

Basic Characteristics of Insurance

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Four characteristics of an insurance plan

1. Pooling of losses
2. Payment of fortuitous losses
3. Risk transfer
4. Indemnification

1. Pooling of losses

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

- Key mechanism is “law of large number”.
- Future losses are predicted based on law of large number.

1. Pooling of losses

Principal of loss pooling

“There should be a large number of similar, but not necessarily identical, exposure units that are subject to the same peril”, which can be concluded as

1. The sharing of losses by the entire group.
2. Prediction of future losses with some accuracy based on the law of large numbers.

1. Pooling of losses

Ex: assume that 1,000 farmers in a village of Sakon Nakorn agree that if any farmer's home is damaged or destroyed by a fire, the other members of the group will indemnify the actual costs of the unlucky farmer who has a loss. Further assume that each home is worth 200,000 Baht, and ,on average, one home burns every year.

1. Pooling of losses

In the absence of insurance, the maximum loss to each farmer is 200,000 Baht, if the home should burn.

With the pooling of loss, the maximum loss for each farmer is 200 Baht for the actual loss of 200,000 Baht.

1. Pooling of losses

In reality, the actuary seldom knows the true probability and severity of loss. Therefore, estimates of both the average frequency and the average severity of loss must be based on previous loss experience (objective risk). As the number of exposures increases, the relative variation of actual loss from expected loss will decline.

Note:

1. Pooling of loss is the spreading of losses incurred by the few over the entire group so that in the process average loss is substituted for actual loss.
2. The primary purpose of pooling, or the sharing of losses, is to reduce the variation in possible outcomes as measured by the standard deviation or some other measure of dispersion, which reduces risk.

Assume two business owners each own an identical storage building valued at \$50,000.

Assume there is a 10% chance in any year that each building will be destroyed by a peril, and that a loss to either building is an independent event.

If the two owners decide to pool their loss agreeing to pay an equal share of any loss that might occur.

Do risk pooling help reduce risk of the two owners?

From the last problem, if there is another owner joins the pool, what is the level of risk?

2. Payment of fortuitous losses

A fortuitous loss is one that is unforeseen and unexpected and occurs as a result of chance.

Law of large number is based on the assumption that losses are accidental and occur randomly.

Insurance policies do not cover intentional losses.

3. Risk Transfer

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

4. Indemnification

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

Requirements of an insurable risk

Insurer normally insure only pure risk. Not all pure risks are insurable. Six requirements of an insurable risks.

1. There must be a large number of exposure units.
2. The loss must be accidental and unintentional.
3. The loss must be determinable and measurable.
4. The loss should not be catastrophic.
5. The chance of loss must be calculable.
6. The premium must be economically feasible.

Large number of exposure units

There should be a large group of similar, not necessarily identical, exposure units that are subject to the same peril or groups of perils.

Purpose of this requirement is to let the insurer to predict loss based on the law of large numbers.

Accidental and unintentional loss

Loss should be fortuitous and outside the insured's control. If an individual deliberately causes a loss, he or she should not be indemnified for the loss.

Two purposes of this requirement are

1. If intentional losses were paid, moral hazard would be substantially increased and caused insurance premium to rise which driven away a large number of insured.

Accidental and unintentional loss

2. Law of large number requires random occurrence of events. As intentional loss is controlled by the insured, prediction of future experience may be highly inaccurate.

Determinable and measurable loss

Loss should be definite as to cause, time, place, and amount.

Ex: under a disability income policy, the insurer promises to pay a monthly benefit to the disabled person if the definition of disability stated in the policy is satisfied. Some dishonest claimants may deliberately fake sickness or injury to collect from the insurer. Even if the claim is legitimate, the insurer must still determine whether the insured satisfies the definition of disability.

Determinable and measurable loss

Purpose of this requirement is to enable an insurer to determine if the loss is covered under the policy, and if it is covered, how much should be paid.

No catastrophic loss

This is to ensure that a large proportion of exposure units should not incur losses at the same time. If not the pooling of losses principle is violated and premium will increase prohibitively.

Reinsurance is used by the insurer in order to avoid the concentration of loss exposures in a geographic area.

Calculable chance of loss

Both average frequency and the average severity of future losses with some accuracy.

Purpose of this requirement is to assess the appropriate premium.

Ex. Certain loss is difficult to insure because the chance of loss cannot be accurately estimated, and the potential for a catastrophic loss is present, i.e., floods, wars, cyclical unemployment due to an irregular basis, etc.

Economically feasible premium

For the insurance to be attractive purchase, the premiums paid must be substantially less than the face value, or amount, of the policy.

The have an economically feasible premium, the chance of loss must be relatively low.

Thoughts and Practice

Apply six requirements to consider whether risk of fire and risk of unemployment is(are) insurable or uninsurable.

Term Paper

Explore history, competitive situations (market size, number of insurers, product variety), types of insurance products, and the impact of Asean Economic Community (AEC) on Thai insurance industry.

Propose potential product(s) for the specific insurance you are interesting in.