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General Insurance Subsector Performance In 2020/2021, Does The Covid-19 Pandemic Matter?

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ABSTRACT

This paper is aimed at analyzing the impact of the covid-19 pandemic on the performance of general insurance subsector in Indonesia. Secondary data obtained from the Indonesia Financial Service Authority which include annual growth rate (year on year) of total asset, technical reserve, investment, equity, and net premium income for the periods between April 2019, 2020 and 2021 to March 2019, 2020 and 2021 were used in this study. Using the dependent sample t-test, it is revealed that the impacts of the covid-19 pandemic on the performance of general insurance subsector were varied. The growth rates of the total asset, total investment, and net premium income of general insurance subsector significantly decreased during the covid-19 pandemic. The decline of these variables was influenced by the covid-19 pandemic. In the meantime, the growth rate of technical reserve and equity were not significantly influenced by the covid-19 pandemic. The growth rate of these variables decreased, however, the degree of decreases was not statistically significant. Findings of the study indicate that further study is required to examine in more detail the factors that affect the performance of the general insurance subsector in relation to the covid-19 pandemic.

Keywords: General Insurance, Growth Rate, Performance Indicator, Covid-19 Pandemic.

INTRODUCTION

Financial institutions play an important role in the economic system, namely as a source of economic life in the form of providing facilities for the flow of funds in and out of funds or capital circulation. Insurance is one of the oldest fields of the economy. Insurance sector in Indonesia—as one of the sectors in the financial industry which include banking, capital markets, pension funds, financial institutions, and other financial service institutions—plays an important role in strengthening monetary and investment activities by means of providing the long-term funds needed for the development of physical and social infrastructure while at the same time increasing the ability of business actors to take risks.

The insurance sector plays an important role in maintaining financial system stability for a number of reasons, three of which are (i) insurance companies are large investors in the financial market, (ii) the increasing relationship between insurance companies and banks, and (ii) by insuring the risks they face, insurance companies protect the financial stability of households and firms. Insurance, according to Ghimire (2014), is a means of financial protection from events that result in loss of property (wealth or assets), loss of the head of the family as the breadwinner of the family, and loss of income due to accidents, prolonged illness, and permanent disability.

The insurance sector plays a major role in increasing GDP. Premiums collected by insurance companies have been recognized to have positive impact on economic development. In addition, insurance has a substantial contribution towards the balance of payments, positive financial stability as well as increases employment in the economy. These factors, in various ways and magnitudes, accelerate economic growth. On the other hand, the development and performance of insurance sectors is influenced by a number of factors. This includes, as summarized by Outreville (2011), economic factors, demographic factors, social and cultural factors, and institutional and market structure factors.

The World Health Organization (WHO), on March 11, 2020, declared covid-19 a pandemic. This statement is supported by data showing that more than 3 million cases have been found and more than 200 thousand deaths in 213 countries (World Health Organization, 2020). It realized that the infection has not only become a public health crisis but has also affected the global economy. Significant economic impact has already been experienced by a number of countries across the globe due to reduced productivity, loss of life, business closures, trade disruption, and decimation of the tourism industry. Like other countries, Indonesia is still experiencing the social, economic and even political impacts of the pandemic.

Since insurance sector is, to some degree, influenced by economic factors such as, amongst others, economic growth, income per capita and unemployment rate, it is assumed that the sector—in this case general insurance sector—will be affected by the covid-19 pandemic. Accordingly, the present study primary objective is to investigate the effect of the covid-19 pandemic on the development of general insurance sector in Indonesia. The development indicators of general insurance sector investigated in this study include the growth rate total asset, technical reserve, investment, equity, and gross premium income.

METHOD

Insurance sector and the economy

It has been widely recognized that insurance sector provides substantial contribution towards economic development. A number of studies such as, amongst other, Arena (2006), Han, Li & Tian (2010), Sorensen & Gutiérrez (2006), Sawadogo, Guerineau & Ouedraogo (2018), Concha & Taborda (2014), Alhassan & Biekpe (2016), and Din, Abu-Bakar & Regupathi (2017), have generally proved that there are strong causal relationships between insurance sector and economic growth a nation.

Arena (2006) discovered that the insurance activity across 55 countries affect the economic growth. Han *et al.* (2010) recognized that insurance sector—both life and general—through its indicator such as insurance density has positive influence on economic growth. In Malaysia, it was reported by Kok *et al.* (2010) that there was a strong co-integration and long-run relationship between national economic growth and insurance sector growth. Concha & Taborda (2014) discovered in 11 Latin America countries that all measures of insurance sector growth i.e., insurance density, total insurance, life insurance and non-life insurance are positive and significantly affect economic growth. Alhassan & Biekpe (2016) found that general insurance in some African countries positively influenced the nations' economic growth. These include Algeria, Gabon, Kenya, Madagascar, Morocco, and Nigeria. Recently, Din *et al.* (2017) conducted a comprehensive study on the relationship between insurance sector activity and economic development in 20 countries. They used net written premiums, penetration and density to measure insurance activity. Their findings are relatively similar with the findings of the previous mentioned studies where insurance sector, either life or general/non-life, provides positive contribution towards the nations' economic growth.

The relationships between insurance sector activity and economic development investigated by all studies generally use the same patterns which is depicted in the figure which follows. The insurance industry promotes economic growth through the channels as follows:(1) offering protection to firms and relieving pressure to covering large damages; (2) facilitating commercial transactions and the provision of credit by mitigating losses; (3) promoting entrepreneurial attitude, encouraging innovations, investment, the vitality of the market and of the competition; (4) increasing financial intermediation through life insurance products; and (5) enabling risk averse individuals and entrepreneurs to undertake higher return activities (Brainard (2008); Cristea, Marcu & Carstina (2014); Peleckienė, Peleckis, Dudzevciute & Peleckis 2019).

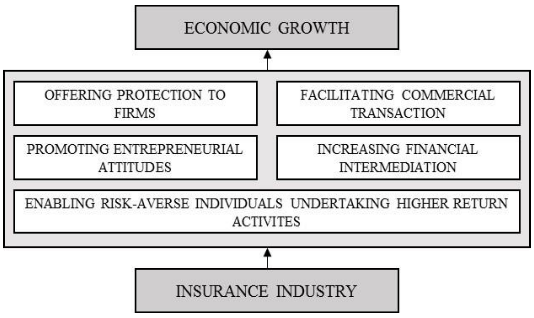

Figure 1. The Relationship Pattern between Insurance Sector and Economic Growth (Adapted from Brainard (2008); Cristea *et al.* (2014); and Peleckienė *et al.* (2019)

Insurance market determining factors

It has been theoretically and empirically understood that growing insurance market provides positive impact on economic growth (Brainard, 2008; Cristea *et al*., 2014; Peleckienė et al., 2019). On the other hand, it is necessary to, in turn, comprehend the determining factors that contribute to the development of a healthy insurance markets. Brainard (2008) identified there are three most important driving factors of insurance market coverage namely rising incomes, reasonable inflation, and financial system development. The study of Feyen, Lester & Rocha (2013) to some degree supports this statement. They revealed that in both developed and developing nations insurance—life and non-life/general insurance—development is strongly associated with per capita income, population size and density, demographic structures, income distribution, the size of the public pension system, state ownership of insurance companies, the availability of private credit, and religion.

Podoaba (2015) and Peleckienė *et al.* (2019) agreed that insurance sector development which is measured by insurance density and insurance penetration has a strong association with higher per capita incomes, the development of financial system, better banking sector development, and moderate rate of inflation. This indicates that there is a strong interrelationship between economic growth and insurance sector development. It is clearly in accordance with Brainard's (2008) explanations that the substantial contribution of rising incomes to greater insurance coverage and development is believed to be attributable to demand factors and supply factors or a combination between the two factors.

The development of the insurance market can be measured by both qualitative and quantitative approaches. Insurance penetration is a synthetic indicator that indicates the level of the insurance sector's contribution to GDP (gross domestic product) formation. This indicator is estimated by dividing the total direct premium by gross domestic product. Insurance penetration, then, is the ratio between gross direct premiums and GDP. Insurance density is the ratio between total gross direct premiums collected and the total population (population) of a country. The ratio—insurance density—represents the average population expenditure on insurance in per year (Podoaba, 2015).

The Covid-19 pandemic impact on the economy

The Covid-19 pandemic has been plaguing Indonesia for more than a year since the government confirmed the first corona infection in Indonesia on March 2, 2020. This pandemic not only caused a public health crisis, but also disrupted national economic activity. The strategic step taken by the government to anticipate the broader and deeper impact of the pandemic is to implement a Large-Scale Social Restriction (LSSR) policy. The government's decision to implement the Large-Scale Social Restrictions (LSSR) since April 2020 has had a wide impact on the process of production, distribution and other operational activities, which ultimately disrupt economic performance.

The impact of the Covid-19 pandemic is clearly illustrated in the rate of economic growth as seen in the following figure.

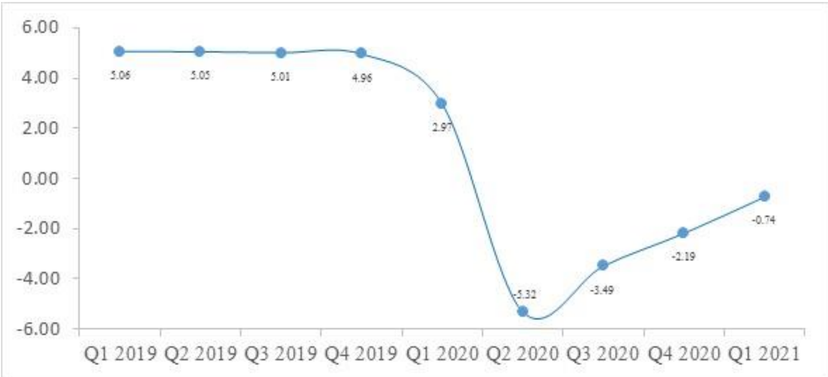

Figure 1. GDP Growth Rate Year 2019-2021 (%)

(Source: Statistics Indonesia, 2021)

In accordance with the data in the figure, per capita income throughout 2020 fell to IDR 56.9 million (US $ 3,911) per year. In 2019, Indonesia's GDP per capita reached IDR 59.1 million (US $ 4,174) and 2018 IDR 56 million (US $ 3,927). In the first quarter of 2021, per capita income will increase slightly (Statistics Indonesia, 2021).

Research hypothesis

Since the development of the insurance sector market is closely related to national economic growth (i.e., gross domestic product—GDP), it is assumed that the Covid-19 pandemic which causes a substantial decline in the national economy will indirectly have a negative impact on the development of the insurance sector, including the general insurance subsector. Accordingly, the hypothesis to be tested in this preliminary research can be formulated as follows.

H_1: The Covid-19 pandemic has an effect of reducing the growth rate of total assets of general insurance subsector.

H_2: The covid-19 pandemic has an effect on reducing the growth rate of the total technical reserves of general insurance subsector.

H_3: The covid-19 pandemic has an effect of reducing the total growth rate of total investment of general insurance subsector.

H_4: The covid-19 pandemic has an effect on reducing the growth rate of total equity in the general insurance sector.

H_5: The covid-19 pandemic has an effect on reducing the growth rate of general insurance net premium income.

Research Methods

Secondary data which consists of total asset, technical reserve, equity, investment, and net premium income of general insurance sector for the periods between 2019 and 2021 were obtained from the Indonesia Financial Service Authority (*Otoritas Jasa Keuangan*—OJK). Based on these data, annual (year-over-year) growth rate of all variables studied for the whole 2019/2020 (i.e., April 2019 to March 2020) and 2020/2021 (i.e., April 2020 to March 2021) were estimated using the following formula.

$$\text{Growth} = \frac{\mathrm{VEt1} - VEt0}{VEt0}\ x\ 100\ percent \qquad (1)$$

where Growth = year-over-year growth; VEt_1 = the value of the estimated variable in the same month this year; VEt_0 = the value of the estimated variable in the same month last year.

The proposed hypotheses were tested using the dependent sample t-test.

RESULT AND DISCUSSION

Descriptive statistical data analysis

The y-o-y growth of the studied variables such as total asset, technical reserve, total investment, total equity, and net premium income of general insurance subsector for the periods of 2019/2020 and 2020/2021 are presented in table 1.

Referring to the average value of growth, all variables experience a decline. Total asset growth decreased by more than 20 per cent (-20.26%), technical reserve decreased by almost 17 per cent (-16.99%), total investment decreased by more than 50% (-52.70%), total equity decreased by 13.55 per cent, and a very substantial decrease was experienced by net premium income. It decreased by more than 100 per cent (-114.81%).

The decline in the rate of growth experienced by total assets, technical reserves, total investment, and equity was a continuation of the decline in premium income, both gross premium income and net premium income. For insurance companies, premium income is the main source of revenue (Insurance Information Institute, 2021). The decrease in net premium income earned by the general insurance subsector was due to, among other, the decrease in the sales volume of motorized vehicles, both motorbikes and cars. The car sales volume until March 2021 decreased by 41.83%, while the motorcycle sales volume decreased by 49% (Statistics Indonesia, 2021). These declines were followed by the decline in demand for motor vehicle credit insurance and motor vehicle insurance itself.

Table 1. Growth (y-o-y) of Total Asset (TA), Technical Reserve (TR), Total Investment (TI), Equity (Eq.), and Net Premium Income (NP) of General Insurance Subsector in the

Periods of 2019/2020 and 2020/2021

Month	TA (%)		TR (%)		TI (%)		Eq. (%)		NPI (%)	
	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21	2019/20	2020/21
April	10.10	11.24	11.84	15.60	9.15	4.33	8.68	9.96	26.20	-2.96
May	8.54	9.59	10.68	13.77	7.17	4.81	7.25	10.32	22.35	-0.19
June	8.24	7.65	8.66	11.14	7.93	3.12	8.79	9.44	20.49	0.20
July	10.31	6.53	10.99	9.82	8.81	2.10	9.03	9.29	19.03	2.45
August	9.33	7.29	11.66	9.40	8.25	1.37	9.45	9.83	17.37	2.66
September	9.45	7.55	11.41	9.75	8.17	2.37	10.62	8.69	18.32	-3.54
October	8.84	8.54	10.88	10.36	8.62	2.94	11.37	9.12	20.96	-5.09
November	10.67	5.03	11.61	6.49	8.52	3.74	14.26	6.16	19.55	-6.84
December	8.66	5.60	9.59	8.65	9.03	3.64	13.03	5.36	17.33	-0.02
January	10.39	5.57	12.33	8.00	7.96	3.75	13.20	6.63	8.23	-3.69
February	10.85	9.05	13.77	9.40	8.02	5.91	11.28	13.02	2.37	-2.69
March	12.99	7.25	19.25	6.05	4.00	7.19	10.59	12.41	0.62	-8.87
Mean	9.87	7.57	11.89	9.87	7.97	3.77	10.63	9.19	16.07	-2.38
Std. dev.	1.27	1.74	2.54	2.60	1.26	1.50	2.02	2.20	7.65	3.40

Source: Estimated from the Indonesia Financial Service Authority (Insurance Statistics 2018, 2019, 2020 & 2021)

Changes in the growth rate (y-o-y) of the studied variables between 2019/2020 (pre Covid-19 pandemic) and 2020/2021 (Covid-19 pandemic) are presented in table 2.

Table 2. Changes in the Growth Rate (y-o-y) of Total Asset (TA), Technical Reserve (TR), Total Investment (TI), Equity (Eq.), and Net Premium Income (NP) of General Insurance Subsector from the Periods of 2019/2020 to 2020/2021

Month	TA (%)	TR (%)	TI (%)	Eq. (%)	NPI (%)
April	1.13	3.76	-4.82	1.28	-29.16
May	1.05	3.09	-2.35	3.07	-22.54
June	-0.59	2.48	-4.81	0.65	-20.29
July	-3.78	-1.17	-6.71	0.26	-16.59
August	-2.04	-2.27	-6.88	0.38	-14.71
September	-1.90	-1.66	-5.80	-1.93	-21.86
October	-0.30	-0.53	-5.68	-2.25	-26.05
November	-5.64	-5.12	-4.78	-8.10	-26.39
December	-3.06	-0.95	-5.39	-7.67	-17.35
January	-4.82	-4.33	-4.21	-6.57	-11.92
February	-1.81	-4.37	-2.11	1.74	-5.06
March	-5.74	-13.20	-4.87	1.82	-9.48
Mean	-2.29	-2.02	-4.87	-1.44	-18.45
Std. dev.	2.28	4.37	1.35	3.76	7.00

Source: Estimated from the Indonesia Financial Service Authority (Insurance Statistics 2018, 2019, 2020 & 2021)

The decline in the growth rate of total assets in the annual period of the Covid-19 pandemic (April 2020-March 2021) an average of -2.29%. The first decline occurred in June 2020, two months after the Covid-19 pandemic was declared, which was -0.59%. The largest decline in growth occurred at the end of the month from the first year of the Covid-19 pandemic, i.e., -5.74%. The average decline in the growth rate of technical reserve was -2.02%. The decline in growth began to occur in July 2020, namely -1.17%. The largest decline in growth occurred at the end of the month from the first year of the Covid-19 epidemic, i.e., -13.20%. Total investment growth rate has begun to decline in the first month of the Covid-19 pandemic (April 2020) i.e., -4.82%. The highest decline occurred in August 2020, i.e., -6.88% and the lowest was in February 2021, i.e., -2.11%.

The decline in the growth rate of equity had an average of -1.44%. The decline started happening in September 2020 i.e., -1.93%, in the following two months it continued to decline until it reached the highest figure (-8.10%) in August 2020. After that the rate of decline continued to decline until finally in February 2021 there was an increase in growth of 1.74%. The decline in the growth rate of net premium income began to occur in April 2020, the first month the Covid-19 pandemic was declared, i.e., -29.16%. This is the degree of decline in the growth rate of the largest net premium income. The decline continued until February 2021. The rate of decline fluctuated until it finally reached -9.48% in March 2021, the last month of the first year of the Covid-19 pandemic.

Inferential statistical data analysis

The results of hypothesis testing using the dependent sample t-test—the hypothesis testing method used to analyze the impact of the Covid-19 pandemic on the performance or growth of the general insurance subsector—are presented in table 3.

Table 3. Results of the Dependent t-test for the Differences in the Growth (y-o-y) of Total Asset, Technical Reserve, Total Investment, Equity, and Net Premium Income of General Insurance Subsector

Variables	Mean Differences (%)	Rate of Changes	Probability	Research Hypothesis
Total Asset	-2.29	Decreased by 2.29%	0.0067	Accepted
Technical Reserve	-2.02	Decreased by 2.29%	0.1535	Rejected
Total Investment	-4.20	Decreased by 4.20%	0.0000	Accepted
Equity	-1.44	Decreased by 1.44%	0.2289	Rejected
Net Premium Income	-18.45	Decreased by 18.45%	0.0000	Accepted
Mean	-5.68			

Source: MS Excel Output

As shown in the table, all the variables studied experienced a decrease in their growth rate. The degree of decline varied between -1.44% (equity) and -18.45% (net premium income) with an average of -5.68%. It is interesting, however, that not all variables under study have a mean difference—i.e., mean before and the mean during the covid-19 pandemic—which was statistically significant. In other words, not all research hypotheses were accepted which means that not all variables were significantly affected by the covid-19 pandemic. Variables which were significantly affected by the covid-19 pandemic include total asset, total investment, and net premium income. These variables were accepted at the level of significance (alpha) of one per cent ($p < 0.01$). The remaining variables, i.e., technical reserve and equity were discovered to not significantly be affected by the covid-19 pandemic ($p > 0.05$).

The growth rate of total assets before the covid-19 pandemic was in the range of 8.24% (June 2019) and 12.99% (March 2020) with an average growth rate of 9.87%. During the Covid-19 pandemic, the growth rate of total assets ranged from 5.03% (November 2020) and 11.24% (April 2020) with an average of 7.57%. The difference in the growth rate of total assets before the Covid-19 pandemic and during the Covid-19 pandemic ranged from -0.30% (October) and -5.74% (March) with an average of -2.29% and a standard deviation of 2.28. The decline in the growth rate of total assets of the general insurance subsector was proven to be influenced or caused by the Covid-19 pandemic.

The same phenomenon is experienced by the growth rate of total investment in the general insurance subsector. The decline in the growth rate of total investment was influenced or caused by the Covid-19 pandemic. The difference in the growth rate of total investment before the Covid-19 pandemic and during the Covid-19 pandemic ranged from -2.11% (February 2021) and -4.87% (March 2021) with an average of -4.87%. Similar to the rate of growth in total assets, the decline was due to the Covid-19 pandemic.

The growth rate of total assets before the Covid-19 pandemic was in the range of 8.24% (June 2019) and 12.99% (March 2020) with an average growth rate of 9.87%. During the Covid-19 pandemic, the growth rate of total assets ranged from 5.03% (November 2020) and 11.24%

(April 2020) with an average of 7.57%. The difference in the growth rate of total assets before the Covid-19 pandemic and during the Covid-19 pandemic ranged from -0.30% (October 2020) and -5.74% (March 2021) with an average of -2.29% and a standard deviation of 2.28. The decline in the growth rate of total assets in the general insurance subsector was proven to be influenced or caused by the Covid-19 pandemic.

The same phenomenon is experienced by the growth rate of total investment in the general insurance subsector. The decline in the growth rate of total investment was influenced or caused by the Covid-19 pandemic. The difference in the growth rate of total investment before the Covid-19 pandemic and during the Covid-19 pandemic ranged from -2.11% (February 2021) and -4.87% (March 2021) with an average of -4.87%. Similar to the rate of growth in total assets, the decline was due to the Covid-19 pandemic.

Not different from total assets and total investment, the growth rate of net premium income in the general insurance subsector experienced a significant decline. The difference in the growth rate of net premium income before the Covid-19 pandemic and during the Covid-19 pandemic ranged from -0.02% (December 2020) and -8.87% (March 2021) with an average of -2.38%. The decline in the growth rate of net premium income was even influenced by the covid-19 pandemic.

The occurrence of these three phenomena can be assumed to be an indirect impact of the Covid-19 pandemic. The pandemic caused a drastic decline in national economic growth (see figure 1). The subsequent impact is the decrease in per capita income, which means the decrease in people's purchasing power. The decrease in per capita income and purchasing power of the people leads to a decline in demand for insurance products. An indicator of the decline in demand for insurance products is a decrease in premium income, both net premium income and gross premium income. A decrease in premium income, no matter how small the amount of reduction is, will have an impact on the decrease in the amount of funds allocated to increase the company's assets and the amount of funds allocated for investment activities.

The decline in the rate of growth in technical reserves and equity was proven not to have been caused by the covid-19 pandemic. In fact, data (see figure 1) shows that the Covid-19 pandemic caused a massive decline in national economic growth indicated by a decrease in gross domestic product (GDP). This in turn decreases per capita income, which leads to a decrease in people's purchasing power. The decline in demand for insurance products is the final terminal of the decline in national economic growth. However, this phenomenon did not significantly decrease the growth rate of the two variables—technical reserve and equity.

The decline in the rate of national economic growth which has resulted in a decrease in per capita income and a decrease in the purchasing power of the people has resulted in a decline in demand for insurance products. The decline in demand led to a very significant reduction in the growth rate of net premium income. It has been well known that theoretically and empirically, net premium income is categorized as the primary source of revenue for insurance companies. Assets owned and funds invested by insurance companies come from premium income.

Slightly different rules apply to technical reserves and equity. Technical reserves, which consist of premium reserves, unearned premium reserves, claims reserves, and reserves for catastrophic risk, have a complex method of determining the amount regulated by the OJK (Circular Letter Number 27/SEOJK.05/2017). Technical reserves represent the readiness of an insurance company in anticipating risks that will occur in the future, namely to fulfill all obligations that can be predicted to occur in the future. Thus, the value of this variable must be maintained so that it does not decline sharply under any circumstances.

Likewise with equity where the largest components are paid-in capital and retained earnings. The value of these two variables can be controlled and, therefore, can be maintained at a certain level by the manager so that it remains at the amount considered safe. The dependence of the value of the two variables on external factors - macroeconomic indicators - is relatively smaller than the other studied variables, especially net premium income. Thus, the decline in the growth rate of these two variables—technical reserves and equity—during the covid-19 pandemic is insignificant or, in other words, these two variables are not affected by the covid-19 pandemic.

CONCLUSION

Covid-19 was officially declared by the World Health Organization a global pandemic on March 11, 2020. The virus has had unexpected economic and human consequences in many countries and, to date, has resulted in significant economic damage. The economic damage caused by the COVID-19 pandemic is largely due to falling demand, meaning that fewer consumers are willing to buy goods and services available in the global economy. The decline in demand was mainly due to the decline in people's purchasing power as a consequence of the slumping rate of economic growth at the local, regional and global levels.

The insurance sector, both life insurance and general insurance, in Indonesia is inseparable from the economic storms triggered by the Covid-19 pandemic. The drastic decline in the rate of economic growth directly results in a decrease in per capita income and, in the end, leads to people's purchasing power which is expressed in terms of decreased demand - including demand for insurance products. The decline in demand for insurance products - in this case general insurance - is believed to have a negative impact on the performance of the general insurance subsector.

However, the results of this preliminary study indicate that the impact of the Covid-19 pandemic on the general insurance subsector growth rate indicator varies. Total assets, total investment, and net premium income were found to be affected by the Covid-19 pandemic where the growth rate of these three variables decreased significantly during the pandemic period. Meanwhile, the two other variables studied were technical reserves and equity which proved not to be affected by the covid-19 pandemic. The growth rate of these two variables decreased during the Covid-19 pandemic, but the rate of decline was insignificant.

The practical implication of the results of this preliminary research is the need for a number of other studies that are focused on the same subject matter with a wider scope i.e. more variable and not just limited to the general insurance subsector.

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