

Business Administration and Business Economics

Economic and Financial Impact of the Covid-19 Pandemic on the Insurance Market in Albania, Serbia and North Macedonia

Ervin Koçi¹, Valter Hoxha², Florjan Bombaj³, Sulo Haderi⁴

Abstract: As in many parts of the world, the Covid-19 sanitary pandemic has hit very hard the economies of the countries of the Western Balkans. The economy faced a "shock" both on the supply and on the demand. Most economic sectors were paralyzed. One of these sectors is the insurance market, which represents a relatively important weight for the economic and financial sector. The purpose of this article is to analyse the impact of Covid-19 on the insurance market in the three countries of the Western Balkans: Albania, Serbia and North Macedonia. Based on the specifics of this crisis and particularly that of the insurance sector, the purpose of this article is to verify the impact of Covid-19 on the insurance market and specifically, on the volumes of gross annual premiums. To verify it, we have analyzed the annual data of this sector, before the pandemic and throughout the pandemic. The results show that the Covid-19 pandemic for Albania and North Macedonia has had a negative impact on the market of this sector, while for Serbia we have an increase in the annual data.

Keywords: Insurance market; Covid-19 Pandemic; Financial Impact

JEL Classification: F63

1. Introduction

The insurance market in the world is one of the most active growing sectors. According to the study of the Swiss New Institute in 2020, for the year 2019, the

¹ PhD in progress, University of Tirana, Albania, Address: Mother Teresa Square 4, Tirana 1010, Albania, Corresponding author: erv.koci@gmail.com.

² PhD, Department of Economics, Mediterranean University of Albania, Albania, Address: Blvd Gjergj Fishta 52, Tirana 1023, Albania, E-mail: valter.hoxha@umsh.edu.al.

³ PhD, Department of Economics, Mediterranean University of Albania, Albania, Address: Blvd Gjergj Fishta 52, Tirana 1023, Albania, E-mail: florjan.bombaj@umsh.edu.al.

⁴ PhD, Department of Economics, Mediterranean University of Albania, Albania, Address: Blvd Gjergj Fishta 52, Tirana 1023, Albania, E-mail: sulo.haderi@unitir.edu.al.

growth of premiums globally remained stable around 3% ¹, or translated into real statistics 6.3 billion US dollars. Also, for 2019, inflation indexed, life insurance premiums increased by 2.2% while those for non-life products (Nonlife premiums) increased by 3.5%. The most important markets are those of North America, East Asia and Europe with respectively 42.53%, 27.91% and 25.76%. In the Central and Eastern European, according to the Deloitte CEE Insurance M&A Study in 2019, the region's total premium income grew by a further 6.3%, breaking the record gross premium income of 2018².

Since the fall of the Berlin Wall and with the change from a planned economy to a market economy, even for the countries of the Western Balkans, this market in the last three decades has experienced considerable development. For 2019, according to studies conducted by Deloitte experts (statistics of The Economist Intelligence Unit (EIU)³, for these countries, this market occupies on average 1.5 to 2% of Gross Domestic Product. The current performance of this market, as well as that of many other economic markets, has been tested by the Covid-19 sanitary crisis. In fact, since the beginning of March 2020, this crisis has caused a major health, economic and social problem globally. The death toll for 2020, according to the Johns Hopkins University Center for Science and Systems Engineering⁴ but also by the World Health Organization⁵ (WHO), was over 1.8 million. This sanitary crisis still continues and the most problematic regions being endangered are the European and North American countries where are located almost 90% of Covid positif cases and over 75% of Covid life losses have been registered.

According to the former Head of the International Monetary Fund (IMF) Dominique Strauss-Kahn, this sanitary crisis is not the same as the crises in the past, (Strauss-Kahn, 2020). This global sanitary crisis produced another economic crisis, which, according to many economists, can be classified as the greatest crisis since the Great Depression of 1929. In fact, this pandemic has hit almost all the sectors of the world economy. Firstly, the exponential growth of Covid positif cases forced governments to take drastic measures by closing external borders (Jin Wu, *et al.*, 2020). And secondly, measures to protect against the spread of the virus through quarantine created a blockage of businesses (Peterson & Thankom, 2020). The impact of this sanitary crisis has reduced economic growth to alarming levels (De Vijlder, 2020). This problem has also been channeled into the insurance industry.

¹ https://www.iii.org/sites/default/files/docs/pdf/a_firm_foundation_2019.pdf.

 $^{^2 \}quad https://bbj.hu/economy/statistics/analysis/covid-helps-insurance-manda-hurts-banking-mergers-incee.$

³ https://www.eiu.com/industry/financial-services/subsector/insurance.

https://gis and data.maps.arcgis.com/apps/opsdashboard/index.html #/bda7594740fd40299423467b48e9ecf6.

⁵ https://www.who.int/data/stories/the-true-death-toll-of-covid-19-estimating-global-excess-mortality.

For the insurance companies, this crisis is nothing new. They have already known sanitary crisis and natural disasters, but certainly not to this extent (Holliday et al., 2021). During 2020, the impact of this pandemic was unpredictable. The regions of North America, East Asia (Pacific Asia) and the Eastern Mediterranean countries, had a slight increase in premiums between 2 and 1.3%, while the regions of Europe, Africa and Latin America recorded a decline respectively by 3%, 10% and 16%¹. The data show that the less developed regions in the insurance industry sector, Latin America and Africa, have higher declines.

This crisis did not spare even the countries of the Western Balkans, where the number of Covid positif cases and Covid life losses was relatively high. According to the WHO², although these countries imposed strict restrictions such as quarantine, closure of businesses and educational institutions, they recorded a total of 689,971 Covid positif cases and 12,995 dead. The most problematic countries were Serbia, Bosnia and Herzegovina and North Macedonia, which are ranked among the 15 most affected countries on the European continent (Huszka & Lessenska, 2020). The COVID-19 pandemic has plunged the Western Balkan economies into a deep recession, as in other parts of the world, although governments of these countries applied an easing fiscal policy, the crisis impact was reflected in the gross domestic product (World Bank, 2021). Thus for 2020, the Western Balkans registered an economic activity estimated at 3.4 % (figure 1 below), which is the worst downturn on record.



Figugre 1. Impact of Covid-19 on the economy of the Western Balkan countries, 2019-2020

Source: (World Bank, 2021)

The most affected countries were Montenegro and Kosovo. Their economies respectively fell to -15.2% and -6.9% (Figure 1). While the economies of Serbia and Albania seem to have been more resilient, amortizing this decline respectively to -

9

¹ https://www.atlas-mag.net/article/marche-mondial-de-l-assurance-en-2020.

² https://covid19.who.int/.

1% and -3.3% (World Bank, 2021). This economic downturn was also reflected in the insurance industry declining in the Life and Nonlife insurance products markets. In fact, the closure of the economy for several months hit both the demand and supply of many economic sectors. For sectors such as transport, tourism or conventional trade, survival was difficult, while for others such as the pharmaceutical industry or digital business such as GAFAM¹², they recorded an increase in annual revenue (Deneux, 2021).

In this context, the aim of this article was to identify the impact of the Covid-19 pandemic on the insurance sector for the Western Balkans countries, and more specifically how this pandemic has affected the share of GDP as well as Life and Non-life insurance products.

2. Theoretical Background

The insurance industry is not like other sectors of the economy. If in other sectors, firms know the price of a product or service in advance because they know the costs from production to sales, in the insurance sector the calculation of a premium is calculated taking into account the probability of risk occurrence. So, insurance companies sell an insurance product, a hedge against a risk, the event of which is uncertain that it may occur in the period in which it is covered by the insurance contract. It is impossible for companies to know for sure the cost of the premium that customers have to pay or compensation in the event of a risk for which the customer is insured. So, the customers first pay for the product and then, if the risk for which they are insured occurs, they receive compensation from the company. Thus, to set the amount of his premium, the insurer can only rely on previous statistical studies giving him an idea of how much the compensation will cost if the risk phenomenon occurs. Insurers are therefore obliged to set aside the financial amounts needed to cover insurance promises, without having 100% certainty that this capital is sufficient to meet their commitments³.

As for the functioning of premium management, insurance companies divide it into management through capitalization of premiums and management through their redistribution. In the management through capitalization, the insurer capitalizes premiums for a long period, according to a compound interest technique. Insurance made in this form is life insurance such as private pensions. While in the management through redistribution, the insurer, during the exercise of the annual activity, uses the amount of premiums paid by all the insured, to compensate those

https://www.linformaticien.com/biz-it/57711-42des-resultats-financiers-confortables-pour-les-gafam.html.

https://www.lsa-conso.fr/chiffres-les-performances-hors-normes-des-gafa-en-2020,373313.

³ https://www.assurance-et-mutuelle.com/assurance/secteur-assurance.html.

who have suffered damages during the fiscal year. This management method is used for insurance provided to customers in case of road accident, fire or health insurance.

In the case of Covid-19, the pandemic hit both the demand and supply of most economic markets. According to Strauss-Kahn, (2020), measures taken by governments to quarantine the population for several months caused a shock to the economy on the aggregate supply, due to declining output generated by labor shortages. On the other hand, this creates a shock on the aggregate demand. The lack of income for families as well as the self-isolation, have decreased the consumption and consequently decreased the income or receipts. This cycle well known to economists leads the country's economy into recession (Strauss-Kahn, 2020).

In the insurance market, economic theory analysis the behavior of insurance companies and the behavior of other economic agents who contracts these companies. Being called the theory of uncertainty, it has formalized the behavior of the insured through neoclassical microeconomic models. At the macroeconomic level, general equilibrium studies, which contain a strong normative trend, pose a new problem related to the information assymetry between insurance companies and their insurers. This theory dates back to the 1960s when economists began to seriously identify information problems related to health analysis. It was Kenneth Arrow who identified the limited consumer information (Arrow, 1963). In fact, the main point is that insurance companies are not fully aware of the risks they insure when insurers, who usually know risks better than companies, can modify them in their favor (Laffont, 1976). Arrow also introduced the problem of moral hazard into the economic literature when Akerlof raised the problem of adverse selection, which (unfortunate) occurs as a result of various and unidentifiable risks (Akerlof, 1970). It highlights the negative consequences that information asymmetry can have on the functioning of markets.

Information asymmetry describes the situation in which two economic agents have differentiated information. When information asymmetry occurs in a commodity exchange situation, one agent has more information than the other agent (Rothschild, and Stiglitz, 1976; Stiglitz, 1977). This shows that in cases where we have market inefficiencies, state intervention is necessary (OFCE, 2012). The insurance sector is a typical sector where markets cannot function efficiently (Spence, 1978). Such a case is sickness insurance where the price of the insurance contract should reflect the cost of the insured (Geoffard, 2004).

Also, currently, due to climate change, the consequences on natural hazards can not be fully recognized. With the increasing intensity and frequency of climatic phenomena causing natural disasters, insuring people and covering second-hand costs is a challenge in itself for insurance companies. The problem of the efficiency of insurance markets is as big as the case of the real estate market where the microeconomic theory and especially the hypothesis of the perfect advance of future

damages is difficult to operate (Mauroux, 2015). For buyers searching for an apartment takes time and work to have an optimal choice (search costs). The opposite happens with sellers who perfectly know the product. Even in this case, the lack of market efficiency requires an intervention of a prior information policy, even by the state. Also, total knowledge of the consequences of a hazard is not easy and requires constant scientific knowledge. In some cases, it is even more difficult because scientific knowledge can be the object of scientific controversy. It is the case of the impact of climate change on meteorological phenomena and natural disasters. Individuals' opinions are often generated by information made available by government, media or social networks. Contextualizing it, currently we have the ongoing sanitary crisis of Covid-19. Consequently, we are testing the theory of decision making in situations of uncertainty (Etner et al., 2011). In this unfamiliar situation where information is limited and uncertain, decision making depends not only on its characteristics but also on the context in which the decision is made. In this case we have the hypothesis of Tversky and Kahneman (1973) called "gambler's fallacy" and the so called "availability heuristic".

The Covid-19 pandemic is considered an "extreme" or "catastrophic" risk where the losses are no longer economic but human. Market efficiency, thus, gives way to state intervention. The government intervenes in emergencies to minimize the damages that can be human, sanitary and economic. Insurance companies and clients are totally in a state of uncertainty due to the lack of information that comes only from government decision-making. So, the main hypothesis of this article is that state intervention in pandemic management produced an information asymmetry for insurance market agents which translates into declining performance by markets that have a fragility and low resilience to exogenous risks as is the case with Covid-19. So, the more developed an insurance market is, the more it adapts to "extreme" risks and the more the information asymmetry between market actors decreases.

3. Methodology

To test our hypothesis, we used a comparison method between two economic periods, before and during the Covid-19 crisis. Although time series analyzes of the relationship between economic activities and causal and random phenomena may not provide complete state of the art, the comparative and historical method remains one of the best instruments used in the social sciences to achieve scientific knowledge (Waentig, 2014). This method not only enables to know the past but moreover it enables to analyse the present and more precisely the behavior of economic agents towards the problem we are analysing. It is commonly used in economics to make not only diagnoses but also predictions for the future (Laplante & Dumazedier, 1969). Also, it is often used in management science to improve data processing techniques of economic activity (Curchod, 2003). In our case, this

method has been used in the context of identifying the impact on Covid-19. Data before the Covid-19 period have their extent limited to 2016. The analysis of the time series created from 2016 to 2020, give an important result in terms of the impact of this pandemic not only on the level of gross domestic product (GDP) but also at the industry level. The information sources were the articles and statistics published by the financial institutions of the countries taken into analysis as well as the databases of international institutions such as the World Bank. The last step was the selection of the states that were taken in the study. Thus, based on some objective criteria regarding the development of the insurance sector, we selected three countries: Serbia, Albania and North Macedonia (figure 2).



Figure 2. The Western Balkan countries taken into analysis

Source: adapted by the authors (2021)

4. Findings

4.1. Impact of the insurance industry on the GDP ratio

From the analysis of statistical data for the three countries, we have a slight increase from 2016 to 2019, respectively, for Albania from 1.04% to 1.05% and North Macedonia from 1.44% to 1.52%. For Serbia, however, this ratio remains almost constant at 2% of GDP (figure 3).

Since the beginning of the pandemic, according to The Health System Response Monitor (HSRM¹), anti-covid measures taken in 2020 by the governments of Serbia,

¹ https://eurohealthobservatory.who.int/monitors/hsrm/.

Albania and North Macedonia created a different economic environment for the insurance sector.

The results show that for North Macedonia we do not have any change from 2019 to 2020 of the weight of this industry in relation to GDP. Only Albania has an almost negligible decline of 0.02%. This indicates that this industry at the overall economic level has not been affected by the Covid-19 pandemic.

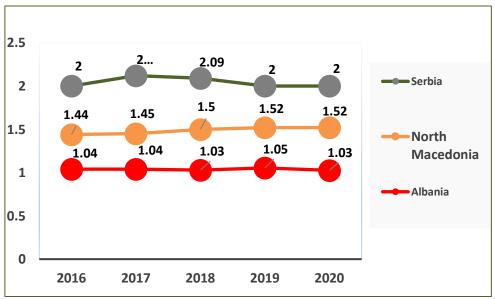


Figure 3. Gross written premiums ratio to GDP (in %) for Albania, Serbia and North Macedonia

Source: adapted by the authors (2021)

4.2. Impact of Covid-19 on Gross Written Premiums by Insurance Categories

According to a study conducted in 2020 by Deloitte¹ for CEE region, the total insurance market on Gross Written Premiums, from 2016 to 2019, increased by 26.6% for Serbia with an annual growth rate of 8.2%, increased by 26.9% for Albania with an annual growth rate of 8.3%, and increased by 21.3% for North Macedonia with an annual growth rate of 6.7%.

For 2020, for all three countries, the category of Non-Life insurance dominates the market, and it is respectively 76% for Serbia, 93% for Albania and 83% for North Macedonia. The impact of Covid-19 on Gross Written Premiums in total and by categories varies between Albania, Serbia and North Macedonia (figure 4). Thus, in

_

 $https://www2.deloitte.com/content/dam/Deloitte/ce/Documents/finance/ceMA_Insurance_study_2020_digital.pdf.$

total, we see that for Serbia we have an increase of 2.5%, while for Albania and North Macedonia we have a decrease of -5.7 and -5%, respectively.

The impact of Covid-19, reflects almost the same Gross Written Premiums divided into Life and Non-Life insurance categories. Thus, for the Non-Life category, the impact of the Covid-19 pandemic, for Serbia, is in positive ratio respectively with 1.9%, while for Albania and North Macedonia we have a negative decrease in percentage with respectively -5%, and -5%. The same trend is for the Life category where for Serbia we have an increase of 4.6%, while for Albania and North Macedonia we have a negative decrease in percentage, with respectively -4.1% and -5.1%.

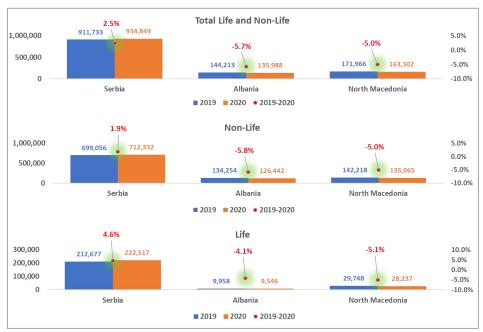


Figure 4. Impact of Covid-19 on Gross Written Premiums (in 000 euros) between 2019-2020

Source: adapted by the authors (2021)

4.3. Impact of Covid-19 on Major Insurance Companies

The structure of the insurance market in Albania and Serbia seems polarized and owned by a small number of companies which also have the largest share of Gross Written Premiums. Results shows that in Albania, the first 4 companies Sigal UGA, Albsig, Sigma Interalbanian VIG and Eurosig control almost 70% of the insurance market. In Serbia, also the first four companies Dunay, GeneraliOsig, Wiener and DDOR, control 75% of the market. The opposite is true in North Macedonia where

the market looks more competitive and where most companies have a Gross Written Premiums figure between 10% and 15% (figure 5).

For 2020, the pandemic effect has hit a good part of corporate activity in all three countries. In Albania, with the exception of two companies, Albsig and Atlantik, which result in positive outcomes of respectively 14% and 3%, , all other companies have a revenue loss of an average of -10%. North Macedonia also has this trend where except for Halk company which has a positive growth rate of 57%, other companies have a negative average rate of -10%. The most affected companies in Albania are Intersig, Eurosig and Ansig with respectively -15%, -12% and -11%. While in North Macedonia the most losing companies are Grawe nonlife, Insurance Policy, Triglav, Winner and Evroins, respectively -26%, -15%, -14%, -12% and -11% (figure 5). Less affected by the Covid-19 crisis are insurance companies operating in Serbia. In Figure 5 we see that the companies most affected and having a negative balance are Sogaz, UniqaNezivot and UniqaZivot with respectively -45%, -11% and -10%.

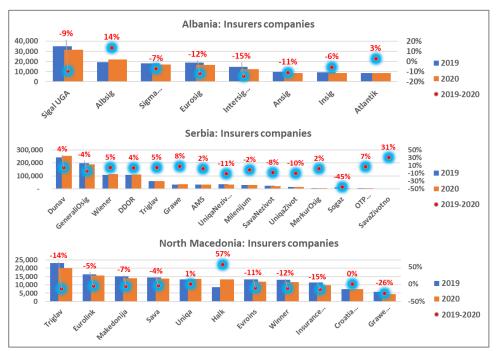


Figure 5. Impact of Covid-19 on Insurance Companies (000 Euros) between 2019-2020 Source: adapted by the authors (2021)

4.4. Impact of Covid-19 on Insurance Products

The Covid-19 pandemic blocked a good part of the economy which was reflected in the specific markets of insurance products. Anti-covid measures and the quarantine

for several months of the population and economic activities such as transport, retail, travel, etc., were also reflected in the shock on demand for insurance products. Insurance companies and consumers of their products were found unprepared for this sanitary catastrophe. Intervention by governments through extreme measures has led to a differential shock to their markets. Figure 6 shows the ranking by products in the annual premium ratio as well as the impact on % of the revenues between 2020 and 2019, for all three countries. It is clear that in all these three countries, the markets that have experienced second-hand product supply are those related to travel, transportation, Fire and Other Damage to Property Insurance, Accident and Health Insurance, Green Card Insurance, Casco Insurance, General Liability Insurance, Credit and Suretyship Insurance, Border Insurance, Marine, Aviation and Transport Insurance. Thus, in Albania the most affected are Marine, Aviation and Transport Insurance, Border Insurance and Green Card Insurance has decreased respectively by -76%, -55% and -42% (figure 5). We also have the same products in North Macedonia that have significant losses. The most affected markets are General Liability Insurance, MTPL Insurance, Motor Insurance, Casco Insurance, Marine, Aviation and Transport Insurance, with respectively -36%, -10%, -9%, -7% and -5%.

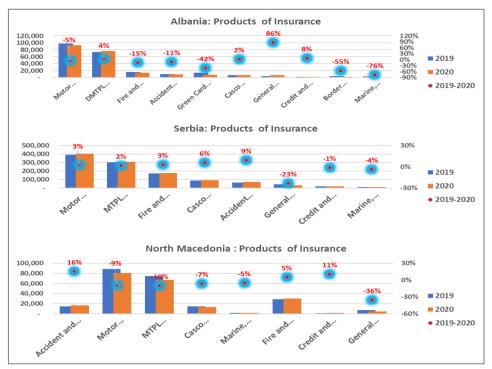


Figure 6. Impact of Covid-19 on the Markets of Insurance Products (000 euros) between 2019-2020

Source: adapted by the authors (2021)

The markets for these products are the least affected in Serbia. Except from General Liability Insurance, Marine, Aviation and Transport Insurance and Credit and Suretyship Insurance, where the markets for these products have fallen respectively by -23%, -4% and 1%, other markets remain positive.

5. Discussion and Conclusion

The results of this article show that state intervention through market government measures, created for both the supply and demand of insurance products, a situation of shock and uncertainty which was dependent on the absorption capacity of the market structure. The insurance market for Serbia is more developed and there is a greater depreciation of this shock which shows a positive result. It is different for the insurance industry in Albania and North Macedonia where the market needs to be more mature and solid.

Undoubtedly, this study has its limits. Analysis of the pandemic correlation to the insurance industry requires more complete information on actors and their behavior. Also, the lack markets analysis for life products is another limit of this study. The hypothesis of the stage of market development as one of the factors resisting the impact of the Covid-19 pandemic, requires a deeper factor analysis.

Besides, the Covid-19 pandemic has hit many markets of insurance industry products for the countries of the Western Balkans, especially those related to transport and travel, but it can also be seen as a generator of other new markets for this industry. In addition to classic products such as property protection, family, financial, etc., the Covid-19 pandemic has created new products for the insurance industry (Holliday et al., 2021). New markets have been created by the pandemic and the digitalization of economic, financial and sanitary activities.

Thus, the Swiss insurance company "Chubb" and the mediation company "Marsh²" are proposing insurance coverage for the Covax vaccination program created by the WHO³. Cybercrime⁴ is another problematic phenomenon that gives an expansion to the insurance market. In recent years, with the digitalization of a good part of economic activity and the change of the labor market where a good part is being moved from offices to residential houses, cybercrime insurance is becoming an emergency for all economic agents, especially for private and public firms. In fact,

² https://www.mmc.com/.

³ https://www.atlas-mag.net/sites/default/files/AtlasMagazine_2021-06_fr.pdf.

https://www.revue-risques.fr/2020/09/lassurance-facteur-de-resilience-de-leconomie-face-auxrisques-cyber/.

https://www.atlas-mag.net/sites/default/files/AtlasMagazine_2021-06 fr.pdf#%5B%7B%22num%22%3A68%2C%22gen%22%3A0%7D%2C%7B%22name%22%3A %22XYZ%22%7D%2C0%2C842%2C0%5D.

the pandemic has favored an insecure situation from cybercrime, which has created an increase in the demand for insurance against this phenomenon (Delcamp, 2020). According to the creator of the American defense program McAfee, for 2019, cybercrime has cost 1000 billion US dollars to the world economy. Despite a small increase in the insurance market for Serbia, Albania and North Macedonia registered a small decline. The health industry such as hospitals and pharmaceutical firms, and the financial industry such as banks, insurance companies and intermediaries, are most at risk. According to a study by the law firm PricewaterhouseCoopers (PwC), the number of cyberattacks in the health sector since the beginning of the Covid-19 pandemic has increased by 500%. As for the financial sector, according to the president of the US Federal Reserve (FED), globally, cyber attacks for 2020 increased by 38%. According to a survey by the Bank for International Settlement, cyber-financial attacks hit strong big banks and insurance companies.

For 2021 onwards, according to the rating agency Moody's, the financial performance of life and non-life insurers in 2021 will be strongly affected by the losses and economic consequences caused by the Covid-19 pandemic. Maintaining a low interest rate by the central banks as well as the downturn in the world economy will have a negative impact on this sector. Also, insurers will now need more financial capital to cope with this pandemic. Moreover, the Covid-19 crisis is also structuring the labor market. Working remotely requires some traditional insurance agencies¹.

In conclusion, the insurance industry, for the countries of the Western Balkans, faces the same challenges as in other Western countries with developed economies. The implementation of the European Solvency² II directive, also for the countries of the Western Balkans, is necessary to increase the performance and competitiveness of the insurance and reinsurance sector³. Besides, this industry should also be seen as a cushioning and resistance factor to the ongoing⁴ Covid-19 pandemic (Sigma, 2019).

References

Akerlof, George A. (1970). The Market for "Lemons": Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics*, Vol. 84, No. 3, pp. 488-500.

Corentin Curchod (2003). La méthode comparative en sciences de gestion: vers une approche qualiquantitative de la réalité managériale/ The comparative method in management sciences: towards a qualitative-quantitative approach to managerial reality. *Revue Finance Contrôle Stratégie/ Finance Control Strategy Review*, revues.org, vol. 6(2), pp. 155-177, June.

³ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019DC0292.

¹ https://www.atlas-mag.net/sites/default/files/AtlasMagazine_2021-01_fr.pdf.

² https://www.atlas-mag.net/article/solvency-ii.

⁴ https://portail-assurance.ca/article/lassurance-a-la-rescousse-de-leconomie-mondiale/.

Delcamp Ch. (2020), L'assurance, facteur de résilience de l'économie face aux risques cyber. Jean-Hervé Lorenzi/ Insurance, a factor in the economy's resilience to cyber risks. Jean-Hervé Lorenzi. *Editorial du Risques/ Risk Editorial* n° 123. https://www.revue-risques.fr/2020/09/risques-n-123/

Deneux M. (2021). Chiffres: Les performances hors-normes des GAFA en 2020. LSA N°2639 du 18 février 2021/ Figures: The non-standard performances of GAFA in 2020. LSA N° 2639 of February 18, 2021. https://www.lsa-conso.fr/chiffres-les-performances-hors-normes-des-gafa-en-2020,373313.

De Vijlder W. (2020). Covid-19: l'impact sur l'économie mondiale/ Covid-19: the impact on the global economy. https://group.bnpparibas/actualite/covid-19-impact-economie-mondiale

Etner J.; Jeleva M. & Tallon J. M. (2011). Decision Theory under Ambiguity. *Journal of Economic Surveys*, vol. 26-2, pp. 234-270.

Geoffard, I. (2000). Assurance maladie: la gestion du risque long/ Health insurance: long-term risk management. *Revue d'Économie politique*, 110, pp. 457-482.

Holliday, S.; Sherchan, P. & Ebrahimi, S. (2021). La COVID-19 et le secteur de l'assurance: Pourquoi une réponse intégrant la dimension de genre est importante. *IFC*, 2021. International Finance Corporation 2020. www.ifc.org.

Huszka, B. & Lessenska T. (2020). Viral vulnerability: how the pandemic is making democracy sick in the Western Balkans. European Counsil on Foreign Realtions. https://ecfr.eu/publication/viral-vulnerability-how-the-pandemic-is-making-democracy-sick-in-the-western-balkans.

Wu, Jin; Cai, Weiyi; Watkins, Derek & Glanz, James (2020). How the Virus Got Out. *The New York Times*.

Kenneth Arrow (1996). Uncertainty and the Welfare Economics of Medical Care. *American Economic Review*, 53, pp. 941-973, 1963. Traduction française dans Risques, n° 26.

Laplante, M. & Dumazedier, J. (1969). Méthode comparative et prévision sociologique. / Comparative method and sociological forecast. *Cahiers Internationaux de Sociologie. Nouvelle série/ International Sociology Notebooks*, *New series*, Vol. 47 (Juillet-décembre 1969), pp. 69-92. https://www.jstor.org/stable/40689511.

Mauroux A. (2015). Exposition aux risques naturels et marchés immobiliers/ Exposure to natural risks and real estate markets. *Revue d'économie financière/ Financial economics journal* 2015/1 N° 117, pp. 91-103.

Michael R. & Joseph S. (1976). Equilibrium in Competitive Insurance Markets: An Essay on the Economics of ImperfectInformation. *The Quarterly Journal of Economics*, Vol. 90, No. 4, pp. 629-649.

OFCE (2012). L'État et le marché/ The state and the market. *Revue de l'OFCE/ OFCE Review*, 2012/2 n° 121, pp. 8-73.

Peterson O. & Thankom A. (2020). Spillover of COVID-19: impact on the Global Economy. SSRN Electronic Journal. 10.2139/ssrn.3562570.

Laffont J-J. (1976). La théorie économique de l'auto-protection/ The economic theory of self-protection. *Revue économique/Economic Journal*, 27-4 pp. 561-588

Sigma, (2019). Bâtir des indices de résilience: un manuel pour les marchés de l'assurance et pour les économies/Building Resilience Indices: A Handbook for Insurance Markets and Economies. Swiss Re sigma N° 5/2019. https://www.swissre.com/dam/jcr:261d5610-d798-4706-849f6707dc6342e2/sigma5_2019_fr.pdf.

Stiglitz, J. (1977). Monopoly, Nonlinear Pricing, and Imperfect Information: The Insurance Market. *Review of Economic Studies* 44, pp. 407–430.

Strauss-Kahn, D. (2020). L'être, l'avoir et le pouvoir dans la crise/ Being, having and power in the crisis. *Politique Internationale/International Politics. La Revue n° - AUTOMNE* — https://archives.politiqueinternationale.com/revue/read2.php?id_revue=0&id=1945&search=&content =texte.

Swiss Re Institut, (2020). *World insurance: riding out the 2020 pandemic storm.* Sigma No 4/2020. https://www.swissre.com/dam/jcr:d50acbcd-ce5c-4ee9-bc60-a3c1e55f8762/sigma-4-2020-en.pdf.

Waentig H. (2014). La méthodologie des sciences sociales selon Comte/ Social science methodology according to Comte. Presses universitaires de Strasbourg. Les Cahiers philosophiques de Strasbourg, pp. 289-311.

World Bank, (2021). *Western Balkans Regular Economic Report*: https://www.worldbank.org/en/region/eca/publication/western-balkans-regular-economic-report.