6

RESEARCH ARTICLE

# Individual insurance products: is there a real choice for Russians?

Svetlana V. Shchelokova<sup>1</sup>, Vladimir A. Vertogradov<sup>1</sup>

1 Lomonosov Moscow State University, Moscow, 119991, Russia

Received 2 May 2022 • Accepted 16 August 2022 • Published 27 March 2023

**Citation**: Shchelokova SV, Vertogradov VA (2023) Individual insurance products: is there a real choice for Russians? Population and Economics 7(1):1-20. https://doi.org/10.3897/popecon.7.e86059

#### Abstract

The article analyzes the level of competition of insurance product offerings in the following four markets using the Russian market as an example: (1) life insurance, (2) accident and disease insurance, (3) voluntary health insurance and (4) pension insurance. The purpose of the study is to assess competitive dynamics in the insurance product markets during the period under review. Relevant data of the Expert Rating Agency for 2018-2021 were used as the study basis. The study methodology is based on the assessment of the competitive situation using the SV matrix, which is based on HTSV (level of differentiation within the dominant group) and CRSV (cumulative market share of the dominant group). The study shows that the Russian insurance market in 2018-2021 was quite diverse in terms of dominance. Most individual insurance products belong to the B4 quadrant of the SV matrix (a natural oligopoly), yet, the situation with the dominant group regarding types of insurance under study is significantly different, since the number of dominant players varies from 2 to 10, considerably affecting a real consumer choice, however, among the markets under study, there is none with low concentration or without a dominant group or dominant leader. In the VHI market, the choice is quite large, while the presence of a big dominant group of eight companies suggests formation of the twotier companies. The top echelon sets guality standards and dominates by price, while other companies can compete with the leaders due to niche offerings and price factors. The pension insurance market is an example of a significantly reduced consumer choice: in 2018, it is in the RO quadrant with a relatively "weak" dominant group, while by 2021, a hardly differentiated oligopoly of 5 companies has been formed, controlling 95% of the market. Emerging players with the market and institutional opportunities similar to SOGAZ make significant changes in the market structure, as in the case of personal insurance market, wherein SOGAZ has absorbed the largest player, transferring the market from an oligopoly of seven companies to the actual dominance of the one.

#### Keywords

competitive analysis, life insurance, market competition, Russian insurance market, SV Matrix

**JEL codes:** G22, L13, L22

Copyright Shchelokova SV, Vertogradov VA. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

## Introduction

Competitive analysis of the market of individual insurance products is substantiated by economic changes in all countries associated with the pandemic, which could not but affect the insurance market. Formally, there is a fairly broad market of individual insurance products in each country, but a real consumer choice may be limited by the dominance of large insurance companies in certain types of insurance products.

Using the Russian market as an example, the article attempts to evaluate competition of insurance products, as well as changes in competition during the period under study in the following four markets: (1) life insurance, (2) accident and disease insurance, (3) voluntary health insurance and (4) pension insurance.

## Competitive analysis of individual insurance product markets

The issue of competition between individual insurance products has already been studied in various aspects.

- Researchers are interested in peculiarities of the national insurance markets. For example, the article (Chen et al. 2021) analyzes the impact of research and development (R&D) on the market competitiveness of the Taiwanese life insurance firms using the Lerner Index (LI). The results show that R&D has a significant delayed impact on market competitiveness, and the relationship between R&D and market competitiveness depends on the position of the market competitiveness (the growth momentum of R&D can last for three years for a group with high market competitiveness). Consequently, life insurance firms with high market competitiveness have higher R&D growth rates than companies with low market competitiveness.
- Also interesting is a study (Arintoko et al. 2021), that analyzes the insurance market in Indonesia, as well as the impact of the company's market share on profitability indicators (effectiveness of the company can contribute to increasing profits, rather than capturing a market share). The results of the analysis of the Indonesian insurance market based on the concentration coefficient of four firms (CR4 = 84.77%) and the Herfindahl-Hirschman index (HHI=3374.19) for 2014-2018 showed that this market has a high level of concentration.
- Much attention has been recently paid to the impact of the COVID-19 pandemic on insurance markets. For example, paper (Rajnikanth and Doss 2021) shows that the pandemic effect on the traditional life insurance business was not significant, while the impact on the pension insurance market was significant indeed. However, during the pandemic, customer awareness about insurance has increased, resulting in higher demand for medical services, including health insurance and emergency insurance products.
- In Russia, according to the report of the National Rating Agency (March 2022), the concentration of the Russian insurance market in 2022 increased compared to 2021. The share of the TOP-100 companies included in the ranking accounts for 99.89% of all premiums, the share of the TOP-50 adds up to 97.06%. In 2020, these shares equaled to 99.68% and 96.45%, respectively. This concentration growth is due to the TOP-20: their share increased from 84.86% to 86.46% (National rating... 2022). According to

the authors of the report, in 2022, the market concentration will continue to increase, and the share of the TOP-50 insurers will be in the range of 97.5%-98%. Also, in 2021, the trend towards reducing concentration of the reinsurance market continued: the TOP-10 reinsurers collected 86% of all premiums on incoming reinsurance (in 2020 – 87%, in 2019 – 88.5%). The share of the TOP-3 leaders (Russian National Reinsurance Company (RNRC), Gas Industry Insurance Company (SOGAZ) and Ingosstrakh) decreased from 57.8% in 2020 to 49.1% in 2021.

- Paper (Volkova et al. 2021) shows that the Russian insurance market is characterized • by a tendency towards reducing the number of its participants: 2005 - 815 companies, 2014 – 411, 2020 – 172, at the beginning of 2021 – 151 (while in the U.S. insurance market, for example, in 1989 there were about 6 thousand companies, and by 2020 the number has increased up to 11 thousand). According to the authors' calculations of concentration ratios (CR) and Herfindahl-Hirschman indices (HHI) there are hardly any significant changes in the competitive environment in Russia: CR5 increased from 0.419 in 2014 to 0.446 in 2020, CR10 increased from 0.590 in 2014 to 0.653 in 2020, HHI also increased from 484.79 to 574.4. (Volkova et al. 2021). In terms of the CR index formula, to ensure such changes in the values of these indices, it is sufficient that, for instance, one company from the TOP-5 absorbs a small competitor, resulting in consolidation of their market shares. Therefore, it is rather hard to agree with the authors' conclusions that these "CR indices enable to conclude that the insurance market of the Russian Federation is definitely moving from monopolistic competition to the state close to oligopoly".
- Paper (Tsviliy-Buklanova 2020) notes that consolidation of the Russian insurance market becomes noticeable when studying the volume of premiums collected by insurance companies of different sizes. The data show that insurers with ranking under 50 have growth rates below the market average, while companies "outside the TOP-100 have been showing negative dynamics of premiums for four years in a row." It is also noted that provisions of the law on gradual increase in the minimum level of authorized capital, which came into force on 01.01.2020, result in small insurance companies being forced to join the larger players in the insurance market (Federal Law 2018).

Unfortunately, current research on competition in the Russian insurance market is quite limited in terms of the tools used (mainly, it is CR and HHI assessments), making it impossible to assess the real choice of insurance products.

## 1. Life insurance market

From the consumer point of view, the market of accumulative life insurance products is an alternative to bank deposits. Therefore, in order not to miss potential sales opportunities, all leading banks are actively offering accumulative life insurance as part of their services. In 2019, the share of policies sold by banks accounted for 85% of the total volume (Makhdieva 2021).

An essential part of the life insurance market is life insurance of the borrow or credit life insurance. As a result, there is a direct relationship between the volume of the life insurance market and the volume of loans issued, which depends on the key rate determined by the Central Bank of Russia (Sharifyanova and Khairulina 2016).

Paper (Dmitriev 2020) presents interesting comparative data on the life insurance market in Russia and the U.S. In Russia, HHI=1683 and CR5=72.92, while in the U.S. these indicators equal to 30.1 and 181.99, suggesting a significantly lower concentration of the American insurance market.

# 2. Accident and Disease insurance market

The accident and disease insurance market is also directly affected by the population demand for loans (Bank of Russia 2018). In 2020, during the pandemic, it was accident and disease insurance (along with accumulative life insurance and property insurance of legal entities) that became the main driver of the insurance market in Russia (Ingosstrakh 2021).

## 3. Voluntary Health Insurance (VHI) market

In fact, the main competitor of VHI in Russia is compulsory health insurance (CHI), deductions for CHI funds are subtracted from the employee's real salary regardless of the employee's will. According to some researchers, many Western countries do not have free health care or it is rather limited, therefore insurance products are in much greater demand than in Russia, encouraging a more active competition for customers (Dmitriev 2020).

As a result, in Russia, the main buyers of VHI are legal entities that purchase policies for their employees – 87.7% of the market volume by the end of 2020 (RBC 2021). It would be only logical to assume that company specialists responsible for procurement of such services, other things being equal, will be more rational in choosing optimal options than an average consumer. Out of all types of individual insurance services, it was the VHI market that suffered from the 2020 pandemic the most; however, the structure of this market demonstrates that the main decline was due to individual sector, while the corporate one grew by 7.2%. Among other things, reduction in the VHI market in the individual sector was due to reduced tourism, decreased number of migrant workers<sup>1</sup> and, of course, reduced income of some consumers (RBC 2021).

# 4. Voluntary pension insurance

According to Fatkhlislamova G.F. (Fatkhlislamova 2019), voluntary pension insurance is the most effective type of insurance in the Russian market economy. Currently, the size of premiums is extremely small in contrast to the developed countries (Bakhmatov et al.

<sup>1</sup> The mandatory requirement for foreign citizens to purchase a voluntary medical insurance policy was introduced at the beginning of 2015 as part of the entry into force of the Federal Law No. 409-FL "On Amendments to the Labour Code of the Russian Federation and Article 13 of the Federal Law "On Legal Status of Foreign Citizens in the Russian Federation" related to the specifics of the labour regulation of employees who are foreign citizens or stateless persons". At the initial stage of the formation of this market segment, there used to be many problems: fake policies, policies without adequate insurance coverage, etc. Following the additional instruction of the Central Bank of the Russian Federation No. 3793-U as of May 30, 2016, which defined the requirements for insurance products of this type, the situation has gradually returned to normal, although migrants still do not apply for services under their policies [Grigorieva 2018].

2019), suggesting a huge potential of this market in the Russian Federation. This paper also estimated correlation coefficients based on calculations; the higher the volume of loans issued, the weaker the dynamics in the number of voluntary pension insurance contracts. According to the authors, "this situation is quite natural, since in case of credit obligations, citizens primarily direct their own resources to repay them, rather than to long-term investment". Probably, a negative factor in the demand for voluntary pension insurance is a general household debt load in Russia.

In general, most researchers use standard indices to analyze competition in the insurance market (most often CR and HHI, less often – the Lerner index, HT, absolute concentration index (ACI), Lorenz curve) and analyze entry-exit barriers and institutional advantages of players. At the same time, everyone points out oligopoly or monopolistic competition, however no one analyzes the level of competition between the market leaders, among whom most consumers primarily choose. It is intuitive that if there are 100 companies in the market and each has 1% of the market, then it most likely indicates a broad consumer choice. However, if one of the 100 companies has 95% of the market, a real consumer choice hardly exists. Let's look at this issue in more detail from the consumer point of view.

What number of offerings (or insurance companies in the market) can imply availability of consumer choice?

As written in (Tsviliy-Buklanova 2020) "it is the competition, the "battle for the wallet" of the policyholder that both has engendered many insurance companies and created conditions for their consolidation, primarily with the aim of preventing competitors (both the existing and emerging ones) from entering their market as well as ensuring standard insurance rules".

However, let us not ignore the fact that the consumer behavior is not always rational. For example, paper (Tsyganov and Bryzgalov 2014) states that "behavior of economic entities in financial markets [including insurance services – authors' notes] has signs of irrationality, which is associated with the lack of stable preferences, insufficient information and information asymmetry, and strong influence of recommendations and "herd mentality" on decision-making (up to cases of stampeding from quite stable banks, denial of any currency, etc.).... It is the irrational behavior of the consumer of financial services, including insurance ones, and high transaction costs of the consumer associated with information collection and analysis that lay the institutional groundwork for the emergence of other types of competition in the insurance market". To reduce such manifestations of irrationality, programs are being conducted to improve financial literacy of the population, which, among other things, help substantiate the need for personal insurance (Dmitriev and Nazarova 2020).

It is also important that one and the same need can be met by insurance products of different types. For example, coverage for tick bites (insurance policy), which is popular in many Russian regions, can be provided both as part of VHI policies and as accident and disease insurance (Tsyganov and Bryzgalov 2014). As a result, even if various options for accident insurance are not available to the consumer interested in the "tick bites" coverage, the choice can be met at the expense of insurance products of other types.

The main purpose of this study is to determine competitive dynamics in offerings in the insurance product markets during the period under review. The study considers the following insurance product markets as individual insurance product markets:

1. life insurance,

2. accident and disease insurance,

- 3. voluntary health insurance (it makes no sense to consider compulsory health insurance, since there is a set of medical services that does not depend on the choice of the insurance company),
- 4. voluntary pension insurance.

## **Research methods**

To analyze consumer choice, we will analyze competition in each of the markets and consider relevant changes in 2018-2021. If a certain segment of the insurance market has a low concentration of business and low level of differentiation between players, then we will assume that the market is close to perfect competition and the consumer does have a choice. If there are groups of dominant companies in the market or a high concentration of business, we will consider in more detail the nature and specific features of this competition.

Accordingly, our approach will consist of the following steps:

- 1. First, we calculate the presence and level of dominance for each of the markets using the SV (strength/variety) matrix.
- Then we calculate HHI to analyze those markets where dominance was not automatically detected (Bukvić et al. 2014).
  - a. If there is no dominance and HHI is less than 1000, we consider the market competitive, and that the consumer has got a choice.
  - b. In other cases, a meaningful conclusion requires additional information about the competitive situation in the market for expert evaluation.
- 3. For all markets, we look at the possible institutional advantages of the leaders in order to further assess the level of competition (Blokhin et al. 2019).

The use of the SV matrix (Shchelokova and Vertogradov 2021) to determine availability of consumer choice requires methodological justification. In accordance with the methodology of the matrix, the number of companies in the dominant group is determined by the Lind index (Linda 1976). Next, the level and nature of dominance in this group is assessed by HTSV (Hall-Tideman Strength/Variety, modified Hall-Tideman index, reflecting the level of differentiation within the dominant group) and CRSV (Concentration Ratio Strength/Variety, the cumulative market share of the dominant group).

The Lind index used in the matrix is designed to determine the presence of a dominant group (i.e. two or more companies) and its size in the analyzed market. In case when there is only one dominant company in the market, the Lind index does not show it. Therefore, we will identify such cases using the Herfindahl-Hirschman Index (HHI): if there is one leader with a high market share, then HHI will show a high concentration of the market, and we will analyze it separately. As a rule, in all countries, an indicator of less than 1000 is considered the indicator of low concentration of markets, and over 2000 (in the U.S. over 2500) is a sign of high concentration (Bukvić et al. 2014). When using this index, it is important to remember that it is calculated only on the basis of the market shares of the players in question, without taking into account other competitive parameters (price, etc.), therefore, even with high HHI values, there may be strong price competition.

More information about coefficient calculation can be found in (Shchelokova and Vertogradov 2021) or a specialized web portal www.svmatrix.online . Depending on the values of HTSV and CRSV, the corresponding market is attributed to one of the following four quadrants, see Figure 1.

	30% <crsv <65%<="" th=""><th>CRSV&gt;65%</th></crsv>	CRSV>65%
	<b>Low market share</b> of the dominant group	<b>High market share</b> of the dominant group
HTSV>0.1	Quadrant I "low or natural barriers".	Quadrant G "Dominant super alpha".
high level of differentiation within the dominant group	There is one clear leader within the dominant group, but new players are constantly entering the market, since it is impossible to establish barriers to their entry.	There is one clear leader within the dominant group that determines the rules of the game in this market.
HTSV<0.1	RO quadrant "Red Ocean".	Quadrant B4 "Natural oligopoly".
<b>low level</b> of differentiation within the dominant group	Companies from the dominant group actively compete with both each other and all other companies in the market.	The dominant group includes several companies of comparable capabilities that are interested in preventing new players from entering their circle.

Figure 1. Description of the SV matrix quadrants. Source: (Vertogradov et al. 2022)

Based on the logic of constructing the SV matrix, if the market is in the B4 quadrant, then the companies of the dominant group seek to protect the existing oligopolistic equilibrium by preserving the existing ones and creating additional barriers to entry of any new companies. In this situation, we can say that the consumer choice will be limited by various institutional and market advantages of the dominant companies. This may manifest itself in the fact that, for example, to provide a particular service, an organization may require an insurance policy issued by a limited number of insurance companies.

In the RO quadrant, the consumer choice will be much wider, since companies within the dominant group actively compete not only with other companies, but also with each other, and therefore it is quite difficult for them to unite, which has a beneficial effect on the consumer choice options.

The consumer has a somewhat narrower choice in the I and G segments, but in order to assess the availability of a real choice, it is necessary to analyze in detail the number of players in the dominant group, as well as the market share of the leader. If the leader's share is over 50% (FAS of Russia 2017), then it is logical to assume that the consumer choice is significantly limited, since the leader with such a market share can use its market advantages to limit the consumer choice and significantly influence the market situation both directly and through intermediaries.

Additionally, in many cases it will be necessary to analyze possible institutional advantages of the market leaders, since if, for example, the bulk of buyers of one of the products is state-owned companies, then it is possible that insurance companies with state participation may have advantages over the rest of the market participants.

Based on Expert RA data for 2018 – 2021 (https://raexpert.ru/rankings/insurance/2021/) we will analyze how the situation in the voluntary insurance market has changed during the COVID-19 pandemic in terms of the overall market dynamics and its individual segments, as well as the level of dominance and competition in these markets (see Table 1).

Market	Market volume
1. Total amount of insurance premiums (including incoming reinsurance)	1 881 178
1.1 Total amount of premiums by type of voluntary insurance (including incoming reinsurance)	1 626 708
1.1.1 Life insurance premiums	524 402
1.1.1.1 Life insurance premiums (excluding pension insurance)	522 232
1.1.1.1.2 Life insurance premiums of the borrower	136 084
1.1.1.2 Pension insurance premiums	2 170
1.1.2 Non-life insurance premiums	1 102 306
1.1.2.1 Personal insurance premiums	462 883
1.1.2.1.1 Accident and disease insurance premiums	262 568
1.1.2.1.2 Health insurance premiums	200 317

**Table 1.** Main indicators of the individual insurance market – amount of the collected insurance premiums in 2021

Source: https://raexpert.ru/rankings/insurance/2021/

In general, the Russian voluntary insurance market consists of the following two large segments "Life insurance" and "Non-life Insurance". In line with the purpose of the study, we will focus on the market segments related to the life and health of the population, namely, we will consider "Life insurance premiums", "Personal insurance premiums", excluding "Property insurance premiums".

# Results

The table below presents the authors' calculations of HHI, Lind, HTSV and CRSV, corresponding quadrant of the SV matrix, as well as the scale of each market in 2018-2021 for reference.

Tab	le 2	<b>2.</b> Ca	alculation	1 data,	201	18-2021
-----	------	--------------	------------	---------	-----	---------

Insurance markets	Year	Lind=>	CRSV	HTSV	Quadrant	нні	Market Volume (million rubles)
1. Total amount of	2021	NO	NO	NO	NO	722	1 881 178
insurance premiums	2020	9	68%	0.036	B4	691	1 601 186
(including incoming reinsurance)	2019	10	68%	0.032	B4	572	1 483 033
Temsurance)	2018	9	63%	0.035	RO	551	1 479 527
1.1 Total amount of	2021	10	71%	0.046	B4	753	1 626 708
premiums by type of	2020	10	70%	0.040	B4	727	1 352 779
voluntary insurance (including incoming	2019	2	26%	0.031	RO	600	1 245 336
reinsurance)	2018	3	35%	0.057	B4	597	1 227 498

Insurance markets	Year	Lind=>	CRSV	HTSV	Quadrant	нні	Market Volume (million rubles)
1.1.1 Life insurance	2021	4	73%	0.09	B4	1 615	524 402
premiums	2020	4	72%	0.060	B4	1 465	430 517
	2019	4	69%	0.153	G	1 743	409 374
	2018	9	86%	0.112	G	1 896	452 400
1.1.1.1 Life	2021	4	74%	0.09	B4	1 627	522 232
insurance premiums	2020	4	72%	0.060	B4	1 479	428 249
(excluding pension insurance)	2019	4	69%	0.153	G	1 759	407 257
msurance)	2018	9	86%	0.112	G	1 912	450 840
1.1.1.1.2 Life	2021	2	68%	0.014	B4	2 683	136 084
insurance premiums	2020	2	74%	0.024	B4	2 958	94 548
of the borrower	2019	2	73%	0.072	B4	2 870	91 491
	2018	3	87%	0.287	G	3 769	59 197
1.1.1.2 Pension	2021	5	95%	0.092	B4	2 264	2 170
insurance premiums	2020	3	77%	0.029	B4	2 158	2 268
	2019	3	80%	0.029	B4	2 287	2 114
	2018	2	65%	0.006	RO	2 458	1 560
1.1.2 Non-life	2021	6	70%	0.092	B4	1 264	1 102 306
insurance premiums	2020	6	69%	0.086	B4	1 237	922 262
	2019	7	70%	0.043	B4	883	835 962
	2018	7	68%	0.049	B4	817	775 098
1.1.2.1 Personal	2021	9	81%	0.14	G	2 178	462 883
insurance premiums	2020	1*	42%	1	Ι	2 005	380 639
	2019	2	42%	0.056	RO	1 109	368 021
	2018	7	68%	0.049	B4	817	321 378
1.1.2.1.1 Accident	2021	1*	51%	1	Ι	2 779	262 568
and disease	2020	10	83%	0.143	G	2 429	203 116
insurance premiums	2019	9	77%	0.111	G	1 458	187 366
	2018	1*	53%	1	Ι	2 287	169 556
1.1.2.1.2 Health	2021	8	83%	0.099	B4	1 650	200 317
insurance premiums	2020	8	84%	0.099	B4	1 700	177 526
	2019	9	85%	0.085	B4	1 506	180 655
	2018	9	85%	0.086	B4	1 657	151 843

\* in these segments, the Lind index does not automatically show the dominance (which is related to the specifics of the index calculation, for more details, see (Shchelokova and Vertogradov 2021)):

• Personal insurance premiums in 2020;

• Accident and disease insurance premiums in 2018 and 2021. *Source:* authors' calculations

Therefore, the size of the dominant group (as will be specified below) was evaluated by experts, and then CRSV, HTSV and the corresponding quadrant of the SV matrix were calculated.

2020 rank- ings	Company name	City	Amount of the collected insurance premiums in 2020, million rubles	Market share	Amount of insurance claim payments in 2020, million rubles	Payout level
1	SOGAZ	Moscow	160 734	42.23%	51 823	32.20%
2	RESO-Guarantia	Moscow	27 398	7.20%	15 801	57.70%
3	Rosgosstrakh	Lyubertsy	26 122	6.86%	6 404	24.50%
4	AlfaStrakhovanie	Moscow	25 397	6.67%	13 480	53.10%
5	VSK	Moscow	19 758	5.19%	5 859	29.70%

Table 3. Personal Insurance Premiums, 20	020.
--	------

Source: https://raexpert.ru/rankings/insurance/2020/

Table 3 shows that SOGAZ leads in this type of insurance and accounts for more than 42% of the market, the market shares of other companies are significantly lower (RESO-Garantia accounts for 7.2%, while indicators for the rest are even less significant). Despite the fact that the Lind index failed to automatically identify dominance in this segment, according to the expert evaluation, we can state that it does exist (in this case, the dominant group is represented by one company). In terms of the SV Matrix, this situation falls into the I quadrant (since CRSV = 42.23%, and the level of differentiation between companies (HTSV) is 1).

Table 4. Accident an	d Disease Insurance	Premiums, 2018
----------------------	---------------------	----------------

2018 rank- ings	Company name	City	Amount of the collected insurance premiums in 2018, million rubles	Market share	Amount of insurance claim payments in 2018, million rubles	Payout level
1	VTB Insurance	Moscow	78 821.59	46.5%	2646.4	3.4%
2	VSK	Moscow	9 466.77	5.6%	1221.06	12.9%
3	SOGAZ	Moscow	7 512.17	4.4%	2967.16	39.5%
4	CARDIFF	Moscow	6 246.66	3.7%	488.09	7.8%
5	AlfaStrakhovanie	Moscow	6 217.34	3.7%	1051.09	16.9%

Source: https://raexpert.ru/rankingtable/insurance/insurance\_2018/1.1.2.1.1

We can observe a similar situation in the accident and disease insurance segment in 2018 (see Table 4). The clear leader is VTB Insurance with a market share of over 46%, followed far behind by other companies. As in the previous case, this segment can be attributed to quadrant I of the SV matrix (CRSV= 46.5%, HTSV=1).

2021 rank- ings	Company name	City	Amount of the collected insurance premiums in 2021, million rubles	Market share	Amount of insurance claim payments in 2021, million rubles	Payout level
1	SOGAZ	Moscow	134 027	51.05%	5 721	4.3%
2	Rosgosstrakh	Lyubertsy	22 005	8.38%	1 218	5.5%
3	Tinkoff Insurance	Moscow	15 764	6.00%	343	2.2%
4	AlfaStrakhovanie	Moscow	11 119	4.24%	2 915	26.2%
5	VSK	Moscow	10 585	4.03%	1 626	15.4%

Table 5. Accident and disease insurance premiums, 2021

Source: https://raexpert.ru/rankingtable/insurance/2021/1.1.2.1.1

In 2021, the situation related to this type of insurance resembles the one in 2018: SOGAZ is in the lead with a market share of over 51%, followed far behind by other companies. As in the previous case, this segment can be attributed to quadrant I of the SV matrix (CRSV= 51.05%, HTSV=1).

# Discussion

Next, we will separately consider the following two segments: life insurance (1.1.1) and personal insurance (1.1.2)

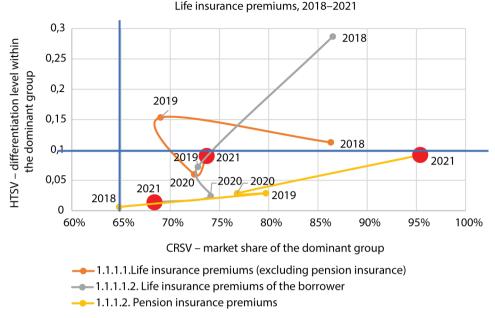
#### Life insurance premiums

It is important to note that since pension insurance premiums account for a very small part of the "Life Insurance" segment (about 0.4%, according to Table 2), the actual situation in the "Life Insurance Premiums" segment coincides with "Life insurance premiums (excluding pension insurance)", therefore, we will consider only the following three market segments in this section:

- 1. Life insurance premiums (excluding pension insurance) (1.1.1.1)
- 2. Life insurance premiums of the borrower (1.1.1.1.2)
- 3. Pension insurance premiums (1.1.1.2).

In 2021, a third of the increase in premiums in the insurance market is due to the life insurance segment (94 out of 290 billion rubles). According to the National Rating Agency, in 2021, "the main factors of the premium growth were the record volume of mortgage and consumer loans, as well as low deposit rates combined with the introduction of taxation of interest income on deposits" (National rating... 2022)

The figure below outlines the SV matrix showing these three segments of the insurance market.



**Figure 2.** SV matrix for life insurance premiums in Russia, 2018-2021. *Source*: compiled by the authors based on the data presented in Table 2.

Let's consider each of the segments separately.

## Life insurance premiums (excluding pension insurance)

As the SV matrix shows (see Figure 2), this type of insurance is very dynamic: from 2018 to 2019, while remaining in the G segment, the dominant group shrank from 9 to 4 players, reducing the total market share by about 20%. Further, this group of 4 companies (Sberbank Life Insurance, AlfaStrakhovanie-Life, SOGAZ-LIFE <sup>1</sup>Insurance Company, and Renaissance Life Insurance Group) gradually increased its consolidated market share from 69% to 74%, while simultaneously reducing the level of differentiation among themselves, transferring the market from the G segment to B4.

Rosgosstrakh Life, which is 5th in the ranking in 2020 and 2021, lagged more than twice behind Renaissance Life, which ranks fourth.

According to the National Rating Agency, "After information disclosure standards were introduced, banks – the main sellers of life insurance contracts – shifted their interests towards other products, both insurance (for example, accumulative life insurance) and non-insurance. The problem of misselling has become less acute, yet impossible to be fully eradicated, creating reputational risks in this segment. The segment development is also negatively affected by low level of accumulation in the population income, competition due to other investment products, including conditions for tax deductions, as well as lack of simplified identification of customers» (National rating... 2020).

<sup>1</sup> In 2018, it was presented in the ranking as VTB.

#### Life insurance premiums of the borrower

From 2018 to 2021, this market segment moved from the G quadrant to B4 (see Figure 2), which means a significant decrease in the level of differentiation of the dominant players (HTSV decreased almost 20 times from 0.287 in 2018 to 0.014 by 2021). However, within the last 3 years there have been only 2 companies in the dominant group: Sberbank Life Insurance and AlfaStrakhovanie-Life, which jointly controlled 68-74% of the market in different years. Renaissance Life Insurance Group ranks 3rd far behind.

In this case, we can assume that a real consumer choice is missing, since 2 companies control three quarters of the market.

## Pension insurance premiums

In Russia, as of 2019, there were 46.5 million pensioners, including 36.7 million receiving an old-age pension (Tulenty et al. 2021). According to the Association of Life Insurers in the Russian Federation, "pension insurance is a small, yet steadily growing segment of life insurance. Its premiums still account for 0.5% of the market, however, in 2020 they increased by more than a third (Tadviser 2020). This suggests that people are increasingly taking care of their future, independently providing themselves with a bonus to the government payments". On the other hand, according to the report of the Bank of Russia, "the number of participants in the voluntary pension system decreased in 2020. This may be explained by decreased economic activity and income of the population. At the same time, in the last quarter of the year, the number of participants increased due to active customer engagement by two large non-state pension funds (NPF)" (Bank of Russia 2020) In this case, there is a decreased number of participants in the voluntary pension system against the background of a steady increase in premiums.

In terms of competition in this market in 2018-2021, this market segment has moved from the RO quadrant to B4, which means a significant increase in the share of dominant players (from 65% in 2018 to 95% in 2021). The following 5 companies (Sovcombank Life, PPF Life Insurance, Geopolis, Ingosstrakh-Life Insurance Company, Capital Life Life Insurance) formed the dominant group in 2021 (see Table 6).

	2021	2020	2019	2018
Sovcombank Life (MetLife until	33.51% 🔺	29.15% 🔺	27.20%	32.80%
2021), (Vedomosti 2020)				
PPF Life Insurance	25.74% 🔺	22.92%	23.00%	32.00%
Geopolis	16.31% 🔻	24.72% 🔻	29.50% 🔺	11.10%
Ingosstrakh-Life	10.89% 🔺	10.48%	10.50%	14.00%
Capital Life Life Insurance	8.95% 🔺	6.25%	2.40%	1.80%
Renaissance Life	3.60% 🔻	4.51%	5.50%	5.80%
SOGAZ-LIFE Insurance Group	0.84% 🔻	1.52%	1.20%	1.50%

**Table 6.** Dominant group composition and market share of the companies in the pension insurance market, 2018-21

*Source:* compiled by the authors based on https://raexpert.ru/rankings/ insurance/2021/, https://raexpert.ru/rankings/insurance/2020/, https:// raexpert.ru/rankings/insurance/insurance\_2019/, https://raexpert.ru/ rankings/insurance/insurance\_2018/ Formally, the size of the dominant group has been constantly increasing since 2018, indicating expansion of the consumer choice, but in reality, in the end of 2021, an oligopoly of 5 companies controlled 95% of the market. This may lead to negative consequences, however, most likely this will not happen, since pension insurance is considered by consumers on a par with non-state pension funds, whose offers expand their range of choice (Sovkomblog 2022).

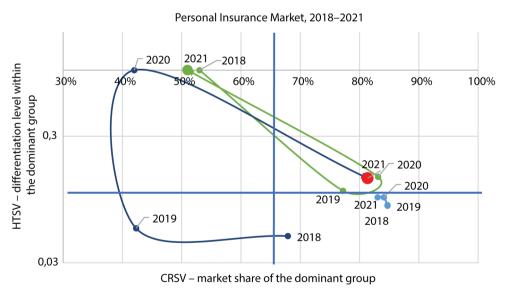
Conspicuous is a low share of SOGAZ-Life, which is part of the SOGAZ Group, but this is probably caused by too small a volume of the pension insurance market compared to the rest.

#### Personal Insurance Market

The personal insurance market showed significant changes under the study period, having successively passed all 4 segments in 4 years, although all segments of this market, as shown in Figure 3, tend to monopolize and move to the G quadrant.

This is due to the fact that the first largest company in 2018 (VTB Insurance with a market share of 17.3%) was sold to SOGAZ Insurance Group. The transaction scope included all companies of VTB Insurance group, including VTB Life Insurance and VTB Health Insurance (SOGAZ 2018).

Emergence of a strong leader in this market has moved the market from a poorly differentiated oligopoly in 2018 to a highly differentiated one in 2021. The dominant group of 9 companies has been formed by 2021, since companies with the ranking number 10 and under (Soglasie) began to lose their shares (see Table 7), failing to keep pace with the first-tier companies.



1.1.2.1.1 Accident and disease insurance premiums

1.1.2.1 Personal insurance premiums

**Figure 3.** SV matrix for the personal insurance market in Russia, 2018-2021. *Source:* compiled by the authors

Table 7. Personal Insurance Market Shares, 2018-2021

		2021	2020	2019	2018
1	SOGAZ	44.33%	42.23%	23.40%	14.90%
2	Rosgosstrakh	7.11%	6.86%	6.60%	5.30%
3	RESO-Guarantia	7.07%	7.20%	6.80%	8.00%
4	AlfaStrakhovanie	6.78%	6.67%	5.80%	8.50%
5	VSK	4.39%	5.19%	5.30%	7.30%
6	Ingosstrakh	3.75%	3.61%	3.80%	6.60%
7	Tinkoff Insurance	3.41%	3.17%	2.70%	1.20%
8	Alliance Life	2.28%	2.51%	2.20%	3.00%
9	Renaissance Insurance	2.24%	2.24%	2.30%	3.00%
10	Soglasie	1.18% 🔻	1.30%	1.50%	1.20%
11	CARDIFF	1.16% 🔻	2.22%	2.90%	2.00%
12	RSHB Insurance	0.92% 🔻	1.02%	0.90%	0.70%
13	Sovcombank Insurance	0.90% 🔻	1.30%	no	no
14	VTB Insurance	0.90%	2.05%	18.90%	17.30%
15	Sberbank Insurance	0.88%	0.50%	0.30%	1.10%
	Lind (core of the market)	9	1	2	7
	Quadrant	G	Ι	RO	B4

*Source:* compiled by the authors based on https://raexpert.ru/rankings/ insurance/2021/, https://raexpert.ru/rankings/insurance/2020/, https:// raexpert.ru/rankings/insurance/insurance\_2019/, https://raexpert.ru/ rankings/insurance/insurance\_2018/

If the companies of the dominant group stick together, then a gradual decrease in differentiation between companies and evolution of the market into the B4 segment can be expected.

In any case, there is a formal availability of a fairly broad choice for consumers, however, the leader with a market share of almost 45% also makes it possible to hypothesize that SOGAZ may have strong competitive advantages over other companies in some segments of this market, possibly relying on institutional advantages.

## Accident and Disease Insurance Market

This market is so peculiar that the use of the SV matrix apparatus required manual adjustment in two periods (see Table 8). 2021 and 2018 were expertly assigned to segment I, in 2020 and 2019, the Lind index identified large dominant groups (9 and 10 companies) with the strongest differentiation.

A detailed analysis shows that, for example, if we compare 2020 and 2021 by market share, there are no significant changes registered apart from the continued business transfer from VTB Insurance to SOGAZ (SOGAZ 2018). The Lind index correctly shows the lack of dominant group in 2021, since the shares of companies started to decrease more evenly, however this does not change the competitive situation in the market anyway. In fact, SOGAZ is a monopolist in this market with a 51% share, which is probably caused by its institutional leverage.

	Company	2021	2020	2019	2018
1	SOGAZ	51.05%	47.45%	13.80%	4.40%
2	Rosgosstrakh	8.38%	6.86%	2.50%	1.80%
3	Tinkoff Insurance	6.00%	5.94%	5.30%	2.50%
4	AlfaStrakhovanie	4.24%	5.22%	3.20%	3.70%
5	VSK	4.03%	4.15%	6.50%	5.60%
6	RESO-Guarantia	3.33%	3.55%	4.00%	2.50%
7	Ingosstrakh	2.09%	2.03%	1.70%	1.20%
8	CARDIFF	2.04%	4.15%	5.70%	3.70%
9	RSHB Insurance	1.47%	1.73%	1.60%	1.50%
10	Uralsib Insurance	1.19%	0.90%	1.10%	1.20%
11	Capital Life Life Insurance	1.03%	1.18%	1.50%	2.00%
12	Ugoria	1.01%	0.96%	n/a	0.50%
13	Sberbank Insurance	1.01%	0.54%	3.00%	0.00%
14	Renaissance Insurance	0.88%	0.99%	0.80%	0.60%
15	VTB Insurance	0.79%	2.48%	33.20%	46.50%
	Lind (core of the market)	no	10	9	no
	Quadrant	Ι	G	G	Ι

Table 8. Market share of accident insurance companies, 2018-2021

*Source:* compiled by the authors based on https://raexpert.ru/rankings/ insurance/2021/, https://raexpert.ru/rankings/insurance/2020/, https:// raexpert.ru/rankings/insurance/insurance\_2019/, https://raexpert.ru/ rankings/insurance/insurance\_2018/

On the other hand, the choice of various products in the market is more than available. And dozens of large insurance companies claim the second half of the market.

#### [Voluntary] health insurance market

It was the most stable market in the period under study. The market share of the dominant group ranged from 83% to 85%, the market was consistently in the B4 quadrant – a natural oligopoly. Although about a third of the market has always been occupied by SOGAZ, there were still 7 or 8 companies in the dominant group, suggesting that consumers have a sufficient choice of VHI products. Composition of the companies was stable (see Table 9), while the decrease in the number of companies was only due to SOGAZ taking over the VTB Insurance business.

It is interesting that throughout all four years, the leader of the second echelon, which followed the dominant group in the rankings, was Soglasie company. Also, intriguing is a constant growth of the market share of RESO-Garantia and a sharp decline of Rosgosstrakh over the period under study.

Comparing 2019 and 2021, Table 9 shows that all companies of the dominant group (except for Rosgosstrakh and Ingosstrakh) have increased their market shares, although during this time many customers have abandoned VHI policies, and about 10% of insurance companies have left the VHI market (Employers saved ... 2021).

	2021	2020	2019	2018
SOGAZ	35.53%	36.25%	33.30%	36.4%
RESO-Guarantia	11.98% 🔺	11.38% 🔺	9.70% 🔺	9.4%
AlfaStrakhovanie	10.11%	10.06%	8.5%	9.2%
Ingosstrakh	5.92% 🔺	5.42%	6.00%	6.2%
Rosgosstrakh	5.45% 🔻	6.87% 🔻	10.90% 🔺	4.3%
Alliance Life	5.17%	5.29%	4.4%	5.1%
VSK	4.86%	5.16%	4.0%	4.3%
Renaissance Insurance	4.01%	3.68%	3.8%	4.2%
Soglasie	1.82%	1.99%	2.0%	1.7%
VTB Insurance			4.1%	5.6%

**Table 9.** Composition of the dominant group in the health insurance market and the market share of its member companies, 2018-2021

*Source:* compiled by the authors based on https://raexpert.ru/rankings/ insurance/2021/, https://raexpert.ru/rankings/insurance/2020/, https:// raexpert.ru/rankings/insurance/insurance\_2019/, https://raexpert.ru/ rankings/insurance/insurance\_2018/

# **Concluding notes**

The insurance market of the Russian Federation in 2018- 2021 is quite diverse in terms of dominance. Most of individual insurance products belong to the B4 quadrant, which is characteristic of a natural oligopoly, however, the situation with the dominant group related to types of insurance under study is significantly different, since the number of dominant players varies from 2 to 10, significantly affecting the real choice of the consumer.

Conclusions:

- 1. It is worth paying special attention to the fact that among the considered markets there is neither with low concentration nor without a dominant group or a dominant leader, which greatly distinguishes the Russian market from the ones in other countries.
- 2. Differentiation within the dominant groups by most types of insurance under study decreased in 2018-2021, which may indicate equalization of institutional advantages of the market players during the pandemic.
- 3. In the voluntary health insurance market, the choice is quite large, and a presence of a large dominant group of eight companies suggests formation of the two-tier companies. The upper echelon sets quality standards and dominates by price, while other companies can compete with the leaders due to niche offerings and price factors.
- 4. The pension insurance market is an example of a significant reduction in the consumer choice: in 2018 it was characterized by a relatively "weak" dominant group, while a poorly differentiated oligopoly of 5 companies controlling 95% of the market has been formed by 2021.
- 5. Emerging players with market and institutional capabilities similar to the SOGAZ level introduce significant changes into the market structure, as in the case of the personal insurance market, for example, whereas SOGAZ has absorbed the largest player and transferred the market from an oligopoly of seven companies to the actual dominance of the one.

# List of References

- Arintoko, Ahmad AA, Habibah SN (2021) Market Structure and Determinants of Firm Profitability on General Insurance Industry in Indonesia. Studies in Business and Economics 16(1): 26-41. https:// doi.org/10.2478/sbe-2021-0003
- Bakhmatov SA, Borodavko LS, Semenova EV (2019) The development of voluntary pension insurance in the Russian Federation. Izvestiya Bajkal'skogo gosudarstvennogo universiteta [Bulletin of the Baikal State University] 29(2): 244-52. URL: https://cyberleninka.ru/article/n/razvitie-dobrovolnogo-pensionnogo-strahovaniya-v-rossiyskoy-federatsii (in Russian)
- Blokhin AA, Lomakin-Rumyantsev IV, Naumov SA (2019) Alfa-Business in the Russian Food Market. Economic Strategies 6: 68-77. https://doi.org/10.33917/es-6.164.2019.68-77 (in Russian)
- Bukvić RM, Pavlović RZ, Gajić AM (2014) Possibilities of Application of the Index Concentration of Linda in Small Economy: Example of Serbian Food Industries. Annals of the University of Oradea. Fascicle of Management and Technological Engineering (3): 159-64. http://dx.doi.org/10.15660/ AUOFMTE.2014-3.3070
- Chen G-C, Hsiung L-Y, Lai H-J (2021) A Dynamic Analysis on Research and Development Performance and Market Competitiveness of the Taiwanese Life Insurance Industry. Journal of Insurance Issues 44(2): 45-64. URL: https://www.jstor.org/stable/27032416
- Dmitriev AS (2020) Structural features of life insurance markets in Russia and the West. RUDN Journal of Economics 28(4):787-96. https://doi.org/10.22363/2313-2329-2020-28-4-787-796 (in Russian)
- Dmitriev AS, Nazarova AA (2020) Trends in the development of the insurance market in Russia: Institutional Aspect. The Bulletin of the Institute of Economics of the Russian Academy of Sciences 1:159-68. https://doi.org/10.24411/2073-6487-2020-10009 (in Russian)
- Fatkhlislamova GF (2019) Comparative Analysis of the Development of Accumulative Component of the Pension System and Non-Governmental Pension Insurance of Russia. Russian Economic Developments 26(7): 65-75. URL: https://cyberleninka.ru/article/n/sravnitelnyi-analiz-razvitiya-nakopitelnoi-komponenty-pensionnoi-sistemy-i-negosudarstvennogo-pensionnogo-strahovaniya-rossii (in Russian)
- Grigorieva KS (2018) Voluntary health insurance of foreign migrant workers in Russia. Sociologicheskaya nauka i social'naya praktika [Sociological Science and Social Practice] 6(3): 152-64. https://doi.org/10.19181/snsp.2018.6.3.6008 (in Russian)
- Linda R (1976) Methodology of concentration analysis applied to the study of industries and markets. Brussels: Commission of the European Communities. URL: https://aei.pitt.edu/33888/1/A597.pdf
- Makhdieva YuM (2021) Modern trends and priorities in the development of life insurance. Industrial Economics 10(5): 988-93. URL: https://cyberleninka.ru/article/n/sovremennye-tendentsii-i-pri-oritety-razvitiya-strahovaniya-zhizni (in Russian)
- Rajnikanth R, Doss S (2021) Impact of COVID-19 Pandemic on the Life Insurance Industry. Bimaquest 21(2): 65-85. URL: http://www.bimaquest.niapune.org.in/index.php/bimaquest/article/ view/103
- Sharifyanova ZF, Khairulina LA (2016) Strahovanie zhizni i strahovanie ot neschastnyh sluchaev: problemy i sravnitel'nyj analiz" [Life Insurance and Accident Insurance: Problems and Comparative Analysis]. Mezhdunarodnyj nauchnyj zhurnal Innovacionnaya nauka [Innovative Science] (3-1): 259-62. URL: https://cyberleninka.ru/article/n/strahovanie-zhizni-i-strahovanie-ot-neschastnyh-sluchaev-problemy-i-sravnitelnyy-analiz (in Russian)
- Shchelokova SV, Vertogradov VA (2021) SV matrix: strategic competitive analysis tool based on the dominance level. Moscow University economics Bulletin. Series 6. Economics 6: 137-62. https:// doi.org/10.38050/0130010520216.7 (in Russian)

- Tsviliy-Buklanova AA (2020) Current status and development prospects of the insurance market in the context of antitrust regulation. Russian Competition Law and Economy 2(22): 64-71. URL: https://cyberleninka.ru/article/n/sovremennoe-sostoyanie-i-perspektivy-razvitiya-rynka-strahov-aniya-v-kontekste-antimonopolnogo-regulirovaniya (in Russian)
- Tsyganov AA, Bryzgalov DV (2014) New forms of the competition in the insurance market of the Russian Federation. Financial Journal 3(21): 141-49. URL: https://www.finjournal-nifi.ru/images/ FILES/Journal/Archive/2014/3/15\_3\_2014.pdf (in Russian)
- Tulenty DS, Ermolaeva AS, Raba, PG (2021) Pension insurance in Russia: Current state and transformation opportunities. Finance: Theory and Practice 25(3): 102-26. https://doi. org/10.26794/2587-5671-2021-25-3-102-126.
- Vertogradov VA, Shchelokova SV, Spector SV (2022) Competition and dominance in the Russian insurance market. Strahovoe delo [Insurance Business] 4: 9-21. URL: http://ankil.info/ lib/1/336/2755/ (in Russian)
- Volkova EM, Rakhimov OO, Shmatova TS, Vinogradov EA (2021) Analysis of the insurance market in the Russian Federation and trends in its transformation. Bulletin of Scientific Research Results 3: 126-36. https://doi.org/10.20295/2223-9987-2021-3-126-136 (in Russian)

Other sources of information

- Bank of Russia (2018) Overview of key performance indicators of insurers. Information and analytical material, No.4 URL: https://cbr.ru/Collection/Collection/File/24024/review\_insure\_18Q4.pdf
- Bank of Russia (2020) Overview of key indicators of non-state pension funds. Information and analytical material, No.4 URL: https://www.cbr.ru/Collection/Collection/File/32250/rewiew\_npf\_20Q4. pdf
- Employers saved on voluntary health insurance (2021) Gazeta.ru, March, 16. URL: https://www.gazeta.ru/business/2021/03/16/13513532.shtml
- FAS of Russia (2017) Explanation of the Presidium of the FAS of Russia dated 07.06.2017 N 8 "On Provisions of the Article 10 of the Competition Law" (approved by the Protocol of the Presidium of the FAS of Russia dated 07.06.2017 N 11).] URL: http://www.consultant.ru/document/cons\_doc\_LAW\_218552/56cbdeff9c0bff912c083b8a670245cafaacb52c/
- Federal Law (2018) On Amendments to the Law of the Russian Federation "On Organization of Insurance Business in the Russian Federation" No. 251-FZ dated July 29, 2018 URL: http://www. consultant.ru/document/cons\_doc\_LAW\_303534/
- Ingosstrakh (2021) Annual report, 2020 URL: https://www.ingos.ru/Upload/info/disclosure\_info/ year\_report/igs-annual-report-2020\_rus.pdf
- National rating agency (2020) Russian insurance market, 2019. Analytical review URL: https://www.ra-national.ru/sites/default/files/Insurance\_Russia\_2019\_Report\_26032020\_0.pdf
- National rating agency (2022) Insurance market -2022: A rise before fall? Analytical review URL: https://www.ra-national.ru/sites/default/files/analitic\_article/Research\_Insurance\_2021\_2022\_0. pdf
- RBC (2021) Voluntary health insurance premiums decreased by 2% in 2020 adding up to 117 billion rubles URL: https://marketing.rbc.ru/articles/13153/
- SOGAZ (2018) SOGAZ and VTB close deal to merge insurance asserts URL: https://www.sogaz.ru/ sogaz/pressroom/aboutus/827654/
- Sovkomblog (2022) Contributory and non-contributory pension in Russia URL: https://sovcombank. ru/blog/sberezheniya/nakopitelnaya-i-strahovaya-pensii-v-rossii#h\_612091717201631191724213
- Tadviser (2020) Pension insurance in Russia. URL: https://www.tadviser.ru/index.php/Статья:Пенсионное\_страхование\_в\_России#cite\_note-1

Vedomosti (2020) Sovcombank to acquire MetLife's Russian subsidiary. December, 03. URL: https:// www.vedomosti.ru/finance/articles/2020/12/02/849281-sovkombank-pokupaet

# Information about the authors

- Svetlana Viktorovna Shchelokova Ph. D. (Econ.), Associate Professor at the Lomonosov Moscow State University, Faculty of Economics, Moscow, 119991, Russia. Email: shcholokova@gmail.com
- Vladimir A. Vertogradov Head of the laboratory «Project MAX», Faculty of Economics, Lomonosov Moscow State University, Moscow, 119991, Russia. Email: v@svmatrix.online