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Impact of COVID-19 Pandemic on Insurance Demand in Russia: A Comparative Analysis with Global Markets

Svetlana Frumina[1,2*], Elena Yakushova[3], Aslan Azimzadeh[4,5]

[1] Department of Global Financial Markets and Fintech, Plekhanov Russian University of Economics, Moscow 115054, Russia
[2] Department of Public Finance of the Faculty of Finance, Financial University under the Government of the Russian Federation, Moscow 125468, Russia
[3] Department of Strategic and Innovative Development of the Faculty Higher School of Management, Financial University under the Government of Russian Federation, Moscow 129110, Russia
[4] Department of Economics and Economic Relations, Odlar Yurdu University, Baku AZ 1072, Azerbaijan
[5] Department of Economics, Azerbaijan State University of Economics (UNEC), Baku AZ 1001, Azerbaijan

Corresponding Author Email: frumina.sv@rea.ru

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ABSTRACT

The pandemic has exposed the Russian economy's weaknesses, particularly its insurance industry. In the study, the following qualitative data were utilized: an analysis of the impact of the COVID-19 pandemic on the insurance market in various countries, an assessment of the economic impact of the pandemic on the insurance sector, an examination of trends in the global insurance market, and an evaluation of the effectiveness of insurance companies across different nations. Quantitative data were employed, including the volume of insurance premiums in various countries, the number of insurance contracts, the amount of insurance compensation, the number of COVID-19 cases per 100,000 population, the Consumer Price Index (CPI), the Producer Price Index (PPI), and the Gross Domestic Product (GDP). The pandemic impact system was reproduced and built on the example of such countries as Russia, the USA, Canada, Australia, Japan, and many others. It has been proven that the development trend of this industry under the pandemic influence is an economic downturn with a decline in profits but an increase in requirements. In some nations, such as the United States and Canada, there was a slowdown in the life and disability insurance market, whereas in other countries, such as China and South Korea, a rapid market expansion was observed. In Russia, the insurance market maintained a positive trajectory in 2021, despite the pandemic's impact. The volume of insurance premiums in Russia increased to 1.5 billion rubles in 2021. Europe and Central Asia experienced diverse effects of the pandemic on insurance markets. In Poland, the Czech Republic, Slovakia, and Hungary, there was a decline in life insurance premiums, while Slovenia observed a positive growth trend. The study outlined the key issues that need to be addressed to reduce the repeated negative impact of pandemics to restore the global insurance market.

1. INTRODUCTION

The outbreak of coronavirus disease in 2019 has launched a global pandemic. On January 30, 2020, the COVID-19 progressive transmission dynamics led to it being declared a public health emergency by the World Health Organization (WHO) and a pandemic on March 12, 2020. This pandemic has caused severe social and economic upheaval reducing consumption, investment, services, and industrial production worldwide. The rapid growth of the incidence slows down many areas of life that are directly related to the world's economic well-being. This refers to a reduction in the number of trips due to restrictions, imports and exports of goods, public meetings, office closures, unemployment, and imbalances in the markets for goods and services, including the insurance market. This research paper examines the COVID-19 impact on the latter.

The WHO says that 452 million COVID-19 cases have been reported since March 2020, while 17 million COVID-19 infections have been detected in the Russian Federation, according to Johns Hopkins University [1].

As reported by the Federal State Statistics Service (Rosstat), one of the reasons for the increase in mortality in Russia in 2020-2021, which went up by 18%, or by 323.8 thousand people, was COVID-19 (144.69 thousand people, of which 21.97 thousand people of working age and 122.64 thousand older than working age) (Figure 1).

Given the growing incidence dynamics and the relationship between the economy and medicine, the economic impact of the pandemic on all spheres of life is considered as the global economy has entered a recession phase.

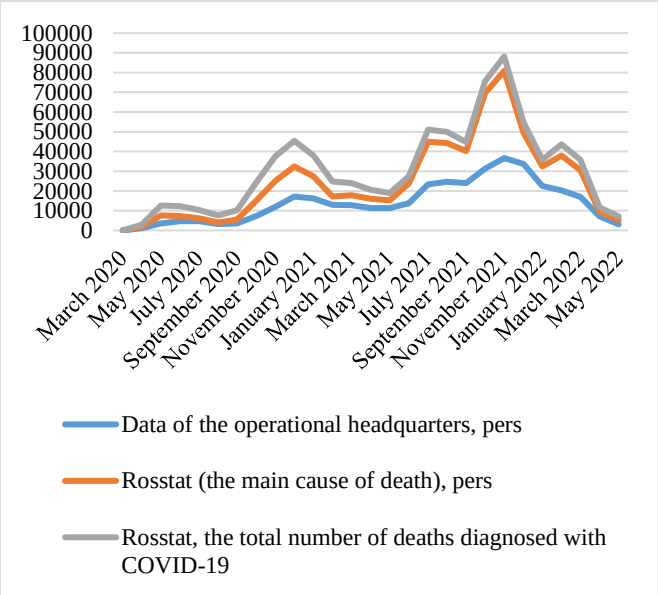

Figure 1. Dynamics of COVID-19 mortality in the Russian Federation
Source: author's elaboration

Barro et al. [2] studied the potential impact of the coronavirus on mortality and economic activity by comparing it with lessons learned from the 1918-1920 Great Influenza Pandemic. The authors compare the two pandemics' economic impact based on an assessment of the economic downturn, increased consumption, mortality, and the decline in realized real return on stocks, especially short-term government bills caused by the Great Influenza Pandemic. The study concludes that the current situation, falling stock prices, increased stock price volatility, declining nominal interest rates, and a slowdown in actual economic activity are classic effects of a pandemic that require a quick response.

The range of studies on the impact of the pandemic on the insurance industry is very narrow. So, this research analyzes sources directly or indirectly related to the COVID-19 impact on insurance demand in the global economy. Because pandemics have directly influenced the economy throughout human history, numerous studies have been carried out to address the issue more effectively.

Today, life insurance policies are the most widespread over the direct impact of COVID-19 on people's health worldwide. Such policies imply paying premiums regardless of the cause of death, with some exceptions. Sheehan [3] believes that reinsurance companies are highly exposed to the risk of morbidity and mortality from the pandemic, whereas Winters [4] considers that only in a worst-case scenario close to a 200-year event, COVID-19 will have the same effect as an average natural risk or catastrophe. Meanwhile, fears of new pandemic waves hurt the issue of new policies, leaving life insurers with the biggest challenge.

Since the COVID-19 virus is of global significance, it naturally directly impacts the tourism sector. Thus travel insurance has become widespread as it covers medical expenses and trip cancellations. Furthermore, travel health insurance provides medical coverage for healthcare costs when people travel outside their home country. During the current COVID-19 pandemic, certain insurers have halted issuing new travel insurance policies. Existing travel insurance policies often cover medical treatment caused by the coronavirus infection while traveling. Association of British Insurers [5] estimated the loss at £275million, the largest ever.

The COVID-19 pandemic has also impacted the African insurance industry. According to a study by Insaidoo et al. [6] on the influenza impact on the insurance industry in South Africa, the economic cost of a mild pandemic would be R1.1 billion, excluding annuities, and a severe pandemic could cost R55 billion.

Traditionally, the United States ranks first among the leading countries in the world insurance market. But shortly, this position may be taken by China as one of the major insurance players. COVID-19 has caused an economic downturn around the world. As a result, Lloyd's of London confirmed its outlook for the damage to the insurance industry from the COVID-19 pandemic at $107 billion as of September 2020 [7]. The situation was exacerbated by extreme volatility in the stock markets because the COVID-19 outbreak hit the United States. This has particularly affected insurers specializing in accident insurance since they hold most of their liquid assets on the stock market. The COVID-19 pandemic has caused a deep recession since the 1930s [8].

The COVID-19 pandemic outbreak and spread in 2020 are encouraging people to pay more attention to their health, which will boost the demand for insurance, primarily health-related. Moreover, many insured people needed to see a doctor but could not due to out-of-pocket expenses in the USA [9, 10]. However, there are no such expenses for insured people in China, except for the deductible being usually 10 thousand Yuan for health insurance for 1 million Yuan amounts insured. According to the China Banking and Insurance Regulatory Commission's (CBIRC) data, there will be 239 insurance companies in China by 2022. Gross premium income in 2021 is 4525.73 billion Yuan, which is 6.13% up against 2020 [11].

As for the Philippines, its traditionally high insurance claims volume dropped sharply from at least March to September 2020, which was due to the policy of containing the COVID-19 spread. This decline is a deviation from PhilHealth's annual growth in claims. Based on the analysis of the PhilHealth reports, insurance claims have increased by 12.5% annually over the past decade (2009-2019), which may be due to recent healthcare financing reforms to expand health insurance coverage and benefits. About 85% of the nation's population are members of PhilHealth, while nearly 70% of the population rely on PhilHealth to fund their medical expenses [12]. The observed decline reflects the extent of the impact of the pandemic on access to hospital services.

Among the key segments of the Russian insurance market, the pandemic affected the voluntary health insurance market the most. After rapid growth in 2019 (by 19%), the insurance premiums in 2020 shrank by 2% to RUB 177.1 billion. First of all, this trend was traced by a decrease in demand for health insurance programs on the part of individuals and small-sized companies because of a drop in income and the exit of many enterprises from the market. The fall in insurance premiums was also caused by a general reduction in reduction in the segment of health insurance for labor migrants, whose number in Russia has decreased, and the almost complete absence of insurance for those traveling abroad due to the closure of borders. The consequences of the pandemic resulted in a 42.6% reduction in voluntary health insurance (VHI) contracts concluded with individuals in 2020 [13].

Even despite the uncertainty and novelty of the pandemic, Russia's insurance market "reacted" to it quite efficiently and promptly. Certain companies have restructured their regime in keeping with the new rules. For example, Rosgosstrakh and

Rosgosstrakh Zhizn in October 2020 launched a new product, Vosstanovi Zdorove ("Restore Your Health"), which offers insurance coverage related to the need for rehabilitation after suffering from COVID-19. The rehabilitation program is prescribed by a doctor individually for each insured who applied. It includes various procedures (physiotherapy exercises, chest vibration massage, diaphragm electrical stimulation, etc.). So, rehabilitation insurance for those who have recovered from COVID-19 has emerged in Russia [14]. Later, Alfa Insurance, Cyber Insurance, Soglasie ("Consent"), and others started to offer insurance against COVID-19.

This research paper analyzes the COVID-19 impact on the global insurance market, its changes, and supply and demand in different countries, with a particular emphasis on Russia. Since most countries showed complete unpreparedness for this kind of shock that affected insurance, this became one of the main questions of the study, the answers to which are formulated based on deep scientific research and the author's approaches. The following questions are also relevant: How much insurance is in demand now in different parts of the globe? How badly has this industry suffered? Since the primary responsibility of any company is to keep its promises to its customers and manage its capital prudently, especially during an economic crisis, this paper provides a list of recommendations based on which an accurate model can be created to ensure that the consequences for the insurance market be minor. The findings can also serve as reference material for countries still overcoming the COVID-19-related implications in the insurance market.

2. MATERIALS AND METHODS

The methodological design of the research is shown in Figure 2.

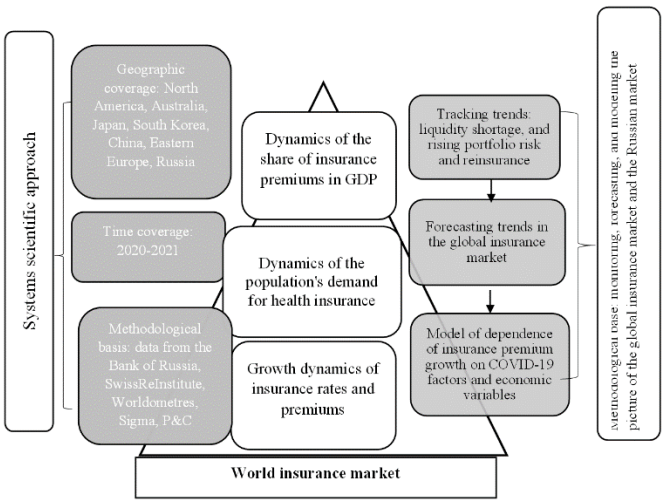

Figure 2. Methodological design of the study
Source: author's elaboration

The study made a general analysis of the COVID-19 impact on the world insurance market globally. The research was carried out under the conditions of a systematic approach. So, the system of the COVID-19 influence on the insurance market in various countries was reproduced and built. The countries studied are the USA, Canada, Australia, Japan, South Korea, China, Poland, the Czech Republic, Slovakia, Hungary, and Russia. The selection of countries included in the study is broad and diverse, allowing for a comparison of the pandemic's impact on the insurance sector across nations with varying economic conditions, levels of development, and responses to the pandemic. The research is not limited to developed countries but also encompasses nations with developing economies, thereby facilitating the identification of differences in the pandemic's effects on the insurance industry across countries with disparate economic contexts. Furthermore, the study enables a comparison of the pandemic's impact on the insurance sector in countries with different insurance models.

In addition, various sources were taken for a more effective study of the issue. This research is intended to contribute to the scientific and methodological basis for studying the impact of COVID-19 on the insurance sector. Over the past decade, overall insurance penetration in developed markets, measured as the share of insurance premiums in GDP, has remained relatively steady. Today, the trend of the population's growing demand for health insurance prevails. In non-life insurance sectors, insurance penetration has been increasing, while rate hikes have kept the premium volumes in recent years.

The study compiled charts for the development of the global insurance market in 2020 [15] and 2021 [16] and traced the growth of demand for insurance products. In addition, it demonstrated a chart of the number of COVID-19 cases using regional estimates from Worldometers [17]. The next step was monitoring trends in the global insurance market and forecasting their dynamics. This study item contributed to the big-picture modeling at the world level and the comparison of the results with Russia, which was grounds for providing an overview of the situation and supply and demand in the world market.

The obtained results point to the disastrous consequences of the pandemic for insurers and the insurance market in Russia as a whole because of the unpreparedness of the economy for external shocks. Meanwhile, during the economic growth phase, the insurance industry could show successful results, developing new tools to counteract external shocks effectively.

Analyzing the aftermath, one should consider the factor of shutting down enterprises by both private individuals and the state, which led to various economic fluctuations. The negative consequences of COVID-19 can also include the fact that insurers are facing a shortage of liquidity, portfolio risk, and reinsurance protection in a pandemic. Moreover, social distancing measures limit the communication of people, which naturally results in a decline in business activity. Restrictions closed or limited many economic activities, affecting all international trade, tourism, hospitality, and infrastructure since many industries that depend on these sectors are also essential for premium growth. In addition, data were taken from Sigma [18], which added accident and health (A&H) data entered by U.S. health insurers and a non-life data set to make them consistent with practices in other regions. Data and forecasts for P&C in the USA were also taken to compare the situation and its further actions [19].

Yet, the pandemic has some managerial effects, helping company managers assess management risks, particularly when concluding insurance contracts. To compare the Russian insurance market with the international market and review insurers' key performance indicators, data from the Bank of Russia were taken as well [13].

In addition, the total number of reimbursement claims for medical insurance in 2020-2021 (in thousands) in Russia's territory is presented. They are formed by the author using the

Bank of Russia's calculations [13] for the insurance segment. Such data contribute to a general understanding of both the economic impact of the COVID-19 pandemic and the legal one. These data directly influence the legal consequences of non-payment of health insurance. Fluctuations in the number of claims are presented depending on a particular pandemic wave.

Following Shi et al. [20], the study developed the following fixed effects econometric model to estimate the Covid-19 impact on Russia's insurance industry using the example of Sberbank [21] for 2021:

$$QPGit = a0 + COVIDDummy\ (t) + IC + IB + CPIt + PPIt + GDPt$$

where,

- QPGit – total quarterly premium growth at the firm level at a given fixed point in time;
- COVIDDummy (t) – dummy variable;
- a0 – the amount of the premium with zero factors of the model and the impact of other factors not described in it;
- IC (Insurance Contracts) – the number of insurance contracts.
- IB (Insurance Bonus) – the amount of the insurance bonus.
- CPIt, PPIt, and GDPt are economic variables that significantly impact dependent variables, namely consumer and producer price indices and gross domestic product.
- ηt and εt – temporary fixed effects and errors.

This model was developed to assess the impact of the pandemic on the insurance sector, taking into account fixed effects such as economic indicators, the number of insurance contracts, and the size of insurance premiums. The model was based on previous research concerning the pandemic's effects on the insurance industry. The econometric model was selected due to its ability to control for fixed effects and to detect variations in the pandemic's impact on the insurance sector across different countries and regions.

The input parameters of the econometric model in the form of empirical data on the Russian insurance market, confirmed COVID-19 cases, consumer and producer price indices, and GDP are shown in Table 1.

Table 1. Empirical data on the Russian insurance market, the scale of the pandemic, and macroeconomic indicators

Period	Insurance Premiums, USD	Number of Insurance Contracts	Amount of Insurance Compensation, USD	COVID-19 Cases (Per 100,000 People)	CPI Consumer Price Index	PPI Producer Price Index	GDP Trillion USD
Q1 2020	605875	790	45782	0.002	101.7	100.2	1.69
Q2 2020	628990	982	43290	0.007	102.8	100.5	1.6
Q3 2020	568250	1118	43890	1.2	102.7	100.8	1.54
Q4 2020	553268	1187	44992	3.13	105	101	1.483
Q1 2021	554890	1289	46020	4.5	102.1	100.1	1.57
Q2 2021	560120	1892	45890	5.47	104.1	100.2	1.65
Q3 2021	542344	2492	47391	7.4	105.5	100.3	1.7
Q4 2021	535493	2957	47469	10.3	108.2	100.4	1.76

Source: author's elaboration based on Bank of Russia [13], Our World in Data [22]

3. RESULTS

The study made a general international review of the pandemic's impact on the insurance market, particularly on health insurance. To this end, the following countries are considered: the USA, Canada, Australia, Japan, South Korea, China, Poland, the Czech Republic, Ukraine, Slovakia, Hungary, and Russia.

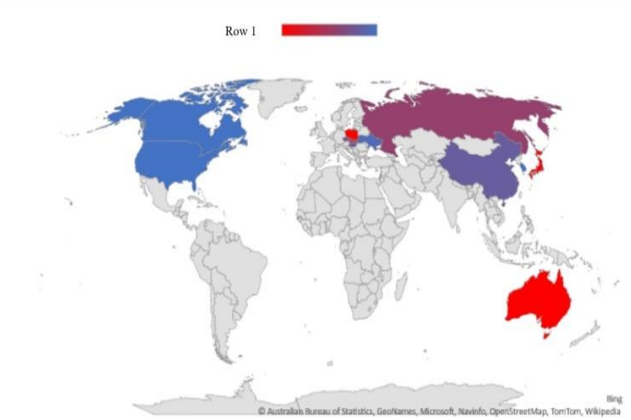

Figure 3. Development of the insurance market on the world stage in 2020 (percentage)
Source: author's elaboration based on regional annual estimates and surveys from the Swiss Re Institute.

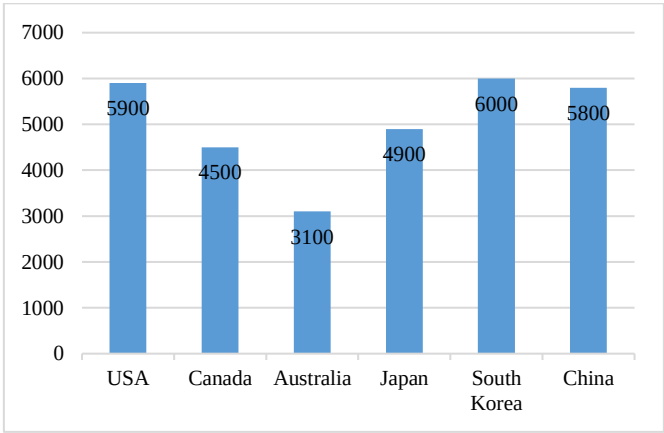

Figure 4. Development of the insurance market in 2021 (premiums in % of GDP)
Source: author's elaboration based on regional annual estimates and surveys from the Swiss Re Institute.

Figure 3 shows the development of the insurance market in 2020 for such countries as the USA, Canada, Australia, Japan, South Korea, China, Poland, the Czech Republic, Slovakia, and Hungary. The worst results are observed in Poland, Australia, Japan, and Slovakia, which range from -8% to -2.5%.

Positive dynamics of insurance development at the global

level are observed in Russia (1%), the Czech Republic (3%), and China (5%). The leaders in this field are Ukraine (7%), the USA (8%), Canada (8%), and South Korea (8%).

A significant gap in the dynamics of these countries is due to the different levels of their economies and preparedness for a prolonged pandemic and the degree of resource depletion (Figures 4 and 5).

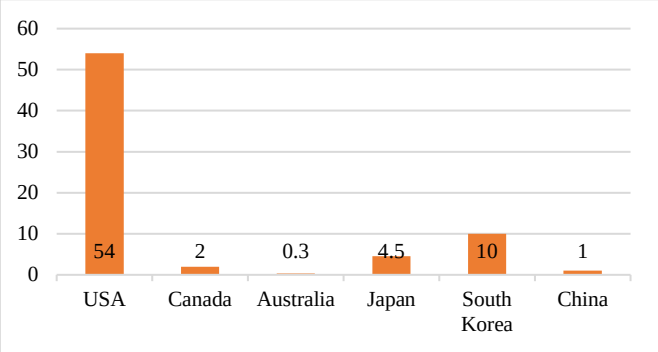

Figure 5. Number of COVID-19 cases for 2019-2021 (in millions)
Source: author's elaboration based on regional annual counts from Worldometers [17].

3.1 USA and Canada

The results of these countries are difficult to unequivocally assess as positive or negative since the level of insurance in the USA has slowed down in terms of life insurance and annuities. Collective and particularly individual life insurance performed better in 2020 than in 2021. Life insurers tried to expand their market niche before principle-based reservation changes became mandatory in 2021.

One of the reasons for the decline in gross written premiums in the life insurance segment is a rise in the speed of expiration or a decrease in the number of newly signed deals. Restrictions on physical communications in obtaining insurance as a mandatory legal requirement for customers contributed to declining new life insurance policy sales. Certain countries have eased this type of temporary requirement over the health crisis.

Severe rate hikes across the board supported the overall market growth in Canada. Liquidation and business closure losses due to the pandemic remain hard to quantify. Moreover, workers' compensation claims may rise because certain states introduce presumption laws.

Nowadays, the USA is the leader in the global insurance market, but China competes with it as one of the largest insurance players. Moreover, COVID-19 has caused an economic downturn around the world. The situation was exacerbated by strong volatility in the stock markets as the COVID-19 outbreak rocked the U.S. stock market. This has particularly affected insurers specializing in accident insurance since they hold most of their liquid assets on the stock market.

3.2 Asia-Pacific

Significant life insurance premiums are characteristics of Japan, where the insurance growth has been wide-ranging, with particular emphasis on real estate due to the pace of consolidation and increased usage of coverage after several natural disasters (mainly typhoons). Weakening economic growth and volatile consumer sentiment were principal factors holding back demand.

In Asia, where the insurance market is emerging, increased risk awareness is a potent supportive factor. Yet, economic constraints and negative impacts on well-being are more important in mature markets, given already high levels of awareness and penetration. Life insurance profitability will remain under pressure because of low-interest rates. In Australia, the life insurance sector is demonstrating significant losses. At the same time, there are currently no catalysts for a sustainable improvement of the situation, i.e., investments in this sector and new management decisions.

Every advanced Asian market showed an upward trend in non-life insurance premiums in 2021. The highest growth was in Hong Kong, while the healthcare sector was the most profitable in all markets in China.

According to Figure 4, the growth rate of premiums went up in Australia in 2021. That happened through the tightening of rates for financial and professional liability items. The protracted global recession is affecting non-life insurance demand in the Asia-Pacific region, where premiums are forecast to decline. Meanwhile, the policy of fixed rates in Japan and Australia will help offset the effects of the recession.

The positive growth dynamics of China's share in insurance premiums in the global market is a harbinger of the country's emergence as the largest insurance market.

3.3 Countries of Europe and Central Asia

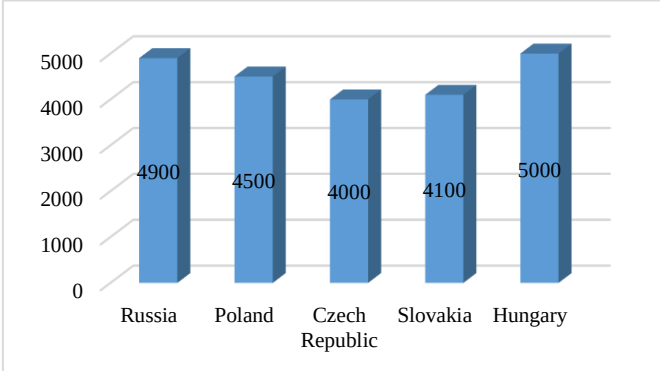

Figure 6. Development of the insurance market on the world stage in 2021 in developing countries of Europe and Asia (premiums in % of GDP)
Source: author's elaboration based on regional annual estimates and surveys from the Swiss Re Institute.

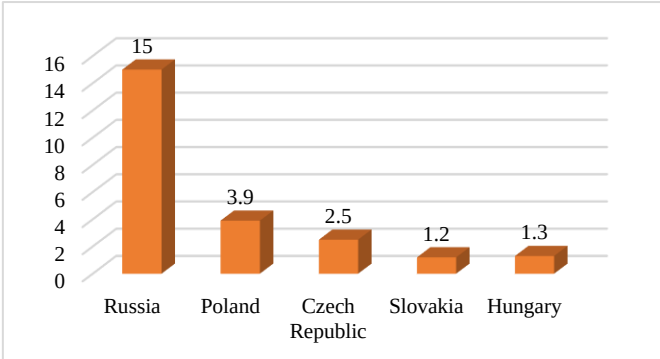

Figure 7. Number of COVID-19 cases in 2019-2021 (in millions)
Source: author's elaboration based on regional annual counts from Worldometers [17].

In 2021, the Russian insurance market was characterized by a downward trend in premiums (Figures 6 and 7). Last year, they were also low in the life insurance markets in Poland, the Czech Republic, Slovakia, and Hungary. Slovenia has maintained a positive trend in growth. The CIS countries, except for Russia, are still in the lead, as premiums in Kazakhstan and Ukraine showed a positive result. Potentially, against the background of the pandemic-related recession, the growth rate of insurance premiums in the region will slow down.

3.4 Russia

In general, the 2019-2021 period can be characterized as a crisis for Russia's insurance market. Nevertheless, insurers managed to maintain positive indicators, thereby preserving foreign exchange reserves.

The insurance market of the Russian Federation showed a positive development trend because the volume of insurance premiums in 2021 grew to RUB 1.5 billion. Segments related to lending and endowment life insurance were the main drivers of this trend. The health insurance sphere demonstrated the least successful dynamics. From the point of view of this study, this segment is expected to decline further shortly due to lower demand from the civilian population and small-sized Russian companies.

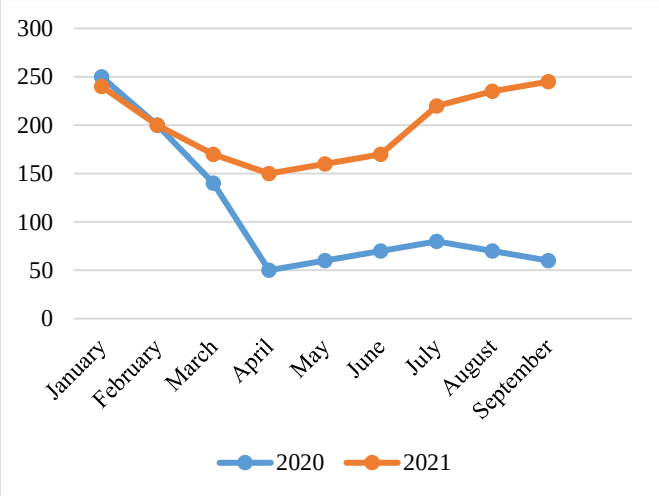

Figure 8. Total number of recovery claims for health insurance in 2020-2021 (in thousands)
Source: author's elaboration based on Bank of Russia calculations for the insurance segment.

Figure 8 presents the seasonally adjusted monthly dynamics of medical claims in the Russian Federation throughout 2020-2021. In addition, a trend of a significant decrease in medical requirements is observed during a pandemic. The smallest number of applications was reported in April 2020, which coincided with the start of the second wave of the pandemic. A slight recovery in May 2020 was seen, but this trend stopped by Q3 2020. The average value of changes from March to September 2020 was 150 thousand year-over-year. In August 2020, the number of requests for medical assistance grew by 30 thousand, which coincides with the aggravation of the second wave of infection. Tighter restrictions were introduced during this month. The decline in health insurance premiums remained relatively low during the pandemic and showed no signs of recovery until the third quarter of 2020. As for 2021, the insurance market showed a positive trend in the growth of the claims compared to 2020 because of citizens' increased awareness about legal liability mechanisms. In addition, it should be noted stable "light" fluctuations in the number of medical claims filed, which range from 150,000 to 250,000, throughout 2021. However, a trend of a sharp increase in claims was observed in July 2021, which is associated with the third wave of the pandemic.

The regression analysis showed the following dependence of the quarterly growth of premiums on insurance market factors (the number of insurance contracts and the amount of insurance remuneration), the C-DUMMY factor, and macroeconomic parameters (price and GDP indices):

$$QPG = 9401015 - 17479.6C\text{-}DUMMY + 5.8IC - 9.4IB + 20633CPI - 103884PPI - 34761GDP$$

The calculated data in Table 2 can be interpreted as the impact of the COVID-19 factor on the decline in quarterly premium growth. The COVID-19 pandemic failed to significantly impact the number of insurance contracts in Russia, as people may have more insurance policies related to their health and property. However, Table 1 shows a significant difference between the average insurance penetration, which indicates a negative impact on the overall development of the insurance industry amid the pandemic.

Table 2. Summary statistical data of Sberbank variables for 2020-2021

Variable	Value	Standard Deviation	Min	Max
QPG	9401015	3935938	-4.1E + 07	59411844
C-DUMMY	-17479.6	9687.843	-140575	105616.1
IC	5.771169	33.91044	-425.102	436.6442
IB	-9.37636	7.028778	-98.6855	79.93274
CPI	20633.49	9163.424	-95798.9	137065.8
PPI	-103884	46252.31	-691575	483807.8
GDP	-34761.2	173352.9	-2237418	2167896
R-squared adequacy ratio	0.99			

QPG: Quarterly Premium Growth
C-DUMMY: Covid-19 Dummy Variable
IC: Insurance Contracts
IB: Insurance Benefits
CPI: Consumer Price Index
PPI: Producer Price Index
GDP: Gross Domestic Product
Source: The author's elaboration is based on calculations of a fixed effects econometric model to assess the impact of COVID-19 on the Russian insurance industry (Table 1).

The results of the study hold significant implications for the insurance industry, highlighting the necessity for insurers to adapt to a shifting environment and to develop new strategies to maintain profitability and meet the evolving needs of their clients. The findings also underscore the importance of considering the impact of the pandemic on the insurance market when making policy decisions.

Regarding the impact of COVID-19 on the insurance market, the study's results indicate that the pandemic led to an increased demand for health insurance and a decreased demand for life insurance in certain countries. The pandemic caused an economic downturn, stock market instability, and changes in consumer behavior, which affected insurers'

liquidity, portfolio risk, and reinsurance coverage. This resulted in varying impacts across countries and regions, with some experiencing positive growth and others facing negative outcomes.

Moreover, the results emphasize the need for insurers to adapt to the changing environment and to develop new strategies to sustain profitability and address the continuously evolving needs of their clients.

4. DISCUSSION

According to the present study of the U.S. insurance sector, its growth trend has slowed due to a fall in total written insurance premiums in the life insurance segment since face-to-face meetings have decreased over the pandemic, which is known to be a mandatory legal condition for closing a deal. In addition, according to the 2021 data from the Organization for Economic Co-operation and Development, business disruptions caused by restrictions on economic activity have led to an increase in BI claims [23], and according to Gezici and Ozay, to soaring unemployment [23]. A study by Morath [24] points out that businesses suffer additional losses due to a decreasing number of job applicants. This trend could further boost the uncertainty in business sentiment and thus encourage business shutdowns.

Despite this, the World Bank estimated a 12.75% decline in industrial production amid the pandemic in 2021, predicting a contraction of the U.S. economy by 3.6% [25].

It is worth noting that a Severe Storm with a $1 million loss increases the number of claims. Correlating the values of 5106 and 3.35, the authors obtained the value of the rise in such claims to insurance companies against the background of growing losses from a Severe Storm. This number increased by 5106, and the losses amounted to $1.5 106 million. Regarding the impact on Hits, the total number of COVID cases had the same effect as the Severe Storm, with $1.5 106 million. In 2019, the U.S. GDP was $21.4 106 million [26]. According to the assessment, COVID acted like a Severe Storm resulting in a loss of 7% of the U.S. GDP in 2019. Based on similar calculations in the COVID model, a value of $6.5·104 million or 0.3% of the U.S. GDP was obtained.

There is a positive dynamic in the development of the insurance market in the Asia-Pacific region despite the decrease in insurance premiums in certain countries, for example, Japan. Moreover, the reduction in premiums in some countries can be associated with the pandemic-related decline in income over job losses. Consequently, the demand for health care has decreased because of this rapid decline. The cost of PhilHealth support, i. e. the percentage covered by PhilHealth of the total cost incurred during a hospital stay, fluctuates between 50% and 60%, despite efforts to cut out-of-pocket private expenditure and increase government spending [27].

According to the China Banking and Insurance Regulatory Commission as a potential leader in the global insurance market, there will be 239 operating insurance companies in the country by 2022, four companies up against 2020. Gross premium income in 2021 is 4,525.73 billion yuan, which exceeds 4,264.45 billion yuan in 2020 by 6.13%. The dynamics of the growth in the number of insurance policies is also positive, with 52.63 billion insurance policies concluded in 2020, up 6.24% from 49.54 billion policies in 2019 [28].

According to this research, in recent years, the developing European countries, namely the Czech Republic, Poland, Slovakia, Hungary, and Slovenia, have seen a decline in premiums in the insurance market, which was associated with a pandemic but even so, the dynamics of the market growth was monitored. Moreover, it was the most progressive in the CIS countries, especially Ukraine and Kazakhstan. Despite the positive dynamics, many weaknesses that need to be improved in the insurance industry remain against the background of increasing risks and threats. For example, according to the European Insurance and Occupational Pensions Authority [29] 2020 data, in the context of the pandemic, insurance companies should take anti-crisis actions to protect their funds from uncertainty in the level and duration of exposure to COVID-19 and assess the possible consequences for their solvency capital requirements.

The study's results indicate that the COVID-19 pandemic had a significant impact on the insurance market across various countries. These findings are corroborated by research from other authors, who also emphasize that the pandemic led to economic downturns and stock market instability, which affected the insurance market [6], [21].

Research by Kok and Ahmad [10] demonstrates that the pandemic resulted in a decline in life insurance policy sales due to restrictions on physical meetings but notes an increase in demand for health insurance. The American Insurance Institute confirmed that insurance companies faced considerable challenges due to economic instability and rising losses associated with the pandemic.

The Asian Development Bank report highlights that the pandemic affected insurance markets in the region, particularly through decreased economic activity and consumer spending. However, research by Gezici and Ozay [23] confirms that the health insurance sector in China exhibited high profitability, which aligns with the results obtained. However, the study's results also indicate that the insurance market can be adapted to a changing environment and the development of new strategies to maintain profitability and meet the evolving needs of clients. This can be achieved through the development of new products and services that align with client needs and by enhancing the operational efficiency of insurers. These findings are consistent with research that underscores the necessity for insurance companies to adapt to new conditions and develop innovative strategies to sustain profitability and address client demands [9].

It is worth noting that the decline in business activity amid the pandemic has affected investment income. A lower return on investment, combined with higher exposure to claims, could cause a reduction in the insurer's funds, for example, closer to the solvency capital that insurance companies must have in reserve. To address this issue, insurers should review actuarial valuations to quantify the COVID-19 impact on capital requirements and stress-test their financial position to monitor regulatory capital coverage [30].

In developing European countries, travel is popular even during a global pandemic. According to Allied Market Research, the European travel insurance market capacity was estimated at $6.25 billion in 2019. It is projected to reach $10.39 billion by 2027, growing by 14.4% on average from 2020 to 2027. Travel insurance covers the expenses incurred and minimizes the risks while traveling.

The effect of such insurance is similar to that of a "cushion" in cases of trip cancellation due to medical emergencies, lost baggage, medical evacuation or hijacking, loss of travel

documents, etc. [31].

Referring to the insurance market in Russia, one can trace a clear positive trend in its growth, even despite the unpreparedness of the economy. Insurance companies managed to achieve positive indicators, thereby maintaining foreign exchange reserves. Meanwhile, the global pandemic has led to several shifts in the insurance sector over increased demand in the insurance segments related to lending and endowment life insurance. In contrast, demand in the health insurance segment, on the contrary, declined. In our opinion, a further increase in this type of insurance should be expected because of a decline in demand from the civilian population and small-sized companies. Russia currently ranks third globally as regards the number of COVID-19 cases, following the United States and Brazil [26]. The Russian Federation has recorded over 560,000 official COVID-19 cases and more than 7,600 deaths [26]. Most of the cases are reported in Moscow, but there are also documented cases across the country. According to the Russian insurance policy, insurance is currently mandatory in the following situations: insurance of vehicle owners; insurance of hazardous production facilities during operation; personal insurance for passengers; insurance for civil servants and military personnel; compulsory social insurance; and compulsory health insurance. Health insurance is especially beneficial during a pandemic providing the opportunity to get tested for COVID-19 free and covering the cost of treatment.

5. CONCLUSIONS

The results of the research demonstrated that insurance premiums declined considerably because of the slowdown in economic activity. Profit shrank significantly as more claims were paid during the period under review than premiums were collected. Certain companies had to lay off employees, which substantially reduced labor productivity and, accordingly, the efficiency of business processes.

Companies' budgets have also risen with increased spending on social responsibility to ease the government's burden related to the pandemic. For example, certain insurers have had to buy hand sanitizers, gloves, face masks, and other personal protective equipment for their employees.

Insurance companies must also adapt to the new conditions arising from the COVID-19 pandemic. To achieve this, they need to focus on the safety and protection of employees, partners, brokers, and agents, as well as on developing new cybersecurity protocols to ensure the secure exchange of confidential information among remote staff. Additionally, insurance companies should update their crisis management plans, adjust to new business practices, integrate with stakeholders, and develop strategies for post-pandemic recovery.

Russian insurance companies are responding to COVID-19 in several ways, namely as wealth managers, employers, and taxpayers. Every insurance company has some problems. However, the most pressing concern for all insurers is the protection and safety of their employees and partners, including brokers and agents. As mentioned above, insurers should focus on reviewing and updating their crisis management plans and taking steps to continue operations with minimal customer losses. They also should consider setting up temporary multipurpose emergency decision-making units amid the pandemic to coordinate response and introduce new safety protocols to contain shocks.

In addition, insurers must adapt to working remotely. To this end, companies should equip employees with everything they need for the home office. What is more, information security managers must have the equipment to create new cybersecurity protocols to ensure the secure exchange of strictly sensitive information between remote employees.

Insurance companies have suffered various losses depending on factors such as liquidity, portfolio risk, the degree of dependence on reinsurance, the level of free assets, and the protection that reinsurers have.

Although the financial loss is expected to continue through the end of the year, the outlook indicates a recovery in operations, allowing regular claims, premiums, and earnings to resume. It is anticipated that this growth to be sustained for five years, but insurers must adapt to the new way of doing business and be able to quantify and manage their losses.

Noteworthy, recovery from the pandemic will require an integrated partnership of several stakeholders, including the Ministry of Health, the insurance industry, and the banking sector. This recovery will depend on the preparedness and responsibility of the international community in general and the level of the pandemic danger, with the lion's share of this responsibility resting with the insurance industry. The recovery in full will only occur in post-pandemic conditions. Companies that have not been adequately prepared will suffer the consequences to a greater extent.

Comparative characteristics of pre- and post-COVID states show that the pandemic has significantly affected the insurance sector in terms of its reduction. In addition, the regression model points to the negative impact of the Covid-19 pandemic on the insurance industry. This short-term negative impact is reflected in rising premiums, insurance density, and insurance penetration. The results were statistically considerable and reliable compared to other indicators, and the coefficient of model adequacy is equal to 1. The managerial effect of this study is to substantiate for insurance companies' managers the assessment of risks to which they are exposed when concluding insurance contracts.

Future research could focus on examining the long-term consequences of the pandemic on the insurance sector, including market recovery, changes in consumer behavior, and the development of new insurance products.

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