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Risk Management and Major Reserve at Vietnamese Insurance Companies

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ABSTRACT: Through methodology and meta-analysis, the research team presented the content of risk, risk management in insurance enterprises and regulations, methods, and bases for setting up professional provisions. The article also identifies some limitations in regulations on setting up professional reserves at insurance enterprises. There are many methods but there are no specific instructions in the regulations, causing difficulties and a lack of legitimacy for the risk management department to evaluate the provision at the enterprise. Using the basis of deduction such as the 1980 CSO mortality table is no longer suitable for the human body in Vietnam and the current situation. Law there is no provision on provision for compensation for applications that have refused to pay within 3 years from the date of refusal. Finally, the research team believes that, in order to improve the effectiveness of risk management, the setting up of professional provisions should have some changes in regulations such as specifying the methods of provisioning, building a Mortality rate suitable to the human body in Vietnam and put into practice as a basis for making professional provision is very necessary or supplementing the requirement that insurers must make a claim reserve within a short period of time 3 years from the year the insurance enterprise refuses the application for insurance payment.

KEYWORDS: Insurance enterprises, Risk management, Major reserve, Vietnam

1. INTRODUCTION

Insurance is an important financial sector in Vietnam. Insurance is not only a means of moving risk, but today insurance has become one of the effective capital mobilization channels for the economy. Risk management is the identification, assessment, reasonable and economical application of resources to reduce risks. At the same time, risk management also monitors and controls the probability of occurrence or effects of unfortunate events or maximizes the realization of opportunities so that business activities in the insurance enterprise are not affected benefit and achieve high efficiency. The technical reserve is the sum of money that an insurance enterprise must set aside for the purpose of paying for predetermined insurance liabilities and arising from signed insurance contracts. So, how is the setting up of insurance reserves related to risk management? According to the circular on risk management, internal control and internal audit of insurance enterprises, insurance risks are risks arising from fluctuations in technical factors related to insurance premium calculation insurance and setting up insurance reserves. Thus, provisioning is one of the activities that can cause risks in an insurance enterprise. Therefore, in setting up insurance reserves, there needs to be continuous supervision, inspection and evaluation of the risk management department to avoid setting up a professional reserve with the wrong method or incorrect ratio. In addition, the risk management department needs to control the use of the professional reserve fund in investment activities, comply with regulations and laws in the insurance business, and avoid legal risks when not making provisions professional room.

2. THEORETICAL BASIS

2.1. Risk

When we talk about risk, we all think that risk is a bad thing. Risk is always present in all of our activities and brings about negative consequences that we do not want. Rosa (1998) defines risk as a situation or event where something of human value (including the person himself) is threatened and the outcome is uncertain (pp.15-44). The International Risk Governance Council [IRGC] defines risk as the uncertain consequence of an event or activity on something that people value (IRGC, 2005). In the circular on risk management, internal control and internal audit of insurance enterprises, reinsurance enterprises, branches of foreign non-life insurance enterprises, and branches of reinsurance enterprises in the case of foreign insurance, "Risk is the possibility of a loss that reduces income and capital, leading to a decrease in the capital adequacy ratio or limiting the ability of the insurance enterprise to achieve its business objectives" (Circular) Number: 70/2022/TT-BTC, 2022, para 1). We see many definitions of risk, the above definitions show that risk is a way of calling things that are not good. Risks occurring in an insurance enterprise reduce income, loss of capital safety and failure to achieve business results. In addition, in Circular 70, there are also important types of risks including insurance risk, market risk, operational risk, counterparty risk and other risks (Circular No: 70/2022) /TT-BTC).

2.2. Risk management

According to Dionne (2013), modern risk management appeared in 1955. The concept of risk management in the financial sector was changed in the 1970s when it became the priority of companies including insurance businesses in the face of risk fluctuations related to interest rates and market profits (147-166). According to the regulations on risk management, internal control and internal audit of insurance enterprises, risk management in insurance enterprises is the identification, measurement, monitoring and control of risks (Circular: 70/2022/TT-BTC). The role of risk management is to identify, measure, monitor and control risks in an insurance business. According to regulations, insurers must identify risks, measure, monitor, and control risks in a timely and accurate manner. Identify the material risks that insurers may face in their business activities. Measure the level of risk on the basis of determining its impact on the operation of the business. Monitor risk status and timely assess and warn risk risks to ensure safe business operations. Finally, control the implementation of the business process according to the corresponding risk limit.

2.3. Making provision at non-life insurance enterprises

According to the provisions of Article 53 of Decree No. 73/2016/ND-CP, non-life insurance enterprises must set up major insurance reserves corresponding to the retained liability. In this regulation, it is also allowed to choose the provisioning method and get approval from the Ministry of Finance as prescribed in Article 58 of Decree No. 73/2016/ND-CP before applying. In the case of applying a different method of setting aside from the regulations, the non-life insurance enterprise must prove that the new method provides accurate results, and the major reserve will be approved according to regulations.

Retention Liability = Original Insured Liability + Reinsurance Liability - Reinsurance Liability.

Method of setting up a major reserve for insurance at non-life insurance enterprises

Provision for unearned fees

The unearned premium reserve has two methods of setting up, namely the percentage method of the total premium and the coefficient method of the insurance policy term. The percentage method of deduction for contracts with a term of less than 1 year for the carriage of goods by road, sea, rail, air, and inland waterways will be equal to 25% of the total insurance premium within the financial year of this insurance business. The remaining insurance operations are equal to 50% of the total insurance premiums in the fiscal year of this insurance business. The method of setting up according to the coefficient of the term of insurance contracts issued in a quarter or a month by non-life insurers is evenly distributed among the months of the quarter and the month. The general formula for these cases is as follows:

Unearned premium reserve = Premium x Unearned premium rate

The daily reserve method can be applied to calculate the unearned premium reserve for insurance and reinsurance contracts of any term according to the following general formula:

$$\text{Unearned fee reserve} = \frac{\text{Premium x Number of remaining insurance days of the insurance policy, reinsurance}}{\text{Total number of insurance days under insurance and reinsurance contracts}}$$

According to Chi & Cu (2009), the provisions of Vietnam's law on setting aside unearned fees are similar to international practices and the laws of many countries on the provision of unearned fees. The method of provisioning daily is the most accurate, but the provisioning is very complicated, so it is not commonly applied. In the European region, most insurers make quarterly and monthly deductions to ensure their ability to pay insurance premiums (p.399).

Set up compensation provision

There are two methods of setting up a compensation provision: making a claim provision based on the claim file and making a compensation provision based on the claim generation coefficient. In the first method, determine the level of indemnity provision that can be made for each insurance line according to the method of estimating the amount of indemnity for each loss under the announced or announced insurance liability claim for compensation. Provision for indemnification for losses incurred under insurance liability but not yet notified or claimed is made according to the following formula:

$$\text{Provision for compensation for losses incurred that have not been notified or claimed for the current fiscal year} = \frac{\text{Total compensation for losses incurred unannounced or unclaimed for 3 consecutive preceding fiscal years}}{\text{Total compensation incurred for 3 consecutive preceding fiscal years}} \times \text{The amount of compensation incurred by the current fiscal year} \times \frac{\text{Net revenue from the insurance business for the current fiscal year}}{\text{Net revenue from the insurance business in the previous fiscal year}} \times \frac{\text{Average claim delay for the current fiscal year}}{\text{Average claim delay for the previous fiscal year}}$$

The method of making an indemnification provision according to the indemnification coefficient is applied to make an indemnification provision for each insurance business based on the principle of using historical claims data to calculate the coefficients incurred indemnification to predict the amount of non-life insurers.

Compensation provision for large fluctuations in losses. Annually, a non-life insurer must make a compensation provision for large fluctuations in losses, even if the enterprise or branch uses (or does not use) this reserves to compensate for large fluctuations in losses during the financial year. Each year, the maximum reserve is 1% to 3% of the retained premium for each insurance business and the setting up will continue until this reserve is equal to 100% of the retained premium in the fiscal year.

2.4. Setting up a major reserve for life insurance

Life insurance enterprises must establish major insurance reserves according to the provisions of Article 54 of Decree No. 73/2016/ND-CP. Life insurance enterprises need to actively choose the method and basis for setting up the major reserve of insurance according to regulations. Major reserve of life insurance includes Mathematical reserve, Unearned premium reserve, Compensation reserve, profit sharing reserve, committed interest reserve and balance guaranteed reserve. Let's find out the method and basis for setting up a major reserve for each type of reserve mentioned above.

Mathematical fallback

The reason it is named mathematical contingency is because the calculation is actuarial in nature (Yeatman, 2001, p.322). There are different methods of determining the mathematical reserve such as the past method, future method, and Zillmerized method, calculated on the gross or net premium (Pung & Cu, 2011, pp115-120). For term insurance, term insurance, mixed insurance, whole life insurance, and term payment insurance. Life insurers are entitled to actively choose the method of making a mathematical provision for insurance contracts with a term of more than 1 year. The mathematical reserve method must ensure that the result is not lower than the reserve calculated by the net premium method for insurance contracts with a term of 5 years or less. For insurance policies with a term of more than 5 years, the net premium method is adjusted by a Zillmer coefficient of 3% of the sum insured. The adjusted net premium used to calculate the provision cannot be more than 90% of the actual premium earned. The basis of the deduction is Commissioners Standard Ordinary [CSO] 1980 and other technical facilities consistent with insurance benefits. The maximum technical interest rate does not exceed 70% of the average interest rate of Government bonds with a tenor of 10 years or more issued in the last 6 months prior to the time of provisioning. The technical interest rate used to make provisions must not exceed the average investment rate of the previous four quarters. For universal life insurance products, unit-linked insurance, voluntary retirement insurance, and mathematical reserve, including: Insurance risk reserve, Major reserve for the universal part, Major reserve for with the unit-linked part, Major reserve for retirement insurance accounts, Provision for other insurance benefits besides insurance risk and investment benefits.

The unearned premium reserve is calculated on the gross premium according to the methods specified by the Major reserve of non-life insurance

Compensation reserve

Provision for claims under insurance liability but unresolved at the end of the financial year. It is deducted according to the method of records with the level of deduction calculated based on statistics of the amount of insurance that can be paid for each record that has announced or claimed to be indemnified by the life insurance enterprise but until the end of the financial year has not been resolved. Provision for indemnification for losses incurred under insurance liability but not yet notified or claimed: only applicable to insurance contracts with a term of 01 year or less.

Provision for profit sharing

Provision for announced profit. The basis for making provision for profit sharing is similar to the basis for making provision for mathematics. The actuary is responsible for ensuring that the provision for profit sharing meets the obligations committed in the insurance contract and the law. For contracts for profit sharing in the form of cash, the calculation formula is as follows:

Provision for sharing interest	=	The total value of the declared interest divided by the policyholder during the fiscal year	+	The total accrued value of declared interest payments distributed to policyholders in previous financial years but not yet paid

For interest-sharing contracts in the form of accrued dividends

Provision for sharing interest	=	The present value of the total accumulated premiums announced divided by the policyholder as of the current fiscal year

Provision for undisclosed profits. The provision for undisclosed profits is the present value of the profits that will be further distributed to the policyholder in the future to ensure that the provisions of Clause 2, Article 76 of Decree No. 73/2016/ND-CP are calculated equal to the assets of the contract owner fund participating in profit sharing minus the fund's liabilities, the source of support from the owner and the profit allocated in the current year.

Provision for a guarantee of committed interest rates. In case the investment market fluctuates or the investment results from the insurance premiums being lower than the committed interest rates, the insurance enterprises shall make a provision to secure the committed interest rates. The level of deduction corresponds to the difference between the investment results from the insurance premium source and the committed interest rate of the enterprise to the customer as agreed in the insurance contract.

The reserve ensures balance. For life insurers, the annual provision is 1% of the life insurer's pre-tax profit, which is set aside annually until this reserve is equal to 5% of the premium collected in the year the financial year of the business.

3. METHODS

In this study, we use the methodology and the meta-analytical method. The methodology is the method commonly used in many scientific research reports. Methodology through the use of a system of arguments and theories as the basis and foundation for the theoretical basis of the research problem. Based on information gathered from the text of the Law on Insurance Business, the Circular stipulates risk management, internal control and internal audit of insurance enterprises, reinsurance enterprises, branches of insurance enterprises and insurance companies. In the case of foreign non-life insurance enterprises, branches of foreign reinsurance enterprises, and Circular guiding the method of setting up a major reserve of insurance in Vietnam, the research team has presented the main points in this article in turn. In addition, the research team uses analytical methods to evaluate the relationship between risk management and major reserve. The research team also relied on the financial statements of Baoviet Life Corporation as an empirical example to evaluate methods of setting up major reserves at insurance enterprises.

4. RISK MANAGEMENT AND MAJOR RESERVE AT INSURANCE COMPANIES

4.1. Reasons to make a major reserve

Regulations on setting up major reserves in insurance business activities are very important and recognized by law as a compulsory liability for insurance enterprises. We believe there are three reasons leading to the need to set up a major reserve in insurance businesses.

Firstly, the liability of the insurer usually arises after the insurance premium is collected, or in other words, the insurer is always in a state of readiness to pay the insurance premium. Therefore, to ensure solvency, insurers need to set aside a portion of the premiums received to set up provisions suitable for their responsibilities.

Secondly, the insurance business has many risks, so it is essential to be prepared for large fluctuations in the risk of having to pay insurance premiums to ensure the normal operation of the business actual insurance.

Third, the peculiarity of the insurance business is that the revenue of the insurance enterprise arises before the cost of insurance payment. In a life insurance business, in many cases, revenue from insurance premiums can arise long before the cost of insurance payments, so transferring insurance premiums to reserve items is a way for insurers to Insurance splits costs, ensures stability in determining profits of insurers as well as fulfills corporate income tax obligations to the state.

4.2. Consider setting up a major reserve at a life insurance business

National laws often stipulate quite specifically the types of reserves that insurers must set up to ensure the interests of the insured. The types of reserve required for life insurance business are usually mathematical reserve, unearned premium reserve, payment provision, balance provision, and profit sharing reserve. The mathematical reserve is the most important reserve for the life insurance business. However, in essence, a mathematical reserve is a provision to ensure the solvency of an insurance enterprise in accordance with the nature of the life insurance business. The laws of many countries also allow insurers to make a provision for payment as soon as they discover an insured event has occurred but have not yet made a claim. In addition to the responsibility of setting up major reserves, the insurance business laws of other countries also require insurers to set up compulsory reserve funds. The level of setting aside required reserves varies from country to country, determined either as a percentage of capital or a fixed rate. Different major reserves, which are established from insurance premiums and therefore belong to the category of Liabilities, required reserves are established from the after-tax profits of insurers Funds section of the financial statements.

Table 1. Example of setting up a major reserve at Baoviet Life Corporation Unit: Billion VND

Criteria	2019	2020	2021	2022
Revenue from insurance business	25,416	28,011	30,536	33,174
Net premium revenue	25,415	28,002	30,531	33,169
Major reserve	78,865	97,948	118,332	139,796
Mathematical redundancy	75,547	93,091	112,071	129,251
Unearned fee provision	181	201	211	231
Compensation provision	99	66	86	90
Provision for sharing interest	1,813	1,935	2,157	2,570
Redundancy ensures balance	95	107	117	130
Minimum investment commitment interest provision	1,129	2,548	3,688	7,526
Total compensation and insurance payments	-23,158	-26,553	-29,206	-32,421

Source: Synthesized data from financial statements

4.3. Some points need to be modified in the setting up of the major reserve for insurance

According to the provisions of Circular No: 50/2017/TT-BTC, each type of reserve has many different calculation methods, so in principle, the Ministry of Finance allows insurers to actively choose the method of provision but must be approved by the Ministry of Finance before implementation and must not change the method of setting aside in the fiscal year. For mathematical reserves, if previously Circular 156/2007/TT-BTC only stipulates one method of making mathematical provisions, which is the net fee method, now Circular No.: 50/2017/TT- BTC allows insurers to choose from many methods of mathematical provisioning according to international practices. However, there are now many different extraction methods. Therefore, if the methods and calculation methods are not clearly specified, it will be difficult for the internal risk management department to assess whether the mathematical provisioning activities of the insurance enterprises are in accordance with the regulations state or not.

The specification of the technical basis for evaluating the mathematical provisioning method based on the 1980 CSO mortality table is now no longer relevant. Because the CSO 1980 is based on the population statistics of developed countries such as Europe. Therefore, the 1980 CSO is unlikely to hold true for the population of Vietnam, even in the present period. In the world today, the mortality rate table issued in 2001 (called CSO 2001) with many statistics has changed compared to before. Besides, many countries often have their own mortality tables such as the United States, Australia, and Israel.

The Ministry of Finance does not have specific guidance on the methods of deduction, leading to inconsistent application among insurers, even when these insurers apply the same method. For the Zillmer adjusted net premium method of 3% of the insurance amount to be used as a reference to other methods in monitoring activities, Circular No: 50/2017/TT-BTC did not provide specific guidance on the method of monitoring deduction method. The absence of specific instructions will make it difficult for the risk management department to control the solvency of the insurer because of the lack of legal basis.

In practice, insurers in Vietnam make relatively adequate provisions, but there are many cases where insurers make improper provisions, typically the setting up of indemnity reserve for records that have refused to pay (Hau & Hung, 2013, p.46). Thus, the business purpose is to ensure the major reserve but accidentally did the wrong thing. In the Regulations on indemnification provisions, there are still shortcomings in cases where insurance enterprises refuse to pay insurance premiums. When there are not enough grounds to pay the insurance, the insurer has the right to refuse to pay. According to Circular No.: 50/2017/TT-BTC, for the dossiers which have been refused to pay by the insurer, the insurer is not entitled to make a claim reserve. However, according to the provisions of the Law on Insurance Business, the insurance buyer has the right to sue within 3 years from the date the insurance enterprise refuses to compensate. Thus, the possibility that the insurer has to make indemnification may still occur, but it is not allowed to make a provision. This can cause risks in the operation of the business.

5. DISCUSSION

Through the above research, we see that the setting up of a major reserve for insurance still has some limitations that affect the quality of risk management in enterprises. In order to improve the effectiveness of risk management, the setting up of a major reserve requires some changes in regulations such as clearly stipulating methods of setting up mathematical reserves according to international practices accepted by the Ministry of Finance instead of only general rules as of now. Vietnamese people have many differences compared to people in European countries (body mass index, life expectancy), so the Ministry of Finance needs to coordinate with experts in the field of insurance and insurers to build a death rate table suitable to the human body in Vietnam and put into an application as a basis for deducting the major reserve is very necessary. In addition, it is necessary to add to the circular specifically guiding the setting up of major reserves on the Zillmer 3% adjusted net premium method and supplement the requirement that insurers must make a claim reserve within 3 years. from the year the insurance enterprise refuses to file a claim for insurance payment.

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