compensation for death, disability, or dismemberment are governed by specific limits set forth in the pertaining statute.
Coverage B

The insurance agreement for Coverage B, which is Employers' Liability, states that the insurer "will pay on behalf of the insured all sums which the insured shall become legally obligated to pay as damages." The policy automatically provides a $100,000 single limit of liability for Coverage B, but this basic limit may be increased to as much as $1,000,000 or more. Relating to bodily injury, the limit applies to each individual accident, regardless of the number of persons involved. Relating to disease, the same limit serves as an aggregate annual limit per covered jurisdiction for all diseases caused or aggravated by exposures to conditions of employment, where the last day of exposure occurs during the policy period, if a written claim or suit is brought within thirty-six months after the end of the policy period.

Generally, in the workers' compensation and employers' liability policy, the insurer does not reimburse the insured for any loss of earnings, even if incurred at the request of the insurer. In addition, defense and supplementary benefits are payable in addition to the amounts payable under Coverage A or the applicable limit of liability under Coverage B. Unlike other liability policies, the compensation policy's obligation for defense and claims expenses is literally unlimited in amount. The insurer's obligation to defend does not cease when the insurer has paid the amounts required by statute. Nor does it end when the insurer has paid an amount for common-law damages equal to the Coverage B limit of liability.
Restoration of Policy Limits

A per person liability limit is restored automatically for future losses because this type of limit is applied per accident or per occurrence. In this type of limit, the intention is to make a per person limit available to each separate accident or occurrence covered during the policy term.

A limit per claim or per occurrence is designed to put a ceiling on the insurer's total payment when two or more persons are claimants. Once exhausted, it cannot be restored for that particular accident. Yet, the full limit is automatically restored for future losses, in effect, by its application to each separate accident.

When the coverage is not subject to an upper dollar limit, such as the medical expenses coverages mandated by workers' compensation, there is simply no need for the restoration of policy limits. There is also no reason to restore what are already unlimited defense benefits under the standard workers' compensation and employers' liability policy. These policies are generally silent on the matter of whether exhausted defense coverage is or can be restored, but the clear implication is that defense coverage is automatically restored, along with the limit of liability for damages, in respect for all separate accidents.

On the other hand, it is necessary to remember that it is highly unlikely that an insurer would be willing to restore defense coverage for the same accident that exhausted the limit of liability for damages. To do so would be the equivalent of backdating coverage for an event that has already occurred, and would make little sense.
C. **The Structural Elements of Insurance Policies**

Generally, commercial and personal property insurance policies have several of the following common elements:

1. Declarations
2. Insuring agreements(s)
3. Deductibles
4. Definitions
5. Exclusions
6. Conditions
7. Endorsements or riders.

**Declarations**

The first part of a property and liability insurance contract is usually the declaration. The declarations present the important facts about the coverage provided. They specify which house (address), which car (license plate), and which person (name) is covered. The declarations also specify the face limits of the coverage ($150,000 for the house, $1,000,000 for liability).

The declarations come from the application for insurance. They are the basis of the insurance premium. The annual premium is specified in the declarations, as are payments due for shorter (quarterly, semi-annually) periods.
Insurance Agreement

The insurance agreement gives force to the insurance policy. It is the specific language creating the contract. In broad terms, it describes the insurer's and the insured's rights and duties. Often, sub-agreements, which are used to identify specific perils covered by the policy or to indicate coverage, are provided on an open perils basis. In the insuring agreement, the insurer states that it provides the insurance described in the policy, and the insured agrees to abide by the conditions of the policy.

Deductible

Property insurance policies commonly provide for the insured to pay the first dollars of an insured loss. A deductible provision causes this result. Several variations of deductible provisions exist. The most common is the straight deductible.

The **straight deductible** causes the insurer to pay only for the amount of loss in excess of the deductible amount. For instance, if there was a $200,000 loss and a straight $300 deductible, the insurer would pay $300, and the insurer would pay the remaining $99,800. Some policies indicate that the deductible is to be taken from the loss. Other policies require that the deductible be taken from the claims payment. For instance, an insured may lose $75,000 in property but have only $40,000 in insurance. If a $300 deductible is taken from the loss, the insured turns in a claim for $74,700, and receives a payment for $40,000, the policy face amount limit. If the $300 reduces the claims payment, the insured receives $39,700.

Straight Deductible

. Insurer pays excess of deductible amount
There are two very good reasons for the deductible provisions. Firstly, they reduce the morale hazard, because the insured must pay a small part of every loss. Most insureds presumably are not indifferent to the loss of $300, so they will not be indifferent to insured losses. Second, deductibles eliminate the expenses involved in settling small claims. It makes no economic sense for the insurer to incur $800 worth of expenses to settle a $300 claim. The savings from reduced expenses and loss claims are reflected in lower premium rates. Therefore, the larger the deductible an insured chooses, the lower will be the insurance premium. Some insurers encourage their insureds to use their premium dollars more efficiently by choosing larger deductibles. This course of action allows insureds to lower their premiums or to increase their coverage by increasing policy limits. In personal and commercial insurance purchases it is always wise to consider several deductible-premium-face amount combinations before choosing one.

. Reduce morale hazard

. Premium inversely proportional to deductible
Definitions

Definitions serve to establish meaning of important words found in the policy, thereby reducing room for ambiguity.

Exclusions

Insurance policies clearly identify losses not covered. Insurers exclude losses arising from catastrophic events. For instance, damage from nuclear radiation is always excluded. Losses associated with the moral or moral hazard are also excluded. For instance, theft committed by an insured or additional damage caused by the insured's failure to protect property after a loss are excluded. Exclusions in the main body of a policy are used when an extra charge is required to remove an exclusion. For instance, liability losses arising from business pursuits are excluded in the Homeowner's Policy (HO), but the policy can be endorsed to cover certain business pursuits (such as mowing the neighbor's lawn). When the policy states that it will not pay for the following losses, and a list of excluded losses is given, it means the insured has no right to collect payment under the circumstances listed.
In the HO, there are four categories of exclusions that occur. They are laid out as follows:

1) To control costs, exclude noninsured parties from benefiting from coverage, and keep premiums calculable.

2) To preclude liability from catastrophic losses, including earth movement, water damages, war, and nuclear radiation.

3) To exclude atypical losses or coverage not useful to the average insured but that can be added by insureds with special needs who can purchase an endorsement for an additional premium.

4) To control the moral and morale hazard, including losses caused intentionally and by neglect.

*Conditions*

Specifies the rights and duties of the insurer and insured under the contract.

*Endorsements*

Endorsements serve to modify standard insurance contracts. They can add coverage directly, or they can add coverage by removing the effect of an exclusion in the standard policy. Approximately one hundred different endorsements can be added to the HO. The include:
D. Insurable Interests

An insurable interest can be defined as "the kind of financial interest a person must have in order to possess legally enforceable insurance coverage." If the occurrence of an event to be insured would cause financial loss or injury to that person, that person is said to have an insurable interest. Based on this definition, the relationship between the person and the property or event in question is essential to determine whether that person has a legally insurable interest. In most cases, the holder of the insurable interest is the person or entity that is exposed to loss.
Simply because a person has a legally insurable interest does not mean that his or her specific loss exposure will be considered insurable from the viewpoint of a particular private insurer. In addition, even pertaining to an exposure of a type generally regarded as commercially insurable, each insurer has the right, in the absence of a contrary statute of regulation, to accept or reject applications for insurance based on its own underwriting standards.

To fully understand the insurable interest doctrine, it will help to apply it separately to two main types of insurance categories. These include: 1) life insurance, and 2) property and liability insurance.

Life Insurance

A life insurance policy that is purchased by an individual on behalf of his/her own life is valid and enforceable in favor of any beneficiary named by the insured policy owner. This is true regardless of the amount of the policy or whether the beneficiary has an insurable interest in the life of the insured.

While it is true that the law imposes no upper dollar limit on the amount of life insurance a person may purchase on their own life, there are practical upper limits set by insurer underwriting practices and the ability and willingness of the insured to pay the required premiums.
When an applicant wishes to purchase life insurance on behalf of the life of another, the general rule is that the applicant must have an insurable interest. In most cases, the applicant is also the beneficiary. As a result, the courts want to be assured that the insurance is not likely to provide a motive for murdering the insured. However, it is important to keep in mind that if there is a close enough family relationship between the proposed insured and the applicant-beneficiary, the latter does not have the burden of proving exposure to financial loss in a narrow sense. This assumption is due to the presumption by most of the courts that family members have insurable interests in the lives of others who are closely related to them by blood or by marriage.

In addition to individual and family relationships, there are many business relationships that give rise to insurable interests in life insurance. There are several insurable interests recognized and commonly used to support the purchase of life insurance. They include:

- the interest of a creditor in the life of a debtor
- the interest of an employer in the life of an employee
- the interests of both a partnership and the individual partners in the lives of each working partner.

. Applicant must have an insurable interest to insure the life of another

. Presumption that families have insurable interests

Business Insurable Interests

. creditors
. employers
. partners
In each of these situations, the business entity is both the applicant and the beneficiary but not the insured. Each situation clearly involves the possibility that the business entity will suffer substantial financial loss upon the death of the insured. As a result, each of the above examples gives rise to insurable interest.

One more additional rule that must be observed is that, in life insurance, the insurable interest is legally required to exist only at the inception of the policy. This rule comes into play when applying to the applicant-beneficiary who is not a close family member. An applicant in this situation must have an insurable interest only at the inception of the policy, not necessarily at the time the insured dies. A likely consequence of this rule is that an employer may retain a life insurance policy on the life of a main employee, even after the employee resigns and goes to work for another employer.

In general, a person has an insurable interest in the life of another if:

1) They are closely related by blood or marriage;

2) One of them is financially dependent on the other; or

3) They have a business relationship of such a nature that premature death of the insured would cause financial loss the business beneficiary.
When applying the general definition of insurable interest to property and liability insurance, it helps to keep the following generalities in mind:

- The insurable interest must exist when the loss occurs.
- It is the insured who must have an insurable interest.
- There are many relationships that give rise to insurable interests in property and liability insurance.

**Insurable Interest Must Exist When Loss Occurs**

While insurers routinely impose the requirements as a matter of underwriting practice, the law generally requires an insurable interest of the property-liability insured only at the time of loss. This principal is in keeping with the prevailing view that most property and liability contracts are legally considered contracts of indemnity. As discussed earlier in this section, these type of contracts are designed to make whole or indemnify the insured for loss actually sustained. The courts will not enforce an indemnity contract in favor of an insured who did not have an insurable interest at the time of loss. If they did, this would violate public policy by unjust enrichment for an individual who did not really suffer a loss.
Since life insurance contracts are not really considered contracts of indemnity, the same reasoning is not applied to these life insurance situations. Instead, life insurance contracts are referred to as valued policies. The life insurer pays a stipulated sum of money at the insured's death, regardless of the amount of the dollar loss, if any. Enforcing this agreement is not really considered against public policy, as long as the insurable interest requirement was validly presumed or otherwise satisfied at the inception of the contract.
Requirement of an Insurable Interest

Pertaining to a property or liability insurance contract, the insurer is considered one party to the contract. The only other party to the contract in a specific situation is the insured who is claiming entitlement to benefits. As a result, the insured is the one who must have an insurable interest in order to have a contract that is legally enforceable against the insurer. On the other hand, in some life insurance situations, the party claiming entitlement (the beneficiary) may not be the party on whom the insurable interest requirement is imposed. If they could be, it would defeat the purpose of the insured interest.

Relationships Giving Rise to Insurable Interests

Many possible relationships exist that can create or give rise to insurable interests. They exist in both liability insurance and property insurance. It must be stressed that there are many rights and interests, beyond mere ownership, that also create valid insurable interests. The various insurable interests in property and liability insurance can be based on any of the following foundations:

1) contract rights
2) property rights
3) exposures to legal liability
4) factual expectations of loss
Contract rights

A contract can be defined as an agreement between two or more entities creating one or more obligations between them that the law will enforce. When one entity has a contractual obligation to a second entity, the second entity has a contractual right based on the first entity's obligation. Contract rights may be broadly classified as:

- Rights *in personam*; also characterized as rights with respect to persons. If one party to a contract has rights *in personam* against the other party to a contract, the first party does not have a claim against any specific property of the second party. However, the first party can require the second party to use any or all of its property to satisfy its obligations to the first party.

- Rights *in rem*; also characterized as rights with respect to things or property. If one party has *in rem* contractual rights against a second party, the first party has a specific claim against some particular item(s) of property held by the second party. The first party can enforce its claim to satisfy any contractual obligation that the second party fails to perform.
Property rights

The term "property" can have many individual meanings. Legally defined, "property" is understood as "an aggregate of rights that have an economic value because they are guaranteed and protected by law." These rights can pertain to physical objects of a tangible nature, but not all have to. The concept of "property" includes every valuable right that is capable of being owned, whether or not the right pertains to intangible objects such as stocks, copyrights, or trademarks, or whether the right applies to real or personal property such as buildings, cars or houses.

Exposures to Legal Liability

It is generally understood that an entity has an insurable interest in any event that may cause harm to that entity. An insurable interest that rests on potential legal liability however, does not depend on whether the entity has any legal or equitable title, but on whether the entity has the possibility to be charged in court with liability for damage or injury stemming from the event in question.

Exposures to Factual Expectation

Factual expectation is considered the most inclusive of all the possible categories for insurable interests. Essentially, factual expectation is the expectation of economic harm to the insured if the event occurs. Each type of recognized insurable interest involves the expectation of financial harm from the occurrence of the insured event or of financial benefit from its nonoccurrence.
Unfortunately, factual expectation is not really considered a valid basis for an insurable interest in property in most jurisdictions. In the small number of circumstance where the courts have accepted factual expectation as a valid basis for an insurable interest, the insured is not required to have any property right, contract right, or potential legal liability in order to establish an insurable interest. The insured individual is only required to show potential financial harm from the event to be insured.

**Reasoning Behind Requiring Insurable Interests**

To understand the benefits of insurable interests, it is helpful to understand the reasons behind insurable interests.

There exist three main purposes of requiring insurable interests:

1) to minimize intentional losses

2) to prevent wagering through insurance

3) to enforce the principle of indemnity

**Minimizing Intentional Losses**

One purpose of requiring insurable interests is to minimize the number of intentional losses that may be attributed to moral hazards. Hazards are usually defined as conditions that tend to increase the frequency and/or severity of losses. Moral hazards, more specifically, generally refer to the conditions that lead some people to exaggerate losses or intentionally cause them to occur in order to collect insurance proceeds.
Merely imposing a requirement on the insured should not really have any appreciable effect on the volume of intentionally caused or exaggerated losses covered by liability insurance. Legally, almost everyone has an insurable interest in the events covered by liability insurance policies. It is very unlikely that the insurable interest requirement itself has any effect on those persons who simultaneously have both:

1) valid insurable interest in property or lives and . Insurable interest

2) criminal inclinations. . Criminal intent

The insurable interest requirement serves the purpose of minimizing the intentional losses of property. This result is accomplished by attempting to prohibit the purchase of insurance by persons who would have everything to gain and nothing to lose by the occurrence of the covered event.

Enforcing the Principle of Indemnity

The third purpose of the insurable interest requirement is to assist in enforcing the often referred to "Principle of indemnity." As set forth above, the principle of indemnity is the assumption that the proper function of insurance is to do no more than indemnify, or to make whole again financially. Essentially, it's purpose is to place the insured back in the same financial position that he or she was in before the insured event occurred.

Principle of Indemnity

Insurance only indemnifies
In contracts of indemnity, the extent of the insurable interest serves as an upper limit on the amount the insurer will pay to the insured for a covered loss. One cannot actually lose more than he or she stands to lose. The insurer will pay at a maximum no more than the amount of the insured entity’s insurable interest. This maximum will be subject to any other limits that may apply.

In a legal sense, life insurance contracts are not in most cases regarded as contracts of indemnity. In addition, the insurable interest requirement does not enforce the indemnity principle in those health or property insurance policies that are also written on a valued basis. In the latter cases, the amount payable upon the transpiring of the insured event is agreed to in advance. As a result, valued policies may result in violations of the indemnity principle.

**Dilemmas Associated with the Lack of Insurable Interest.**

If an insurance policy is not supported by a valid insurable interest, then it is legally not enforceable. When this occurs, an insurer can raise this fact as a defense to any claim that is brought by the insured. This defense extinguishes any of the insurers' duties under the policy as well as the rights that the insured had under the policy.
Using the Insurable Interest Defense by the Insurer

At any time during the policy relationship, an insurer can raise the lack of an insurable interest defense in order to have the policy declared void. If this defense is raised with success, it will deny coverage for any loss the insurer has not yet paid.

In most jurisdictions, an insurer may deny coverage for lack of an insurable interest even though the insurer has been aware for some time of the lack of insurable interest and has accepted premiums for coverage that the insurer should have known it could successfully deny. For instance, in a case where an insurer's agent knew that a client had already sold, and no longer had a legal or any other interests in the insured building, the fact that the agent knew the client had no insurable interest in the house did not bar the insurer from successfully denying a claim for damage to the house.

The question of whether an insurable interest can be waived is a difficult issue. Courts are split on this issue: some have stated that an insurer cannot waive an insurable interest requirement; other courts have insisted that an insurer may waive, or be estopped from asserting as a defense, a lack of an insurable interest. In some courts for instance, a life insurer is estopped from asserting the lack of an insurable interest in a relative of an insured when an agent of the insurer persuaded the relative to take over the premium payments on a life insurance policy that was about to lapse. This agreement was on the condition that the relative was to be named beneficiary of the policy. In these types of cases, or cases of this nature, courts will insist that the insurer be estopped from asserting the defense.
How is Equity Achieved When a Policy Has Been Voided

When an insurance policy is not supported by a valid insurable interest, it is deemed to be voidable and unenforceable. In other words, it will have no legal effect and will not be enforceable by the courts. If a court determines that a particular policy is void, the insured will lose all rights under the policy and will not be entitled to any return of premium or any other benefit under the terminated policy. If it chose to do so, the insurer could then voluntarily pay the claim. Or a third party, who had a valid insurable interest at the time of loss, might be able to recover from the insured who did not have a valid insurable interest at the time of loss. Instead of paying the claim, the insurer could voluntarily refund the premiums paid by the insured.

Insurable Interest By an Entity Other than the Insurer

Often times, the question of whether an entity who is not a legal party to an insurance contract has a right to raise insurable interest questions for its own benefit. Generally, if the entity seeking compensation attempts to collect it from the insurer, the attempt will fail in almost all jurisdictions. The reason for this is because an insurance policy is a personal contract between an insurer and a particular insured. A general rule of insurance law to keep in mind is that no other party besides the party(s) to the insurance contract, has any rights against the insurer under the contract. Generally no third party rights
There exists one jurisdiction that departs from this general rule by allowing any entity that has a financial interest in a loss to raise the issue of lack of insurable interest. In this jurisdiction, the courts seem to feel that it would better serve the purposes of the insurable interest requirement if individuals who had suffered a loss could use the doctrine to obtain compensation.

Although most jurisdictions will not permit a person who is not a legal party to the contract to recover from the insurer, most of these courts will allow such a person to recover from insureds who have already paid for losses in which they allegedly have no insurable interest. In other words, an entity who is seeking compensation can generally bring suit against an insured who has received insurance compensation for that loss without having had a valid insurable interest.

E. Preserving the Principle of Indemnity:

Since the principle of Indemnity has been and will be discussed in detail, a review of the principle is useful in connecting the prior subjects to future ones that will be discussed in Section V. As discussed earlier, allowing an insured to "profit" from a loss would violate and be directly contrary to the principle of indemnity. Some experts believe however, that the principle is violated by replacement cost and valued coverages under which the insurance payment may exceed the actual dollar loss.

- Do not allow insured to profit from loss
- Replacement value contracts?
Replacement Cost Coverages

It does not over-indemnify property owners to pay them on the basis of physically depreciated value of used property. However, it would over-indemnify them to pay more than it would cost to replace their depreciated used property with new property. The main question at issue is whether a property owner "profits" when old property is replaced with new property of similar type and quality, without any deduction for physical depreciation. To a certain degree, the property owner does gain by a replacement cost settlement to the extent that it extends the useful lifetime of the structure or a portion of the structure.

However, a replacement cost loss settlement is not really considered "profitable" to a property owner unless the profit increases not only the market value of the property, but also the value in its use prior to sale.

There are several factors that affect the market value of real estate:

1) The land
2) The general economic conditions
3) The relative bargaining power of the buyer
4) The relative bargaining power of the seller

Factors affecting:
. Land
. Economic conditions
. Bargaining power of buyer
. Bargaining power of seller
Replacing all or a portion of a structure with new materials will not necessarily increase the practical market value of the property. In addition, the building's use value to its owner has usually not been altered by a replacement cost loss settlement.

Besides excluding specified types of personal property from the replacement cost coverage endorsement, insurers must cope with moral hazards associated with replacement cost coverages. Eligibility requirements coupled by underwriting decisions serve to limit the availability of replacement cost building coverage to dwellings and commercial buildings which are fairly new, or to those which have market values that are equal to or greater than a set percentage of their replacement costs. A replacement cost settlement is only allowed if the structure is actually repaired or replaced. The reason for this policy is because of the public policy of trying to keep the coverages on a fair and equitable level. Some policies actually add the further condition that the structure must be rebuilt at the same location, if a replacement cost settlement is to apply.

- Replacement cost $\leftrightarrow$ moral hazard
- Only if structure is actually replaced
Valued Coverages

Under valued property insurance coverages, unlike replacement cost coverages, it is possible for the insured to profit from a total loss. In reality, no insurer would ever knowingly insure an item of property for more than 100% of each insured's insurable interest. Due to the fact that valued policy forms can potentially result in violations of the principle of indemnity, insurers are sometimes inclined to take special underwriting precautions. As a result, appraisals of the property's insurable value are often required. In essence, the potential for over indemnification is countered by the widespread tendency to underinsure property in the first place. The policy limit usually remains constant during the policy period, while the insurable value of the property increases.

Tools to Implement or Preserve the Principle of Indemnity

It is necessary to remember that when only one property insurance policy is involved, there are several devices that help to preserve the principle of indemnity. The following devices accomplish this task by limiting the maximum amount of recovery:

1) Claims settlement practices
2) Policy limits
3) Underwriting restrictions
4) Loss valuation provisions and insurer settlement options
5) The insurable interest doctrine and related policy provisions

Valued Coverages

. Profit from total losses
. Special underwriting precautions

Tools

. Claims settlement practices
. Limits
. Restrictions
. Loss valuations
. Insurable interest doctrine
When two or more property insurance policies are involved, or if there happens to be more than one source of recovery, the following devices serve to preserve the maximum amount of recovery:

5) The same five as above applying to one property
6) The doctrine of subrogation and related policy provisions
7) Exclusions to prevent coverage duplications
8) "Other insurance" provisions

The two groups of devices above apply to property insurance policies and to property insurance coverages of multi-peril policies. In general, violations of the principle of indemnity are best thought of as "departures" from its traditional interpretations. Such departures are not extremely serious, as long as insurers are able to maintain adequate controls over moral hazards.
V. FINANCIAL LOSS EXPOSURES

A. Introduction

Generally, whenever the technique of avoidance is successfully used to treat a loss exposure, that specific exposure ceases to exist, and the loss essentially becomes zero. It is possible that loss exposures that have not been avoided could lead to losses if a loss does occur. If this situation occurs, the loss must be paid for, or “financed,” internally or externally. It is extremely helpful for an individual or risk manager to be prepared for any type of situation that might occur by planning in advance how losses will be financed. Thus, financing loss exposure predicts the possibility of losses, as well as paying for the losses that actually occur.

Most business entities have focused their attention on three general techniques for financing loss exposure. They are:

1) Noninsurance transfers;
2) Insurance as a risk management technique; and
3) Retention.
B. Noninsurance Transfers

Not all loss exposure transfers involve insurance. Many, such as those discussed in this section, deal with noninsurance transfers. Specifically, there are two main types of noninsurance transfers: control transfers and loss financing techniques.

Control-Type Noninsurance Transfers

Control-type noninsurance transfers are used to alter the entity's exposures. They can either reduce the loss frequency, the loss severity, or possibly reduce the variation in potential losses. The different options available from a control-type transfer allows for flexibility when adjusting to losses. The result of an effective noninsurance transfer of this type is that certain specific loss exposures will be altered in at least one of the following ways:

1) Losses should have a lower potential frequency
2) Losses should have a lower potential severity, or
3) Losses should be more predictable
It is important to keep in mind that noninsurance transfers do not eliminate all exposures connected with the transferred property. This option is important for the risk manager because of the need to recognize the specific exposures that have been transferred, as well as those which remain. Several examples may underscore this principle, for example:

1) *The sale of a building:* when this transfer of property occurs, it shifts all property and liability exposure associated with that property to the new owner. Even though a sale has occurred, the seller might still face a loss because there might still be an activity that might have occurred on the property before it was old. Generally, if the seller, as a tenant, continues to occupy the property, many exposures continue to remain unchanged. Still, the chances that there will be a loss is much lower for the seller after the sale.

2) *Subcontracting part of a construction project:* when a contractor hires a subcontractor to do work that the contractor could have done himself, the contractor has greatly reduced its chance of loss connected with that particular work. Essentially, the risk of loss is transferred onto the subcontractor and they, instead of the contractor, will have the burden of the losses if they happen to occur.

3) *The sale of a product line to another business:* When a manufacturing activity is transferred to a different business
entity, the chance of injury to workers engaged in the manufacturing activity is also usually transferred. The principle is similar to that of the contractor and subcontractor example above.

**Loss Financing-Type Noninsurance Transfers**

*Similarities With Insurance:*

Loss Financing-type noninsurance transfers resemble insurance in that the financial consequences of certain loss exposures are transferred to another entity. Also, noninsurance transfers such as this financing-type, transfer only the responsibility for financing the potential losses arising out of an exposure. This is very similar to insurance exposures.

*Differences With Insurance:*

Noninsurance transfers differ from insurance in four distinct areas:

a) they are not legally the same as insurance

b) there is no significant pooling of exposure units

c) they are not sold by insurers

d) they are usually matters that are really only incidental to the contract.
There are many different noninsurance transfers that can take place. One typical noninsurance transfer consists of one party to the contract, called the *indemnitee*, securing a promise from the other party, called the *indemnitor*. The indemnitor is the party who promises to bear some or all of the potential financial consequences from some loss exposure that otherwise would be borne by the indemnitee. Through this promise of loss, the indemnitee has essentially transferred the potential financial losses to the indemnitor.

It is also possible for the same contract to contain both a control-type transfer and a financing-type transfer. A control transfer for the indemnitee/indemnitor example above would be a provision that relieves the indemnitee of responsibility for losses to the person or property of the indemnitor. The relief of these responsibilities, except for those contained in the contract, would be the responsibility of the indemnitee and would thus be a control transfer.

Transfers which would, except for the contract, be the responsibility of the indemnitee are financing transfers. In addition, provisions that make the indemnitor responsible for losses to the person or property of the indemnitee for which, except for the contract, the indemnitor would be responsible, would also be financing transfers.
Below are several examples of Noninsurance transfers:

a) **Leases**

A lease serves the purpose of describing and enforcing the relationships between a landlord and a tenant. The lease has the ability to change or alter responsibilities that would otherwise exist under common law or statute. In other words, a lease can take precedent over state or local laws.

Under a lease, the landlord, as the owner, might assume responsibility for any physical damage caused by negligent acts of the tenant. In these types of agreements, the tenant has transferred some of the potential financial losses to the landlord. This transfer is considered a control transfer, not a financing-type transfer.

b) **Contracts to supply goods and services**

Contracts relating to the distribution of goods and services have the characteristic of transferring or shifting responsibilities for replacement or repair of the goods or services from one entity to another. The liability arising out of the defective products or services involved can also be transferred.

In general, responsibility can be shifted from seller to buyer, from manufacturer to processor, or vice versa in each of the above relationships. In order to determine whether the transfer involved is a control or financing-type transfer, one must look at the actions of the parties involved. Two main factors that should be
considered include 1) whether one party simply excuses the other party for damage that was caused to the first party's property, or 2) whether one party agrees to pay some money to the other party or to some third party.

c) Construction contracts

Construction contracts are usually financing-type transfers. They generally make the contractor responsible for damage to the property being constructed. In some cases, the construction contract transfers potential losses that would otherwise be borne by the property owner.

d) Surety contracts

A surety contract occurs whenever one party promises to do something for someone else and the promisee asks the promisor to have a third party guarantee the promise. Under a surety contract, one person, the surety, guarantees that a second person, the principal or obligor, will perform his or her expressed obligation to a third person, called the creditor or obligee. Through a surety contract, the obligee transfers to the surety the potential loss from nonperformance of the principal. The third party in essence acts as a neutral third party who has little or no vested interest in the immediate transaction. Surety contracts are always financing type transfers.
Pros and Cons of Noninsurance Transfers

From the viewpoint of the risk manager, noninsurance transfers have four potential advantages:

1) Noninsurance transfers can be tailor-made to specific situations.  . Customizable

2) Noninsurance transfers may be less expensive than insurance  . Cheaper

3) Noninsurance transfers may permit the risk manager to transfer some potential loss that cannot be transferred through insurance.  . Permit transfer of otherwise nontransferable risk

4) The loss can be shifted to a transferee who is in a better position than the transferor to exercise loss control.  . Shift to transferee
There are, however, certain limitations that accompany noninsurance transfers. These include:

- If the transfer is tailor-made to specific instructions, one has very few precedents to determine how the courts will interpret the contract language. This lack of precedent will lead to unpredictability and a lack of substance, leaving little information to rely on for decisions affecting the future.

- The indemnitor (transferee), may be unable to pay the loss, in which case the indemnitee (transferor) will remain responsible. Because there is no significant pooling of exposure units under most noninsurance transfers, the indemnitor is subject to substantial fluctuations in loss experience.

- The transfer may not be as complete as the risk manager had intended. For instance, the contract language may be incomplete. If this occurs, and the contract is ambiguous, courts are more likely to interpret the provisions in favor of the transferee. Courts might also hold overly broad transfers to be invalid based on public policy or if there exists specific statutes prohibiting such transfers.

- The responsibility can be shifted to an indemnitor or transferee who is unable to exert much, if any, loss control.
C. **Insurance**

**Insured v. Insurer**

Insurance differs from noninsurance transfers in that:

° The insurer pools or combines many loss exposures

° The insured contribute to a fund out of which cash payments or services are provided, and

° The insurance contract deals solely with the transfer.

**Insurance Defined Conceptually**

From the perspective of a risk manager, insurance can best be interpreted as a risk management technique that makes it possible to transfer the financial consequences of potential accidental losses from the insured entity to an insurer. The term "insurance" is also used to mean the protection provided under an insurance contract. Despite these definitions, neither one indicates what exactly distinguishes insurance from noninsurance transfers. In actuality, it is the *mechanism* of insurance that distinguishes the different transfers.
Insurance Viewed Mechanically

Viewed from a mechanical perspective, insurance is seen as a social device where two or more entities promise to make contributions to a fund from which the insurer promises to make specific cash payments or render certain services to those contributors who have suffered losses because of accidents.

As a mechanism, insurance differs from most noninsurance transfers in the following ways:

- The insurer pools or combines many loss exposures.
- The insureds contribute to a fund out of which cash payments or services are provided.
- The insurance contract deals solely with the transfer.

Pooling of Loss Exposure

In insurance transfers, the insurer accepts similar transfers from at least two entities. Although some noninsurance transferees or indemnitors also accept transfers from two or more entities, this is very rare. The number of transferees dealing with a single indemnitor tends to be much smaller than the number of insureds dealing with a single insurer.
Premium payment to Insurer

Another distinctive feature of insurance is that insureds contribute or promise to contribute to a fund out of which payments are made. Although most insured pay a premium in advance for their protection, some promise to pay at least part of the cost later. The promised payment may be an extra premium based on the experience of the insured during the policy period, or it could be an assessment based on the total experience of the insurer. Insurers may either make cash payments or render services such as investigating and defending liability claims.

Main Purpose of Contract

Unlike most noninsurance transfers, an insurance contract is concerned exclusively with the transfer, and does not deal with any other matters. Noninsurance transfers are usually accomplished through clauses in contracts dealing primarily with other matters such as a sale of goods, construction of a building, or lease of premises.

Reasons Insurers Assume Risk

By assuming the risks of the many insureds, the insurer, in effect, creates a risk for himself. Why is the insurer able to accept risks that insureds wish to transfer? The insurer, like anyone else faced with risk, has several alternatives available to him for the reduction of his uncertainty.

One risk reduction technique in particular, already briefly mentioned earlier, permits the insurer to assume risks that insureds are desirous of transferring. This technique is referred to as pooling.
With any increase in knowledge, uncertainty is likely to be reduced. A most important source of knowledge to the insurer is that acquired from the pooling of many similar exposures. The combination of many similar exposures permits the operation of the law of large numbers and therefore enhances one's ability to predict. As the number of exposures increases, the percentage deviation of actual from expected experience diminishes.

The concept of pooling can be as valuable a source of information to an individual or a firm as it is to an insurance company. Therefore, a business firm that possesses a sizable number of exposures to a certain cause of loss, can better predict the range of probable losses from that peril. Equipped with this information, it may find it desirable to self-insure against a particular peril. By the same token, a group of individuals exposed to the same peril can agree to share the losses of the few on some predetermined basis. This, in fact, is sometimes done, and such associations are referred to as pure assessment mutuals.
Loss Prevention

The insurer also has the choice of reducing his uncertainty by engaging in loss prevention activities. To the extent that the expenditures for these activities are more than offset by the reduction in claim costs, the insurer may find loss prevention to be a useful uncertainty reducing device.

Greater Financial Capacity

The insurer may also be willing to accept the risks of the insured because of its greater financial capacity. The amount of the potential loss if the event occurs may be negligible in relation to the assets of the insurer. Based on the decreasing marginal utility of money, the disparity in he relative value of the risk to the insurer permits a mutually beneficial contract.

Transfer of Risk

The insurer may also reduce uncertainty by transferring part or all of the risk to another. This process is known as reinsurance. Reinsurance may be sought by an insurer when faced with concentrations of value in a particular exposure, geographical area, or line of insurance. The ability to transfer risk is an extremely important alternative to the new insurer.
Benefits of Insurance

There are many benefits that individual insureds can receive directly from the purchase of insurance. The benefits to insureds can be categorized as follows:

- Payment for losses
- Reduction of uncertainty, and
- Various risk management services not dependent on the happening of the insured event

1) Payment For Losses:

The most obvious benefit of insurance is the rendering of certain services to or on behalf of insureds who suffer covered losses. Because insurance money or service is available, the insured may be able to achieve post-loss objectives that might arise. Some of these objectives include the following:
Risk Management: Property and Casualty

a) **Continuity of Operations:**

Insurance can provide funds that permit an insured to pay the extra costs of more rapid repairs or replacement, and of continuing operations with alternate facilities until damaged property is replaced or repaired. Thus, the insured may be able to continue operations at or close to the same rates as before the accident, often with little delay. This allows for operations to continue while at the same time, decreasing the potential for large losses.

b) **Earnings Stability:**

The cash provided by insurance can be used to pay repair or replacement costs that would otherwise reduce earnings. The cash can also be used not only to defend and pay a liability claim that would otherwise be a charge against earnings, but also replace earnings that might be lost because of an interruption in operations.

c) **Social Responsibility:**

The image of the firm in the community and its sense of responsibility to the public might also be enhanced by insurance proceeds that permit it to continue normal operations, not lay off workers, meet customer demands, accept business from suppliers, pay employees' medical expenses, and pay legitimate liability claims. These benefits serve to
increase the perception of the entity as it is viewed by the public, thereby increasing its value through the eyes of the community.

**Reduction Of Uncertainty**

From the point of view of the **insured**, payment for losses reduces the cost of losses that *actually* occur. One of the most important benefits of **insurance** is that it reduces the cost of losses that *might* occur. . Most important benefit!!!

Although insurance reduces uncertainty about financial loss, it does not affect the cause of financial loss. The entity that purchases insurance is as uncertain as before concerning the loss-causing event itself. The insured also continues to be uncertain concerning losses that are not covered under the contract. . Reduces loss

**Risk Management**

There are services provided by insurers that can be extremely valuable even if an insured event never happens to occur. A percentage of the insurance premium pays for the services that, at least in part, benefit the insured. If the exposure is retained, some of these services must either be abandoned, purchased from outside, or handled with the entity's own resources. Generally, some services are provided by insurance producers such as agents and brokers; others are provided directly by insurance companies. . Some of premium payment benefits insured with services . Provided by companies and brokers
Availability of Risk Management Services provided by Insurance Producers

Insurance producers have long provided management services, often including:

- Loss exposure identification and measurement
- Suggestions on how these loss exposures might be handled
- Loss control services
- Claims adjustment services
- Management services
- Assistance in meeting legal requirements
- Selection of an insurer and, where insurance is recommended, the best coverage and pricing method for those exposures

Insurance producers create a market for their services by identifying and measuring loss exposures. With this ability, they can bring to this task an orientation and experience that the entity exposed to loss may not have or be able to command otherwise. The insurance producers act as a source of knowledge for the entity to utilize when it becomes necessary.
The process of the insurance producers proceeds as follows:

. The producer identifies and measures the client's loss exposures;

. The producer suggests which exposures should be insured;

. The client (usually) heeds the advice of the producer; and

. The client insures the necessary exposures.

Many producers also suggest other appropriate risk management tools.

For those loss exposures that are to be insured, producers serving more than one insurer help the business or entity to select an insurer. Some producers have loss control or departments that advise firms and families on how to prevent losses or reduce their severity. Depending on how much loss has occurred, these loss control services may be provided at no extra cost to the insured or as an extra service for which a charge is made. The choice and options depend on the situation presented and the agreement between the two parties.
Availability of Risk Management Services provided by Insurance Companies

Insurance companies (insurers) themselves often provide some or all of the following risk management services:

- Loss exposure identification and measurement
- Loss control services
- Claims adjustment services
- Management services
- Assistance in meeting legal requirements

Insurers provide loss exposure checklists that may be used by their marketing representatives or by risk managers themselves to identify and measure loss exposures. The contracts and pricing methods developed by insurers provide risk managers with the opportunity to choose among various combinations of coverage and price.

One of the most beneficial services that insurance companies contribute is that they offer extensive loss control services. They inspect insured locations and make loss control recommendations. Through their individual loss control departments, insurers have offered their insureds safety inspections. In more recent years, insurers have chosen to form subsidiaries to provide safety services beyond those normally provided.
Costs

When deciding whether to purchase insurance, it is necessary for the insured to decide whether the benefits exceed the direct and indirect costs. If the benefits fail to cover the costs necessary, it makes little sense to proceed with the transaction. There are several factors to consider when determining the benefit versus cost ratio:

- The premium
- The time and effort spent negotiating with insurers
- The lessening of incentives to control losses

Cost-Benefit Calculation

- Benefits must be more valuable than costs

Factors:
- Premium
- Negotiation Costs
- Control of Losses
Premium Costs:

The cost of insurance includes the dollar outlay for the premium, as well as the opportunity costs of the loss of use of the premium paid in advance. The premium includes three components:

1) Expected Loss Component

The insurer's estimate of the dollar loss that will be sustained by the average insured among a larger number of insureds with the same quantity and quality of exposure. In other words, the expected loss component is the loss sustained by an insurer who is in the same exposure situation as other insureds around the insurer. If the insurer collects this amount from each of these insureds and the actual losses approximate the expected losses, the insurer will have sufficient funds to meet its obligations.

2) Expense Component

An additional cost to the premium. Part of the expenses of the premium go to provide important services for the insured that would normally have to be financed by the insured's own funds.

3) Profit and Contingency Allowance

Designed to provide the insurer with a reasonable allowance for underwriting profit. It is also designed to provide some margin for differences between estimated expenses.
expected and actual losses and expenses.

4) *Opportunity Costs*

Since a significant portion of the premium must usually be paid at the beginning of the policy period, the insured loses not only the premium but also the use of that money until, under retention, it would have been needed to pay losses and expenses.

The yield that is foregone because of the payment of an insurance premium is a cost because it is not offset in the premium calculation by the insurer's anticipated investment earnings. Due to other factors such as taxes, accounting methods, and the timing of actual outlays for expenses and losses, it is very difficult to predict accurately what the opportunity costs are going to be. As a result, one should take as many factors into consideration as are available.
Negotiating with the Insurer

There are expenses involved in the process implementing a decision to insure. The process can contain all or some of the following:

- An insurer is selected from among the many assortment of companies that write and process the type of insurance sought.
- The insured must cooperate with the insurer in its separate exposure analysis.
- The terms of the insurance contract and the price to be charged must be negotiated.
- The insured must cooperate with the insurer in the insurer’s loss control effort.
- If a loss happens to occur, the insured will be expected to notify the insurer, file the necessary proofs of loss, and cooperate with the insurer in its investigation of the loss. If the loss is a liability claim against the insured, there may be court appearances, depositions, or other expenditures of time.

Expenses of Dealing With Insurer

- selection
- exposure analysis
- terms negotiated
- loss control effort
- loss and claim processing, investigation and payment

Disincentive for Loss Control:
One of the disadvantages commonly attributed to insurance is that it reduces the incentive for loss control. In essence, there is a moral dilemma at issue. Because the insurer will pay for at least part of the losses arising out of a covered event, many insureds reason that they gain little or nothing by loss prevention or loss reduction efforts. Others simply are less careful than they would be in the absence of insurance. This process of weighing the options results in costs that are borne by insureds and leads to the following scenarios:

- If insured losses are higher because of this options weighing attitude, the insurer's expected loss estimate will rise, causing insurance premiums to rise.

- A relaxed attitude toward control of insured loss exposures is likely to increase the incidence of noninsured losses as well. This may happen because the insured cannot distinguish accurately between insured and noninsured exposures or because a person who is careless with respect to insured events may develop the same tendency with respect to noninsured events.

Chief Disadvantage

Leisurely safety control
D. **Retention**

**Introduction**

Retention can best be described as the keeping or retaining of all of the elements of the exposure. An entity that retains a loss exposure opens itself to the financial consequences of any losses. If a business does not transfer the potential financial consequences to someone else, it has retained them.

Retention can either be the result of a conscious or an unconscious act. An example of this combination would be the failure to identify certain loss exposures. Essentially, this means that the entity unconsciously decided to retain these loss exposures. On the other hand, the entity might have explored the various alternatives and consciously decided that the best course of action was retention.

Often times, retention is the best way to handle all or part of an exposure. There are reasons to suggest that an exposure should always be retained unless a strong case can be made for transferring the potential losses to another entity.

It must be stressed that the term "self insurance" cannot be equated with retention. Insurance is a transfer device. Under "self-insurance" the firm or family retains the loss exposure. In addition, retention is not a method of last resort. It should not just be considered only after all other avenues have been attempted. Retention is often the best way to handle all or part of a loss exposure even when other techniques are readily available.
There are two basic characteristics of retention: a financing technique and a residual method.

The Financing Technique

In general, retention is concerned with financing losses that occur. For example, if a business decides to retain its exposure to industrial injury losses under a program such as a worker's compensation act, it has elected to bear any financial losses out of its own resources (or out of borrowed funds that will need to be repaid).

Different from avoidance, loss control, combination, and noninsurance transfers of the control type, retention does not seek to change the loss exposure itself. However, retention can be used in conjunction with all of these control techniques except avoidance. It can also be used along with partial financial transfers. Of course if the loss exposure is avoided or completely transferred, there is no exposure to retain.
On the other hand, in order to reduce the frequency or severity of the potential losses, loss prevention or reduction can be used simultaneously with retention. In order to make the retained losses more predictable, separation or a combination can be used in conjunction with retention.

*The Residual Method*

Unless a loss exposure is handled in its entirety though one or more of the other risk management techniques available, there is no other alternative for the remaining exposure other than for it to be retained. This process of elimination is known as the residual method. For instance, even when a building is insured for its full insurable value under the broadest policy available, the insurance transfer is incomplete and some exposures must be retained. Some of these exposures include exposure to small losses within a deductible, and the exposure to losses that exceed the policy limit because of a sudden increase in inflation.
Reasons for Retention:

There are many reasons why simple risk retention is practiced. First, the cost of treating a risk in a positive manner may be greater than its value to the risk-bearer. For instance, it may be possible to buy insurance to cover a loss arising from a falling meteorite or satellite hitting a building. The cost of such insurance, however, may be far greater than its value to the owner of the building. Similarly, it may be possible to construct the building in such a way that it can withstand the shock of being hit by these falling objects. The additional cost of such construction, however, may be far greater than its value to the owner. In such cases the risk will be met by simple retention.

More realistically, this approach is followed by the great majority of property owners in regard to the peril of earthquake. Although earthquakes have occurred in every state, few persons buy earthquake insurance, and even fewer buildings are constructed to withstand violent earthquakes. Instead, the owners practice simple risk retention because the cost of alternative methods of treatment is considered to be greater than their value to the risk-bearer.

A second reason, closely related to the first, is the matter of significance. A risk can be of so little significance that its adverse affects can readily be accepted. If this is done, the risk-bearer may ignore the uncertainty of its occurrence.

Further, the significance of a loss may be determined by the composition of a balance sheet. For instance, two firms have identical total assets and surpluses, but one has a high ratio of liquid assets and the other has a low ratio of liquid assets. The loss of a given sum will have very different consequences, and
may be significant to one firm but not to the other. One firm may safely be able to practice simple risk retention; the other may not. In determining the significance, the stability of cash flow and the composition of a firm's liabilities must be considered in addition to its size and the composition of its assets.

The third reason for deliberate simple risk retention is that some risks may not be susceptible to other treatment. For instance, the risk of loss of property from war, with a few exceptions, is not susceptible to other treatment. In addition, the justification for profit as an element of income distribution is, in the opinion of some economists, based on the assumption of risk by a risk-bearer. If risks could be eliminated by the risk-bearer, there would be no reason for profit, in its strict economic definition.

On many occasions, risks are retained by a risk-bearer through lack of knowledge of appropriate techniques, carelessness, or poor judgment. This is true of both business concerns and individuals. While it is easy for those interested in risk and risk-treating techniques to over-emphasize the significance of carelessness and poor judgment, these are important causes of risk retention.
Types of Retention

Unplanned Retention

When all or part of a loss exposure is retained without considering alternative risk management techniques. Unplanned retention is usually an unconscious act; the risk manager may be unaware of the exposure, or may know about it but may postpone deciding how it should be handled. In either case, this type of retention is considered unplanned because alternative methods are not considered.

Planned Retention

Planned retention is always the result of a conscious decision. In a planned retention, the risk manager is aware of the loss exposure because they weigh the advantages and disadvantages of other techniques. After weighing their options, the risk manager decides which retention is the best way to handle part or all of that exposure. By choosing to analyze the different options presented before them, the risk manager has engaged in planned retention.

Situations Conducive to Retention
There are several situations that favor the use of retention of other techniques available:

- When no other alternative is available
- When the worst loss that might occur is not too stressful or serious for the entity to control.
- When the losses that will occur in the immediate future can be predicted with approximate accuracy.

No Alternative Available

Once in a while, retention is the only loss financing method available. There are several reasons why this might occur.

1) Insurers may not write insurance on the exposure in question, or if they do, the particular entity may be unable to obtain insurance for some reason.

2) The risk manager may be able to alter the characteristics of the loss exposure through some control device but not eliminate all of the potential losses.

3) Noninsurance transfer possibilities may not be available to use.
Small Losses

Retention should be considered when the worst loss that can occur is not serious enough in nature where the entity would be unwilling or unable to bear the cost. The size of the loss that can be handled by the entity depends on the situation presented. An entity in a strong financial position is better able to sustain larger losses than one that is on the verge of bankruptcy.

Predictable Losses

This scenario involves actual losses that are fairly predictable. The reason these losses may be fairly predictable is because they may tend to vary within a narrow range around the estimated average losses. Enough money can be budgeted to cover the expected losses with a fair degree of confidence that the actual losses will not differ much from the budgeted amount. This condition favors retention because, if the range is narrow enough, there will be very few surprises.
Advantages and Disadvantages of Retention

Loss Savings

It would not be an accurate indicator to compare the entire loss costs under the retention program with the entire insurance premium under an insurance program. This comparison is unfair because some retained loss dollars might not be covered by insurance and because the insurance premium does no more than cover loss costs.

One can legitimately compare the portion of the premium intended to cover the expected losses. Retention will result in savings when actual losses are less than the loss allowance in the premium. Unfortunately, it may be difficult to properly measure this savings in the short run.

In the long run and on the average, actual losses may produce fewer loss dollars than assumed in the insurance premium. For some insureds, the loss allowance in the premium exceeds the true expected losses; for others, the loss allowance is smaller than the true expected losses. When an entity’s expected losses are less than the loss allowance in the premium, the entity is likely to save money in the long run by using retention rather than insurance. This advantage, however, may be more than offset by the disadvantage that retention involves the possibility of wide fluctuations in loss experience from year to year. The down side is that volatility may produce an unstable earnings pattern.
Expense Savings

If the services normally provided by the insurer can be provided by the entity at a cost lower than the expense and profit portion of the insurer's premium, then retention may permit expense savings. If the entity is willing to forgo all of the services provided by the insurer, it can save most of the expense and profit loading.

The loss control services provided by the insurer may be necessary or desirable to satisfy legal requirements. For instance, a business with large industrial machines may be required to have them inspected periodically. The business may purchase machine insurance or liability insurance covering the maintenance, operation, or use of the machines.

The exposure analysis services provided by the insurer may merely duplicate tasks regularly performed by the risk manager. If this is the case, no other expenses need to be incurred to replace these services. On the other hand, if no careful analysis would have taken place otherwise, the insurer's analysis would most likely be replaced.
Instead of saving part of the expense and profit allowance in the premium by retaining a loss exposure, the business may spend more on the services it decides to replace. Insurers have the option of spreading the overhead cost of these services over many insureds. For instance, if a business has a number of small operations at many different locations, all of which require servicing, an insurer with a network of national loss control and loss adjustment offices would most likely be able to provide services much more efficiently than the business itself.

By retaining the loss exposure, the entity may also save that part of the expense allowance allocated by the insurer to the underwriting process and other administrative functions. The insurer can incur certain expenses when deciding which insureds are acceptable from the many who apply for insurance. Additionally, the insurer incurs expenses from arranging reinsurance that will protect the insurer from shock losses, establishing the premiums to be charged, preparing contracts for distribution to policy holders, and performing general administrative tasks.

**Business Can**

- Save premium costs by retaining
- Take more services
Service Improvements

By retaining an exposure and making alternative arrangements for the services that would otherwise be provided by the insurer, the entity may be able to improve the quality of those services. One way to accomplish this is to use internal staffing for service activities which will use existing strengths more effectively. Some of the money that would otherwise have been paid for insurer services may be used to increase the internal staff or otherwise improve its capability.

Using internal staff also results in more control. In addition to setting policies relating to exposure analysis, loss control and loss adjustment, the firm can check on how effectively and efficiently these policies are executed. If instead of the internal staff, an outside agency is used to provide these services, it will most likely result in a loss of close knowledge of the exposures and personnel. On the other hand, it might also result in a possible gain in expertise if the outsider specializes in these services. Thus, the possibility of building on existing strengths exists when insiders as well as outsiders are used.

Retention may create the possibility of improved service; however, it may simultaneously reduce the quality of risk management services. For instance, internal staff or outside agencies may not be able to provide the same expertise as insurers. Also, the services may not be available at all locations. Insurers on the other hand have expertise gained by dealing with many insureds in a variety of situations that may be difficult or even impossible to match with internal staff. Outside agencies may be able to supply similar expertise but there will most likely be differences among outside agencies in this regard and the risk manager should expect such differences.
Cash Flow

Whenever insurance is purchased, the insured loses the use of prepaid premium dollars. By retaining the loss exposure, the entity can avoid paying out any money until it is needed to repair or replace property, pay for loss control services, or handle other losses and expenses. The key is that until the money is needed, it can be invested, thus earning an investment return.

An advantage will accrue to the entity to the extent that its investment return exceeds the reduction in premium by the insurer. This advantage of the investment return would make retention a very productive choice even if the retained losses and expenses equal the premium that would otherwise be paid to the insurer. The longer the time period over which the losses and expenses are paid, the more important this advantage becomes.

Tax Implications

If the exposure has been insured, it is possible that retaining a property or liability exposure could lead to higher taxes. There are two types of tax implications, business and family, that will be used to illustrate the above assertion.

Business tax implications:

If a business insures a property or liability exposure, it can deduct the insurance premium as a business expense. If a business retains this exposure, it can deduct only actual losses. The difference between these procedures is relevant in three aspects:

- Premiums are deductible
- If retained, actual losses can be deducted
1) Chance fluctuations in the business' loss exposure has an affect on premiums on a much smaller level than on actual losses.

2) In accordance with property losses, the permissible tax deduction with retention is limited to the book value of the property that is lost.

3) Based on current rulings for liability or workers' compensation losses, only amounts actually paid, or payable in the future, are tax deductible with a retention program.

Based on retained property losses, the permissible tax deduction is limited to the book value of the property that is destroyed, damaged, or happens to disappear. For instance, assume that a business purchased an area of land 10 years ago for $100,000. Because the business chose to spread the cost of this building uniformly over the next 20 years, it assumed that the building depreciated $5000 a year. As a result, at the end of the 10th year the book value of the building is the original cost of $100,000 less the accumulated depreciation of $50,000 (10 X $5000), which comes out to $50,000. Assume that replacing this building today would cost $200,000; recognizing physical depreciation would reduce the current value in its actual state to, say $170,000. If the building were completely destroyed, the business would lose $170,000; it could deduct about $50,000.
It is important to keep in mind these fundamental concepts involving tax implications:

1) If the business purchases property insurance, the premium is deductible.

2) If insurance proceeds exceed the book value of a property loss, the excess is taxable in one of two ways:
   
a) the excess is taxable immediately at capital gains rates, or
   
b) the income tax will be higher in future years than if the replacement property were not purchased with insurance proceeds.

If the business entity does not happen to buy insurance, only the book value of a property loss is tax deductible; but if the property is replaced, the book value of the replacement property is its actual cost; and the income tax in future years will be less than if the property had been replaced, at least in part, by insurance proceeds that exceed the book value of the property loss.

**Family tax implications**

The tax codes that are applicable to individuals and families are different in several significant aspects from the codes that apply to businesses:
An important impetus to the growth of group insurance has been the tax advantages associated with it. Generally, the premiums or contribution payments made by employers are deductible by them as reasonable and necessary business expenses for federal income tax purposes. Of course, if the employer gave employees a cash wage increase in lieu of insurance programs, the additional compensation (if reasonable and necessary) would also be deductible. Nevertheless, the fact that the Internal Revenue Act does permit tax deductions for employer contributions to these programs has been an incentive to their growth.

Even more favorable from the standpoint of tax treatment is the fact that employees generally need not report as taxable income the employer’s group insurance contributions payable on their behalf. If the employer granted an equivalent cash wage increase in lieu of the benefit program, the employees would have a higher taxable income and would have to purchase individual insurance coverages out of after-tax dollars. The employee can, therefore, receive greater amounts of insurance coverage per dollar of employer outlay through employee benefit programs.

Finally, if a trust fund is created to hold the assets of
employee benefit programs, the investment income from the trust assets is exempt from federal income taxes.

**Actions for Retention**

Once a decision has been made to retain a loss exposure, action must be taken based on that decision. Action includes the following:

1) controlling loss costs
2) evaluating and paying losses
3) taking steps to meet any applicable legal responsibilities
4) arranging funding for retained losses
5) allocating retention costs

A second reason for an investigation is that in some losses, it is important to determine if someone else is legally liable for the damage or destruction. When insurance is purchased, the loss adjustment services of insurers are particularly important in handling liability claims. Based on the fact that few businesses are equipped to replace these services internally, it is customary to hire an insurer or an independent adjuster to provide these services.

**Loss Control**

Based on the fact that any loss savings that result from loss control are recouped directly, the incentive for loss control is stronger under retention than under insurance.
Funding Retained Losses

One must determine how the losses, if any, will be funded if there is a decision to retain a loss exposure. There are several possibilities that may present themselves, but the two most important are:

1) current net income
2) captive insurers

Current Net Income:

The simplest method is to pay losses out of current net income when they happen to occur. In this case, the losses are treated similarly to expenses incurred that year. If the loss involves payments over a period of years, each year's payments would be met out of each year's net income. This method is very inexpensive because it is extremely simple.

The major disadvantage to this approach, however, is that losses may exceed not only the current net income, but also assets that can easily be liquidated. As a result, it may be necessary to convert nonliquid assets into cash at a time that is less than convenient. This conversion would result in receiving less than full value for the assets, thus increasing the real dollar loss sustained.
An additional disadvantage is that even less serious losses may impair overall liquidity. Reduced liquidity may cause concern about the firm’s future among lenders, investors, customers, suppliers, and employees.

In spite of these disadvantages, paying losses out of current net income is the most common way to fund a retention program. One can counter the disadvantages by:

1) Not retaining losses that are likely to cause serious liquidity problems or cause earnings to fluctuate greatly

2) Making advance arrangements to borrow funds to solve short-term liquidity problems following a loss.
Captive Insurers

- Underwrite only for their owners
- Tax advantages

Captive Insurers

Captive insurers are different from other insurers in that they confine or largely limit their writings to exposures belonging to their owner(s). One reason for a business to establish a captive insurer is for tax purposes. For tax reasons, captive insurers improve access to the reinsurance market. There are also special advantages for international operations.

Allocation of Retention Costs

In order to obtain a more accurate reading of the profitability of each division, and to encourage loss control, it is necessary to allocate retention costs among the various divisions of a business. Unfortunately, retention costs are the most difficult of all the risk management costs to allocate. Thus, it would be better to charge each division with its expected losses rather than charge each division with its actual losses since these losses are determined largely by chance.
If these expected losses cannot be estimated on the basis of divisions or firm experience, a common approach is to charge each division the premium it would have had to pay if it purchased insurance. These division premiums might also be adjusted upward or downward on the basis of how the firm's retention costs (losses and expenses) compare with its hypothetical insurance costs.

**Tracking:**

- Decisions to retain, along with all other risk management decisions, must be tracked to determine whether they have been most effectively and efficiently implemented. In addition it must be determined whether retention is the most appropriate technique available. Tracking consists of four procedures:
  1. Establishing standards for judging the performance of the retention program.
  2. Analyzing the losses that have been retained against these standards.
  3. Reviewing the retention decision itself.
  4. Altering the retention decision or its implementation where this seems appropriate.

### Tracking

- Spread imputed premium across operating departments
- Establish standards
- Analyze losses
- Review retention decision
Setting Standards

Performance standards are determined in large part by the objectives of the particular risk management program as well as by the advantages and disadvantages originally considered in making the decision to retain. Generally speaking, performance standards should be established for:

1) The worst losses sustained
2) Fluctuations in the annual losses
3) The average loss
4) The expenses incurred in servicing the plan
5) The quality of those services.

Comparing Actual Losses to Established Standards:

Determining whether the actual loss experience under retention meets the standards established is quite difficult. If a loss has already exceeded the worst acceptable loss, this indicator may be enough to suggest a change in the retention program because this event was not supposed to happen. However, if the standard had been phrased in terms of the worst probable event, the risk manager would have to recognize that it was possible that the standard would be exceeded. Thus, the question then becomes how likely it is that the event will happen in the future; a question that requires sophisticated data and analysis.
Periodic Examination of Losses to Standards

Confirmation of Standards

When the retention decision is made, the risk manager has certain perceptions concerning the probable loss experience, the servicing the plan would require and the amount it would cost, the premium that would have to be paid for insurance protection, and the business' post-loss and pre-loss objectives. Since each of these factors is subject to change with time, thus making the retention decision more or less attractive, it is important for the risk manager to decide whether the retention decision needs to be adjusted or not.

Adjustment of Standards

If it is determined by analyzing the monitoring process that the retention decision should be altered, retention may be replaced in whole or in part by insurance or some other transfer device.
Retention Using Insurance:

Concept

In many cases, the business might only want to retain part of the exposure. It is common in some cases to purchase insurance that will cover only those potential losses that the firm does not wish to retain.

Application

Coverage Limitations:

In most cases, insurance does not cover all of the events that might produce a loss. Thus, the firm usually retains part of the exposure whenever it purchases insurance.

Inadequate Insurance:

One way to split the amount of the exposure is to purchase insurance that is less than the maximum possible loss. The insured then retains that portion of any loss that exceeds the policy limit. This variety of partial retention may occur because the insurer refuses to issue higher limits. In this type of case, the risk manager has no choice. In some instances, this occurs because the risk manager refuses to pay the premium for higher limits.
Retaining Excess Loss

An additional approach to retaining part of the amount of the exposure is to retain the first part of any loss. One way to do this is by using *excess insurance*. Under excess insurance, the insured retains a relatively large part of the maximum possible loss. The excess insurer does not usually provide any exposure analysis or loss control services. Unless the loss exceeds the retention level, the excess insurer does not usually participate in loss adjustment. Because liability losses are difficult to evaluate until they are settled, excess insurers often wish to become involved in claims at a lower level because of the chance that the loss ultimately will exceed the insured's retention.

Retaining Deductible

Another way to retain part of the amount of the exposure is by using deductible insurance. Under deductible insurance, the firm retains a relatively small part of the maximum possible loss. With deductible insurance, unless the loss is clearly less than the deductible amount, the insurer usually adjusts the loss and subtracts the deductible amount from the insurance proceeds. Because liability losses are difficult to evaluate until they are settled, the insurer providing deductible insurance usually adjusts all liability losses.

Retention Combined with Insurance

Advantages

There are advantages of retention combined with insurance, versus complete retention. Combined retention has the advantage of allowing the business to purchase protection against the losses in excess of the deductible amount. As a result of this protection, the risk manager's uncertainty is thereby reduced.
Many of the advantages of complete retention are also preserved. If the insurer's loss allowance is too low relative to the average insured losses in the long run, the long-run results will favor the insured. If the insurance is deductible insurance, the entity may also benefit if the insurer can provide more efficient or more effective services. In addition, the premium dollars saved by purchasing deductible or excess insurance can be invested until they are needed to pay losses or expenses.

Disadvantages

In comparison to complete retention, the retention-insurance combination may be more expensive in the short run because the actual losses retained under the combination plus the allowance in the premium for the deductible or excess insurance exceed the actual losses that would have been borne under full retention.

If the insurer's loss allowance is too high, the loss cost will be higher in the long run. Services provided by the insurer may cost more or be of lower quality than those associated with complete retention. The opportunity to keep premium dollars paid for insurance invested until they were needed would also be lost.
E. Self-Insurance

Self-insurance as a technique for treating risk has long been surrounded with confusion and controversy. Some individuals define insurance in terms of the technique of pooling; others define it in terms of a transfer of risk; still others may require both pooling and transfer. The accepted definition of insurance determines the definition of self-insurance. For those who believe that transfer of risk is a requisite for insurance, the term self-insurance is a misnomer since it permits no transfer. For those who define insurance in terms of pooling, the term self-insurance is not a misnomer but an accurate description of a process by which uncertainty is reduced or eliminated.

Since pooling requires the existence of a large number of homogeneous risks free from catastrophic loss, in order that the law of large numbers may operate to provide a substantially accurate prediction of future losses, this may be required of self-insurance. An additional requirement frequently included is the establishment of a fund by the self-insurer which is actuarially sound and available solely for the purpose of indemnifying a loss. This has been the traditional approach of insurance scholars.

More recently, however, a different concept has been developed. Self-insurance is considered to be any plan of risk retention in which a program or procedure has been established to meet the adverse results of a financial loss. Although this does not exclude either the practice of pooling or the establishment of an inviolate reserve, it includes many other practices that the business world has considered self-insurance but insurance scholars have not.
For instance, a firm may recognize that certain losses can occur but may be unable or unwilling to determine their probability. Under these circumstances special retained earnings accounts, not considered available for dividends, may be established. If a loss should occur, both the appropriate asset and the special retained earnings account would be reduced.

It should be noted that this approach does not require periodic increases in the special retained earnings account, nor does it consider the character of the assets. Alternatively, a firm may retain the first level of many risks as a deductible while insuring commercially the amount above a specified limit. These retained losses together with other unindemnified losses are then simply written off as nonrecurring expenses. In both of these approaches, the firm simply diverts its cash flow from normal uses to meet the needs of unexpected losses. Formal reserves with actuarially determined contributions are not established, and pooling with its traditional requirements of large number and homogeneity is not required.

This new concept recognizes that the traditional requisites of self-insurance are seldom, if ever, achieved in practice, but that a planned program of risk retention differs significantly from simple risk retention.