DEVELOPMENT OF THE BULGARIAN INSURANCE MARKET - CRISIS CHALLENGES OF THE DECADE

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Abstract: The present study focuses on the development of the Bulgarian insurance market in the second decade of the XX century. It examines the issues of the relationship between the global financial sector, insurance and the phases of economic cycles; the debate on the importance of the financial sector and insurance for the economic development; the establishment of correlations and dependencies between the dynamics of GDP and the dynamics of the Gross Premium Income (GPI) in the general insurance sector in Bulgaria for the period 2007-2019, presenting prospective reflections and assessment of the impact of the global pandemic COVID-19 on the Bulgarian insurance market. The linear model in a realistic scenario forecasts a decline in GPI of 18.2%, in a GDP decline of 9.0%. An additional assessment and forecast made using the model is that a decrease between 12.4% and 25% of GPI from the compulsory motor third party liability insurance (at the indicated level of GDP decline) will have a destructive effect on the Bulgarian model of general insurance, due to the impossibility to perform the social functions of this insurance such as the protection of victims of road accidents.

Keywords: economic growth, insurance market, general insurance, motor third party liability, COVID-19.

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Introduction

The financial sector is the global barometer of economic growth. It indicates the change of economic cycles, the pace of economic progress, the trends in the development of countries, regions and economic sectors. The financial industry or the financial sector is a mediator in the process of efficient resource allocation to the economic sectors in the economy, by reducing transaction costs and solving the problem of asymmetry in information. In addition, the financial sector plays the role of a major risk manager in the economy, as well as in the transaction processes and the transformation of savings into investments. Financial intermediaries have the necessary resources (financial, human, know-how) to obtain significant economies of scale in the evaluation, selection and subsequent monitoring of investment projects. At the same time, the diversification between a large number of funded projects or the insurance of a large number of entities results in reduction of the risk for the individual project. Thus, the financial sector increases productivity, facilitates the investment process, optimizes risk management and has a positive impact on economic development.

The financial sector comprises the banking and the non-banking financial sectors. The banking financial sector in Bulgaria includes the Central Bank and the commercial banks; the non-banking financial sector - insurance companies, pension insurance companies, investment companies, joint stock companies with special investment purpose, leasing companies, companies specializing in lending, and non-bank investment intermediaries. An important part of the non-banking financial sector is the insurance sector, which supports the important for all economic entities risk management function and creates a stable flow of investments.

1. The global financial sector, insurance and the phases of economic cycles

Economic activity changes significantly depending on economic cycles. The phases of the economic cycle affect economic growth, inflation, employment, supply and demand for goods, as well as the prices of insurance services and financial instruments. In order for the financial and, in particular, the insurance sector to function well in the conditions of an inevitable, expected cyclical crisis, the supervisory activity of the state is changed and adapted.

The global financial sector has gone through several economic cycles in the last few decades. In the 1970s, the financial industry experienced a period of stagnation. The last two decades of the past century have been characterized

by sustainable, albeit uneven, growth. At the beginning of the new millennium, the Asian financial crisis affected financial services markets. This was followed by a resumption of growth until the onset of the Global Financial and Economic Crisis of 2007-2009, which led to negative economic effects similar to those of the Great Depression in the late 1920s. The last ten years of constant growth ended undeniably at the end of 2019 with the emergence of an exotic cause – a global coronavirus pandemic. This global health crisis has led the whole world to an unprecedented economic crisis in recent history, the development and consequences of which are still unknown and create serious uncertainty in the markets.

Since the beginning of the new millennium, the Bulgarian insurance sector has begun a process of integration into the European insurance sector. This process was accelerated by Bulgaria's full membership in the European Union as from January 1, 2007. The indicators for development of the insurance market in our country marked a rapid growth and though departing from a very low basis, they are not far behind those of the countries of Central and Eastern Europe and much closer to the indicators of the developed economies. The integration of the Bulgarian economy into the European one has a long-term positive effect on the economic progress and welfare of companies and households, and hence on insurance activity. The adoption of good management practices and prudential financial supervision is key to insurance integration and has a pronounced counter-cyclical effect on a European model. On the other hand, the development of the Bulgarian insurance market is a "carrier" of market shocks from Europe and is a function of the successful, sustainable development of the European insurance market. Unsurprisingly, the pandemic situation across the European Union has posed similar challenges and risks, as well as similar solutions to the insurance sectors of the European countries.

The object of this paper is the Bulgarian general insurance market, and its subject - the analytical dependencies and links between the insurance sector and the economic growth in Bulgaria, including the market response of general insurance for the fast cooling of the crisis in the economy. It examines the development of the insurance market in the period 2007-2019 and attempts to forecast the scale and strength of the effects of the global pandemic of COVID-19 on the Bulgarian economy and general insurance. The selected period offers evidence of the links between economic development and the development of the general insurance during the financial and economic crisis of 2008-2009 and the post-crisis period, as well as in the last period of economic growth in 2014-2019.

We formulate the research thesis that the study of the dynamics and structure proves the long-term sustainable relationship of the insurance market

in Bulgaria and the rate of economic growth in the country. At the same time, the unprecedented global pandemic will have a negative impact on the economic development and the insurance sector with a pronounced decline in the general insurance market.

2. Importance of the financial sector and insurance for the economic development

A century ago, Joseph Schumpeter noticed and included in the theoretical model of economic growth the importance of the financial sector for the economy (Schumpeter, 1911). In his seminal work on the determinants of economic growth, Robert Solow points out that economic progress is directly related to and depends primarily on technological progress rather than on population growth or the accumulation of savings (Solow, 1957). Not so enthusiastic is Goldsmith, who in his large-scale study points out that there is a relationship between financial and economic development, but it is hardly causal (Goldsmith, 1969).

In their endogenous growth model, King and Levine demonstrate the positive relationship between financial and economic development, which they attribute to the rational selection of projects and innovations by the financial system, to the mobilization of savings and to improved economic efficiency (King & Levine, 1993A), (King & Levine, 1993B). Rousseau and Vuthipadadorn study a group of emerging Asian economies and prove the existence of a strong positive link between the financial sector and the economic development (Rousseau & Vuthipadadorn, 2005). Other studies find a similar relationship, adding the role of the institutional environment and the protection of creditors' rights to growth to the positive impact of the financial sector (Levine, 1997), (Gaff, 2000).

When studying the importance of the financial sector for the economies of countries with different levels of development, some authors find unequal dependence on the effects of financial development. In general, the positive impact is the result of improved productivity or capital accumulation (Fink, Haiss, & Mantler, 2005). Rioja and Valev find that in emerging economies, capital accumulation is the engine of growth, while in developed economies the leading factor is improved productivity (Rioja & Valev, 2004). The development of the financial system in the European Union has a statistically significant positive effect on growth, which is different for old and new members. However, especially in larger economies, there is a negative effect which generates potential risks (Герунов, 2014). Strengthening the financial sector of emerging economies in the context of market liberalization bridges

the knowledge gap and leads to convergence of emerging and developed economies (Goldberg, 2007). Financial sector's convergence between developing and developed economies is proven, but when reaching a medium development of the financial sector the positive effects fade away and when reaching a high financial development – they are negligibly weak (Bahadir & Valev, 2015).

The positive relationship between financial and economic development has been tested and proven in a large number of studies, which is why it is accepted by most authors in this scientific field. Research also shows how the development of the financial system generates growth, what the main drivers of economic progress are and the nuances in the relationship "financial development - economic development" for countries with differences in institutional development, the size of the financial sector, the degree of economic development, cultural and religious characteristics.

The positive relationship between the development of the insurance sector and the economic development is less studied. Based on a 170-year period, Adams *at al*. analyze the interrelationships of the banking sector, insurance and economic growth in Sweden (Adams, 2005). Kugler and Ofoghi studied insurance and economic development on the example of Great Britain (Kugler & Ofoghi, 2005), and Ranade and Ahuja - the impact on savings through the lenses of the insurance reform in India (Ranade & Ahuja, 2001).

In their analysis of nine developed market economies from the OECD, Ward and Zurbruegg found that in some countries in the sample, insurance was a factor in economic growth, while in other the relationship was inverse. In addition, they conclude that these dependencies are country-specific and the existence of one or another relationship depends on a number of national characteristics (Ward & Zurbruegg, 2000). The research of Arena and Webb *et al* examines and proves the positive relationship between insurance, the banking sector and the stock exchange (Arena, 2006), (Webb, Grace, & Skipper, 2002). Most research is aimed at revealing the influence of the insurance sector as offering insurance coverage, measured by premium income. Catalan *et al* focus for the first time on the other major driver of insurance growth - the investments made by institutional investors in insurance companies (Catalan, Impavido, & Musalem, 2000).

The financial sector directs resources in the economy from savers to investment projects, performing the following important functions:

a. traces and monitors capital seekers thus improving the allocation of resources in the economy;

b. mobilizes savings;

c. reduces the cost of capital by diminishing costs through economies of scale and specialization;

d. provides for the management of risk and liquidity (Wachtel, 2001).

The insurance sector as part of the financial non-banking sector offers mainly insurance coverage, as well as is an institutional investor (Ерусалимов & Василев, 2018). The insured pay a premium and receive insurance coverage against certain risks. In insurance, accidental events are subject to management by allocating the adverse effects for an insured person on a many policyholders affected by the risk. In the event of certain accidental unfavourable events or conditions described in the insurance contract, the insurer owes payment of compensation or an amount. General insurance primarily offers insurance coverage and facilitates market mechanisms for selecting and financing profitable investment projects. Life insurance is primarily an institutional investor and successfully mobilizes savings, accumulating them as large investment flows. Haiss and Sümegi point out that the institutional structure, legislation and regulations, market structure and demographic and social characteristics of the population offer different ways for insurance to interact with the economy.(Haiss & Sümegi, 2008).

Through the transfer of risk, insurance companies protect economic entities from all sectors of the real economy from losses of assets or income. In the conditions of risk transferred to insurers, companies can more confidently develop new projects, technologies and markets, which stimulates economic development. On the other hand, after the transfer of risk, consumption is stable and grows on the basis of value storage. The insurance sector in most developing and developed economies is of growing weight in the financial industry and of growing importance in the economy. Insurance companies are one of the major institutional investors, with an increasing weight in investments in the capital market and the real estate market.

3. Dependence between the dynamics of GDP and the dynamics of GPI general insurance in Bulgaria for the period 2007-2019.

The gross premium income during the period increased two times - from BGN 1,520 mln in 2007 to BGN 2,911 mln in 2019. The average annual increase of GPI was by BGN 107 mln. During the period 82.5% of GPI was generated by general insurance, which accounted for 86.6% of GPI in 2009, decreasing in the following years to reach a share of only 82.9% in 2019. Although slowly the share of GPI from life insurance increased from 12% in 2004 to 20.9% in 2016.The share of GPI from life insurance in 2019 was 17.1%.

The computed growth rates ratios indicate that during most of the period the rates of change of GPI from life insurance are higher than the rates of change of GPI from general insurance. Nevertheless, the GPI from general insurance

is many times the GPI from life insurance and is crucial for the position and the development of the insurance sector. The structure of the insurance market in the period under review was also affected by the financial and economic crisis of 2008-2010.

In practice, the decline in the employment, the economic development and the incomes during the crisis and post-crisis recovery held back the growth of life insurance, which shrank to 15.3% in 2010. From the bottom reached then until 2017 the weight of life insurance in the insurance market had been crawling up.

Table 1

GPI, GPI general insurance and GPI life insurance for the period 2007-2019.

Years	GPI (mln BGN)	GPI general insurance		GPI life insurance	
		(mln BGN)	(%)	(mln BGN)	(%)
2007	1520	1269	83,4	252	16,6
2008	1811	1532	84,6	278	15,4
2009	1682	1457	86,6	225	13,4
2010	1623	1375	84,7	249	15,3
2011	1611	1362	84,5	249	15,5
2012	1600	1336	83,5	264	16,5
2013	1729	1423	82,3	306	17,7
2014	1775	1434	80,8	341	19,2
2015	1962	1571	80,1	391	19,9
2016	2050	1622	79,1	428	20,9
2017	2135	1706	79,9	429	20,1
2018	2531	2083	82,3	448	17,7
2019	2911	2412	82,9	499	17,1

Source: FSC, authors' calculations

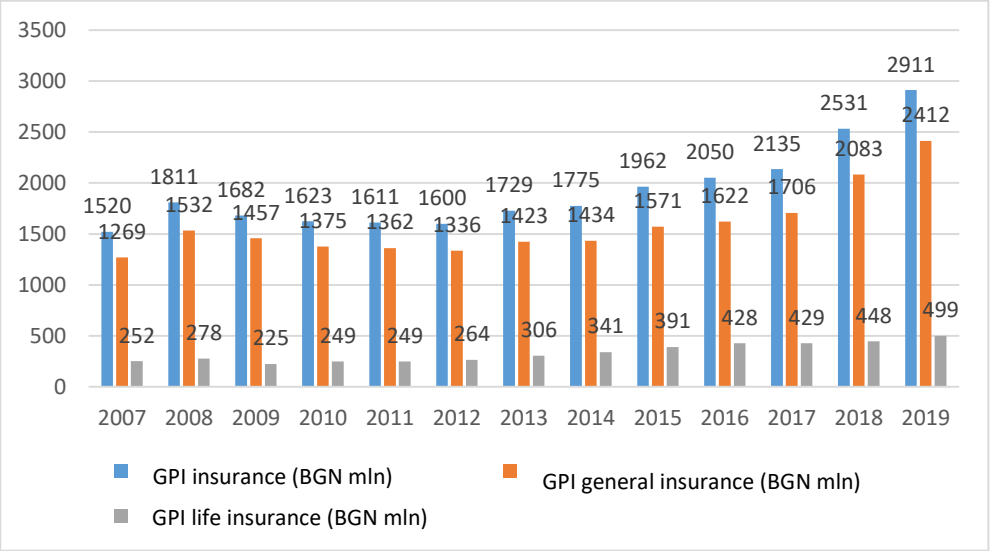

Figure 1. ***GPI, GPI general insurance and GPI life insurance for the period 2007-2019***

Table 2

Characteristic features of the GPI dynamics for the period 2007-2019

Years	GPI growth rate	GPI general insurance growth rate	GPI life insurance growth rate	Growth rates ratio
2007	19,1	20,8	10,6	1,97
2008	-7,1	-4,9	-19,3	0,26
2009	-3,5	-5,6	10,7	-0,53
2010	-0,7	-0,9	0,3	-3,56
2011	-0,7	-1,9	5,7	-0,33
2012	8,1	6,5	16,1	0,41
2013	2,6	0,8	11,3	0,07
2014	10,5	9,5	14,9	0,64
2015	4,5	3,3	9,4	0,35
2016	4,1	5,2	0,1	38,38
2017	18,5	22,1	4,5	4,91
2018	27,4	24,5	48,4	0,51
2019	16,7	17,8	11,4	1,56

Source: FSC and authors' calculations

The linear regression model of the relationship between GDP and GPI general insurance indicates that the relationship between them is very strong - the correlation coefficient $r = 0{,}904$ and the coefficient of determination $r^2 = 0{,}8179$. 81.79% of the variation in the change in GPI general insurance is due to the dynamics of GDP and 18.21% of the variation to other factors, not included in the model. Every change in GDP by BGN 1 million corresponds to a change in GPI general insurance by BGN 0.0185 million.

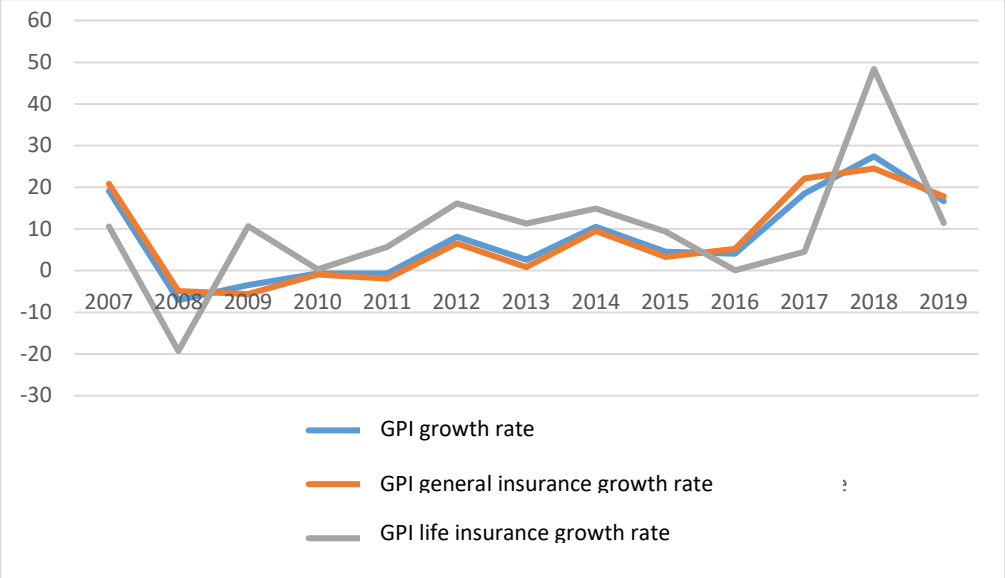

Figure 2. ***Growth rate of GPI, GPI general insurance and GPI life insurance for the period 2007-2019***

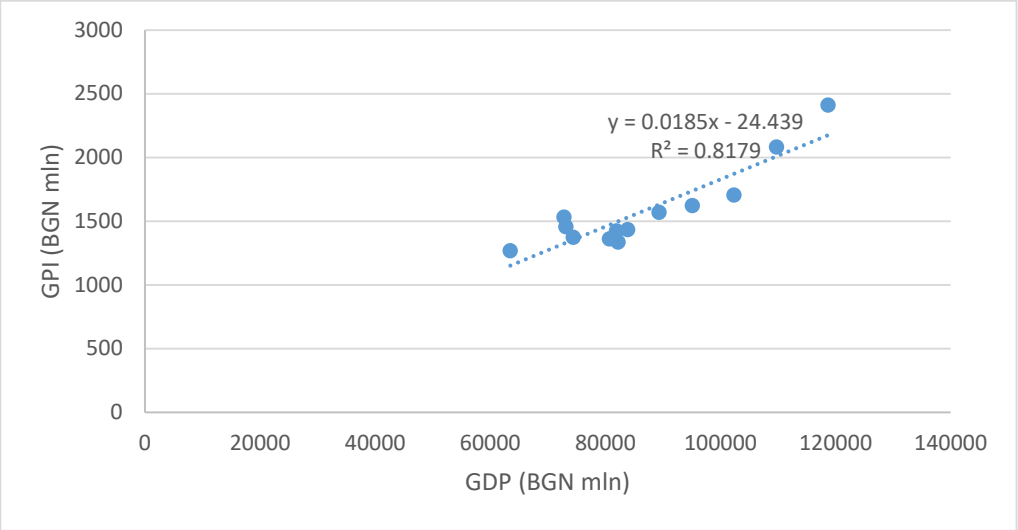

Figure 3. ***Linear relationship of GDP and GPI general insurance***

The linear regression model of the relationship of GDP and GPI motor third party liability insurance shows that the dependence between them is even more pronounced - the correlation coefficient $r = 0{,}96$ and the coefficient of determination $r^2 = 0{,}9223$.

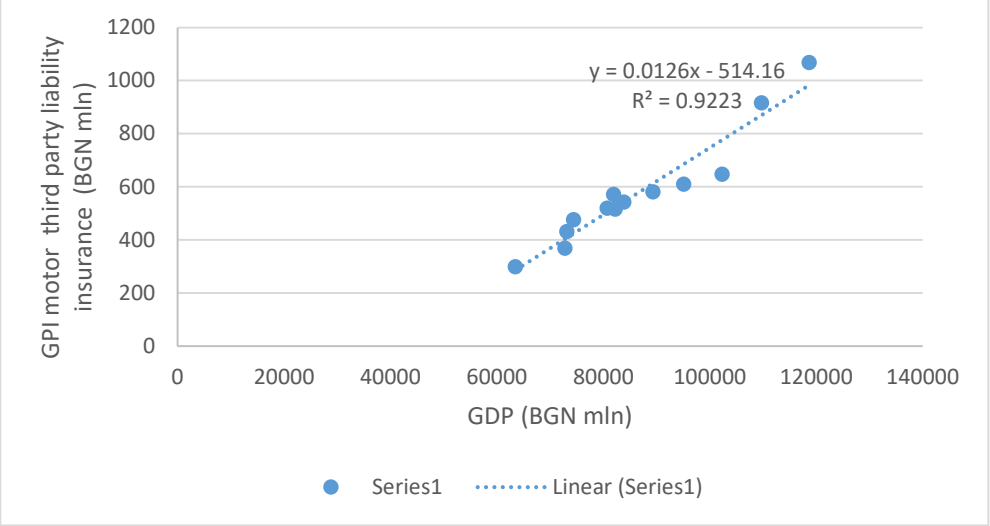

Figure 4. ***Linear relationship of GDP and GPI motor third party liability insurance***

4. Forecast for the effect of the global pandemic COVID-19 on the Bulgarian insurance market

In December 2019, China informed the World Health Organization that an epidemic had occurred in Wuhan Province, causing pneumonia of unknown origin. It was quickly established that the causative agent was a new coronavirus, codified SARS-CoV-2 and causing COVID-19 disease, leading to serious symptoms and in some cases - death. On March 11, 2020, the World Health Organization declared COVID-19 a global pandemic due to high contagion and the aggravation in health situation worldwide. The epicentre of the disease has departed from China to other countries and continents - Iran, Italy, Spain, Britain, the USA, Russia, and Brazil. As of the end of May 2020, more than 5.5 million cases of the disease worldwide and more than 350 thousand deaths were reported (Worldometers.info, 2020). These indicators have been changing in the direction of cumulative growth, as for the first time on May 25, 2020, Brazil was ahead of the United States in deaths for one day, which confirms the pandemic nature of COVID-19 and its strong virulence, especially in areas of high-density of the population.

The worldwide restrictions to curb the spread of the virus - including quarantine, home leave, business closures and travel bans - have had significant consequences for the global economy. Data to measure these effects are still being collected and summarized, but the available indicators show that the economic environment has changed dramatically and worsened since February 2020.

In a report published in mid-May, the reinsurance broker Willis Re (Willis Re Strategic & Financial Analytics, 2020) noted a stabilization of investment markets with a 7% impact on the capital base of the big reinsurers, as well as a preliminary estimate of losses of insurers and reinsurers due to Covid- 19 in a broad consensus range of about USD 30-100 billion. Although the global GDP has been shrinking significantly, insurance premiums may remain surprisingly modestly affected. This has already been observed historically, in periods with a combination of anaemic GDP growth, but a significant increase in premiums.

In fact, the impact of the pandemic on the insurance sector depends on several interrelated factors, including the degree of virulence of the virus, the number of deaths directly or indirectly related to the disease, government measures to curb the infection, incl. quarantine measures and social distance, the economic impact of the health crisis and government action (Clarkson, Bozman, & Shuter, 2020). A McKinsey report of April 2020 sets out a combination of consequences of the pandemic, a combination of the spread of the virus and the effectiveness of health measures and the effectiveness of

government policy for economic restart and economic recovery (FitzGerald, Kwiatkowski, Singer, & Smit, 2020).

The forecast of GPI according to the linear regression model $GPI\ general\ insurance = -24{,}439 + 0{,}0185\ GDP$ is based on the presented scenarios for a decline in GDP and thus calculated expected GDP for 2020. Table 3 presents forecasts for the shrinkage of the general insurance market in different scenarios for the impact of the pandemic on the economy of Bulgaria. The first scenario – the "over-optimistic" was proposed by the Ministry of Finance at declaring a state of emergency in our country and the initial assessment of the possible negative effects. This scenario considers a 3-month active government action to tackle the crisis. The next, more moderate scenarios of GDP decline of 5%, 7% and 9% are based on various expert assessments of the pandemic effect on small and medium-sized European economies immediately after the announcement of quarantine and social distance in them. They test the duration of active government action to tackle the crisis of 4, 5 and 6 months. The last forecasting a GDP decline of 10% and 12% are based on the latest expert assessments of the pandemic effect in leading economies such as the United States, Germany, Spain and Italy, after two months of quarantine measures and expectations of a second peak that would require more or less strict active government action to tackle a 9- or 12-month crisis.

Table 3

Forecast values of GPI general insurance for 2020.

Scenarios	GDP decline	Forecast value of GPI general insurance for 2020 (BGN mln)	GPI general insurance growth rate estimate forecast 2020 compared to 2019 (%)
Over-optimistic	-3%	2105,09	-12,7%
Optimistic	-5%	2061,18	-14,5%
Realistic	-7%	2017,275	-16,4%
Pessimistic	-9%	1973,367	-18,2%
Over-pessimistic	-10%	1951,413	-19,1%
Extremely pessimistic	-12%	1907,505	-20,9%

Source: Authors'calculations

Particularly important for Bulgarian insurance is the third party liability Insurance related to the possession and use of motor vehicles, which constitutes

almost half of the total GPI from general insurance. During the period under review, the gross premium income under the compulsory motor third party liability policy as a main component of the motor vehicle third party liability increased three and a half times - from BGN 299.24 million to BGN 1,068.48 million in 2019. The forecast of GPI under motor third party liability according to the linear regression model *GPI MTPLI = -514,16 +0, 0126 GDP* is based on the presented scenarios for GDP decline and an assessment of the expected GDP for 2020 is made on this basis.

Table 4

Forecast values for GPI from motor third party liability insurance for 2020.

Scenarios	GDP decline	Forecast values for GPI from motor third party liability for 2020 (in BGN mln)	GPI motor third party liability growth rate estimate forecast 2020 compared to 2019 (%)
Over-optimistic	-3%	936,2221	-12,4%
Optimistic	-5%	906,3173	-15,2%
Realistic	-7%	876,4125	-18,0%
Pessimistic	-9%	846,5077	-20,8%
Over-pessimistic	-10%	831,5554	-22,2%
Extremely pessimistic	-12%	801,6506	-25,0%

Source: Own calculations

An expected decline from 12.4% to 25% would be devastating for the Bulgarian model of general insurance, due to the inability to perform the social functions of this insurance such as the protection of the victims of road accidents. There is a view that the mandatory nature of the motor third party liability insurance would prevent such large declines. However, due to the effect of the substitution, the reduction in the volumes of other, voluntary lines of business would both stimulate a price war and reduce prices and reduce the number of insured cars thus reducing gross premiums.

Ultimately, it is quite possible that the projected scenarios for a decline in gross premiums in general insurance and motor third party liability insurance will not reach these extreme values. The unique situation we have been currently witnessing is still very unclear and has the potential to develop in different directions.

The policy and the sector conservation measures are subject to mandatory support from supervisors at both national and European level. Any attempts to hedge the risk in such force majeure conditions, incl. through

options and futures transactions (Недев Т., 2014) (Simeonov, 2012), will be doomed to failure due to the identical effect of COVID-19 on capital markets and the prices of the exchange-traded assets. Such a reaction in the markets was marked by unprecedented indicators in the energy sector, where the WTI (West Texas Intermediate oil price benchmark) futures reached a negative territory of -37.63 $ / barrel at the end of April 2020. Other energy products (Недев, Т., 2015) did not follow a similar direction of product devaluation, which was mainly due to their national affiliation with local markets, demand, supply and rules for trading on the energy exchange (Недев, Т., 2019).

Conclusion

In conclusion, it can be noted that the relationship between GDP growth and GPI in the General Insurance sector is entirely positive with high levels of correlation and determination (for the period 2009-2019). For its part, an assessment of the effect of the global COVID-19 pandemic on the Bulgarian insurance market shows that in a realistic scenario the decline in GPI will be 18.2%, coupled with a recession of 9.0% of GDP on an annual basis. In addition, it is argued that a decrease in the range from 12.4% to 25% of GPI from the compulsory motor third party liability insurance (at the indicated level of recession for GDP) will have a destructive effect on the Bulgarian model of general insurance. This is due to the inability to perform the social functions of this insurance such as protection of victims of road accidents and their compensation for the incurred damage and suffering.

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