

# THE IMPACT OF COVID-19 ON DEVELOPMENT OF MOTOR CASCO INSURANCE IN BULGARIA

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**Abstract:** Motor Casco Insurance is the most concluded voluntary insurance policy on the Bulgarian insurance market and in recent years its market share is about 27% in the General (Non-life) Insurance Section.

The aim of the study is to assess the impact of measures taken by the state to limit the spread of SARS-CoV-2 virus on the development of Motor Casco Insurance.

As a result of the study, it was found that the measures imposed by the state did not significantly affect the development of Motor Casco Insurance in Bulgaria, but simply slowed down its pace. However, there is a significant reduction in the number of road accidents, especially in 2020, which is also reflected on the reduction of insurance payments.

**Key words:** insurance, premium income, indemnity, Covid-19.

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## Introduction

In the specialised literature, insurance is considered as a type of specific human activity and an independent economic category. Its development is directly dependent on economic changes. The past experience shows that the cyclical nature of economic development, as well

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as fluctuations caused by crises of various kinds, inevitably affect the activities of insurance companies.

The health crisis, which has lasted more than two years, caused by the spread of the coronavirus SARS-CoV-2 has affected the world economy. The measures taken by many countries, including Bulgaria, to combat the pandemic, such as the requirements for isolation and social distance, restrictions on the movement of people, temporary closure of parks for walking, reducing public transport, have negatively affected many businesses. Various sectors of the economy were affected, and the sectors most strongly suffered were transport, tourism, hotels and restaurants.

The aim of this study is to assess the impact of measures taken by the state to reduce morbidity and overcome the health crisis on the development of the most frequently concluded voluntary insurance in Bulgaria.

The assessment will be based on the main indicators for the development of a given type of insurance, namely: the written premium income received by the insurers and the insurance payments made. In the course of the study, their change will be traced by making a comparison with the data from the pre-pandemic 2019.

\* \* \*

The transfer of responsibility for covering financial losses when the risk arises is associated with the payment of a certain price. In insurance, it is customary to call this price an insurance premium. The totality of the premiums collected by the insurers forms their premium income. It is one of the main indicators that take into account the development of the insurance business, including the individual sections and types of insurance.

This type of insurance, which is the subject of our study, is specified in the Insurance Code as insurance of "Land vehicles, other than railway rolling stock". In insurance practice it is popularly known as "Motor Casco (Motor Hull)". It is the most frequently concluded voluntary insurance on the Bulgarian insurance market and in recent years its market share is about 27%. In terms of premium income, Casco Motor Insurance is on the second place after the obligatory Motor Third Party Liability Insurance. The two

insurances together form the Car Insurance Branch and hold about 70% of the market share in the General Insurance Section.

The amount of written premium income received by insurers under a given type of insurance is influenced by factors such as:

- number of insured objects (risks);
- the sum insured for which the objects are insured;
- tariff of the insurer.

In the case of Motor Casco Insurance, these factors will depend on:

- the number of registered motor vehicles;
- the number of newly registered motor vehicles;
- the market value of the insured motor vehicles;
- the magnitude of risk;
- the costs of the insurer for concluding and maintaining the insurance contract, as well as for paying indemnities;
- used indemnity system;
- the insurance culture of the population, etc.

For more than two years, the world has been gripped by a health crisis related to the spread of the SARS-CoV-2 virus. Many countries, including Bulgaria, have introduced measures to limit this spread. We have witnessed the closure of state borders for people and non-essential goods. This inevitably affected the motor vehicles trade, and their imports in certain months of 2020 were greatly reduced.

*Table 1*

*Registered motorised road vehicles in Bulgaria for the period 2017-2021*

<b>Year</b>	<b>Number of registered motor vehicles</b>	<b>Change in the number of registered motor vehicles (%)</b>	<b>Number of newly registered motor vehicles</b>	<b>Change in the number of newly registered motor vehicles (%)</b>
2017	3 628 700	-	306 421	-
2018	3 664 621	0.99	319 639	4.13
2019	3 752 566	2.40	302 461	-5.37
2020	3 812 566	1.60	241 302	-20.22
2021	3 790 000	-0.59	279 000	15.62

Source: Ministry of Interior.

The data presented in Table 1 show that the decrease in newly registered cars in 2020 compared to the pre-pandemic year 2019 is significant (20.22%). According to data from the Ministry of Interior, quoted in the press, the decrease is the largest (by about 37%) in the registration of new cars. There is a decrease compared to 2019 in the import of used vehicles, as it is estimated at about 18% (Iliev). Uncertainty about job and income retention, especially in the trade and tourism sectors, inevitably has a negative impact on the market for new cars. The trend of increasing the share of used cars continues. In 2020, more than 43% of all motor vehicles are over 20 years old, and their share increases by 3% (Iliev).

Although in 2021 there is an increase in newly registered cars by 15.62% compared to the previous year, the levels of 2019 still cannot be reached. In addition, the problem of aging vehicle fleet in Bulgaria continues to worsen. According to data from the Ministry of Interior, quoted in the press, out of 279 000 newly registered cars, over 236 000 have been used. The share of motor vehicles over 20 years of age is almost 50%, and that of cars under the age of 5 continues to decline and is estimated at only 4.7%, compared to 5.9% at the end of 2020 (Nikolov, 2022).

The age structure of the vehicle fleet in Bulgaria affects the market value of motor vehicles registered in the country. This is a serious prerequisite for reducing the premium income of insurers offering Motor Casco Insurance.

As already noted, the amount of written premium income is influenced by factors such as:

- number of insured motor vehicles;
- the sum insured (the liability assumed by the insurers) of the insured motor vehicles;
- the tariff rate of the insurers.

The tariff rate depends on the magnitude of the risk, which is determined by objective and subjective factors such as the power of motor vehicle, the braking system, the fuel used, the age and sex of the driver, the place where the vehicle normally travels, etc. However, for the purposes of the study, these issues will not be considered. Here, we will focus on the other two main factors: the number of insured motor vehicles and the sum insured of the insured vehicles.

*Table 2*

*Factors influencing the written premium income under Motor Casco Insurance of motor vehicles for the period 2017-2021*

<b>Year</b>	<b>Number of insured vehicles</b>	<b>Change in the number of insured vehicles (%)</b>	<b>Sum insured of concluded insurances (BGN)</b>	<b>Change in the sum insured of concluded insurances (%)</b>
2017	808 329	-	16 169 018 832	-
2018	849 538	5.10	17 882 024 773	10.59
2019	1 093 103	28.67	19 748 848 622	10.44
2020	1 172 761	7.29	20 184 422 817	2.21
2021	1 336 033	13.92	21 036 205 460	4.22%

Source: FSC

The data in Table 2 show an increase in both the number of insured vehicles and the value liability of insurers. However, there is a serious decline in the growth rate of both indicators, and this is more noticeable in 2020. While in 2019 the change in the number of insured vehicles compared to the previous year increased by 28.67%, then this indicator reports only 7.29% increase in 2020. The same, even to a greater extent, applies to the growth rate of the sum insured. It falls nearly 5 times.

In 2021, the measures taken by the state were gradually eased. This affected both the number of insured vehicles and the premium income received by insurers. However, this growth still cannot be equivalent to the one registered in 2019. In addition, it is clear that with an increase of 7.29% in the number of insured vehicles in 2020, there is only a 2.21% increase in the value of assumed liability of insurers. The same is true in 2021, when an increase of 13.92% in the number of insured vehicles corresponds to more than 3 times less growth (4.22%) in terms of the sum insured. Undoubtedly, this is due to the obsolete fleet in our country and insurance of lower value motor vehicles.

Circumstances related to the measures imposed by the states to limit the spread of the SARS-CoV-2 virus had an impact on the insurers' premium income from Motor Casco Insurance. On the one hand, the restriction on movement between the individual regional cities should have a negative impact on the development of insurance. On the other hand, the requirements for social distance, the temporary abolition of blue and green parking areas in some cities, have contributed to the more frequent use of private cars in

urban areas. The latter, among other things, is a prerequisite for seeking insurance protection for citizens' private cars.

When comparing the data for the pre-pandemic year 2019 with those for 2020 and 2021, interesting conclusions can be drawn regarding the scope of insurance coverage and the premium income received by insurers under motor hull insurance.

*Table 3*  
*Change in the scope and premium income realized under Motor Casco Insurance for the period 2019-2021*

Year	Number of registered motor vehicles	Number of insured motor vehicles	Scope of insurance (%)	Premium income (BGN)	Average cost of insurance (BGN)
2019	3 752 566	1 093 103	29.13	652 161 845	596.62
2020	3 812 566	1 172 761	30.76	652 874 623	556.70
2021	3 790 000	1 336 033	35.25	709 013 802	530.69

*Source: FSC and authors' calculations.*

The increased number of insured motor vehicles in 2020 and 2021 has led to an increase in the amount of premium income realized by insurers under Motor Casco insurance, compared to the pre-pandemic year 2019. Apparently, the state's measures to limit the spread of the new coronavirus have forced more and more citizens to use their private cars and seek insurance protection for them. The interesting thing in this case is that the increase in the number of concluded insurance contracts significantly exceeds the growth of the premium income realized by insurance companies. Apparently, older and respectively cheaper cars were insured, which confirms the fact, quoted above, that cars over 20 years of age in Bulgaria are nearly 50 percent. The average price of one Motor Casco Insurance for the period 2019-2021, calculated in Table 3, also confirms this fact. The reported decline in the price of insurance compared to 2019 is 6.69% in 2020 and 11.05% in 2021.

\* \* \*

The other main indicator, the subject of our study, is the indemnities paid by insurers under motor hull insurance. The settlement of the damage in non-life insurance is a process known in practice as "claims settlement".

This process can be defined as a set of successive actions aimed at establishing:

- the occurrence of the insured event;
- the existence of an insurance case;
- the amount of damage incurred;
- the amount of the insurance indemnity that the insurer will pay.

The process begins with survey and finding of the damage, then proceed to assess their amount. The final phase of the claims settlement is the payment of the insurance indemnity. The amount of indemnities paid by insurers is influenced, directly or indirectly, by a number of factors, which we will pay attention further (Erusalimov, 2021, p. 247).

The number of insured vehicles affected by the occurrence of the insurance event and the liability assumed by the insurers, expressed through the sum insured, are the two main factors that affect the amount of insurance payments under each property insurance. In the case of Motor Casco Insurance, these factors depend on:

- the number of insured motor vehicles;
- the behaviour of road users;
- the frequency of manifestations of natural hazards;
- the value of the insured motor vehicles;
- the system for payment of insurance compensations (indemnities) applied by insurers.

*Table 4*  
*Factors influencing the insurance payments under the Motor Casco Insurance for the period 2019-2021*

<b>Year</b>	<b>Number of insured motor vehicles</b>	<b>Number of claims asserted</b>	<b>Frequency of claims (%)</b>	<b>Sum insured of insurances concluded (BGN)</b>
2019	1 093 103	403 189	36.88	19 748 848 622
2020	1 172 761	369 373	31.50	20 184 422 817
2021	1 336 033	389 609	29.16	21 036 205 460

Source: FSC

As mentioned above, in 2020 and 2021 there is an increase in the number of insured motor vehicles and the amount of the sum insured compared to the pre-pandemic year 2019. The increase in the number of insured motor vehicles is by 7.29% in 2020 and by 22.22% in 2021. The

calculations also show an increase in the sum insured, compared to 2019, by 2.21% in 2020 and 6.52% in 2021, respectively. Logically, the larger number of insured motor vehicles and the greater responsibility assumed by insurers should lead to a larger number of victims, expressed in terms of the number of claims asserted by the insured for payment of insurance indemnity. However, the data published on the official website of the Financial Supervision Commission show the opposite result (Financial Supervision Commission, n.d.). In 2020, a decrease of 8.39% in the number of claims was reported, as they fell from 403 189 in 2019 to 369 373, despite the increased number of insured motor vehicles. A decrease of 4.67% is also observed in the frequency of claims asserted in 2020.

In 2021, the situation is the same. Despite the increase in the number of insured motor vehicles by more than 22%, there is a decrease of 3.37% in the claims asserted by the insured. This also reflects on the registered decline of 7.72 percentage in the frequency of claims.

The main reason for these contradictory results, in our opinion, is due to the measures imposed by the state in connection with limiting the spread of the new coronavirus that appeared at the end of 2019. In mid-March 2020, the National Assembly declared a state of emergency throughout the country, which lasted until May 13 of that year. By a decision of the Council of Ministers of 14 May 2020, an extraordinary epidemic situation was introduced, the term of which was repeatedly extended to reach March 31, 2022, when this term was not extended. Thus, for more than 2 years, citizens and businesses have been forced by circumstances to limit their activities. Initially, in a state of emergency, checkpoints were introduced in large regional cities. Our resort town of Bansko was completely blocked, and the residents and guests of the town were placed under a 14-day quarantine. Sofia was almost completely blocked during the Easter holidays (April 17-21, 2020).

Apart from the fact that the movement between the individual cities of the country was very limited, the intensified road checks by the police also led to a reduction in the speed at which vehicles usually move on our national road network and which in most cases is the cause of traffic accidents. The described circumstances contributed to the reduction of the number of road accidents, and to the reduction of the number of victims.



*Table 5*

*Number of road traffic accidents in Bulgaria for the period 2019-2021*

<b>Year</b>	<b>Serious road accidents</b>	<b>Minor road accidents</b>	<b>Total number of road accidents</b>	<b>Died in road accidents</b>	<b>Injured in road accidents</b>
2019	6730	28409	35139	628	8499
2020	5710	22393	28103	463	7121
2021	6080	24456	30536	561	7609

*Source: Ministry of Interior - Bulgarian National Police General Directorate*

The data presented by the General Directorate of the National Police show that the total number of accidents in 2020 decreased by 20.02% compared to 2019. The reduction is both in serious road accidents in which there are dead and / or injured, and in minor road accidents in which there is only material damage (Ministry of Interior , n.d.)

Although in 2021 there is an increase in both serious and minor road accidents, the total number of accidents decreased by 13.10% compared to 2019.

A decrease is also reported for those killed and injured in road traffic accidents. It is more pronounced in 2020, when measures to limit the spread of the SARS-CoV-2 virus were more stringent. In addition to the number of injured citizens, the reduced number of traffic accidents has led to a reduction in property damage suffered by the insured, which in turn is a major prerequisite for reducing the indemnities paid under Motor Casco Insurance.

The main function of insurance (compensation for damages caused by accidental events) is directly related to the process of "claims settlement" described above. The objectives of the present study require the comparison of the insurance payments under Motor Casco Insurance made in the pre-pandemic 2019 with those of 2020 and 2021.

*Table 6*

*Change of insurance payments (indemnities) under Motor Casco Insurance for the period 2019-2021*

<b>Year</b>	<b>Sum insured of insurances concluded (BGN)</b>	<b>Insurance indemnities paid (BGN)</b>	<b>The average claims rate (%)</b>
2019	19 748 848 622	308 251 446	1.56%
2020	20 184 422 817	226 726 646	1.12%
2021	21 036 205 460	295 706 514	1.41%

*Source: FSC and author's calculations.*

As has already been stated in 2020 and 2021 there is an increase in insured motor vehicles. Growth is also reported in the liability assumed by insurers, expressed through the sum insured. However, the data presented in Table 6 show a decrease in insurance indemnities by 26.45% in 2020 and 4.07% in 2021, respectively, compared to the pre-pandemic 2019. The same is observed in the average claims rate (overall claims amount / overall sum insured), through which it is accepted to determine the main probability of occurrence of an insurance case (Erusalimov R. , 2016, p. 62). This indicator decreased by 0.44 percentage points in 2020 and by 0.15 percentage points in 2021, respectively, which reflects on the reduction of the risk magnitude under Motor Casco Insurance. All other things being equal, this would lead either to a reduction in the tariff rate of insurers or to an increase in the positive financial result of the risk under this insurance.

## **Conclusion**

As a result of the study it was found that during the two years after the introduction of anti-epidemic measures in our country, there has been a decrease in the number of newly registered motor vehicles. However, the number of insured motor vehicles is growing, but at a slower pace than before. It was found that the vehicle fleet in the country continues to grow old, and the share of motor vehicles registered in Bulgaria over the age of 20 reaches 50%. This fact contributes to a significantly lower growth of liability assumed by insurers, despite the increased number of insured motor vehicles. This reflects on one of the main indicators for the development of a given type of insurance – the premium income realised by insurers. The indicator for these 2 years is growing, but at a significantly slower pace, which also reflects on the average price of a Motor Casco Insurance.

The other main indicator (the amount of insurance indemnities), the subject of the study, showed a decrease in both years after the introduction of anti-epidemic measures in the country. This is mainly due to the limited traffic on the country's roads, especially in March, April and May 2020, as well as the intensified inspections by the traffic police, as a result of which drivers reduced the speed.

In conclusion, it can be noted that the measures imposed in connection with the restriction of the spread of Covid-19 did not significantly affect the development of Motor Casco Insurance in Bulgaria, but simply

slowed its pace. Overcoming the pandemic and suspending the measures should lead to an increase in the number of purchased motor vehicles, especially new ones, which will indirectly lead to a restoration of the growth rate of the premium income realised by insurers under Motor Casco Insurance. Unfortunately, with the reduction of control over the implementation of the measures and the elimination of some of them in 2021, an increase in the number of road accidents was observed. It is necessary for the intensified control by the traffic police to continue, which will be reflected in the direction of reducing both the road traffic accidents and the amount of insurance indemnities.

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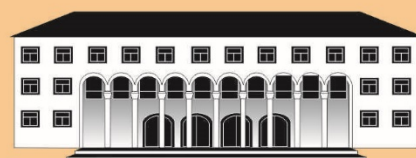
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