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Dynamic Maintenance of Solvency of the Russian Insurance Companies: the Evidence from Russian Insurers

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Abstract

The Russian economy is facing sanctions pressure, resulting in weakening business relations with foreign insurers. Medium-sized insurance companies, targeting regional economic entities, play a crucial role in the insurance market. To improve the efficiency of Russian insurance, the number of medium-sized companies operating in regional markets must increase. To regulate their capitalization, special conditions must be developed, focusing on capital adequacy requirements and financial stability parameters. While earlier research has examined what factors might impact profitability growth, the investment income factor in maintaining corporate financial stability has been underexplored. This paper aims to explore conditions for improving insurers' financial soundness through growth of a company's internal capitalization. Medium-sized insurance companies often struggle to meet regulators' minimum capital requirements (a core variable linked with companies' capitalization) leading to potential market shrinkage. Our hypothesis is that it possible to create a financial reserve that meets the regulator's increasing equity requirements without raising additional external investments. This study examined the factors which impacted the growth of medium-sized insurance companies operating in the emerging markets. Operating results of seven randomly selected medium-sized insurance companies in 2014–2022 were used for the analysis. The paper suggests that institutionalization of insurance companies' capitalization is crucial to minimize the risk of capital inadequacy. The study contributes to our understanding of how medium-sized insurance companies can be governed and suggests a way to increase their capitalization.

Keywords: financial stability, proportional regulation, dynamic increase of capitalization, equity holding structure of an insurance company

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Introduction

With the sanctions pressure affecting the Russian economy, the business relations of Russian companies with foreign insurers are weakening or severed due to tightening of the foreign exchange legislation and the withdrawal of international brokers, which have provided insurance coverage for owners of multiple property risks, from the system of interaction with insurers. For this reason, the operation of medium-sized insurance companies, which often target their services to the insurance needs of regional economic entities, assumes special importance in the insurance market. Conditions favourable for the development of such insurers will diversify insurance services in the regions and encourage the growth of the insurance sector.

In the author's opinion, a precondition for the improvement of popularity and efficiency of Russian insurance is the increase in the number of medium-sized insurance companies operating in the regional markets as well. For this purpose, it is necessary to develop special conditions to regulate their capitalization. In order to preserve the segment of medium-sized insurance companies, which develop mainly due to internal sources, it is necessary to apply a proportional approach to the regulation of their operations from the viewpoint of capital adequacy requirements and financial stability parameters.

A regular toughening of requirements of the Central Bank of the Russian Federation for minimum equity (according to the terminology of the European Standard Solvency II MCR (Minimum Capital Requirements)) is caused by the expected implementation of Solvency II into the Russian legislation. It is common knowledge that the main goal and at the same time the requirement of Solvency II is to ensure a company's 99.5% reliability within a one-year horizon. Amid the growing inflation, which increases the cost of insurable risks, i.e., the insurer's financial obligations, this makes it necessary to toughen equity requirements in order to provide a sufficient solvency margin.

Besides, the reason for the strengthening of equity requirements is the growth of the insurance portfolio. Risks associated with the insurance portfolio quality, insurance rate adequacy, reinsurance coverage reliability are managed by a mandatory amount of equity called SCR (Solvency Capital Requirement – the capital necessary to ensure solvency) according to the terminology of Solvency II.

However, in order to enter the insurance market without a portfolio, according to Solvency II, the insurer's equity should equal or exceed the established amount or MCR. Presumably, this amount guarantees a company's solvency for the next year with a probability of 85%. This is the limit value of guarantee reliability, and the company's license is cancelled if its unobligated equity is less than the MCR amount established by the regulator.

Essentially, the requirements for the minimum capital amount imply its proportional value assessment in comparison to the quality and value of the existing portfolio. However, in the Russian Federation these requirements are the same for all insurance companies irrespective of the amount of the risks for which insurance coverage is provided.

Increasingly toughening requirements for the MCR amount may be met by attracting additional shareholder investments or by means of a company's internal growth stemming from its high profitability.

A lot of research papers are dedicated to the analysis of possible factors of insurance operations' profitability growth. However, they do not consider the investment income a factor in maintaining corporate financial stability. We failed to find the papers that describe provision of institutional conditions for improvement of insurers' financial soundness by means of growth of a company's internal capitalization. The present research attempts to fill this gap.

As we have mentioned before, the role of MCR consists, first, in ensuring the solvency of a company when it starts its business and has not yet accumulated sufficient insurance reserves to distribute the risk to insurance population; and second, in being a "cash cushion" in case of insolvency caused by business risks coming to fruition, thus producing an unexpected negative effect on the insurance company's financial soundness. This is why the amount of corporate equity cannot be less than the minimal amount established by the regulator.

The value of insurable risks actually grows with time; besides, as the insurance portfolio expands, it increases the need to raise the minimal capital amount, which guarantees company solvency in case of decrease in replenishment of insurance reserves. Due to the fact that the established amount of minimal capital loses its guaranteeing power, it gradually becomes possible for the minimal capital requirements to be officially met, while the guaranteeing power is partially lost due to practical reasons. However, often insurers of medium-sized companies are unable to adhere to the regulator's minimal capital requirements. This may force medium-sized companies out of the market and cause abrupt market shrinkage in spite of a significant potential of these companies to develop the sector of economy in which they operate [1].

The above reasons make highly relevant the institutionalization of insurance companies' capitalization, which minimizes the risk of their capital inadequacy caused by the tightening of requirements for the capital amount.

Literature Review

The author adheres to the view that the basis for the development of the non-life insurance market in Russia is the growth of specifically medium-sized insurance companies, which often operate in the regions and have a high potential. The factors that positively and negatively affect the development of this sector were the subject of special research [2; 3].

The potential for development of medium-sized insurance companies is related to the following factors. First, it is the median amount of equity as the basis for calculation of profitability and, second, it is the understanding of the

insured and their insurance needs, which allows to create a well-balanced insurance portfolio of small homogeneous risks that may be accepted for insurance, taking the existing equity into consideration [4]. Such homogeneous portfolios of medium-sized insurers do not actually require a significant equity. Moreover, the MCR regulatory capital requirements are excessive for them when they are seeking their consumer demand niche.

It seems justified to be premised on the study of emerging markets in Asia, Africa, Latin America when analyzing the growth factors of medium-sized insurance companies. The comparison of these countries' national markets with the Russian market seems appropriate due to the similarity of the development level, insurance culture, size of insurance companies, their capitalization and other financial and economic indicators.

As long as the primary objective of an insurance company as a business entity consists in earning profit for its shareholders, the author considers profitability to be the main indicator of insurance business performance. A medium-sized company as a business entity concerned with the growth of its market share may finance its developing projects through internal growth due to a rise in profitability of insurance operations. Such profitability is a reliable way to meet the regulator's requirements to accrue the insurer's internal funds. For this reason, the methods of its increase are studied by insurance professionals in various national markets.

Studies of operations of Turkish insurers show that such variables as debt-to-equity ratio, premium retention ratio, listing status and growth of total assets significantly influence business performance (ROA) as a result of the company's use of capital, including credits. The factors defining the profitability of foreign insurers in the Turkish market are company size, debt-to-equity ratio, underwriting risk, premium retention ratio, listing status and company age, respectively [5]. In addition, the technical profitability ratio and the return on sales ratio of Turkish companies depend greatly on such variables as company size and age, the loss ratio, current ratio and premium growth ratio [6].

In the Canadian insurance market, such variables as size, liquidity, capital proportion, industry-related concentration, share market profitability and GDP growth have a considerable impact on ROA and ROE [7].

An analysis of Serbian insurance companies showed that ROA depends greatly on such variables as income growth, equity ratio, operating costs, premium growth, underwriting risk and the size of the market share [8].

Study of insurance markets of the four Central and Eastern Europe countries (Croatia, Slovenia, Hungary and Poland) revealed that an increase in such variables as company age and gross domestic product (GDP) has a major influence on ROA and ROE in these markets [9].

The main tools for maintaining financial stability of insurance companies in the emerging markets of various countries were analyzed by the authors using a wide range of its indicators. The results of such research may serve as a basis for decision-making regarding the management of insurance efficiency, and first and foremost, improvement of insurance profitability. The emphasis is placed on revealing its growth factors. Such growth satisfies the interests of all company stakeholders and increases the wealth of shareholders by means of raising company value and guaranteeing insurance protection using internal funds in the interests of the insured. In particular, I.Abdeljawad et al. point out that high profitability strengthens company solvency, which is very important for risk counteraction and fulfillment of obligations to the insured and, consequently, for achieving the insurance objectives [10]. Besides, the insurer obtains more opportunities to raise payments to human capital serving the interests of employees and more weight in the reinsurance market.

Consequently, it is quite clear why researchers are so interested in the tools that allow to manage the insurer's profitability and in the factors that have both a positive and negative impact on it.

The research study by L.Tsvetkova et al. found that ROA had a positive relationship with the company size, ROE, the liquidity ratio and the claim ratio. According to these authors, inflation and premium growth rates have a negative relationship with ROA [11].

In order to be unbiassed, we should note that few researchers share this view. For instance, according to analytics of Saudi Arabia's insurance market, the liquidity ratio and the company size have no significant influence on ROA, i.e., in compliance with the model selected by such authors, company profitability depends mainly on the premium growth rate, leverage, loss ratio and company age, rather than the insurance company size [12].

Papers of the abovementioned authors are of practical interest for managers of insurance companies who seek to solve not just the problem of satisfying shareholders' interests by means of raising insurance profitability, but also that of an equity increase in order to meet the regulator's equity requirements . This may be done by way of choosing an efficient business model for company management.

M.Lament and S.Bukowski prove a specific influence of the business model on the efficiency of insurance companies, in particular, on ROE, ROA, customer retention rate (RR) and the combined ratio (CR) [13]. A. Al-Mutairi et al. confirmed the influence of the company profitability on its value in their studies [14].

M. Balytska discovered the general sources of financial stability and the most important source among them. This author believes that capital adequacy is secured not so much by the financial flow volume as by its constancy in the continuously changing environment [15]. In her opinion, state regulation of insurance is of particular importance.

A paper by L.Ben Dhiab is dedicated to the study of profitability factors as the source of an insurance company's growth. Analyzing the insurance market of Saudi Arabia, the author concludes that there is a recursive link between the rise in company capitalization and the increase in its

profitability, which means that a regular capitalization of the gained profit is necessary [12].

The paper by S.V. Mkrtychev et al. examines the creation of an efficient operating activity contour, that increases the payoff from expenses and the profit, which, in its turn, ensures capitalization growth, as an instrument for the increase of the insurer's capitalization [16].

As far back as 1996, R. Kopcke pointed out the significance of profit, which, while intended to ensure shareholders' interests, mostly provides for the financial stability of the insurer in the interests of the insured. This author emphasized: "Shareholders' income is, first of all, a financial shock-absorber which protects interests of the insured" [17].

It is interesting that R. Kopcke indicated the relationship between the capitalization amount and frequency of regulator's control of its amount, which forces the company to continuously use the earned profit for equity replenishment. At the same time, the insurer has to make a decision on further capitalization based on the self-control of the capital inadequacy risk. This provision was stated later in the principle of management of financial stability of an insurance company, taking into consideration the risk that underlies the Solvency II standard. The abovementioned author indicates that shareholders are obliged to participate in the creation of the "cash cushion" using undistributed profit, which is of special importance for a steady growth of medium-sized insurance companies relying on internal capital sources.

Using the profits earned by conducting insurance operations in order to accumulate equity may be opposed by shareholders who, according to the Gordon model, are determined to get regular dividend payments. Apart from that, the regulator's requirements for equity investment tools decrease the prospective investment income, thus impairing the effectiveness of investments for shareholders. Hence, it is necessary to find a way to meet the tightening requirements for the minimal capital amount and solvency margin that would give the maximum consideration to shareholders' interests and ensure continuity of business.

A regular strengthening of requirements for the minimal equity amount in Russia was accompanied by a massive withdrawal from the market of medium-sized insurers, who were unable to attract extra funding from their shareholders or to find new investors. Equity buildup through the business model based on the internal growth could assist in a gradual equity increment, i.e., ensure the correspondence of the actual equity amount to the required amount. This will improve the company's financial stability and its market share due to an enhanced ability to accept more insurance risks for insurance. As a result, corporate assets and value will grow and interests of shareholders will be respected.

Acknowledging the significance of the internal growth strategy for medium-sized insurers, the researchers emphasize the success of this strategy depending on the equity structure as an aggregate of the minimally required (MCR) and additional (SCR) capital. J.Rudden considers, in particular, the minimum capital requirement (MCR) ratio in Europe as a characteristic feature of this structure. He concluded that this ratio depends on the development level of the national insurance market, which manifests itself in the volume of operations [18]. In the opinion of this author, establishing the correlation between the MCR and SCR value (provided for in the Solvency II standard) that is optimal for the market, should be used to make the decision regarding the necessity of tightening the minimum capital requirements. At the same time, this correlation is established fairly depending on the volume of performed insurance operations.

A researcher of the emerging insurance market of India N. Mor in his paper The Prudence of Lower Minimum Capital Requirements for Insurers introduces the same idea. In particular, this paper indicates that there is a high impoverishment rate among Indian households, and the range of risks they are able to insure is very narrow. Consequently, the assets which secure the assumed obligations will also be small. This also predetermines a slackening of the requirements both for the total and minimal capital [19].

Some authors indicate a negative influence of inflation on corporate solvency [11], however, the majority of studies do not detect such an influence. For example, the papers that analyze solvency factors do not indicate inflation as a factor that influences financial performance in the insurance sector [20].

Nevertheless, inflation is precisely the reason for the regulator's tightening of the requirements for minimum capital, the amount of which defines a company's right to start and conduct insurance operations. Hence, in order to obtain this right, the insurer has to ensure dynamic capitalization growth, which will prevent a decrease of equity below the required level when the regulator strengthens the requirements for such insurers.

An abrupt tightening of the minimum capital requirements has a "stunning" effect on the market. It is a variation of shock, and as a response, insurance offers shrink both in terms of the amount (because a lot of insurance companies exit the market) and diversity (because medium-sized companies merge with each other or with large companies, so the merged companies offer a single set of insurance products). Meeting the capitalization requirement by way of attracting additional shareholders' capital or new shareholders is unattractive because if the market share is preserved, ROE will be reduced, thus lowering the shareholder satisfaction level. As for mergers, they will decrease market competitiveness [21].

To resolve the situation which occurs when minimum capital growth requirements are fulfilled, a the system of capital growth management that does not significantly lower the shareholders' satisfaction can be implemented. In order to state the basic provisions of this system, we offer a specific point of view concerning the functions of the minimum capital amount.

The main hypothesis

The author's main hypothesis comprises the following provisions.

1) The minimum required capital of an insurance company may be considered analogous to corporate fixed capital because when it is insufficient or absent, the company is unable to render insurance services and cannot be considered an insurer.
2) The amount of such capital is designated to maintain the solvency of the insurance company in case of insufficiency of its assets created by using the funds obtained from the insured both at the start of insurance business and in case of a sudden decrease in the current asset flow gained from the sale of insurance services to them.
3) If we stick to the suggested hypothesis on the fundamental nature of the minimum capital, it seems necessary to take measures aimed at the preservation of its value by way of "quasi-depreciation deductions" in order to compensate for the reduction in its "guaranteeing capability" caused by inflation and the increase in the offer of insurance services. These deductions will provide a gain of the depreciating capital and compliance of MCR with new requirements.

The following grounding is offered to prove the suggested hypothesis.

The strengthening of requirements for the minimum capital amount is caused by inflation, which decreases its actual guaranteeing capability due to increase in the value of insurable risks. A company's failure to meet these requirements deprives it of the opportunity to offer insurance services. In this respect, it appears necessary to mitigate the risk of such a situation as inflation grows. If we consider inflation the reason for capital depreciation and its required amount - the precondition for starting to render insurance services, we may substantiate the role of minimum capital as fixed capital.

This point of view is presented in the paper by L.I. Tsvetkova Fixed and Working Capital of the Insurance Company. The author's reasoning is based on the traditional capital structure, namely, its division into fixed and working capital. These structural units differ in the intensity of value "transfer" to the manufactured product or created service. The key distinctive feature of fixed capital (as compared to working capital) is the gradual "transfer" of its value to the manufactured product [22].

It is commonly known that in order to obtain an insurance license, i.e., to be able to start an insurance business, the legislation established a minimal amount of authorized capital that the insurer must have at the start of its business. It is precisely because this capital amount provides the actual opportunity for an insurance services provider to operate, it is logical to consider it the fixed capital of an insurance organization. Since in the course of time and due to inflation the value of the property interests offered for insurance increases and requirements for the guaranteeing capital tighten, a corresponding growth of minimum capital is necessary.

The above reasoning allows to use the notion of "depreciation" when describing the amount of the minimum capital requirements due to a decrease in its sufficiency. This specific relative "depreciation" of the minimum capital amount is at least at the inflation level.

As long as the value of individual property interests offered for insurance grows along with inflation and the regulator's requirements to allocation of the assets that secure the investment income are rather strict, it is necessary to reduce the insurer's taxation basis by the amount of such investment income, which offsets inflation. This income should be transferred to a "depreciation reserve" with a strict intended purpose. If the income from the allocation of fixed capital exceeds the official inflation rate, only the exceedance amount may be subject to taxation.

This dynamically growing guaranteeing reserve solves the problem of bringing internal funds into compliance with the requirements, including the strengthening requirements for the minimum capital amount.

Each insurance company should have the right but not be obligated to build up such a reserve guaranteeing the improvement of solvency (or the "depreciation reserve"). The company may choose not to accumulate the investment income in such reserve designated for capitalization as a way to compensate for the depreciation of fixed capital, however, it is perfectly natural that in this case the reserve may be utilized by shareholders and is subject to taxation.

Methods

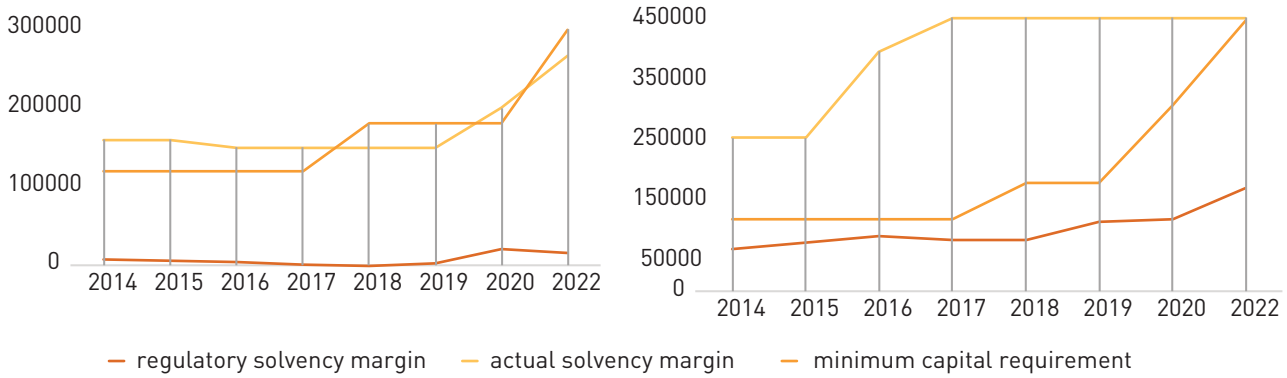
An analysis of dynamics of insurance companies' solvency at the time of strengthening of requirements for its permissible limits is a method for verifying the advanced hypothesis regarding the efficiency of maintaining insurance companies' solvency at the level established by the regulator. This analysis implies the creation of an additional solvency reserve by means of capitalization of the income from allocation of the minimum capital amount when such income is exempt from taxation.

The analysis was conducted in two stages and used the operating results of seven randomly selected medium-sized insurance companies in 2014–2022 (Figures 1–4).

At the first stage, we considered the relationship between the dynamics of minimum capital requirements and the amount of the actual margin of companies' solvency and the one established by regulations. Figures 1–4 present the dynamics of change in these indicators. The amounts of the regulatory and actual solvency margin are calculated according to the requirements of Directive of the Central Bank of the Russian Federation of 28.07.2015 No. 3743-U[1].

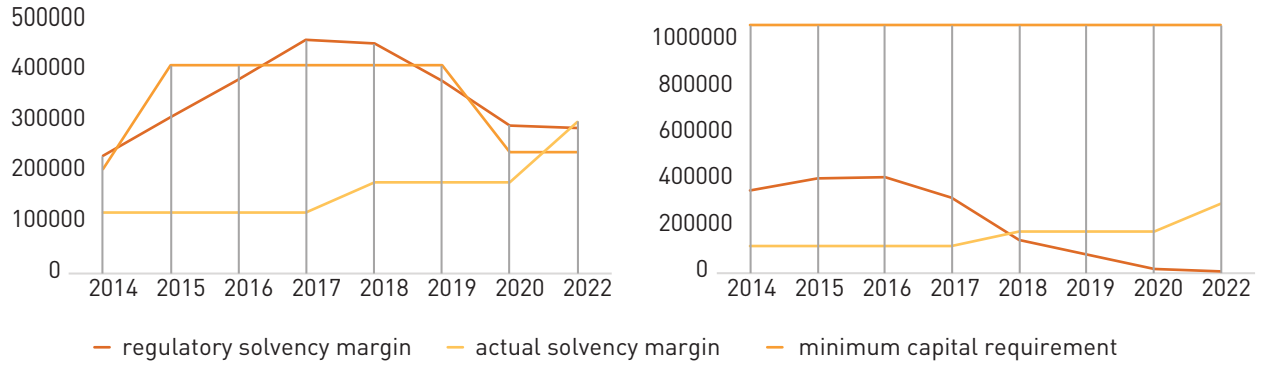
[1] 2021 is excluded from analysis as an uncharacteristic year due to the pandemic.

Figure 1. The dynamics of solvency when changing the requirements for the minimum capital of the Prestige Policy and Kolymskaya insurance companies



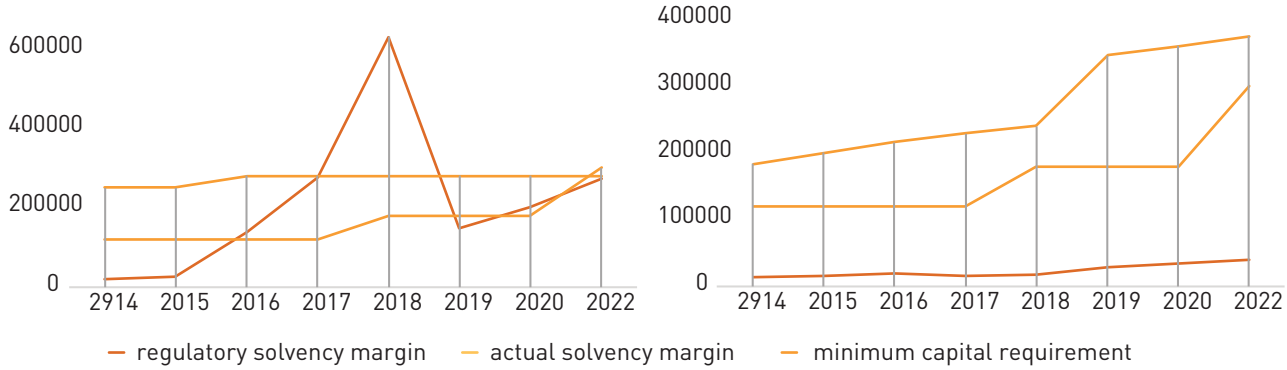
Source: Calculated by the author on the basis of reports of individual insurers. URL: https://cbr.ru/statistics/insurance/report_individual_ins/

Figure 2. The dynamics of solvency when changing the requirements for the minimum capital of the Nadezhda and Bin Insurance insurance companies



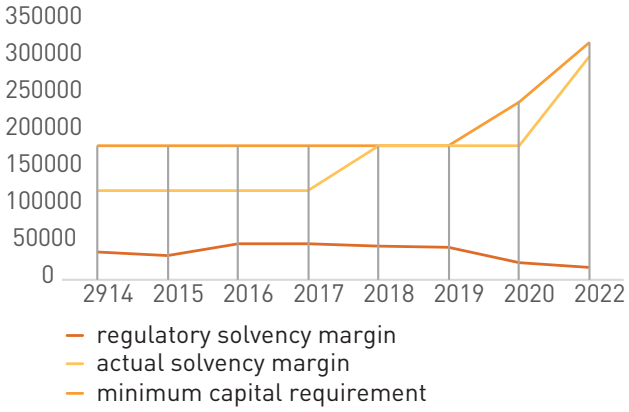
Source: Calculated by the author on the basis of reports of individual insurers. URL: https://cbr.ru/statistics/insurance/report_individual_ins/

Figure 3. The dynamics of solvency when changing the requirements for the minimum capital of the Verna and Ingvar insurance companies



Source: Calculated by the author on the basis of reports of individual insurers. URL: ht tps://cbr.ru/statistics/insurance/report_individual_ins/

Figure 4. The dynamics of solvency when changing the requirements for the minimum capital of the Dal-Jaso insurance company



Source: Calculated by the author on the basis of reports of individual insurers. URL: https://cbr.ru/statistics/insurance/report_individual_ins/

As we see from schedules in Figures 1–4, the following companies experienced difficulties with solvency within the analyzed period:

- IC Prestige Policy;
- IC Nadezhda;
- IC Verna;
- IC Dal-Jaso.

In 2017–2018 all companies showed a significant excess of MCR over the regulatory solvency margin, or these requirements exceeded the actual solvency margin.

While the first group of problems, essentially refers to the fact that requirements for capitalization of these companies are excessive, the second group is indicative of a high insolvency and bankruptcy risk or an insolvency that has already occurred.

Both groups are quite dangerous, and the differences between them imply different approaches to solving the associated problems.

1) Excess capitalization affects the interests of shareholders and should cause capital outflow because it reduces profitability. Hence, it is logical to lower the minimum capital requirements for these companies.
2) If the actual margin is below MCR, it is unacceptable from the regulator's point of view, it affects the interests of the insured, and the company's ability to fulfill its obligations to the insured becomes problematic.
3) If the regulatory margin exceeds the actual margin, it is a sign of insolvency.

As we know, corporate undercapitalization becomes apparent on the date of submitting the financial statements, when it is too late to take any measures. The loss of solvency takes place gradually during the whole reporting period due to excessive accepted risks. Of course, a decrease of excessiveness of insurance commitments is achieved by an efficient reinsurance strategy. However, in order to raise ROA, medium-sized companies try to accumulate working capital which is why is it not used for the necessary reinsurance protection.

It follows herefrom that during the period of accumulation of the insurance portfolio, it is reasonable to take measures for a dynamic increase of insurance companies' solvency, which, in its turn, will ensure their readiness to comply with tightened regulator's requirements for the MCR level.

If we consider the capital amount at the MCR level fixed capital, the loss of its value caused by inflation - "depreciation", and the income from its investment – "depreciation deductions," a regular capitalization of profit from its allocation equaling inflation may be added to the strategy of capital management of an insurance company.

The results of maintenance of insurance companies' solvency when applying the offered strategy were verified by analyzing the dynamics of the estimated theoretical solvency margin of insurance companies selected for analysis.

The algorithm of calculation of the theoretical solvency margin introduced to the analysis comprises the following:

- calculation of income from allocation of minimum capital amounting to the key rate of the Central Bank of Russia valid in the period in question (another calendar year);
- accumulation of the depreciation reserve through an incoming annual transfer of the investment income from the minimum required equity;
- increase of the actual solvency margin calculated on the basis of the standard algorithm by the amount of the depreciation reserve made up of the investment income accumulated by the end of another year.

The hypothesis of efficiency of the reserve that compensates for depreciation was considered confirmed if the insurer had enough capital to meet regulator's tightened requirements for the MCR amount as of the time of their tightening.

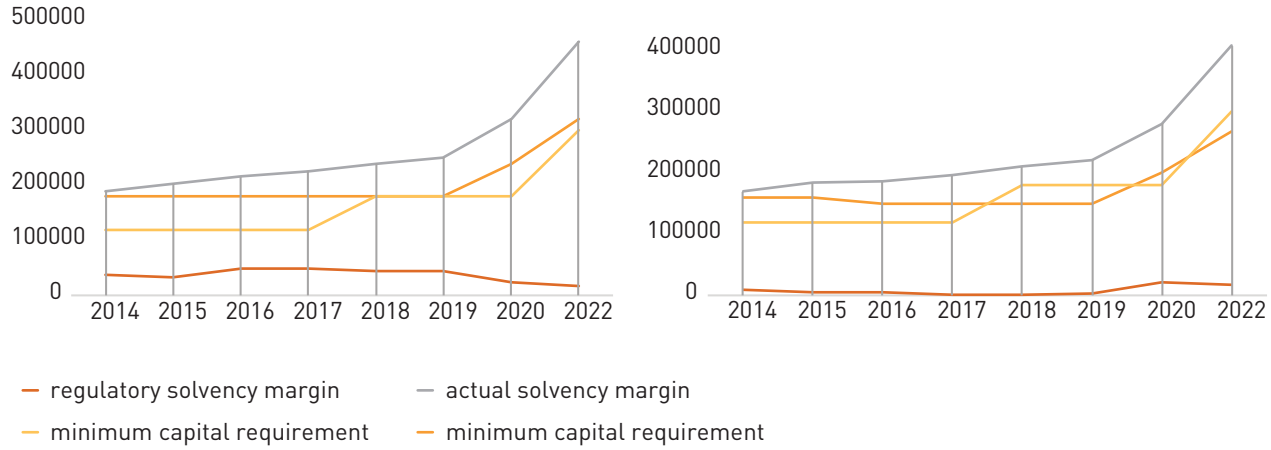
Results

The results of calculations on the efficiency of the offered approach are presented in Figures 5 and 6, which demonstrate the dynamics of the theoretical solvency margin.

The actual solvency margin of the first two companies – Dal-Jaso and Prestige Policy – exceeded the regulatory requirement for the whole period of analysis, but there was an insufficiency of equity necessary to meet the minimum capital requirements (Figure 5).

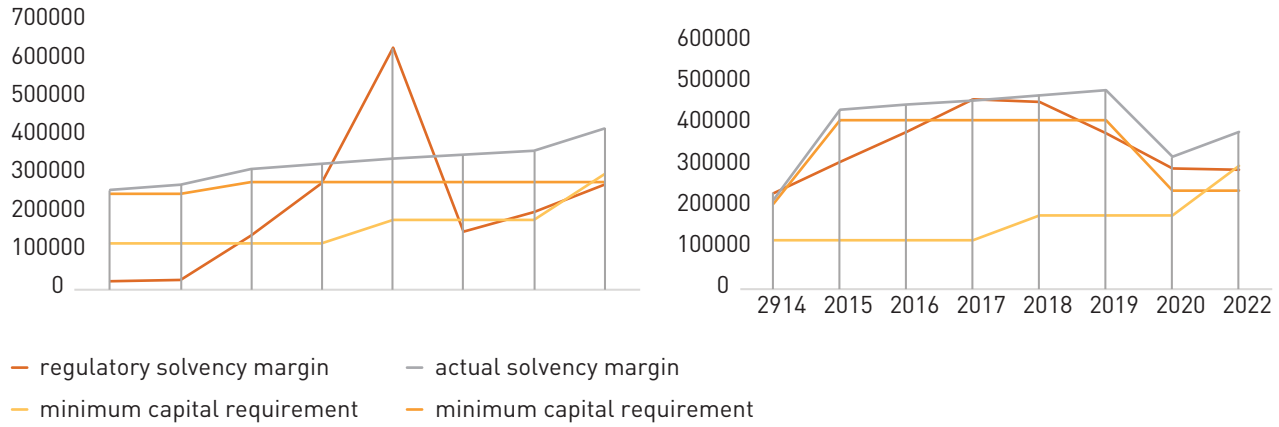
Regular tax-free deductions of the investment income to the "depreciation reserve" could increase the actual solvency margin and ensure the companies' compliance with the requirements for the new amount of minimum required capital in all periods of strengthening of these requirements by the regulator.

Figure 5. Dynamics of maintaining the solvency of the Dal-Jaso and Prestige Policy insurance companies by creating a depreciation reserve



Source: Compiled by the author.

Figure 6. Dynamics of maintaining the solvency of the Verna and Nadezhda insurance companies by creating a depreciation reserve



Source: Compiled by the author.

It follows from the figure that the depreciation reserve could ensure compliance with the tightened requirements for the minimum capital amount without additional lump-sum large-scale investments.

As for the Verna insurance company, the risk of equity deficiency in 2017–2019 was critical. Creating a reserve based on the investment income from allocation of the minimum capital amount still would not solve this problem. However, the solvency problems of the Nadezhda company were solved using such a reserve (Figure 6).

Discussion

The main course of the discussion about the sources of ensuring by insurance companies of conformity to the regulator's requirements on financial stability in the emerging market concerns use of their external and internal nature.

For example, when comparing the ways to increase insurers' capitalization, N.G. Chernova places a priority on M&A (merger and acquisition) as an external growth tool [23]. However, the author agrees that this approach is not always appropriate for small companies, and it often results in their liquidation in case of a takeover by a large federal company. According to N.G. Chernova, small insurance companies may have a rather stable insurance portfolio, and as long as they produce a positive impact on upturn in insurance demand, they should have a right to cost benefits.

In her dissertation, I.V. Grigorenko presents the idea of reasonableness of making additional issues of shares or increasing the value of corporate property in order to meet the requirements for the capitalization of an insurance company. Besides, a decision on the issue should be based on the correlation between the regulatory and actual solvency margin [24].

In the paper by J.D. Cummins et al., capitalization growth is associated with an increase in corporate market value, which serves as shareholders' remuneration [25]. Nevertheless, the paper points out that this rule is not always applicable to emerging markets such as, for example, the Asian insurance market.

M. Eling and R. Jia support the idea of internal growth as a tool for securing the necessary amount of equity. A significant number of studied insurance companies allows these authors to assert that the influence of insurance companies' performance on their profitability and the potential for creation of their equity decrease at some point because high performance requires a raise in the remuneration to the bearers of human capital whose knowledge and competence is related to its growth [26].

Following these authors, P. Zweifel, R. Eisen and D. Eckles also assert that new technology in all sectors of insurance product creation should become the source of corporate capitalization growth. This also implies investment in the quality of human capital and corporate expertise level [27].

Studies of the Tunisian rising market conducted by A.M.-S. Derbali and A. Lamouchi are also dedicated to the analysis of the principal capitalization growth factors of insurance companies from emerging markets. These authors consider efficient management to be one of such factors, along with human capital contribution [28].

Croatian researchers D. Učkar and D. Petrović analyzed the influence of M&A strategies on the development of the national insurance market. The purpose of their research was to define whether large insurers emerging as a result of this process were more efficient than medium-sized and small ones. They concluded that, as a rule, small insurance companies are no less efficient than large ones, while the results of medium-sized insurance companies vary greatly. At the same time, the average efficiency of insurance companies in the market within the observed period of multiple mergers and acquisitions improved, while the gap between the large, medium-sized and small insurers increased further [29].

Conclusion

The technique offered in the present research for the maintenance of compliance with the requirements for medium-sized insurance companies in terms of the MCR amount and general solvency is based on the approach to the nature of minimum capital as fixed capital which loses its guaranteeing capability as a result of inflation.

This assumption allows to speak of the possibility of tax exemptions for the part of the investment income when allocating MCR capital which does not exceed inflation.

This income may be accrued, increasing the actual solvency margin and enabling the company to satisfy the regulator's requirements regarding a regular increase of the minimum amount of the insurer's equity.

At present, the issue of efficiency of the sources of increasing insurance companies' capitalization cannot be considered solved, although the advantage of the internal growth strategy implemented by means of a variety of factors in emerging markets is apparent. In this case the investment income is not typically considered as a separate source or factor of the insurer's capital growth because in a generalized sense it is recognized as the shareholders' property. However, the offered method may maintain the solvency of medium-sized insurance companies provided there are corresponding institutional changes in place to regulate taxation of medium-sized companies implementing the internal growth strategy.

Due to the incomprehensive and incomplete nature of the conducted analysis, the offered research results may be considered to be the first step in the process of its extension to the entire medium-sized insurance business in Russia.

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