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THE ROLE OF RISKS AND RISK MANAGEMENT IN MANAGING THE SOLVENCY OF INSURANCE COMPANIES

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Abstract: The study analyzes the formation and development of a risk-based regulatory approach to ensuring the solvency and financial stability of insurance companies. It examines the shift from administrative methods to financial and economic mechanisms, highlights the role of macroprudential policy, and considers the requirements of the Solvency II standards. The results justify the need to develop an integrated risk management system and apply modern approaches to assessing insurers' financial stability.

Key words: insurance market, solvency, financial stability, risk-based approach, macroprudential regulation, Solvency II, risk management, capital adequacy, financial supervision, insurance companies.

Annotatsiya: Tadqiqot sug'urta tashkilotlarining to'lovga qobiliyatliligi va moliyaviy barqarorligini ta'minlashda riskka asoslangan tartibga solish yondashuvining shakllanishi va rivojlanish jarayonlarini tahlil qilishga bag'ishlangan. Ishda sug'urta sektorida ma'muriy usullardan moliyaviy-iqtisodiy mexanizmlarga o'tish tendensiyalari, makroprudensial siyosatning ahamiyati hamda Solvency II xalqaro standartlari doirasida joriy etilayotgan talablar yoritilgan. Tadqiqot natijalari sug'urta tashkilotlarida integratsiyalashgan risk-menejment tizimini rivojlantirish va moliyaviy barqarorlikni baholashda zamonaviy yondashuvlarni qo'llash zarurligini asoslab beradi.

Kalit so'zlar: sug'urta bozori, to'lovga qobiliyatlilik, moliyaviy barqarorlik, riskka asoslangan yondashuv, makroprudensial tartibga solish, Solvency II, risk-menejment, kapital yetarliligi, moliyaviy nazorat, sug'urta tashkilotlari.

Аннотация: Исследование посвящено анализу формирования и развития риск-ориентированного подхода к регулированию в обеспечении платёжеспособности и финансовой устойчивости страховых организаций. В работе рассматриваются тенденции перехода от административных методов к финансово-экономическим механизмам, раскрывается значение макропруденциальной политики и требований стандартов Solvency II. Результаты обосновывают необходимость развития интегрированной системы риск-менеджмента и применения современных подходов к оценке финансовой устойчивости страховщиков.

Ключевые слова: страховой рынок, платёжеспособность, финансовая устойчивость, риск-ориентированный подход, макропруденциальное регулирование, Solvency II, риск-менеджмент, достаточность капитала, финансовый надзор, страховые организации.

INTRODUCTION

The key feature of the evolutionary development process in the field of assessing and regulating solvency and financial stability lies in the growing tendency to shift from administrative methods to financial and economic mechanisms in the regulation of insurance activities. This process is clearly reflected in the formation and widespread application of new regulatory standards, as well as in the implementation of a risk-based approach[1].

At the present stage, the transition to a regulatory model that takes risks into account is becoming one of the key directions within the public administration system. This approach is increasingly being applied not only to the real sector of the economy, but also to the financial system. As a result, the concept of a "risk-based approach" is interpreted in various ways and encompasses regulatory mechanisms based on consistent and systematic risk assessment[2].

1 https://www.cbr.ru/Content/Document/File/41412/concept_solvency_II.pdf
2 http://igsu.ranepa.ru/analytics/p25099/

The specific characteristics of the financial sector give rise to particular requirements when applying this approach. This is clearly confirmed by the experience of the global financial crisis of 2007–2009. That crisis demonstrated the insufficient preparedness of financial markets for systemic risks, which led supervisory authorities to reorient their activities toward macroprudential policy. At the same time, the need to maintain an acceptable level of risk and to continuously monitor key financial indicators and risks became a pressing issue.

REVIEW OF THE LITERATURE

The issue of ensuring the solvency of insurance companies is directly related to financial stability, risk management, and effective management systems, and this area has been widely covered in the economic literature from various perspectives. In particular, the role of risk management in enterprise activity, as well as mechanisms for identifying and managing financial risks, is of particular importance in the insurance sector.

In the studies conducted by N.V. Tereshchenko and N.S. Yashin, quality management methods are interpreted as an important managerial tool for ensuring the stability of enterprise operations. The authors substantiate that process standardization, early identification of risks, and improvement of the effectiveness of managerial decision-making can be achieved through quality management systems. This approach makes it possible to reduce operational and financial risks in insurance companies and, consequently, strengthen their solvency.

Issues related to assessing the financial condition of enterprises and forecasting bankruptcy risk have been thoroughly analyzed in the research of V.A. Jurov. Using the example of Japanese public companies, the author examines the development of bankruptcy prediction models and demonstrates the practical significance of early risk identification based on financial indicators. This approach can also be applied to the activities of insurance companies, serving as an important methodological basis for the early assessment of risks that threaten solvency.

The issues of financial stability and insolvency of insurance organizations are examined directly from the perspective of the insurance market in the studies of N.V. Kirillova. The author analyzes the financial condition of insurance companies, their ability to meet obligations, and cases of insolvency arising from improper risk assessment. Particular emphasis is placed on the importance of the adequacy of insurance reserves, asset quality, and risk diversification mechanisms in maintaining solvency.

The factors and trends in the development of financial intermediation have been systematically studied by V.K. Burlachkov, whose research extensively examines the role of financial institutions, including insurance companies, in the economy. The author substantiates that the development of financial intermediation serves to redistribute risks and ensure financial stability. This approach highlights the necessity of improving risk management systems in insurance companies and using modern financial mechanisms in managing their solvency.

Overall, the reviewed literature demonstrates that identifying, assessing, and effectively managing risks plays a crucial role in managing the solvency of insurance companies. Quality management, financial stability analysis, bankruptcy forecasting models, and theories of financial intermediation jointly serve as a theoretical and practical foundation for the formation of an integrated risk management system.

RESEARCH METHODOLOGY

In this study, data on the solvency and financial stability of insurance companies were obtained from international and national regulatory and legal documents, official statistical reports, and open analytical sources. The collected data were analyzed using comparative analysis, systemic analysis, risk grouping, and logical generalization methods.

ANALYSIS AND RESULTS

At present, the insurance sector is facing not only traditional risks but also new types of risks. Insurance companies are required to comply with the requirements of supervisory authorities and international standards aimed at strengthening financial stability. However, some insurers—particularly in countries where the insurance market is not sufficiently developed—are not yet fully prepared to meet these requirements due to the underdevelopment of their risk management systems.

In recent years, the scope of insurers' activities has expanded significantly beyond traditional processes related to premium collection, claims payments, reinsurance policy implementation, and financial reporting. At the same time, high volatility in financial markets, the emergence of new financial instruments and the resulting expansion of the range of potential risks, as well as technological progress, have increasingly complicated the risk management process.

There is no single, universally accepted system for risk classification in the scientific literature, which allows risks to be examined from different perspectives depending on the objectives of the study and the specific characteristics of the research object.

From the perspective of managing the solvency of an insurance company, risk is broadly interpreted as the probability of losing a state of dynamic stability and as a deviation from expected outcomes.

In international practice, the stability of the external environment in which insurance and reinsurance activities are carried out is defined by the absence of sharp fluctuations in financial markets or other external shocks that could negatively affect insurers' operations.

Within the framework of macroprudential regulation, risk is not equated with loss; rather, it is considered a situation in which an unacceptable negative deviation from planned outcomes occurs at any stage of achieving strategic objectives. A strategic risk management system aims to maintain all key indicators at acceptable levels, which requires the development of a strategy map through the integration of a balanced scorecard into risk management. This system is particularly focused on minimizing risks in the long term and transforms the quantitative expression of risk into one of the key indicators in strategic and operational decision-making processes.

According to Article 101 of the Solvency II Directive, the main risks taken into account when calculating the required capital include the following:

- underwriting risk in non-life insurance;
- underwriting risk in life insurance;
- underwriting risk in health insurance;
- market risk;
- credit risk;
- operational risk (including legal risks or risks related to non-compliance with regulatory requirements, excluding risks associated with strategic decisions and reputational risks).

At the same time, based on the working papers of the International Association of Insurance Supervisors and relying on the classification of specific risk types proposed by the European Insurance Committee, a broader risk classification can also be identified. This classification is clearly presented in Table 1 (Table 1).

Table 1. Classification of risks specific to insurance companies

Technical risks	Investment risks	Non-technical risks
Adequacy of tariffs	Risk related to a decline in asset values	Operational risk
Actuarial risks, risks associated with an increase in loss ratios and the occurrence of extraordinary (catastrophic) events	Liquidity risk	Credit risk
Liquidity risk	Insufficient cash flow	Political risk
Risks associated with errors and increased operating costs	Interest rate risk	Management risk
Risk related to insufficient provisioning of reserves	Participation risk	Risk related to fulfilling obligations to third parties
Reinsurance risk	Risks associated with derivative financial instruments	Risk related to changes in tax legislation

According to the data presented in Table 1, technical risks include risks associated with the insurance company's inability to maintain sufficient funds to meet its insurance claim obligations. Investment risks, in turn, encompass risks of capital shortfalls arising from investment activities. Non-technical risks, on the one hand, include risks directly or indirectly related to technical and investment risks, and on the other hand, cover risks associated with operations outside core insurance activities.

At the current stage, based on the analysis of the activities of internal units responsible for developing the infrastructure required to adapt the new Directive and for improving risk management systems, market reviews and models are increasingly focused on studying the detailed requirements within the "pillars" of the Solvency II standard. Particular attention is paid to the technical aspects of developing internal models, efficient capital utilization, and the practical implementation and adaptation of risk management instruments to internal operating conditions. As a result, the significance of operational risks associated with human errors, process failures, or malfunctions in information systems is increasing.

At the same time, the range of risks taken into account by insurance companies varies depending on their business model, operating jurisdiction, and the structure of their investment portfolio. The International Association of Insurance Supervisors identifies losses and expenses, investment market risks, counterparty default risk, investment credit risk, as well as operational and liquidity risks as the main risk categories.

Studies conducted in recent years, drawing on the lessons of financial crises, have identified key factors affecting the solvency of insurance companies. Experts emphasize that, alongside maintaining adequate capital levels and aligning the interests of stakeholders and management, strategic risk management plays a crucial role. Strategic risks are associated with events that may undermine the stability of the business model, reduce company value, and ultimately have a negative impact on capitalization. Such risks include changes in competitiveness, legislative developments, technological shifts, and other factors capable of disrupting market equilibrium.

The study highlights that it was precisely the financial and economic crisis that served as a key impetus for understanding the extent to which insurance companies depend on the stability of other segments of the financial market, particularly the banking system. Given the emergence of such interconnections, reducing risk levels becomes an extremely complex task under conditions of procyclical capital adequacy regulation and the presence of derivative financial instruments in the market. Therefore, the author emphasizes, on the one hand, the necessity of conducting in-depth analysis based on reliable indicators across related financial sectors, and on the other hand, the importance of applying prudence and caution as core principles in underwriting and investment policies.

All types of risks inherent in the activities of insurance organizations directly affect the formation of final financial results and therefore must be taken into account within an integrated risk management framework. The financial result of an insurer is formed as the sum of income from insurance activities and the balance of transactions related to non-insurance activities carried out within the framework of current legislation. Within the structure of these revenues, income from investment activities constitutes the largest share.

Thus, the financial indicators of an insurance company are shaped not only by internal management processes but also by the influence of the external economic environment. In this regard, the management system of insurance organizations, including mechanisms for assessing their financial stability, should rely on modern concepts and methodologies based on the analysis of complex dynamic stochastic systems that operate under conditions of uncertainty and are sensitive to various economic shocks.

Under such conditions, it is appropriate to employ an aggregated indicator that makes it possible to quantitatively assess the probability of an insurance organization’s compliance with established financial and regulatory requirements.

The evolutionary development of approaches to assessing and regulating the solvency and financial stability of insurance organizations demonstrates a gradual abandonment of administrative methods in favor of a risk-oriented regulatory model based on financial and economic mechanisms. The modern regulatory concept is grounded in the systematic identification, quantitative assessment, and continuous monitoring of uncertainty factors affecting insurers’ activities.

The increasing complexity of financial markets, rising volatility, the expansion of financial instruments, and technological progress are fundamentally transforming the operating environment of the insurance sector. Under these conditions, the financial stability of an insurance company is determined not only by the results of its insurance operations, but also by the effectiveness of its investment policy, the quality of corporate governance, the level of development of its risk management system, and its capacity to adapt to external macroeconomic shocks.

Macroprudential regulatory practice and international standards, including the Solvency II requirements, confirm the necessity of integrating strategic, operational, market, credit, and technical risks into a unified management framework. At the same time, the application of comprehensive models based on the principles of dynamic stochastic analysis is of particular importance in the processes of assessing capital adequacy and ensuring solvency.

Therefore, ensuring the financial stability of insurance organizations in modern conditions requires a transition to a risk-based integrated management system. Within this framework, the quantitative assessment of risks becomes a key instrument in strategic and operational decision-making, while financial stability emerges as the result of a balanced interaction between internal management mechanisms and the external economic environment.

CONCLUSIONS AND SUGGESTIONS

The results of the study indicate that ensuring the solvency and financial stability of insurance companies in modern conditions cannot be limited to traditional administrative supervisory approaches, but instead requires

the formation of a comprehensive risk-based management system. The evolutionary development of insurance regulation confirms the priority of a model grounded in financial and economic mechanisms and focused on the identification, assessment, and continuous monitoring of risks.

The study reveals that technical, investment, and non-technical risks inherent in insurance company operations have both direct and indirect effects on solvency. The complex and interconnected nature of these risks necessitates their management not in isolation, but within a single integrated risk management system. In particular, Solvency II requirements and macroprudential regulatory practices emphasize the importance of approaches that account for capital adequacy, risk concentration, and the dynamic nature of risks.

The analysis demonstrates that the financial stability of an insurance company is determined not only by the outcomes of insurance operations, but also by the quality of investment policy, the level of corporate governance, internal control mechanisms, and adaptability to the external economic environment. Specifically, under conditions of high volatility in financial markets, the use of derivative financial instruments, and close interconnections with the banking sector, strategic risk management becomes a key priority for insurers.

Furthermore, the study substantiates the necessity of integrating quantitative risk assessment into the processes of strategic and operational decision-making in insurance companies. Dynamic stochastic models, internal risk assessment systems, and scenario analysis enhance the accuracy of solvency probability assessments and improve the quality of managerial decisions under conditions of uncertainty.

Overall, ensuring the solvency and financial stability of insurance companies in modern conditions is closely linked to the formation of a risk-based, integrated, and flexible management system. Such a system serves as a necessary methodological and practical foundation for ensuring the long-term sustainable development of insurers, strengthening stakeholder confidence, and contributing positively to the overall stability of the financial system.

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