

# THE SOCIO-ECONOMIC SIGNIFICANCE OF TARIFFS, PREMIUMS, RESERVES, AND LIABILITIES IN INSURANCE ACTIVITIES

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## Abstract:

*The article explores the key aspects of insurance and their impact on the economy and society. The author analyses the role of insurance tariffs, premiums, reserves, and liabilities in shaping a stable and efficient insurance system. Special attention is given to how these elements influence risk distribution, the financial stability of insurance companies, and the protection of policyholders' interests. The article emphasizes the importance of establishing fair and reasonable tariffs, as well as creating sufficient reserves to ensure the fulfilment of insurance obligations.*

**Keywords:** *insurance, insurance premiums, insurance reserves, insurance risks, insurance liabilities.*

## Introduction

In the complex landscape of insurance, the interplay between tariffs, premiums, reserves, and liabilities plays a crucial role in shaping the financial stability and operational efficacy of insurance companies. These elements are not just fundamental to the functioning of the insurance sector but also carry significant socio-economic implications.

Tariffs are the prices set for insurance products and services, determined through a combination of market conditions, regulatory frameworks, and actuarial assessments. They reflect the cost of providing coverage and are a primary revenue stream for insurance companies. Understanding the formulation and adjustment of tariffs is essential, as they impact both the affordability of insurance for consumers and the financial health of insurers.

Premiums, the payments made by policyholders in exchange for insurance coverage, directly influence the insurer's ability to meet its obligations. Premiums are calculated based on the expected risk, operational costs, and desired profit margins. The adequacy and fairness of premiums are critical for ensuring that insurance remains accessible while maintaining the insurer's financial stability.

Reserves are funds set aside by insurance companies to cover future claims and liabilities. Proper reserve management ensures that insurers can fulfil their commitments to policyholders even in adverse situations. The adequacy of reserves is a key indicator of an insurer's financial health and its ability to manage risk effectively.

Liabilities encompass the financial obligations that an insurer must meet, including claims payments and other contractual commitments. Managing these liabilities efficiently is crucial for maintaining trust with policyholders and ensuring long-term sustainability.

The socio-economic significance of these elements extends beyond the insurance industry. Tariffs and premiums affect the cost of insurance for individuals and businesses, influencing their financial planning and risk management strategies. Reserves and liabilities impact the stability of the financial system and the overall economic environment.

This study aims to explore the intricate relationships between tariffs, premiums, reserves, and liabilities in insurance activities, examining their impact on both the insurance sector and the broader economy. By understanding these dynamics, stakeholders can make informed decisions to enhance the effectiveness and stability of insurance practices, ultimately benefiting society as a whole.

**Analyses and results.** To ensure solvency, each economic entity as an insured party must:

- charge insurance premiums sufficient to cover insurance pay-outs;
- cover the insurer's expenses that guarantee its profitability;
- create insurance reserves to fulfil "its obligations";
- maximize the amount of own funds (capital), which, according to A.L. Lelchuk, is

likely to cover unexpected losses. [5, P. 45-49].

A.L. Lelchuk, in analysing the issues of premiums, tariffs, reserves, and liabilities, mainly relies on corporate risk management. However, he also bases his analysis on the concepts of Solvency II, which focus on ensuring the insurer's solvency. Of the solvency indicators mentioned above, only the first point can be agreed upon, as the insurance premium, being the market price of the insurance product (commodity), is intended to:

- cover production and distribution costs;
- generate profit, including enough to pay dividends to the economic entities—

policyholders.

However, it is essential to consider that profit not only ensures the payment of dividends to shareholders but also has other purposes. This leads to profit distribution across various directions. This means that the insurance premium should generate sufficient profit to account for other interests of policyholders as economic entities, beyond just the interests of their clients.

Nevertheless, it is worth asking whether it is still appropriate to separate the concepts of "insurance coverage" and "insurer's expenses", especially in the context of tax relations and the economic system of management. Such a division seems unjustifiable, as the payment of insurance

coverage is part of the insurer's overall expenses. This view is also supported by the Russian scholar V.B. Gomoll [3].

According to the Tax Code, insurance compensations, including insurance payments (as well as contributions to insurance reserves), are included in the expenses of insurance companies [2]. However, if these expenses are not considered the insurer's costs, what else could they be classified as, or what equivalent category do they fall under? As is well known, the economic theory of insurance classifies current production (and distribution) costs as cost of goods sold, both in the broad and narrow sense of the term.

In the first case, cost refers to the insurer's total expenses, while in the second case, in the narrow sense, it refers only to operating expenses. It seems that the concept of the insurer's costs is more accurate and appropriate than the Solvency II framework (as presented by A.L. Lelchuk).

When it comes to “forming adequate insurance reserves”, we agree with A.L. Lelchuk. If we approach this issue, particularly regarding the amount of the insurer's own funds (capital), it indeed needs to be “financially supported” in case of insufficiency, especially when the statutory capital is inadequate and if a shortfall in insurance reserves is identified.

The significance of statutory capital and equity capital as financial sources for covering insurance liabilities in emergency situations is undoubtedly great. Firstly, without them, it is impossible to start insurance activities, as reserves are not yet formed in sufficient amounts at the initial stage. Secondly, a large statutory (and equity) capital enables the insurer to commence its business with 100% confidence within the framework of insurance operations. Thirdly, insurance premiums serve as the primary source for forming insurance reserves. However, they are collected for a limited period, while the insurance company is established for the long term. Therefore, the role of statutory capital and free reserves, as noted by T.A. Dubrovina, V.A. Sukhov, and A.D. Sheremet in their jointly prepared textbook, is “in ensuring the financial stability of the insurer’s current activities... no less important than the role of insurance reserves” [4].

It is well known that statutory capital and free reserves represent the consumption fund and accumulation fund, which are formed from net profit. This measure is just as important as insurance reserves. Moreover, they have a clear practical significance. No matter how large the statutory and equity capital of an insurer may be, no insurer can sustain itself for long relying solely on them. No insurance operation is feasible without insurance premiums and reserves.

The task of raising the equity capital to a level that ensures the insurer's solvency involves periods of operation where loss fluctuations exceed the levels accounted for in the tariffs. Here, the capital serves as a safeguard.

Currently, the actual amount of the insurer's equity can be assessed using the traditional method, which is the difference between its assets and liabilities, i.e.:

$$\textit{Equity Capital} = \textit{Assets} - \textit{Liabilities} \quad (1)$$

This method provides a clear and straightforward way to evaluate the financial health of the insurer, ensuring that its resources can cover unexpected losses beyond what is calculated in its premiums and reserves.

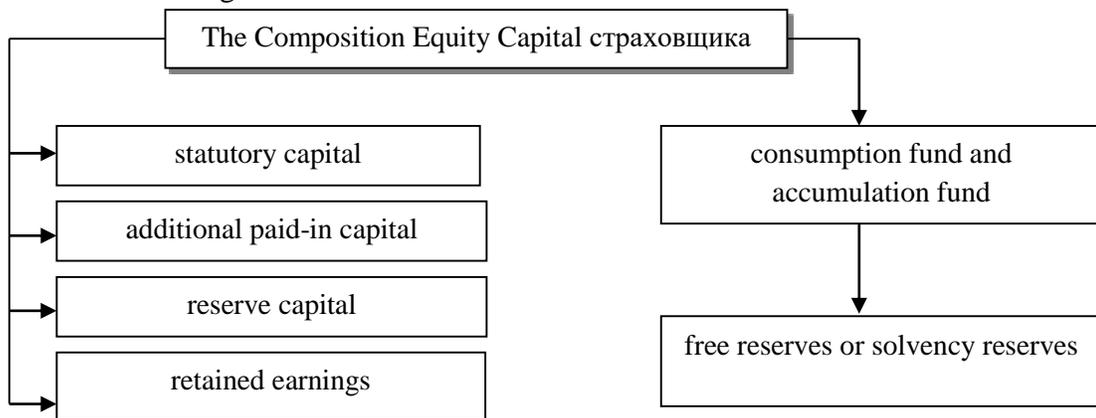
According to A.L. Lelchuk, this formula does not require refinement, as there is no need for it. The question arises whether the obligations in this context refer to aggregate or only to insurance-related obligations. Previously, the sufficiency of the insurance premium was discussed from the

perspective of shareholders, whose interest lies in receiving dividends. This interest is not covered by insurance obligations. Insurance obligations are linked solely to the property interests of policyholders.

The primary protection against adverse fluctuations is indeed provided by the insurer's equity capital. However, insurance tariffs themselves cannot create funds sufficient for adequate protection against all economic losses that may occur during the period covered by the tariffs. Insurance tariffs are certainly not designed to cover “any” losses. They are aimed at covering random losses with a limited probability (frequency) of occurrence, not every possible loss.

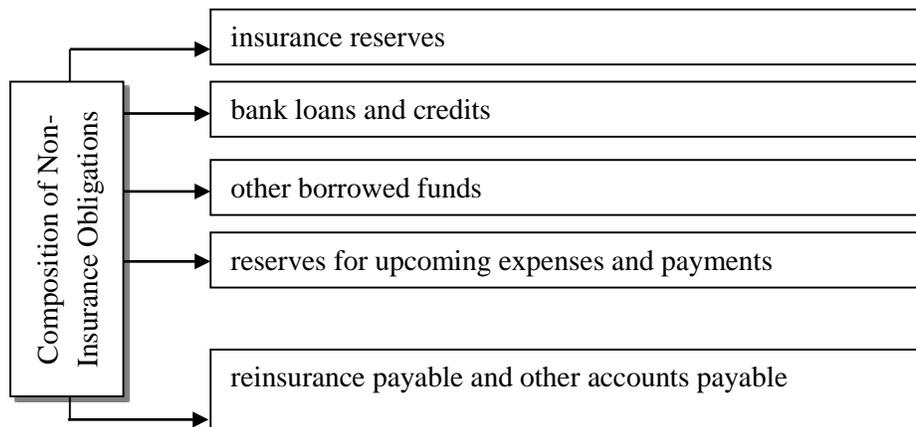
Thus, primary insurance protection for policyholders cannot be ensured solely by equity capital. Its composition and amount are intended only for providing insurance protection in exceptionally critical situations, thereby guaranteeing additional insurance coverage.

It is important to note the composition of equity capital (see: Figure 1). Based on Figure 1, it can be observed that equity capital is formed from the contributions of founders (the company) and its profits. However, by definition, these resources cannot be the main source for covering the insurer's insurance obligations.



**Fig. 1. The Composition of an Insurer’s Equity Capital**

It is important to consider one factor: the insurer has numerous non-insurance obligations (see: Figure 2).



**Fig. 2. Composition of the Insurer’s Non-Insurance Obligations**

Based on the above, we would like to mention one point: in all the textbooks available to us, economists emphasize the identity (adequacy) of the formula for determining assets and equity capital (see: formulas (1) and (2)):

$$\text{Assets} = \text{Liabilities} + \text{Equity Capital} \quad (1)$$

$$\text{Equity Capital} = \text{Assets} - \text{Liabilities} \quad (2)$$

It follows that equity capital cannot continuously cover the entire amount of the insurer's obligations, including insurance obligations.

Thus, based on the above, let's revisit the role of the insurance premium in relation to insurance tariffs and insurance reserves.

It can be emphasized that insurance tariffs alone cannot create funds sufficient for adequate protection of policyholders against "any" financial losses. In practice, it may be encountered that during a critical period, the insurance reserves created based solely on insurance tariffs may be insufficient.

In voluntary insurance, the prevailing insurance tariffs, regardless of their structure, are unable to provide 100% coverage of actual insurance losses, even with a risk surcharge included in the tariff. An insurance tariff cannot replace the market price of the insurance product. The tariff is merely a forecast or approximate price. Although in compulsory insurance the insurance tariff is not affected by market factors such as supply and demand, and is set by directive or law, it will still not provide full insurance coverage through reserves alone. In other words, in compulsory insurance, the insurance tariff essentially functions as the insurance premium, as it cannot be fully adequate to actual insurance obligations (as observed in compulsory motor insurance).

According to A.L. Lelchuk's views, he describes insurance obligations as a "sum, i.e., an amount analogous to the insurance premium"; he represents the insurance premium as the "amount for which the insurance company is willing to assume insurance obligations"; and he characterizes insurance reserves as the amount "that the company must have to fulfill its insurance obligations". Finally, "the market-consistent value of obligations equals the best estimate of obligations plus a risk margin", where the risk margin is either a portion of the reserve or the cost of capital (own funds) required to "support insurance obligations throughout the remaining insurance period for settling claims" [5, P.48].

It is clear that there are certain inaccuracies in his exposition. In one instance, the author uses the term "obligations", while in another, he refers to "insurance obligations". This is problematic because an insurer's obligations encompass both policyholders' and non-policyholders' interests. The author also mentions the "sum" of insurance obligations, premiums, and insurance reserves. However, this sum could include both quantitative and financial measures. Clearly, the discussion should focus on monetary amounts.

However, there are more significant issues in A.L. Lelchuk's article. At first glance, it might seem that the insurance tariff does not ensure the fulfillment of insurance obligations, while the insurance premium does.

Nevertheless, there are other ambiguities in the article.

The statement that insurance obligations are a sum, i.e., an amount analogous to the insurance premium, is unlikely to be considered more accurate. Insurance is associated only with contingencies of limited probability (frequency). Therefore, it seems that an insurer attempts to cover insurance obligations in monetary terms not from all insurance premiums but only from their net portions and “other insurer’s funds”.

However, referring to the Insurance Law, it states that the interests of policyholders are protected “through monetary funds formed by insurers from paid insurance premiums (insurance contributions), as well as from other insurer's funds” [1].

As we know, insurance monetary funds are formed not from the entire insurance premium (insurance contributions) but only from its net portion. Therefore, A.L. Lelchuk is correct when he writes that the price is determined by the cost (expenses) and profit margins, and, without specifying that the insurance premium is a market price, he provides two formulas:

$$\text{Gross Premium} = \text{Losses (expected insurance payouts)} + \text{Expenses} + \text{Profit}$$

$$\text{Gross Premium} = \text{Losses} + \text{Risk Margin} + \text{Expenses} + \text{Profit}.$$

The first formula is used in the U.S. (since 2010), while the second is recommended in Russia (since 1992) as a methodology for calculating tariffs.

It should be noted that costs are present both in the net premium and in the load. In the net premium, costs include all types of expenses, specifically:

- $\overline{\sum ALR_{la}}$  - average loss ratio of the insurance amount;
- $\sum RM_{ar}$  - risk margin;

In addition to expenses, the load includes:

- $\sum A_{dm}Ex$  - administrative expenses;
- $\sum EPM$  - expenses for preventive measures;
- $\sum In$  - income.

This derives from the directive model of the tariff rate based on the methodology that existed during the pre-transition period. Relying on this approach, A.L. Lelchuk graphically represents it as follows:

net rate		margin		
$\overline{\sum ALR_{la}}$	$\sum RM_{ar}$	$\sum A_{dm}Ex$	$\sum EPM$	$\sum In$
GROSS RATE				

Regarding the American model of the insurance premium (not the tariff), it includes (accounts for) “losses (expected insurance pay-outs)”. These represent current costs, i.e., the costs of producing and administering insurance tariffs, and not the insurers’ income.

Thus, returning to the issue of incorrect comparison: from A.L. Lelchuk's article, one can draw conclusions about:

The insurance premium versus the insurance tariff, i.e., the market price versus the forecasted price;

A model that has expired (1993-1994) versus a model that is presumably in use (2010).

We can only hope that everything A.L. Lelchuk was unable to fit within the narrow confines of the article will be more thoroughly presented in the author's monograph.

**Conclusion.** The socio-economic significance of tariffs, premiums, reserves, and liabilities in insurance activities is profound and multifaceted. Each component plays a critical role in the functionality and stability of the insurance sector, with broader implications for the economy and society at large.

Overall, the effective management of tariffs, premiums, reserves, and liabilities is crucial for the stability and sustainability of the insurance industry. These elements not only influence the operational success of insurance companies but also have significant implications for the broader economic environment. By understanding and optimizing these factors, stakeholders can enhance the resilience of the insurance sector, contribute to economic stability, and provide better protection for individuals and businesses alike.

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