Received: 24 August 2022 | Accepted: 17 October 2022
DOI: 10.52898/ijif.2022.9

ORIGINAL ARTICLE

THE RESEARCH ON THE EFFECT OF THE COVID-19 PANDEMIC PERIOD ON THE FINANCIAL RATIOS OF NON-LIFE INSURANCE COMPANIES TRADED ON THE ISTANBUL STOCK EXCHANGE*

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Abstract
The impacts of the Covid19 Pandemic era have had a significant impact on social and economic life across the globe. The Covid19 Pandemic, which directly affects human health and life, is expected to affect life insurance companies. In addition, it is expected that other sectors such as service, production, education and finance will be adversely affected, indirectly affecting non-life insurance companies as well as life insurance companies. However, no research has been conducted to investigate how the financial ratios of non-life insurance businesses in Turkey were impacted during the Covid19 Pandemic period. The relationship between the financial ratios of non-life insurance companies in the Istanbul Stock Exchange, before and after the Covid19 Pandemic, was examined using the t-Test method. To analyze the effects of the Covid19 Pandemic period on the financial ratios of non-life insurance companies, it was examined whether there was a substantial difference between data from 2018-2019, before the pandemic, and data from 2020-2021, after the pandemic. The financial ratios included in the analysis were determined as the Return on Assets, Liquidity Ratio, Current Ratio, Technical Provisions/Premiums Ratio and Premiums Received/Total Assets Ratio as a result of the literature review. As a result of the study, it was seen that while the profitability of non-life insurance companies increased, their liquidity decreased. However, it was found that this increase and decrease were not significant in terms of pre-pandemic and post-pandemic periods.

Keywords
Non-Life Insurance Companies, Financial Ratios, Covid19 Pandemic.

JEL Classification
C58, G22, I12.

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1. INTRODUCTION

Humankind tends to take more precautions against that risk after a loss. After a realized risk, the measures taken against that risk increase. Due to the health and life losses experienced during the pandemic, individuals' demands for health and life insurance are expected to increase. Thus, the direct consequences of pandemic risk on life insurance firms' costs and revenues are visible.

The risk of the Covid19 Pandemic could not be foreseen, and when it occurred, it caused socioeconomic losses all over the world. On the other hand, since the declaration of a pandemic caused by the Covid19 Virus, public authorities have tried to prevent loss of life with fast and effective measures. As a result of the unavoidable loss of life and the measures taken, the sectors were negatively affected in terms of economy.

The effect of the pandemic period on the insurance sector is estimated to cause a 22.6% decrease in the stock values of insurance companies, in general, all over the world (Parvathi and Lalitha, 2021: 61), because as a result of the risk that the insured and the insurant are exposed to, the demand for taking out insurance will be affected. Although it is one of the basic needs of individuals to want to insure themselves, insurance products are not included in the basic needs because as the income level decreases, it is seen that the demand for insurance policies decreases. It is expected that the demand for insurance policies will decrease as the purchasing power of the insurers whose income level has decreased during the pandemic period has reduced.

This study aims to examine the effects of the Covid19 Pandemic period on the profitability of non-life insurance companies traded on the Istanbul Stock Exchange. To examine the effects, the pre-pandemic and post-pandemic period data were analyzed with the t-Test method. The data for the years 2018-2019 were analyzed before the Covid19 period, and the data for the years 2020-2021 after the period.

An insurance company in Turkey is not allowed to operate simultaneously in both life and non-life areas (Orhaner, 2013). There are six insurance companies traded on the Istanbul Stock Exchange during the years 2018-2021. Of these insurance companies, four are non-life insurance companies, and two operate in the fields of pension and life insurance. The analysis looked at how the Covid19 era influenced the financial ratios of non-life insurance businesses during the pandemic period.

Since the pandemic is a risk to human health and life, it is expected to directly affect life and health insurance compensations. Insurance companies worldwide have suffered since they rely on the performance of people and industries (Parvathi and Lalitha, 2021). The pandemic's socioeconomic consequences have affected individuals' incomes and how businesses operate, and their capacities. For this reason, it is expected that the pandemic will indirectly affect non-life insurance companies' financial ratios.

2. EFFECTS OF THE COVID19 PANDEMIC PERIOD ON THE INSURANCE INDUSTRY

People need to protect themselves against risks. One of the individual risk protection methods is insurance. They insure themselves by transferring their risks to insurance companies with the insurance system. Risks taken over by insurance companies are ventures. Venture refers to the risks to which insurance companies provide assurance. The venture has three elements. It cannot be certain whether the first element will be realized or not. Death is the only venture that does not comply with this rule in the insurance system. The second element of the venture may occur at an uncertain date in the future; that is, it should be clarified when it will occur. In other words, it is inevitable that it will happen like death, but when it happens must be an unknown risk. The other element is that it should cause a financial loss to the insured or the survivors when the risk in question occurs (Özbolat, 2009).

* *In the paper "An Application on the Analysis of the Profitability - Liquidity Relationship of Non-Life Insurance Companies", the full text of which was presented at the "9th International Academic Studies Conference", the data on the return on assets, liquidity ratio and current ratio of the insurance companies traded in Borsa Istanbul for the years 2016-2021 were used.*

People who came together to meet the need for protection against various risks formed the basis of the insurance system. Insurance is a system that provides coverage for the risks included in the insurance policy in return for a certain premium (Kaya and Kahya, 2017). The insurance system provides social and economic benefits. One of the economic functions of insurance companies is to regularly provide funds to financial markets (Çipil, 2013).

Insurance is a dynamic and growing industry. With the developing economy in Turkey, the importance of insurance companies traded in financial markets is increasing. By creating large funds through premiums and channelling them through financial markets, insurance companies finance those who need funds to create new jobs or expand existing ones (Bayramoğlu and Başarı Bayramoğlu and Başarır, 2016: 136). The stock values of insurance companies are affected by the development of the insurance sector. It is important for insurance companies to grow by increasing their profitability, as they are organizations that regularly fund the financial system because insurance companies contribute to economic growth and the development of financial markets due to their economic functions.

With globalization, insurance companies are in an increasingly competitive environment. Insurance companies are exposed to unforeseen risks as well as predictable risks. The Covid19 Pandemic, which affects the whole world, is one of the unforeseen risks. At the end of 2019, when the Covid19 virus first appeared, it was thought that the epidemic could be effectively prevented. However, shortly after the outbreak emerged, it turned into a pandemic. The World Health Organization officially declared the outbreak caused by the Covid19 virus as a pandemic on March 11, 2020 (Budak and Korkmaz, 2020: 71).

Efforts to reduce the number of deaths by preventing the spread of the pandemic have started. Measures have been taken in the world and in Turkey to reduce the adverse effects caused by the pandemic. Obligations to wear masks and maintain social distancing in public areas, curfews, remote working system, interruption of education/training and transition to distance education system, and quarantine studies have been implemented (Duran and Acar, 2020). Interest reduction, monetary expansion, reduction in required reserves, increases in public expenditures, tax reductions, tax and debt postponements, increases in transfer payments, price controls and incentive programs to prevent unemployment have been applied as measures taken by the public authority in order to be protected from the economic effects of the Covid19 Pandemic period in Turkey (Arabacı and Yücel, 2020: 93).

The measures taken to prevent the financial contraction caused by the pandemic were aimed at ensuring stability in the financial markets. In the first quarter of 2020, when the effects of the pandemic period began to be seen, the Turkish economy experienced 4.5% growth, 9% contraction in the second quarter, 6.7% growth in the third quarter, and 5.9% growth in the fourth quarter. A growth of 1.8% was observed at the end of 2020 when the effects of the pandemic were adversely experienced all over the world. However, the exchange rate (Dollar-TL Parity) has been increasing rapidly, and inflation and CDS have increased (Sertkaya and Baş, 2021: 163). It is expected that the insured's financial conditions and the insurance companies' profitability will be affected due to the risks and uncertainties caused by the Covid19 Pandemic.

There are fluctuations in the stock values of insurance companies traded in financial markets due to economic and sector-specific reasons. However, due to the measures taken during the Covid19 Pandemic period worldwide, the stock values of companies traded in financial markets were expected to decrease (Barro et al., 2020). It is expected that these measures taken against the negative effects of the current global epidemic will adversely affect the economy. Due to the measures taken, economic activities decreased, and insurance transactions, which are linked to economic activities, are expected to decline. For this reason, it is expected that the social and economic consequences of the pandemic will negatively affect the insurance sector, as well as all other sectors (Barro et al., 2020).

The Turkish insurance sector grew by 19.2% at the beginning of 2020 compared to 2019. At the end of 2021, it grew by 17.1%, compared to the same period of the previous year (TSB, 2022). According to technical profitability data, the technical profitability of non-life insurance companies increased, while that of life insurance companies decreased slightly. When the data of the pandemic

period are examined, the insurance rate has decreased. The insurance sector has been affected by the pandemic period in Turkey as well as in the rest of the world. The fact that the income of insurance companies has increased does not mean that their profitability has also increased. However, it is seen that the increases in insurance premiums have a significant effect on this growth (Meral, 2021: 446).

3. LITERATURE REVIEW

The literature research is presented in summary form by listing the studies conducted to determine the factors affecting the financial performance of insurance companies from the past to the present.
Shiu (2004) analyzed the data from 211 insurance companies operating in England between 1986-1999. As a result of the analysis, it was concluded that there is a significant relationship between the variables of liquidity, inflation rate, interest rate and brokerage profits and the financial performance of the insurance company.

Chen et al. (2009) examined the relationship between profitability, capital structure and operational risk of life insurance companies operating in Taiwan. As a result of the study, they found that working capital has a negative and significant effect on operational risk, and operational risk has a negative and significant effect on profitability.

Ahmed et al. (2010) aimed to analyze the factors affecting Pakistan's capital structure of life insurance companies. The effects of company premium income, size, age, liquidity ratio, return on assets, growth rate, asset size and loss/premium ratio on leverage ratio were analyzed by regression analysis. As a result of the analysis, they concluded that company size, return on assets, loss/premium ratio, age and return on assets affect the leverage ratio.

Elitaş and Doğan (2013) examined the factors affecting the leverage ratios of insurance companies traded in financial markets between 2005 and 2011 using correlation and multiple correlation methods. As a result of the analysis, the premium increase rate and the current rate are positive; they found that there is a negative relationship between fixed asset ratio, asset size and profitability. Moreover, it has been found that insurance companies primarily use external resources for financing needs.

Doğan (2013) analyzed the relationship between return on assets and capital structures of insurance companies traded in Turkish financial markets between 2005 and 2011 using multiple regression and correlation methods. As a result of the analysis, it has been concluded that the increase in leverage ratio, loss ratio and liquid assets negatively affects profitability. In contrast, the increase in asset size affects profitability positively. Since the insurance companies could not manage their current assets effectively, a negative relationship was determined between them. Also, a positive relationship was found as large insurance companies benefit from economies of scale.

Burca and Batrinca (2014) investigated the factors affecting the return on assets of 21 insurance companies operating in Romania between 2008-2012. They found that the relationship between return on assets and financial leverage, company size, growth in gross written premiums, underwriting risk, risk holding ratio and solvency margin is significant.

Öner Kaya and Kaya (2015) examined the factors affecting the return on assets of 17 life insurance companies operating in Turkey between 2008 and 2013. They found that the gross written premiums and the company's age positively affected the return on assets. However, the company size, current ratio and insurance leverage ratio negatively affected the return on assets.

Jadi (2015) analyzed the factors affecting the financial performance of 57 insurance companies operating in the UK between 2006-2010. Leverage, profitability, liquidity, size, reinsurance, growth, the field of activity and organizational form were determined as independent variables. A significant relationship was found between profitability, liquidity, size and field of activity, and financial performance.

Akel et al. (2016) analyzed the relationship between profitability, capital structure and concentration data of 36 non-life insurance companies operating in Turkey between 2010 and 2015. The effects of asset size, leverage ratio, current ratio, loss/premium ratio, market share and age on return on assets

were analyzed using the panel regression method. According to the findings, it has been concluded that the variables of asset size, liquidity and market share have a positive effect on the return on assets of the companies. It has been concluded that the damage/premium ratio, leverage ratio and operating period variables negatively impact the return on assets, and the Turkish non-life insurance market is not dense.

Hailegebreal (2016) analyzed the relationship between the return on assets of the insurance sector and insurance company-specific factors between 2004 and 2014 in Ethiopia. It has been observed that there is a negative relationship between return on assets and insurance risk, technical reserve, leverage and inflation. It was found that there is a positive relationship between return on assets and premium growth, age of the company, solvency ratio and GDP.

In their article, Kripa and Ajasllari (2016) concluded that there is a significant relationship between the profitability of seven insurance companies operating in Albania between 2008 and 2013 and their liquidity ratio, fixed assets, growth rate and technical provisions.

Veleva (2017) analyzed the relationship between return on assets and firm-specific variables of 23 non-life insurance companies in Bulgaria between 2006 and 2014 using a panel data method. It has been found that there is a positive relationship between return on assets and equity ratio, company age and market share, and a negative relationship between leverage ratio and loss ratio. It was concluded that the size of the company did not have a statistically significant effect on the return on assets.

Ahmad and Prasetyo (2018) analyzed the determinants of return on assets of non-life insurance companies operating in Indonesia in 2011-2014. With the fixed effects model, they found a positive relationship between premium income, brokerage income, value at risk and return on assets. No significant relationship was found between the liquidity ratio and growth variables.

Dilmaç and Korkmaz (2018) analyzed how the market value of 12 banks and 5 insurance companies on the Istanbul Stock Exchange is affected by return on equity, leverage ratio, liquidity, asset growth, intangible assets and size variables using the regression analysis method. As a result of the study, it was concluded that the market value/book value ratio of the leverage and size variables of the banks were negatively affected, while the intangible assets and return on equity were positively affected. It is concluded that the leverage ratio of insurance companies affects the market value/book value ratio positively and the return on equity ratio negatively.

Koc et al. (2018) examined the data of 8 insurance companies, 5 of which were continuous and 3 of which were intermittent, traded in the Istanbul Stock Exchange between 2006-2015. As a result of the study, it has been seen that the return on assets and the size of the company affect the net profit / premiums ratio positively. The return on assets and leverage ratio positively affect the Premiums Received / Total Assets ratio, and the firm size negatively affects the Premiums Received / Total Assets ratio.

Camino-Mogro and Bermudez Barrezueta (2019) found that net premiums, technical reserves, capital ratio and firm value in the Ecuadorian life insurance sector, as well as the loss and liquidity ratio in the non-life insurance sector, are micro-determinants by panel regression method between 2001-2017.

Akgül (2020) analyzed the factors that affect the company size, capital ratio (equity/total assets), retention ratio, and gross loss/premium ratio on the return on assets of companies operating between the years 2014:3-2019:1 using regression analysis. He concluded that it was significantly affected by the capital ratio and loss/premium ratio data. In addition, he found that the size of the company affects the return on assets positively up to a certain point and negatively after this point.

Azmi et al. (2020) analyzed the data of 40 insurance companies in Indonesia between 2013 and 2017 by panel regression method. As a result of the study, it was concluded that the variables of liquidity ratio, equity growth rate, size, loss/premium ratio, technical reserve ratio, economic growth rate, interest rate, return on investment, input costs, and leverage ratio affect the return on assets.

Genç (2021) analyzed the technical profitability of 10 non-life and 10 life insurance companies by using the data from 2005-2011 with the Panel Autoregressive Distributed Lag method. The effects

of incurred claims, earned premiums, operating expenses, paid-in capital and investment income on technical profitability have been analyzed. It has been observed that the increase in investment income in life insurance companies has a positive effect on technical profitability to a large extent. In non-life insurance companies, on the other hand, it has been observed that premium income has a significant positive effect on technical profitability.

Özen and Çankal (2021) examined the financial factors affecting the return on assets of 21 insurance companies operating between 2006 and 2017. They found a significant positive relationship with size, liquidity, return on investment, age, GDP growth rate, interest rate and profitability, and negative relationships with premium growth rate, loss rate, leverage ratio, solvency and profitability.

Deniz and Aydın (2022) examined the factors affecting the return on assets of foreign capital life insurance companies. Between 2010 and 2020, regression analysis was applied with a quarterly panel data set of three horses each. They examined the effects of firm size, capital adequacy ratio, liquidity ratio, operating expenses, conservation ratio, financial leverage ratio, loss/premium ratio and investment profitability ratio on asset profitability. As a result of the study, they found that the size of the company should be taken into account while examining the return on assets.

As a result of the literature search, the variables to be included in the analysis were determined. Also, according to the literature review, data from life insurance companies are mainly analyzed. In addition, it has been seen that there has yet to be an application in Turkey that examines the effects of the financial ratios of insurance companies during the Covid19 Pandemic period, which has affected the whole world in the literature.

4. FINANCIAL RATIOS AND INSURANCE RATIOS

Return on Assets (ROA): While analyzing the profitability of non-life insurance companies operating in the Istanbul Stock Exchange, return on assets data were taken into account. The ratio of net profit to total assets reveals the return on assets. There are different ratios that show profitability, which is considered as one of the financial performance indicators. As a result of the literature search, it is seen that the return on assets is generally calculated in the analysis in order to see the profitability of the business (Ahmed et al., 2010; Doğan, 2013; Burca and Batrinca, 2014; Öner Kaya and Kaya, 2015; Jadi, 2015; Akel et al., 2016; Hailegebreal, 2016). ; Veleva, 2017; Ahmad and Prasetyo, 2018; Akgül, 2020; Azmi et al., 2020; Özen and Çankal, 2021; Deniz and Aydın, 2022).

Return on Assets = Net Profit/Total Assets

Liquidity Ratio (LR): There are different liquidity ratios. The liquidity ratio used in the analysis is the acid-test ratio. Since the acid test ratio shows the ability of the enterprise to pay its debts, the risk of not meeting the debt obligations of the enterprise in the short term is taken into account by adding this ratio to the analysis. The acid-test ratio expresses the ratio of liquid assets to total assets (Ayrıçay and Türk, 2014: 65). While calculating the liquidity ratios of an insurance company, account items such as technical provisions specific to the insurance sector, reinsurer receivables, and compulsory earthquake insurance receivables are used (Başpınar, 2005).

Liquidity Ratio = (Current Assets-Inventories)/Short-Term Liabilities

Current Ratio (CR): The ratio of current assets to short-term liabilities shows the current ratio. It is calculated with account items specific to the insurance sector, as in the liquidity ratio. The current ratio measures the extent to which the adequacy of working capital can be met. In the literature review, there are many studies examining the effect of liquidity and current ratio on performance (Shiu, 2004; Ahmed, 2010; Elitaş and Doğan, 2013; Öner Kaya and Kaya, 2015; Jadi, 2015; Akel et al., 2016; Akel et al., 2016; Kripa and Ajasllari, 2016; Ahmad and Prasetyo, 2018; Dilmaç and Korkmaz, 2018; Camino-Mogro and Bermudez Barrezueta, 2019; Azmi et al., 2020; Özen and Çankal, 2021; Deniz and Aydın, 2022).

Current Ratio = Current Assets/Short Term Liabilities

Premiums Received/Total Assets (PRTA): Insurance companies are financial intermediary institu-

tions that provide assurance against risks determined through policies. It provides the coverages in the policy in return for a premium. The only source of income for insurance companies is the premiums they receive from the insured. Since the ratio of premiums received to total assets is one of the most important ratios used when calculating the capital adequacy of insurance companies, and it shows the income of insurance companies, its relationship with return on assets is examined.

Technical Reserves/Premiums Received (TRPR): Technical reserves are the reserve amount required by insurance companies to protect the financial structure of the insurance company and, thus, to secure the insured. Technical reserves are a source of income that the insurance company reserves and does not touch. Technical reserves are separated from the premiums obtained by insurance companies (Başpınar, 2005). Different ratios for technical provision are calculated. Especially in recent studies, it is seen that technical provisions are included (Hailegebreal, 2016; Kripa and Ajasllari, 2016; Camino-Mogro and Bermudez Barrezueta, 2019; Azmi et al., 2020).

5. IMPLEMENTATION

5.1. Purpose and Hypotheses of the Research

Today, with the pandemic, the concept of insurance has gained even more importance. It is known that insurance companies have experienced some changes in their financial ratios in this process. In this study, it is aimed to examine whether there is a significant difference in the financial ratios of non-life insurance companies traded in the Istanbul Stock Exchange in the pre-pandemic and post-pandemic period.

Return on Assets (ROA), Liquidity Ratio, Current Ratio, Technical Reserves/Premiums Received, Premiums Received/Total Assets ratios of the non-life insurance companies traded in Istanbul Stock Exchange for the years 2018-2019 before the pandemic and for the years 2020-2021 after the pandemic are taken as data and the data have been obtained from FINNET.

The main hypothesis of the research:

H_0: There is no significant difference between the pre-pandemic and post-pandemic financial ratios of non-life insurance companies.

H_1: There is a significant difference between the financial ratios of non-life insurance companies before and after the pandemic.

The sub-hypotheses of the research:

H_{0a}= There is no significant difference in the return on assets of non-life insurance companies before and after the pandemic.

H_{1a}= There is a significant difference in terms of the return on assets of non-life insurance companies before and after the pandemic.

H_{0b}= There is no significant difference in the pre- and post-pandemic liquidity ratio of non-life insurance companies.

H_{1b}= There is a significant difference in the pre- and post-pandemic liquidity ratio of non-life insurance companies.

H_{0c}= There is no significant difference in pre- and post-pandemic current ratio of non-life insurance companies.

H_{1c}= There is a significant difference in pre- and post-pandemic current ratio of non-life insurance companies.

H_{0d}= There is a significant difference in pre- and post-pandemic current ratio of non-life ınsurance companıes.

H_{1d}= There is a significant difference in terms of premiums/total assets received by non-life insurance companies before and after the pandemic.

H_{0e}= There is no significant difference in the ratio of technical provisions/total assets of non-life insurance companies before and after the pandemic.

H_{1e}= There ıs a sıgnıficant dıfference ın terms of technıcal provısıons/total assets of non-lıfe insurance companies before and after the pandemic.

5.2. Sample of the Research and Data

There are four non-life insurance companies traded on the Istanbul Stock Exchange. Company names and codes used in the research are presented in Table 1.

Table 1
Insurance Companies Constituting the Sample

CODE	INSURANCE COMPANY
AKGRT	AK INSURANCE COMPANY
ANSGR	ANADOLU INSURANCE COMPANY
RAYSG	RAY INSURANCE COMPANY
TURSG	TÜRKİYE INSURANCE COMPANY

The financial ratios and codes used in the study are given in Table 2. The analysis and interpretation part of the research will be carried out through the codes.

Tablo 2
Financial Ratios and Codes

CODE	FINANCIAL RATIO
ROA	RETURN ON ASSETS
LR	LIQUIDITY RATIO
CR	CURRENT RATIO
APTA	PREMIUMS RECEIVED/ TOTAL ASSETS
TKAP	TECHNICAL RESERVES / PREMIUMS RECEIVED

5.3. ANALYZES AND FINDINGS

Normality test was performed to determine the analysis method to be used in the study. Normality test data are presented in Table 3.

Table 3
Shapiro-Wilk Normality Test Results

Variable	Shapiro-Wilk		
	Statistics	Degree of Freedom	p
Return on Assets (ROA)	0.914	16	0.135
Liquidity Ratio (LR)	0.926	16	0.212
Current Ratio (CR)	0.940	16	0.352
Premiums Received/Total Assets (PRTA)	0.927	16	0.219
Technical Reserves / Premiums Received (TRPR)	0.905	16	0.080

for 5% significance level

Since the number of observations was less than 30, the Shapiro-Wilk test was applied to the data. According to the Shapiro-Wilk test results, the data are normally distributed. Independent t-test was used because the data showed normal distribution. The findings and descriptive statistics are presented in Table 4.

Table 4
Descriptive statistics on data

Variable / Group		Descriptive Statistics			
		N	Mean	Standard Deviation	Standart Error
Return on Assets (ROA)	Post-pandemic (1)	8	5.8306	3.26398	1.15399
	Pre-pandemic(2)	8	5.5092	3.37704	1.19396
Liquidity Ratio (LR)	Post-pandemic (1)	8	0.8190	0.10032	0.03547
	Pre-pandemic(2)	8	0.8720	0.07096	0.02509
Current Ratio (CR)	Post-pandemic (1)	8	1.2246	0.05149	0.01820
	Pre-pandemic(2)	8	1.2252	0.04123	0.01458
Premiums Received/Total Assets (PRTA)	Post-pandemic (1)	8	0.3754	0.06693	0.02366
	Pre-pandemic(2)	8	0.3924	0.11653	0.04120
Technical Reserves / Premiums Received (TRPR)	Post-pandemic (1)	8	0.1444	0.09303	0.03289
	Pre-pandemic(2)	8	0.1147	0.07090	0.02507

In Table 4, the analyzes of the pre-pandemic period and post-pandemic period data of financial ratios are given in the rows below. According to Table 4, it is seen that the return on assets ratio is higher after the pandemic than the average return on the pre-pandemic period. In addition, it can be said that the liquidity ratios of companies decreased after the pandemic. Again, according to Table 4, it is seen that the ratio of premiums/total assets received after the pandemic decreased more than in the pre-pandemic period. However, it is observed that the technical reserves/premiums ratio of the insurance companies included in the analysis increased in the post-pandemic period. In general, it is seen that

the profitability of the insurance companies included in the analysis increased in the post-pandemic period, but their liquidity decreased.

Table 5

Results of the Levene and T-test analysis

Variable	Results of Levene Test		Results of T-Test		
	F	P	t	df	p
Return on Assets (ROA)	0.031	0.864	0.194	14	0.849
Liquidity Ratio (LR)	0.528	0.479	-1.220	14	0.243
Current Ratio (CR)	0.627	0.442	-0.027	14	0.979
Premiums Received/Total Assets (PRTA)	0.630	0.441	-0.359	14	0.725
Technical Reserves / Premiums Received (TRPR)	1.231	0.286	0.719	14	0.484

for 5% significance level

Levene test was performed to test whether the variances of the data were equal, and it was seen that the probability values of each variable were greater than 5% and the H0 hypothesis, which argued that the variables had equal variance, was accepted. It has been observed that the probability values of each variable are greater than 5%. Therefore, the H0 hypothesis, which argues that the variables have equal variance, was accepted. Levene test was used to test whether the variances of the data were equal. Whether there is a significant difference between the pre-pandemic (2018-2019) and post-pandemic (2020-2021) data were analyzed with the t-test. According to the t-test results, the probability values are greater than 5%. In other words, there was no significant difference between the financial ratios of the pre-pandemic period and the post-pandemic period. The H0 hypothesis was accepted for each ratio.

6. CONCLUSION

As the claims of existing health and life insurance holders were expected to increase at the onset of the Covid19 Pandemic, the compensation expenses of pension and life insurance companies were also expected to increase. For this reason, the branches that were primarily affected by the Covid19 Pandemic in the insurance sector were the health and life insurance branches. In addition to pension and life insurance companies, non-life insurance companies are also expected to be affected. However, non-life insurance companies are not expected to be affected to the same extent. This research examines how the profitability of non-life insurance companies operating in the Istanbul Stock Exchange was affected during the pandemic period.

It was expected that the Turkish insurance sector would also be adversely affected by the Covid19 Pandemic, which affected the whole world socio-economically. However, the Turkish insurance sector has announced growth in 2020 and 2021, which are considered to be post-pandemic. However, when TSB data is analyzed, it is seen that insurance premiums increased in the same periods. Due to the fact that both the Turkish insurance sector data and the entire world economy were adversely affected in this period, the relationship between the insurance sector's specialities in the pre-pandemic and post-pandemic periods was analyzed. Some expenditures have decreased due to the curfews implemented during the pandemic period. For example, the rate of traffic has decreased. Thus, insurance companies may have reduced their motor insurance and compulsory traffic insurance compensation

payments. In this case, this could lead to lower income levels for insurers and, in turn, lower liquidity ratios.

Contrary to expectations, the profitability of Istanbul Stock Exchange non-life insurance companies has increased. Within the scope of this research, annual data of non-life insurance companies operating in the Istanbul Stock Exchange between the years 2018-2021 were analyzed using the t-test method. Return on assets, liquidity ratio, current ratio, premiums received/total assets, and technical provisions/premiums received were determined as the analyzed variables. The pre-pandemic period was determined as 2018-2019, and the post-pandemic period was determined as 2020-2021. In addition to the main hypothesis of the research, five sub-hypotheses were established and tested. As a result of the analysis, it was found that the increase in the profitability of Istanbul Stock Exchange non-life insurance companies between the pre-pandemic and post-pandemic periods was not significant. The hypothesis was accepted. The research results are remarkable in revealing that the profitability of non-life insurance companies did not show a significant change before and after the Covid19 period. Risks related to health, death, safety and insurance awareness have been observed to rise amid the price of the pandemic.

With the assurance provided by the insurance sector on both individual and business basis, the amount of compensation paid in 2020 reached 44 billion TL (TSB, 2020: 5). The compensation amount at the end of 2021 is 63.6 billion TL. As the impact of the pandemic diminished claims frequency returned to previous levels, and increased vehicle density drove higher gross premium rates, particularly in the traffic and motor insurance sectors. Furthermore, the reason for the 14.3% increase in the compensation rates in 2021 is the increase in the outstanding claims reserves (TSB, 2019: 12). It has been revealed that the insurance sector has been affected by the Covid19 Pandemic, even though it has announced profitability and growth. As a result of the analysis, it was found that the liquidity of non-life insurance companies decreased as a result of the analyzes made separately for the pre-pandemic and post-pandemic periods. The liquidity of non-life insurance companies decreased, but there was no significant decrease. Shiu, 2004; Jadi, 2015; Akel et al., 2016; Kripa and Ajasllari, 2016; Camino-Mogro and Bermudez Barrezueta, 2019; Azmi et al., 2020; Özen and Çankal are incompatible with 2021 studies. Ahmed et al., 2010; Ahmad and Prasetyo, 2018; Dilmaç and Korkmaz are in line with 2018 studies. The liquidity ratio shows the debt payment period of the business and the amount of liquidity it has. It is thought that the increased compensation payments of insurance companies during the pandemic period reduced the liquidity ratios, but did not cause a significant effect.

As a result of the literature search, it was seen that the effects of the Covid19 Pandemic on the financial ratios of non-life insurance companies traded in the Turkish financial markets were not examined. For this reason, it is aimed to contribute to the literature of the research.

There are four non-life insurance companies with continuous data traded in the Turkish financial markets. The low number of companies is one of the limitations of the research. The research can be deepened by increasing the financial ratios to be analyzed in future studies.

Declaration of Research and Publication Ethics

This study which does not require ethics committee approval and/or legal/specific permission complies with the research and publication ethics.

Researchers' Contribution Rate Statement

The authors declare that they have contributed equally to the article.

Declaration of Researcher's Conflict of Interest

There are no potential conflicts of interest in this study

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How to cite this article: Ertuğrul, A., & Külekçi, İ. (2022). The Research on the Effect of the Covid-19 Pandemic Period on the Financial Ratios of Non-Life Insurance Companies Traded on the Istanbul Stock Exchange. *International Journal of Insurance and Finance, 2*(2), 47-59. https://doi.org/10.52898/ijif.2022.9