

# Risk Management Analysis in Insurance Sector

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**Abstract:** *To protect both investors and their investments, general insurance companies have engaged in substantial risk management efforts over the years. The potential in the Indian general insurance market and the participants' ensuing focus on attaining business expansion are the two factors that are currently of utmost importance to the general insurance industry. The second factor is the ongoing process of calibrated de-tariffing. De-tariffing has given players a lot of chances to tap markets, and it may lead to even more opportunities in the future, but it has also put the responsibility of fair pricing on the players themselves. Players are now better prepared, placing more emphasis on detecting risk factors and pricing products according to risks as a result of this. The players have lowered the rates even in previously unprofitable enterprises as an early reaction to the pressure of a free market setting. Due to the advent of private players, corresponding policy changes, the current reality of unprofitable books, and capital eroding as a result of unsustainable claim ratios, the general insurance market places tremendous importance on an effective risk assessment and management.*

**Keywords:** Asset Liability Management, Enterprise Risk Management, General Insurance, Risk Assessment, and Risk Mitigation.

## I. INTRODUCTION

Any rising industry deals with a variety of internal and external threats. In contrast, the majority of the hazards in sectors that have been there for a while come from the internal activities of the various actors. Instead of internal operations, an industry that is evolving typically faces greater risks from the competitive and regulatory contexts. To achieve growth in a cutthroat market, one must concentrate on sales while scaling operations quickly by adding channels and expanding their geographic reach. Increased emphasis on sales and company growth entails a number of hazards for financial success. These hazards may have a negative impact on a company's performance or possibly their survival. Due to the nature of their business, general insurance businesses are on the receiving end as both an insurer and an insured. Understanding the external and internal risks relating to the general insurance business industry, as well as the strategies used by insurers and insured to efficiently manage their risks, is therefore essential to the business' performance.

## II. LITERATURE REVIEW

The general insurance players are susceptible to operational and financial risks of both themselves and the insured because they are in the business of covering the risks of other corporate and social organisations. The correct identification of structural functions, their insurability, sufficiency, and economic viability hold the secret to success for an effective risk management of the same. The risk may also be reduced by risk sharing through microinsurance pooling, suitable quantification, and precise result estimation in the event of an underwritten threat. The significance of knowledge about risk transfer in the risk management process for successful risk mitigation and adaptation by core business cannot be emphasised. By incorporating innovation, certification will give the instruments even more depth. To further improve the penetration of general insurance and lower the steadily rising claim ratio, encouragement of public-private partnerships and a solid financial, legal, and political framework will be crucial. Mendoza and Ronald (2009) present a concept for a regional risk-sharing framework called the Asian Rice Insurance Mechanism (ARIM), which might be used as a long-term solution by the area to the problem of food security. It suggests that by assisting nations in the region more effectively in managing the risks associated with fluctuating rice production and trade, resulting from new structural factors such the rising and changing food demand, ARIM might serve as a regional public good. The dependence of environmental risk on social, scientific, economic, and cultural processes has also been

covered by Lubken et al. (2011) in their discussion of environmental risk, risk management, and uncertainty. They spread the myth that historical patterns of resilience and vulnerability are what cause natural disasters. Kunreuther et al. have researched the contribution of the insurance industry to mitigating the effects of global warming as well as the difficulties insurers and reinsurers encounter in addressing the effects of climate change on their risk management methods (2007). By concentrating on natural disaster insurance, the study has looked at the concerns of attribution and insurability. The effectiveness of insurance responses to climate risk was examined by Phelan et al. (2011), who also offered fresh criticisms of the insurance system's reactions to climate change and the accompanying political economics perspective on the topic. According to a complex adaptive system analysis, the only practical way to handle medium- and long-term climate risk is through ecologically appropriate mitigation, both for the insurance system as a whole and for human societies as a whole. Akter et al. have researched a further crucial aspect of commercial viability (2009). According to the study's findings, Bangladesh does not have a homogeneous crop insurance market structure. It underlines the need to carefully evaluate the socioeconomic traits of rural farm communities as well as the nature of the disaster risks faced by farm households when creating such an insurance plan. The characteristics of adaptation and decision-making in the insurance sector were examined by Mauelshagen & Franz (2011). They have made connections between the historical assessment and current worries about global warming and ways to modify insurance to cover related losses. The French Flood Prevention Action Programme's effects on risk distribution have been examined by Erdlenbruch et al. (2009) in France. The survey's findings suggested that the proposed policies might not be commercially viable. Then, a number of more workable risk-sharing options are considered, including insurance plans, government intervention, and local institutions. Microinsurance programme spatial pooling could lower these capital needs. According to a study by Meze-Hausken et al. (2009), when developing index-insurance schemes, spatial pooling may be a desirable alternative for micro-insurers and warrant a thorough case-by-case investigation. Additionally, Botzen et al. (2009) looked at how insurances can lessen the uncertainty surrounding personal losses due to climate change. According to the estimation results, a lucrative flood insurance business may be possible, and climate change may even make selling flood insurance more profitable. In the Swedish and global reinsurance industries, Rohland & Eleonora (2011) have examined risk management and quantification of risk in the wake of fire. The paper claims that by ignoring natural origins of fire and accompanying risks, categorising fire as a man-made hazard misrepresents its overall risk.

### **III. THREATS TO THE INSURANCE INDUSTRY**

Due to the nature of their industry and the socioeconomic environment in which they operate, participants in the general insurance industry are likely to be exposed to a variety of financial and non-financial risks, including capital risk, enterprise risk, asset liability management risk, insurance risk, operating risk, and credit risk.

#### **3.1 Economic Risk**

Given that the insurance industry is fundamentally a financial one, it is subject to a variety of financial risks, including those relating to capital structure, capital (in)adequacy, exchange rates, interest rates, investments, underwriting, catastrophic risk, reserve risk, pricing, claims management, reinsurance, policy holders and brokers, claims recovery, and other debtors. The insurance industry implements a variety of strategies to manage financial risk by using methods like interest rate hedging and reserving that are based on financial modelling but come with an inherent "model risk" because such financial models may be unable to accurately predict the actual results within an acceptable margin of error.

#### **3.2 Non-Financial Risk**

Non-financial risk management has become more important in recent years as a result of (i) an increase in operational losses, (ii) the industry's increasing reliance on sophisticated financial technology, which carries a risk of failure at times, (iii) the rate at which the deregulated insurance system is changing, and (iv) the process of globalisation, which has paved the way for the entry of foreign players. The other non-financial risk that the insurance industry faces in addition to these is the "volatility" factor, which has an impact on the general insurance business's future cash inflows and, as a result, its value. This is because "the value of an insurance company is the present value of its future net cash inflows adjusted for the risks it undertakes." Studies have shown that the operations of the company, rather than

financial hazards, are a significant source of volatility. Therefore, the operating risk may come from either inadequate or ineffective external events like external fraud and damage to physical assets from natural disasters or other uncontrollable events, or from internal processes like employment practises, workplace safety, and internal fraud.

#### **IV. GENERAL INSURANCE'S RISK MANAGEMENT PROCEDURES**

In the general insurance industry, the insured's risk management strategy generally takes the form of "enterprise risk management," whereas the insurer's strategy typically involves "risk based capital management" and "reserving."

##### **4.1 The insured has implemented a risk management strategy**

Any organisation must make every effort to reduce the risk of loss resulting from unforeseen circumstances like earthquakes, floods, fires, theft, and so on. The insured must engage in an effective risk management drive to make sure that a risk minimization and mitigation system is in place. Enterprise risk management is the term for the method the insured can use to manage such risks.

##### **4.1.1 Organizational Risk Management (ERM)**

ERM is the process of organising, directing, and managing an organization's activities in order to reduce the impact of risk on its assets and revenue. ERM is quickly becoming a common business approach for managing risk as authorities and markets around the world evaluate companies on their success in managing risk.

##### **4.1.2 Monitoring and reporting of risks**

Monitoring risks over time to assess how well they are being managed and to cope with emerging trends is another essential component of ERM. It is less crucial to compare them than it is to establish a baseline that can be followed across reporting periods. They must be constantly reminded by the insured that just because a risk cannot be accurately measured or compared to others, it should not be discounted or left out of the ERM strategy. Even though it is challenging to quantify a risk's financial impact, its occurrence can nevertheless be noted and followed. A mitigation plan is created when various threats' relative seriousness and likelihood are evaluated. In some situations, a risk mitigation method can actually make another danger more likely or severe, in which case the trade-off needs to be carefully considered.

ERM's objective is to offer the best protection against unfavourable events, even though it can increase a company's reserve or liability coverage requirements. An ERM framework may in some situations lower costs by preventing the double counting of risks by earlier risk management initiatives. In any event, a wider range of hazards is likely to be taken into account under ERM.

##### **4.3 Risk reduction strategies used by the insurer**

"Risk-based capital management" and "reserving" are the two basic categories into which the risk management strategy used by the insurer in the general insurance sector can be divided. Perhaps it is not out of place to mention once more that the management role, capital and solvency margins, and risk-based capital are included in the "risk based capital management technique" category, while the "reserve" category of risk management techniques includes the unearned premium reserves, unexpired risk reserves, outstanding claim reserves, incurred but unreported reserves, catastrophe reserves, and claims equalisation reserves.

#### **V. CONCLUSION**

The purpose of the study is to determine the risks that the insured and the insurer face, particularly in India, as well as the methods by which these risks are effectively managed. The study shows that in India, risks of both a financial and non-financial kind are typically faced by both the insured and the insurer. Capital risk, asset/liability management risk, insurance risk, and credit risk are the categories for both of them's financial risks. Enterprise risk and operational risk are the categories for their non-financial hazards. Capital structure risk and capital (in) sufficiency risk are both parts of the capital risk. Exchange risk, interest rate risk, and investment risk are all part of the asset liability management risk. In a similar way, credit risk encompasses reinsurance risk, policyholder and broker risks, claims recovery risk, and other debtor's risk, whereas insurance risk comprises underwriting risk, catastrophe risk, reserve risk, and claims

management risk. Similar to how the operational risk comprises regulatory risk, business continuity risk, IT obsolescence risk, process risk, regulatory compliance risk, and outsourcing risk, the enterprise risk also contains reputation risk, parent risk, and competitors risk.

Enterprise risk management, which consists of planning, risk tracking and reporting, implementation, tools, and risk management, is a common risk management strategy used in the general insurance sector for the insured. While for the insurer it takes the form of managing risk-based capital and reserving, the former consisting of management role, capital and solvency margins, and risk-based capital, and the latter consisting of unearned premium reserves, unexpired risk reserves, outstanding claim reserves, incurred but not reported reserves, catastrophe reserves, and claims equalisation reserve.

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