CHAPTER TWO

THE RISK MANAGEMENT

INTRODUCTION

Risk management is a scientific approach to the problem of pure risk, which has its objective the reduction and elimination of pure risks facing the business firm. Risk management evolved from the field of corporate insurance buying, and is now recognized as a distinct and important function for all business and organizations. Many business firms have highly trained individuals who specialize in dealing pure risk. In some cases, this is a full time job for one person, or even for an entire department within the company. Those who are responsible for the entire program of pure risk management (of which insurance buying is only a part) are risk managers. Although the term risk management is a recent phenomenon, the actual practice of risk management is as old as civilization itself. In the broad sense of the term risk management is the process of protecting one's person and assets. In the narrow sense, it is a managerial function of business, which uses a scientific approach to dealing with risks.

learning objectives of the Chapter

At the end of /after studying this chapter, should be able to:

- Define risk management
- Explain the fundamental objectives of risk management Depict the steps of risk management process
- Explain the various tools for treating loss exposures
- Distinguish risk management from Insurance management

1.1. Definition of Risk management

As a relatively new discipline, risk management has been defined in a variety of ways by different writers and users of the term. Although they vary in detail, most of them are related to the following definitions.

Risk management refers to the identification, measurement, and treatment of exposure to potential accidental loses almost always in situations where the only possible outcomes are losses or no change in the status.

Risk management is defined as a systematic process for the identification and evaluation of pure loss exposures faced by an organization and individuals, and for the selection and implementation of more appropriate techniques for treating such exposures. It is a discipline that systematically identifies and analyses the various loss exposures faced by organizations and individual, and the best method of treating the loss exposure consistent with the organization's goals and objectives. As a general rule, the manager is concerned only with the management of pure risks, not speculative risks. All pure risks are considered, including those that are uninsured.

Objectives of risk management

Risk management has several objectives that can be classified as:

I. Pre-loss objectives and

II. Post-loss objectives

I. Pre-loss objectives: a firm may have several risk management objectives prior to the occurrence of a loss. The most important once are economy, the reduction of anxiety and meeting external imposed obligations.

- The first goal means that the firm should prepare for potential losses in the most economical way. This involves an analysis of safety program exposures, insurance premiums, and the costs associated with the different techniques for handling losses.
- The second objective, some loss exposures can cause greater worry and fear for the risk manager, key executives and stockholders than other exposures. In such situations the risk manager wants to minimize the anxiety and fear associated with all loss exposures.
- The third objective is to meet any externally imposed obligations. This means that the organization must meet certain obligations imposed on it by outsiders. For example, the government may require a firm to install safety devices to protect workers from any harm. Therefore, the risk manager is supposed to see such externally imposed obligations and meet them.

II. Post-loss objectives: Post-loss objectives are those which operate after the occurrence of a loss. They are as follows;

a) The first post-loss objective is ***survival of the firm***. It means that after a loss occurs, the firm can at least continue partial operation within some reasonable time period.

b) The second post-loss objective is ***to continue operating***. For some firms, the ability to operate after a severe loss is an extremely important objective.
c) ***Stability of earnings*** is the third post-loss objective. The firm wants to maintain its earnings per share after a loss occurs.
d) Another important post-loss objective is ***continued growth of the firm***.
e) e) The fifth and the final post-loss objective is the ***social responsibility. This is to minimize the impact that loss has on other persons and on society***.

☞Thus, there are the pre-loss and post-loss objectives of risk management. A prudent risk manager must keep these objectives in mind while handling and managing the risk.

1.2. The risk management process

Whether the concern is with a business or an individual situation, the same general steps should be used to analyze systematically and deal with risk. This is known as risk management process.

There are four steps in the risk management process. These are:

I. Identification of potential losses
II. Measuring the losses
III. Selection of the risk management tools
Iv. Implementing and monitoring the decision made

I. Identifying loss exposures:

The first and foremost step in the risk management process is to identify all pure risk exposures. It is the responsibility of the risk manager. These potential losses include the following:

- ***Property losses*** => all losses of the firm related to its asset/properties. E.g. property damaged by different perils.
- ***Business income losses*** => reduction or total losing of its income which generated through firm's contribution. e.g. reduction in sell or market share.
- ***Liability losses*** => **refers to injuries caused to other people** or/and damages caused on their property. It is also called third party liability losses.

Liability losses can emerge through **manufacturing** and **selling of defective product**, company's motor accident to others, firms or industrial waste, professional activities made by the firm to others, etc.

- ***Death or inability of key people*** => Suffering of factory's owners, executive directors and other firm's key person's Physical injuries or death.

- ***Job-related injuries or disease*** => Suffering of factory's employee physical injuries or death at work sites.
- ***Fraud, criminal acts and dishonesty of employees*** => dishonest act or character defect of firm's employee that create loss on it.
- ***Employee benefits loss exposures*** => losses to a firm regarding its employees benefit packages.

A risk manager has several sources of information that can be used to identify major and minor loss exposures. They are as follows:

- ✓ ***Physical inspection of company's plant & machineries*** can identify major loss exposures.
- ✓ ***Extensive risk analysis questionnaire*** can be used to discover hidden loss exposures that are common to many firms.
- ✓ ***Flow charts*** that show production and delivery processes can reveal production bottlenecks where a loss can have **severe financial consequences** to the firm.
- ✓ ***Financial statements*** can be used to identify the major assets that must be protected.
- ✓ ***Departmental & historical claims data*** can be invaluable in identifying major loss exposures.

Risk managers must also be aware of new loss exposures that may be emerging. More recently misuse of the internet and e-mail transmissions by employees have exposed employers to potential legal liability because of transmission of pornographic material and theft of confidential information.

II. Measuring the losses:

The second step in the risk management process is to evaluate or measure the impact of losses on the firm. This involves an estimation of the potential **frequency and severity** of loss.

Loss frequency refers to the probable number of losses that may occur during some given period of time.

Loss severity refers to the probable size of the losses that may occur.

Once the risk manager estimates the frequency and severity of loss for each type of loss exposure, the ***various loss exposures can be ranked*** **according to their relative importance to manage.** For example, a loss exposure with the potential for bankrupting the firm is much more important than a exposure with a small loss potential.

Although the risk manager must consider both loss frequency and loss severity, **severity** is more emphasized.

- ✖ Both the **maximum possible loss** and **maximum probable loss** must be estimated.
- ✓ *The* ***maximum possible loss is the worst loss*** *that could possibly happen to the firm during its lifetime.*

- ✓ *The **maximum probable loss is the worst loss** that is **likely to happen.***

For example, if a plant is totally destroyed by flood, the risk manager may estimate that replacement cost, removal costs and other costs will total Birr10 million Thus, the ***maximum possible loss*** is 10million Birr. The risk manager may choose to ignore events that occur so infrequently.

The risk manager also estimates that flood causing more than 8 million Birr of damage to the plant is so unlikely that *such a flood would not occur more than once in 30 years*. Thus, for this risk manager, the ***maximum probable loss*** is 8 million Birr.

Catastrophic losses are difficult to predict because they occur infrequently.

E.g. earth quake for Ethiopians. However, their potential impact on the firm must be given **high priority.** In contrast, certain losses such as physical damage losses to automobiles and trucks, occur with greater frequency, but are usually relatively small.

III. Selection of the risk Management tools:

The third step is to identify the available tools of risk management. The major tools of risk management are the following:

I) Avoidance

II) Loss control *risk control techniques*

III) Retention

IV) Non-insurance transfers *risk financing*

V) Insurance *techniques*

IV. Implementing the decision made

- ✓ Implementation follows all of the planned methods for mitigating the effect of the risks
- ✓ Purchase insurance policies for the risks that have been decided to be transferred to an insurer,
- ✓ Avoid all risks that can be avoided without sacrificing the entity's goals, reduce others, and retain the rest.

Risk Control Tools

I. Avoidance

One way to control a particular pure risk is to avoid the property, person, or activity with which the exposure is associated by (1) refusing to assume it even momentarily or (2) an exposure assumed earlier, most examples of risk avoidance fall in the risk category. To illustrate a firm can avoid a flood loss by not building a plant in a flood plain. An existing loss exposure may also be abandoned. For example, a firm that produces a highly toxic product may stop manufacturing that product. Similarly, and individual can avoid third party liability by not owning a car. Product liability can be avoided by dropping the product. Leasing avoids the risk originating from property ownership.

The major advantage of avoidance is that the chance of loss is reduced to zero if the loss exposure is not acquired. In addition, if an existing loss exposure is abandoned, the possibility of loss is either eliminated or reduced because the activity or product that could produce a loss has been abandoned.

Avoidance, however, has two disadvantages. First, it may not be possible to avoid all losses. For example, a company avoids the premature death of a key executive. Similarly, a business has to own vehicles, building, machinery, inventory, etc… Without them operations would become impossible. Under such circumstances avoidance is impossible. In fact there are circumstances where avoidance is a viable alternative. For example, it may be better to avoid the construction of a company near river bank, volcanic areas, valleys, etc, because the risk is so great.

The second disadvantage of avoidance is that it may not be practical or feasible to avoid the exposure. For example, a paint factory can avoid losses arising from the production of paint. However, without any paint production, the firm will not be in business.

II. Loss Prevention and Reduction Measures

It is another method of handling loss in a risk management program. Is designed to **reduce both the frequency and severity of losses.**

Loss control deals with an exposure that the firm does not want to abandon. The purpose of loss control activities is to change the characteristics of the exposure that is more acceptable to the firm. Thus, the firm wishes to keep the exposure but wants to reduce the frequency and severity of losses.

The following are the **examples that illustrate how loss control measures reduce the frequency and severity of losses.**

- ❖ Measures that reduce loss frequency are *quality control checks*, *driver examination*, strict *enforcement of safety rules* and *improvement in product design*.
- ❖ Measures that **reduce loss severity** are the **installation of an automatic sprinkler or burglar alarm system**, **early treatment of injuries** and **rehabilitation of injured workers.**

III. Separation

Separation of the firm's exposures to loss instead of concentrating them at one location where they might all be involved in the same loss is the third risk control tool. For example, instead of placing its entire inventory in one warehouse the firm may elect to separate this exposure by placing equal parts of the inventory in ten widely separated warehouses.

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IV. Combination /Diversification

Combination is a basic principle of insurance that follows the law of large numbers. Combination increases the number of exposure units since it is a pooling process. It reduces risk by making loses more predictable with a higher degree of accuracy. The difference is that unlike separation, which spreads a specified number of exposure units, combination increases the number of exposure units under the control of the firm.

In the case of firms, combination results in the pooling of resources of two or more firms. One way a firm can combine risks is to expand through internal growth. For example, a taxicab company may increase its fleet of automobiles. Combination also occurs when two firms merge or one acquires another. The new firm has more buildings, more automobiles, and more employees than either of the original companies. This leads to financial strength, thereby minimizing the adverse effect of the potential loss. For example, a merger in the same or different lines of business increases the available resources to meet the probable loss.

Diversification is another risk handling tool, most speculative risk in business can be dealt with diversification. Businesses diversify their product lines so that a decline in profit of one product could be compensated by profits from others. For example, farmers diversify their products by growing different crops on their land. Diversification however, has limited use in dealing with pure losses.

V. Risk Financing Tools

I. Retention:

- ✖ Retention means that the firm retains part or all of the losses that result from a given loss exposure.
  - It can be effectively used when three conditions exist.
  - ✓ First, *no other method of treatment is available*.
  - ✓ Second, *the worst possible loss is not serious*. For example, physical damage losses to automobiles in a large firm's fleet will not bankrupt the firm.
- ✖ Finally, *losses are highly predictable*. Retention can be effectively used for worker's compensation claims, physical damage losses to automobiles, etc.

Determining Retention Levels:

- If retention is used, the risk manager must determine the firm's retention level, which is **the Dollar / Birr amount of losses that the firm will retain.**
- **A financially strong** firm can have a higher retention level than one whose financial position is weak.
- Though there are many methods of determining retention level, the following **two methods are very important.**
- **First**, a *Corporation can determine the maximum uninsured loss it can absorb without adversely affecting the company's earnings and dividend policy*.
- One rough rule is that the maximum retention can be set at *5% of the company's annual earnings before taxes* from current operations.
- **Second** approach is to determine the maximum retention as *a percentage of the firm's net working capital*, such as between 1% and 5%.
- Although this method does not reflect the firm's overall financial position for absorbing a loss, it measures the firm's ability to fund a loss.
- ***Paying losses:***
- If retention is used, the risk manager must have some method for paying losses. Normally, a firm can pay losses by one of the following **three methods:**

a. The firm can pay losses *out of its current net income, with the losses treated as expenses for that year.* However, when large number of losses could exceed current net income, other assets may have to be liquidated to pay losses.
b. Another method is to borrow the necessary funds from a bank.
    - A line of credit is established and used to pay losses as they occur.
    - However, interest must be paid on the loan and loan repayments can aggravate cash flow problems the firm may have.
c. Another method for paying losses is from firm's **own reserve.**

The advantages of retention are as follows;

- The firm can **save money in the long run** if its actual losses are less than the loss allowance in the insurer's premium.
- The services provided by the insurer may be provided by the **firm at a lower cost.** Some expenses may be reduced, including loss-adjustment expenses, general administrative expenses, commissions and brokerage, etc.
- **Since the risk exposure is retained, there may be greater care** for loss prevention.

- Cash flow may be increased since the firm can use the funds that normally would be held by the insurer.

Disadvantages of Retention:

The following are the disadvantages:

- The losses retained by the firm may be greater than the loss allowance.
- Actually, expenses may be higher as the firm may have to hire outside experts such as safety engineers.
- Thus, insurers may be able to provide loss control services less expensively.
- Income taxes may also be higher. The premiums paid to an insurer are income-tax deductible.

II. **Non-Insurance Transfers:**

- Non-insurance Transfers is another method of handling losses.
- Non-insurance transfers are methods other than insurance by which a pure risk and its potential financial consequences are transferred to another party.
- Examples of non-insurance transfers include contracts, leases and hold-harmless agreements.
- For example, a company's contract with a construction firm to **build a new plant can specify that the construction firm is responsible for any damage** to the plant which it is being built.
- A firm's computer lease can specify that maintenance, repairs and any physical damage loss to the computer are the responsibility of the computer firm.
- Otherwise, a firm may insert a hold-harmless clause in a contract, by which one party assumes legal liability on behalf of another party.
- Thus, a publishing firm may insert a hold-harmless clause in a contract, by which the author and not the publisher is held legally liable if anybody sued the publisher.

Advantages of Non-Insurance Transfers:

- The risk manager can transfer some potential losses that are not commercially insurable.
- Non-Insurance transfers often cost less than insurance.
- The potential loss may be shifted to someone who is in a better position to exercise loss control.

Disadvantages of Non-Insurance Transfers:

- The transfer of potential loss would become impossible, if the contract language is ambiguous.
- If the party to whom the potential loss is transferred is unable to pay the loss, the firm is still responsible for the loss.

III. **Insurance:**

Insurance is also used in a risk management program. Insurance is appropriate tool for loss exposures that have a **low frequency** of loss but the **severity of loss is high.**

If the risk manager uses insurance to treat certain loss exposures, **five key areas must be emphasized.** They are as follows;

I. Selection of insurance coverage's
II. Selection of an insurer
III. Negotiation of terms
IV. Dissemination of information concerning insurance coverage
V. Periodic review of the insurance program

(i) ***Selection of insurance coverage's:***

The risk manager must select the insurance coverage's needed. Since there may **not be enough money in the risk management budget** to insure all possible losses, the need for insurance can be divided into three categories;

(a) Essential Insurance
(b) Desirable Insurance
(c) Available Insurance

Essential Insurance includes those coverages' required by law or by contract, such as **worker's compensation** insurance. It also includes those coverages' that will protect the firm against a loss that threatens the firm's survival.

Desirable insurance is protection against losses that may cause the firm financial difficulty, but not bankruptcy.

Available insurance is coverage for slight losses that would simply create an inconvenience for the firm.

(ii) **Selection of an Insurer:**

The next step is that the risk manager must select an insurer or several insurers. Here, several important factors are to be considered by the risk manager. These include the **financial strength of the insurer, risk management services provided by the insurer** and the **cost and terms of protection**.

The insurer's financial strength is determined by the **size of policy owner's surplus, underwriting & investment results, adequacy** of reserves for outstanding liabilities, etc. The risk manager can identify the financial strength of the insurer by referring the rating given to that insurance company. Besides the financial strength, the risk manager must also consider the **risk management services by the insurer and the cost & terms of protection.**

(iii) Negotiation of terms:

After the insurer is selected, the **terms of the insurance contract must be negotiated.**

- If printed policies, endorsements and forms all used, the **risk manager and insurer must agree on the documents** that will form the basis of the contract.

- If a specially tailored manuscript policy is written for the firm, the language and meaning of the contractual provisions **must be clear to both parties.**
- If the firm is large, **the premiums** are negotiable between the **firm and insurer.**

(iv) Dissemination of information concerning insurance coverage's:

Information concerning insurance coverage's must be given to other people in the firm. The firm's employees must be informed about the insurance coverage's, **the records that must be kept, the risk management services that the insurer will provide**, etc.

(v) Periodic review of the insurance program:

The entire process of obtaining insurance must be evaluated periodically.

This involves an analysis of agent and broker relationships, coverage needed, cost of insurance, quality of loss-control services provided, whether claims are paid promptly, etc. The firm will **be indemnified after a loss occurs.** Thus, the firm can continue to operate.

Uncertainty is reduced. Thus, **worry** and **fear** are reduced for the managers and employees, which should improve their productivity. Insurers can provide **valuable risk management services**, such as loss-control services, claims adjusting, etc. Insurance premiums are income-tax deductible as a business expense.

***Disadvantages of Insurance*:**

- The **payment of premiums is a major cost.**
- Under the retention technique, the premiums could be invested in the business until needed to pay claims, but if insurance is used, premiums must be paid in advance.
- Considerable time and effort must be spent in negotiating the insurance coverage's.
- The risk manager may take less care to loss-control program since he/she has insured. **But, such a careless attitude toward loss control could increase the number of non-insured losses as**