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Review Article: Risk Management in the Insurance Industry

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Abstract: Risk can be defined as variability or instability of unexpected results. The risk is caused by the possibility of occurring more than one result and the final result is not specified and risk management is the identification, analysis and economic control of the risks that could endangers assets or earning capacity of an organization. So, the purpose of the research was to review of the theoretical and research principles that have been performed on risk management in the insurance industry. According to analysis carried out, it is proposed to deploy the corporate culture and teamwork atmosphere in order to establish and strengthen creativity in the organization.

Keywords: Risk Management, Insurance Industry, Finances.

Introduction

Insurance calculates the risk taking which is required for human creativity and distributes its unpleasant financial consequences and reduces the pains and injuries of people by doing operations. Also, it participates in the economic prosperity of the community using accumulated financial resources. Lifetime of insurance is short in Iran and its operations began about a hundred years ago with the establishment of representative offices by European insurance companies (Naghibi, 2012). Risk management is a comprehensive process which should be conducted at all strategic, operational and program levels so that to support different levels of their risk management. Risk assessment is a part of the risk management process in which there are two important factors: one is the likely incidence of risk and the other is effect of risk and by controlling each of these sections, the risk can be controlled (Ahangari & Sa'datmehr, 2008). Economic development is one of the goals which are followed strongly by many countries, including the Islamic Republic of Iran. Accordingly, emphasis on quantitative and qualitative factors of production and services is concerned always to growth and sustainable development in all countries. Suffering from a shortage of funds as an important factor of production is a serious obstacle in implementation of the development of developing countries. Islamic Republic of Iran is also a country that has suffered from the lack of investment and production and on the other hand, achieving acceptable rates of economic growth as an integral part of development has always been the goal of all development programs. But the basic point is that despite the limited capital limits economic growth, but investment security factor is effective in the growth of investment and economic development considerably (Rostami, 2006). Investment is of the steps necessary in the process of growth and economic development. The factors influencing the choice of investment are a lot of attention to investment risk and return. Investors seek to invest their funds in a place that has the most return and the least risk. Therefore, companies should focus on the risk as a limiting factor of maximizing the return besides the benefit (Khajavi, 2014). The aim of this

research was to review of the theoretical and research principles that have been performed on risk management in the insurance industry.

Features of insurance's risks

Subject of insurance contract is the risk or risk of a harmful event. The loss in property insurances is the only financial loss and the risk of insurance subject is assessed on that basis. Hence, the risk of contracted subject has features that should be carefully taken into consideration in each contract, and if any one of these features is missing, credit of contract will face serious instability undoubtedly.

1. Randomness

Given that the time of occurring the risk that is about commitment of the undertaker is not specified in the insurance contract after the contract between insurer and insured, and the contract it is not clear for both sides, therefore, such a contract is called probable. So, one of the things that the risk of contract subject should have is randomness. On the other hand, risks that are inevitable are not capable to be insured. The first and most common sense of risk to be understood in the community is the same randomness. So, the risks that happen certainly cannot be the insured. The converse is also true, and the things that are not likely to happen due to physical and legal rules are not also insurable.

2. Realness

Risk of insurance subject must be present and have the actual aspect. So at present ear, it is illogical that a person insures himself against the dangers of imaginary creatures. In fact, the subject of insurance is obvious, but the risk that is purchased for that insurance policy does not have the real aspect and is considered as a fictional risk. In addition, the illusory affairs cannot be insured. Topics have the ability to get insured that are existed in the real world and have been taken at risk. So, a father cannot insure the child that is not yet come into existence. In fact, the things can be insured that are dealt in a real and tangible way. It should be noted that the both issues (the subject and risk of insurance) should be objective and rational aspects in reality. As a result, the issue and risk of insurance both must have a real aspect. Although the risk has an accidental aspect, but the randomness must be such as to be likely to be allowed it in the world reasonably, namely, the possibility of its occurrence would become accepted by wisdom.

3. Inability to be avoided

Risk is one of the things that should not be dominated by any of the parties. The risk that has prevention capability cannot have a real sense among the risk, and thus is not insurable. Accordingly, coalescence of an insurance contract would not be correct, whenever it is determined that the announced risk by insured is of the issues that have been totally controllable and it certainly can be stifled. Essentially, risks that could be hindered cannot be considered as a risk. Then, it should be briefly noted that the risk of the subject of insurance policy should not be under the authority of any of the parties.

4. Harmfulness

Something can be insured which is harmful. There are some things in the universe that does not pose a risk or if cause the risk is such that is not considered as the risk in norm. No doubt these issues have no place in the circle of the insurance contract and insurance contracts only covers topics that cause the damage, both physical and financial, and it can be considered among the risk issues when the possible effects it seem undesirable for us.

5. Refers to the future

The main characteristic of risk is that it refers to the future and is not related to the past. This also appears due to randomness characteristic of the risk. Because affairs of the past are gone out of the randomness and have become the issues quite clear and specific. So, the events of the past cannot be insured and insurance law has known insuring risks which have happened before the insurance contract as the grounds for invalidity.

6. Legitimacy

Another important feature of the risk is legitimacy. Accordingly, criminalized acts may not be covered by insurance. For example, people cannot insure incidents resulting from a criminal act like human trafficking across

the country's borders. It does not have the feature of legitimacy. It should be noted that this case is different from the legitimacy of the transaction. It is said in expressing the direction of a contract that the ultimate cause and purpose of the contract is by the interface which provokes a person to perform the contract. So it can be said that, contract direction is indirect and mediated motive that a party has in the transaction contract. According to the Civil Code in order to legitimate direction, the parties don't need to mention the direction of transaction, but if they mention the direction, it must be legitimate, but here the problem is different and insurance policy must cover the topics mentioned and if the risk related to the problem is illegitimate, the insurance contract won't be valid (Shahidi, 2013).

Risk management

A) Survival: keeping costs under certain limits that doesn't get the continuity of company to the risk.

B) Providence: if consistent with other objectives, have key influences on the company's success.

C) Establishing an acceptable level of concern and anxiety.

D) Stability of revenues or earnings: establishing acceptable level of revenues by limiting unanticipated reductions in revenue or cash flow from losses (Sehat and Alavi, 2010).

Risk management process

The process of risk management consists of four steps:

1. Risk identification

The purpose of risk identification is to gather information about the kinds of losses that are exposed to the institution. Sources of collecting information to identify risks include of:

A) Internal resources: financial statements, written records, human resources of institute;

B) External resources: companies, agents and representatives of the insurance industry, health and safety experts, legal advisors.

2. Risk Assessment

The first stage of risk management process is to identify and understand the specific risks of the system that must be managed. Parts of assessing a risk management program consider the following basic questions:

- What types of risks are examined?
- What adverse events could be occurred?
- What is the probability of occurring these happenings?
- What are the consequences of happened events?
- How's the risk profile?

3. Risk Control

This stage of the risk management process describes how a suitable method can be identified for risk control, then evaluates this method and ultimately applies the best way to control risk and reduce it. In fact, the result and the efficiency of last stage will be determined to some extent in this stage. If there is a detailed assessment of the risks involved in a system, it is possible to design control methods compatible with the risks and to implement them. Measures conducted regarding risk control may have various methods taking into account the demands of the risk management program:

- Procedures based on eliminating the risk;
- Procedures based on reduction the amount of risk;
- Procedures based on risk transfer;
- Procedures based on risk acceptance.

The risk control and support of decisions taken in the risk management program answers these basic questions:

- What effects the risk control will have after actions?
- What are the relative advantages of each risk control methods?
- What are the best practices that can be set to the risk management goals?

4. Evaluation of performance and feedback

The current risks have been assessed in implementation of the risk management process, and a set of risk control activities is chosen to control these risks, now it is necessary to review and evaluate choose methods and ways for assessment and identification of risks as well as selection and identification of risk control methods. Evaluation of the performance of risk management process and feedback from the application of control methods will provide principles for the measurement of the impact of decisions taken on risk control and the entire of risk management program. Evaluation of the performance and feedback studies these questions:

1. What improvements are expected from decision-makings of risk control?
2. What measurements show expected output better?
3. Do the risk control measures have asked and desired effects?
4. How can be improved the overall process of risk management?

The 6 basic steps can be considered in the field of risk management:

1) Defining the specific purpose of risk management: for example in the third party insurance, it can be noted to the reduction of the cost of life and property caused by accidents.
2) Risk identification: e.g. it is essential in the third party insurance of vehicles with immunodeficiency or drivers who have no good driving records which are considered as a bad risk, because such cases increases the possibility of damage increment and exert significant losses to the insurance company.
3) Assessment of the potential damage which is performed by calculating the probability or chance of damage and the effects of damage to the company.

5. Risk neutralization

The person or organization at risk is trying to compensate for losses by diversifying risk and other contracts. Suppose an industrial plant needs crude oil to produce petroleum products. Given the state of the oil market, factory concerns the risk of increasing the crude oil prices in the future 3 months. Saving the coming months will have also the risk of falling oil prices and daily buy, the risk of increasing the price and bankruptcy of the organization. There is also a third way which is diversifying the risk and doing profitable transactions such as speculation at the same time (Liu et al., 2007).

Types of risk management

Insurable risk must be probable and coincidental with the probability rate lying between zero and one. Risk period means the risk has happened by different intensity in the past and it is likely to happen in the future. Insurer can assess the risk and calculate the premium based on probabilities using past damage experience. The risk probability is related to the insured. Based on probability, the insurer can not only meet the number of losses, but also the amount of damages that could be paid in a period. The only thing that cannot be predicted for the insurer is that if 50 cases of damages must be paid among the population of insured, it is unclear who these 50 cases are (Hajiha and Mohammadi-daiani, 2010). The types of risk management include:

A) Traditional risk management: focus on preventive risk factors from legal and physical reasons (e.g. natural disasters or fires, accidents, deaths and lawsuits).
B) Financial risk management: on the other hand, it focuses on the risks that can use financial and trade instruments to manage.
C) Intangible risk management: it focuses on risks related to human capital such as risk of knowledge, risk of communication and risk of operating processes (Rostami, 2006).

Discussion and Conclusion

The purpose of the research was to review of the theoretical and research principles that have been performed on risk management in the insurance industry. While the insurers companies are seeking to lead the processes of

pricing, asset-liability management and marketing centered on comprehensive risk analysis, they seek to design and apply their strategies on the basis of a comprehensive risk replacing the simplistic measures of non-compensational costs. Comprehensive risk of an insurance company includes risks of individual activities such as sales process of insurance policy and deal with claims of lasses in each of the fields of insurance, buying process and reinsurance management, process of distributing profits and revenues of investment. Each of these processes has been effective on the positive and negative cash flows at an insurance company and in fact, achieving efficient profitability in all levels of companies would not be possible but comprehensive effective risk management. The insurance structures are in the form of risk management in which the objective is to reduce uncertainty in the phenomena. All stages of the risk management project are applied in an insurance company. Of course, these issues are also required in other companies, but the insurance company has different and more complicated situation due to direct dealing with risks and choice. In terms of non-insurance companies, there is not right to choice about risk in general. Despite their desire to be away from risk, the risk exists and occurs everywhere. A series of risks cannot be controlled in insurance companies including the risk of recession in the financial markets. On the other hand, a wide range of risks in the insurance companies are the risks that they accept from their insured. This is where the application of risk management will be magnified more than ever. Risks associated with third party insurance of insured are as part of this risk. The process of risk management in insurance is followed by perception, recognition and measurement of risk, so as to prevent failure to pay debts and to predict and plan for future obtainable income as well as obtain and take more efficient risks and improve the performance in the channel and promote prevention of conservative policies throughout the organization. Applicable optimizing of assets and capitals is another reason of using risk management in insurance companies. Several studies have been conducted in the field of risk management. For example, Hajiheydari et al. (2011) involved classification of the risk of insured of car hull insurance using data mining algorithms. The aim of this study was to classify insured of car hull insurance in terms of risk of receiving or not receiving the compensation during the insurance period. The data required by customers over a specified period were collected at first and then the process of processing the data and identifying the different variables of classification algorithm was conducted on the final data and the results of this algorithm were compared with each other in terms of prediction accuracy. Ultimately, the algorithm c5 with the highest accuracy in the prediction of customers’ risk has been provided as proposed algorithm to the insurance company of case study. And it can be compared between the actuarial methods of rate determining and data mining methods implicitly. Using the results of that study, the predictability of the risk of insured may be tested practically. Insurance companies can percept the role of these attributes (compensational and non-compensational) in predicting risk classes of insured to use it to apply discounts and penalties. The results of Santori (2009) in a study entitled "risk identification and its assessment" showed that the best way to identify and evaluate strong and secure risks consisted of a multi-section system. This system can present the risks that are exposed to it and existing resources, comprehensive picture of the risks the company faces as well as the ways of dealing with them. In the same time, this process can act as an important part of the company's risk culture. Junying Liu et al. (2007) in the study of outcomes and key challenges of risk management and insurance in the construction industry in China have tried to establish an issue based on the views of people who are connected with the subject matter directly or dependently and have collected the data by fax or the e-mail of selected customers and contractors and controller managers and insurers and brokers and damage assessors and Chinese researchers in the field of constructing management, then they were analyzed by descriptive analysis of the data and have concluded that: 1) the cultural regards are considered as a barrier to the implementation of risk management in the construction industry is China; 2) perceptions and attitudes of contractors play an important role in the development of risk management. Therefore, organizational learning of risk management models is recommended through collaboration (teamwork) in order to improve risk management. Those researchers have introduced limitations of their study in the small sample size as well as the value and innovation of their research project have been announced due to practical aspects of the real challenges and risk management models. Wen Chang Lin and Jin Ray Lu (2007) have published an article in the journal of financial risk entitled as changeable insurance risk at risk situations and private information with the introduction of a continuous-time model. This model followed a two-factor consecutive framework so that decisions depended in the one who determined the amount of insurance premium as well as the attitude of the risk representatives. The issues were analyzed by using dynamic planning techniques and the results showed that the insured may purchase the full insurance, even if the price of insurance was statistically inappropriate and investment and risk of insurance were not correlated and demand for insurance may be affected by the history and background of risk even if the two risks were not correlated. It was also concluded that private information were as an obstacle to Pareto optimality index and the paper showed that the heavy losses can be reduced and discounted by the formation of cover changing demand (supplying the demand) with respect to the parameters of risk. Meanwhile, the novelty aspect of the article was that this study was not only the expansion of continuous time insurance demand model, but also it may be a risk

management model for an economic entity for official representatives (quoted by Lang et al, 2014). This model can also develop the ease of the relationship between the insured and the insurer and even the relationship between the insurer and the reinsurance insurer. According to analysis carried out, it is proposed to deploy the corporate culture and teamwork atmosphere in order to establish and strengthen creativity in the organization. For this purpose, some cases can be reviewed including the publication on innovation and establishing a suggestion system and induction of this issue that all the received suggestions will be discussed.

Conflict of interest

The authors declare no conflict of interest

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