Wszystkie artykuły publikowane w czasopiśmie przeszły podwójną – ślepą recenzję.

SPIS TREŚCI

THE IMPACT OF COVID-19 CASES ON STOCK PRICES OF SELECTED COMPANIES REPRESENTING TOURISM AND BANKING SECTORS

Volkan Dayan[*] **Monika Bolek**[**] **Juan E. Trinidad-Segovia**[***]

THE IMPACT OF COVID-19 CASES ON STOCK PRICES OF SELECTED COMPANIES REPRESENTING TOURISM AND BANKING SECTORS

Abstract

The purpose of the article/hypothesis: The purpose of the article is to analyse the relationship between stock prices of selected companies and COVID-19 cases in those countries where the tourism and banking sectors have a high share of national income, such as Croatia, Italy and Spain.

Methodology: The methods used are Breakpoint Unit Root Tests to determine whether a time series is stationary or not, and ARDL cointegration technique for cointegration testing.

Results of the research: It was found that the number of COVID-19 cases negatively impacted the tourism and banking market in surveyed EU countries.

Keywords: COVID-19, Coronavirus, Stock Prices, EU Countries, ARDL.

JEL Class: I5, G15, N24, C32.

---

[*] Assoc. Prof., Department of Banking and Insurance, Uzunkopru School of Applied Sciences Trakya University, Edirne-Turkey, e-mail: volkandayan@trakya.edu.tr, https://orcid.org/0000-0002-4297-4212
[**] Assoc. Prof., Department of Corporate Finance, Faculty of Economics and Sociology, University of Lodz, Lodz-Poland, e-mail: monika.bolek@uni.lodz.pl, https://orcid.org/0000-0001-9376-1105
[***] Prof., Department of Accounting and Financial, Faculty of Economics and Business, Universidad de Almeria, Almeria-Spain, e-mail: jetrini@ual.es, https://orcid.org/0000-0002-5017-2615

INTRODUCTION

COVID-19 not only harmed human health but also threatened the global markets causing economic recession across the world. China is of great importance in the COVID-19 pandemic as the country where the virus developed, but it is also here that the process of supply chain collapse began as many common products were made there and stopped reaching other economies. Moreover, the world's most crowded tourist group, the Chinese, couldn't go out of the country and visit popular touristic places. COVID-19 affected tourism sector radically due to travel restrictions and prohibitions.

During the first phases of COVID-19 pandemic, borders were closed as well as restaurants, museums, theatres, theme parks and airports, even Tokyo Olympics was postponed. International tourist arrivals were down by a global average of –44% in the months January–April 2020. Reduced revenues from tourism had a broader impact and reduced global GDP by 1.5% to 2.8% in 2021. Nowadays a more resilient and inclusive tourism model built on the principles of sustainability for people, planet, and prosperity is needed (UNWTO, 2021).

On the other hand, financial markets were also affected by COVID-19. According to International Financial Corporation, the impact of the pandemic on new loan disbursements was most significant for the riskier micro, small, and medium-sized enterprises and retail segments. Diversification of funding sources, client liquidity, digital transformation and risk management have become strategic for many business entities. The pandemic and associated economic crisis led to a short-term drop in demand for credit causing the financial problems in banking sector (IFC, 2021). Credit risk of corporate and retail clients of the banks have increased and management and operational systems have changed. Digital transformation, robotics solutions, artificial intelligence, mobility, FinTech, cloud technologies have become essential concepts. Finally, high volatility in stock markets negatively influenced banks' valuation reflecting the poor condition of this sector (Latorre, 2020: 8).

The aim of this study is to determine the effects of the number of COVID-19 cases on the tourism and banking sectors and to compare both dynamic processes. For this purpose, the stock prices of some companies representing these sectors were used in the analysis. Breakpoint Unit Root Tests and ARDL analysis are applied in this study, and the applications of dynamic models are related to testing the process of achieving long-term equilibrium and the existence of such a balance. The hypothesis states that COVID-19 had a significant impact on rates of return of selected companies representing the tourism and banking sectors and there was a difference between recovering processes related to the sector and the country the companies were operating on.

The paper is organized as follows: Section 1 is the literature review, after that data and methods are presented in Section 2 and then empirical results are presented in Section 3. Finally, conclusions of the study are presented.

1. LITERATURE REVIEW

There are some studies related to other pandemics published before the COVID-19 outbreak. Haacker (2004: 198–200) analyzed the impact of HIV/AIDS on Government Finance and Public Services. Moreover, Yach et al. (2006: 62–64) presented economic consequences of the global epidemics of obesity and diabetes. COVID-19 has been more severe in the consequences and there are many new studies presenting its influence in the fields of economy, socio-economy, economic policies, stock prices, trade, health care and environment. Some of them are presented below in a brief overview illustrating the issue we would like to discuss.

Pata (2020: 105) investigated the effects of the COVID-19 pandemic on economic policy uncertainty in the US and the UK. Lau (2020: 3) investigated the impacts of the trade war and the COVID-19 epidemic on China-United States economic relations. Goswami et al. (2021: 462–463) found that states with a better containment strategy, higher healthcare capabilities, and a relatively larger employment share of the primary sector have experienced smaller economic losses. Beyer et al. (2021: 10) stated that without effectively reducing the risk of a COVID-19 infection, voluntary mobility reductions would prevent a return to full economic potential, even when restrictions are relaxed. Wang and Han (2021: 8) found that the internal and external carbon emission indexes of most countries have decreased, which indicates that most countries are affected by the carbon reduction and energy consumption caused by the pandemic in the US. Acikgoz and Gunay (2020: 520) stated that COVID-19 had severe adverse effects on the employees, customers, supply chains and financial markets. De la Fuente (2021: 90) explained a comprehensive policy strategy and specific proposals were needed to protect the effects of COVID-19. Yoon (2021: 5) focused on the unequal distribution of output and employment shocks across businesses, workers, and households, through which the macroeconomic implications of the pandemic crisis were derived for the Korean economy. As can be noticed there is a large variety of issues discussed in the papers related to COVID-19, and most of them focus on the influence of the pandemic on the markets.

Socio-economic impact of COVID-19 was investigated in some studies. Paprottka et al. (2021: 1877) found, for example, that low GDP per capita countries experienced a more significant negative economic impact. Measurable differences in the socio-economic impact and the adaptation of safety protocols

between high and low GDP per capita subgroups and between different world regions were observed. Rasheed et al. (2021: 19926) analysed the short-long-term effects of COVID-19 peak on the socio-economic and environmental aspects of Pakistan.

The impact of COVID-19 on financial sector was examined in some studies. For instance, Gormsen and Koijen (2020: 574–575) analysed the impact of coronavirus on stock prices and growth expectations. Ramelli and Wagner (2020: 622–655) explored feverish stock price reactions to COVID-19, the same as Just and Echaust (2021: 1) who examined how the data on new cases and death announcements from 12 countries affected the US stock market. Ganie et al. (2022: 1) analysed impact of COVID-19 on stock prices from selected economies, Kordestani et al. (2022: 3206) investigated effects of the COVID-19 on blockchain based companies. Al-Mughairi et al. (2021: 1), Liu et al. (2022: 1), Carter et al. (2022: 1), Henseler et al. (2022: 1) and Korinth (2022: 1) analyzed the impact of COVID-19 on tourism sector in various countries.

The effect of COVID-19 on environment was also investigated in the financial literature. Fezzi and Fanghella (2020: 885) demonstrated that high-frequency electricity market data can estimate the causal, short-run impact of COVID-19 on the economy. Wang and Zhang (2021: 2) found that generally, the spillover effect of China's economic recovery on other countries' economic growth is much more than other countries' energy consumption. Mele and Magazzino (2021: 2669) explored the relationship between pollution emissions, economic growth and COVID-19 deaths in India.

Other aspect treated by the literature is the impact of COVID-19 on the health sector. Wang (2020: 177604) managed the cross-border risk efficiently during the epidemic prevention and control. Ogundepo et al. (2020: 1–2) assessed multidimensional healthcare and economic data on COVID-19 in Nigeria. Lasaulce et al. (2021: 1–2), analyzed the tradeoff between health and economic impacts of the COVID-19.

According to studies in literature it has been documented that COVID-19 negatively affects many sectors. Our analysis is designed to support the findings presented in the literature from a different point of view.

2. DATA AND METHOD

In this section, definitions of Breakpoint Unit Root Tests and Autoregressive Distributed Lag Cointegration Technique are presented.

2.1. Breakpoint unit root tests

The first unit root to consider structural breaks analysis began with Perron (1989: 1361). This method has been developed (Zivot and Andrews, 1992: 25–44; Lumsdaine and Papell, 1997: 212–218; Perron, 1997: 355–385; Bai and Perron, 1998: 47–78; Ng and Perron, 2001: 1519–1554; Lee and Strazicich, 2003: 1082–1089; Lee and Strazicich, 2004; Kapetanios, 2005: 123–133; Carrion-i-Silvestre et al., 2009: 1754–1792) and currently alternative tests that can perform unit root analysis in the presence of structural breaks can be applied (Altay and Yilmaz, 2016: 78)

These tests, also called new generation or second-generation unit root tests, are divided into two groups. One can perform unit root analysis under multiple structural breaks in series, while in other test methods, unit root analysis can be performed up to one or at most two structural breaks (Bai and Perron, 1998: 47–78; Kapetanios, 2005: 123–133; Carrion-i-Silvestre et al., 2009: 1754–1792).

2.2. Autoregressive distributed lag (ARDL) cointegration technique

The ARDL multifunctional model developed by Pesaran and Shin (1998: 371–413), Pesaran et al. (2001: 289–326) can be used as an alternative to the cointegration tests that examine other long-term relationships (Belloumi, 2014: 269–287). ARDL is related to cointegration or bound procedure in a long-run, irrespective of whether the underlying variables are I(0), I(1) or a combination of both (Nkoro and Uko, 2016: 76). In the ARDL model, long-term prediction results are more important than other methods (Harris and Sollis, 2003: 80–81). In addition, one of the important advantages of this test is that even when the number of observations is small, the results can be significant (Duasa, 2007: 91).

For ARDL model can be presented as follows:

$$Y_t = \partial_0 + \partial_1 X_t + \partial_2 Z_t + e_t \tag{1}$$

A model equation in the form of:

$$\Delta y_t = \partial_0 + \sum_{i=1}^{p} \beta_i \Delta y_{t-i} + \sum_{i=0}^{p} \delta_i \Delta x_{t-i} + \sum_{i=0}^{p} \lambda_i \Delta z_{t-i} + a_1 y_{t-1} + a_2 x_{t-1} + a_3 z_{t-1} + u_t \tag{2}$$

$$\Delta y_t = \partial_0 + \sum_{i=1}^{p} \beta_i \Delta y_{t-i} + \sum_{i=0}^{p} \delta_i \Delta x_{t-i} + \sum_{i=0}^{p} \lambda_i \Delta z_{t-i} + u_t \tag{3}$$

is tested.

In equations (2) and (3) ∂, β, α and λ represent the parameters, while u represents the error. In this method, the best model should first be found among all ARDL models (Pesaran et al., 2001: 289–326; Erdogan and Dayan, 2019: 508).

ARDL models help to identify the dependent variables (endogenous) and the independent variables (exogenous) (Shakil et al., 2018: 65). These models focus on the exogenous variables and the selection of the correct lag structure from both endogenous and the exogenous variables. In this study, the number of COVID-19 cases was defined as the exogenous variable and the relative changes of stock prices as the endogenous variable.

There are several tests of ARDL that can be implemented. Ramsey Reset Test, Breusch-Godfrey Serial Correlation LM Test, Heteroskedasticity Test, Bounds Test, CUSUM Tests, cointegrating form and long-run coefficients is the basic conditions of the model (Nkoro and Uko, 2016: 63–91). After making necessary transformations in ARDL model equivalents, unlimited and limited ARDL model equations, also called Bounds test, are estimated. H0: $\alpha 1 = \alpha 2 = \alpha 3 = 0$. Estimated F account value (Pesaran et al., 2001: 289–326) the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. In this case, it is assumed that there is a long-term co-integrated relationship between the variables y, x, z, and so, it is decided that a regression model can be created with variables that are stationary at different levels (Shrestha, 2006; Erdogan and Tatar, 2021).

This bound F-statistic is carried out on each of the variables as they stand as endogenous variable while others are assumed as exogenous variables (Nkoro and Uko, 2016: 63–91).

In ARDL analysis, the CUSUM test is used to determine the model's parameter stability and structural breaks (Brown et al., 1975: 154).

2.3. Causes of indebtedness

In the study, total cases of COVID-19 and stock prices of companies operating in the tourism and banking sectors are taken into consideration. The choice of these two sectors was considered appropriate because they were the most affected by a pandemic situation and in the countries taken into consideration tourism and banking sector plays an important role. Since ARDL is an appropriate model for the analysis of time series, stock prices are used as data.

The selection has been made according to the European Union members' financing and tourism contribution to GDP.

These countries include Greece, Portugal, Netherlands, Luxembourg, Austria, Slovenia, Croatia, Italy and Spain.

In total, nine countries and 54 companies were chosen, but most of them are not included in this study according to the test results.

Finally, Croatia, Italy and Spain and the companies representing these economies were chosen for the analysis with the GDP impact as presented in Table 1.

Table 1. The share of selected countries from GDP on a sectoral basis

Country	Tourism Sector			Banking Sector		
Year	2019	2020	2021	2019	2020	2021
Croatia	24.8%	13.2%	16.1%	75.23%	86.08%	77.79%
Italy	10.6%	6.1%	9.1%	108.7%	123%	115.5%
Spain	14.0%	5.9%	8.5%	113.4%	131.8&	119.65%

Source: www2.

Selected tourism and banking companies traded on the stock markets are surveyed.

The following companies (as presented in Table 2) are included in the study. Data comes from Yahoo Finance (www1) and Our World in Data (www2) services.

Table 2. Variable information and data sources

Names of Variables	Definition of Variables	Country	Sector	Date	Number of Observa-	Source
IKBA	Istarska Kreditna Banka Umag	Croatia	Banking	02/25/2020-06/17/2021	83	www1
PLAG	Plava Laguna D.D.	Croatia	Tourism	02/25/2020-06/18/2021	131	www1
GVI	I Grandi Viaggi	Italy	Tourism	01/31/2020-06/23/2021	355	www1
AMS	Amadeus	Spain	Tourism	01/31/2020-06/23/2021	357	www1
BBVA	BBVA Bank	Spain	Banking	01/31/2020-06/23/2021	357	www1

Source: own study.

The number of daily COVID-19 cases was matched with the stock release days.

Weekends and holidays could not be taken into consideration because there was no stock market data for these days.

The recovery period is not the same for the several stocks/countries. It is due to the number of stock data published by stock exchanges.

3. EMPIRICAL RESULTS

Below empirical results of the research are presented. Breakpoint unit root tests and ARDL results of this study are shown in this section. Table 3 includes unit root tests of variables.

Table 3. Breakpoint unit root tests of variables

Variable	Break Type	ADF test	Lag Length	Max Lag	Breakdate	t-statistic	p-value	Remark
Total_Cases_IKBA	Innovational outlier	1st Difference	0	11	08/04/2020	-6.802998	< 0.01	I(1)
IKBA	Innovational outlier	Level	0	11	03/27/2020	-6.310382	< 0.01	I(0)
Total_Cases_PLAG	Innovational outlier	Level	0	12	10/22/2020	-4.536807	0.0391	I(0)
PLAG	Innovational outlier	Level	3	12	05/20/2021	-5.241619	0.0155	I(0)

Total_Cases_GVI	Innovational outlier	Level	9	16	10/16/2020	-4.542700	0.0385	I(0)
GVI	Innovational outlier	1st Difference	0	16	06/08/2020	-20.13912	< 0.01	I(1)
Total_Cases AMS_BBVA	Innovational outlier	1st Difference	14	16	03/15/2021	-4.936055	0.0396	I(1)
AMS	Innovational outlier	Level	0	16	03/03/2020	-4.931381	0.0402	I(0)
BBVA	Innovational outlier	Level	0	16	03/09/2020	-4.540269	0.0483	I(0)

Source: own study.

According to Table 3 all prices and total cases are stationary at level "I(0)" or 1st Difference "I(1)".

Unit roots are present and all p-values are less than 5% indicating the significance.

A stationary time series does not depend on the time at which the series is observed (Hyndman and Athanasopoulos, 2018).

In this part each company's stock prices and total cases of COVID-19 will be analyzed separately, and the results are presented in Tables 4–8.

Table 4. Main results of ARDL and short-run coefficients of IKBA
and total cases of COVID-19

Dependent Variable: IKBA, Selected Model: ARDL(7, 0)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
IKBA(-1)	0.398911	0.116937	3.411336	0.0011
IKBA(-2)	0.087572	0.126012	0.694953	0.4895
IKBA(-3)	0.287205	0.131597	2.182465	0.0326
IKBA(-4)	0.139184	0.137883	1.009437	0.3165
IKBA(-5)	-0.029100	0.124782	-0.233205	0.8163
IKBA(-6)	-0.076536	0.113322	-0.675381	0.5018
IKBA(-7)	-0.231634	0.100664	-2.301056	0.0246
TOTAL_CASES	3.41E-05	7.44E-06	4.583966	0.0000
C	539.7817	111.3400	4.848050	0.0000
R-squared	0.914309	Akaike info criterion		10.25702
Adjusted R-squared	0.903922	Schwarz criterion		10.53512
F-statistic	88.02560	Hannan-Quinn criter		10.36806
Prob(F-statistic)	0.000000	Durbin-Watson stat		1.841356

Source: own study.

Table 5. Main results of ARDL and short-run coefficients of
PLAG and total cases of COVID-19

Dependent Variable: PLAG, Selected Model: ARDL(4, 0)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
PLAG(-1)	0.601021	0.085422	7.035933	0.0000
PLAG(-2)	0.341428	0.100727	3.389620	0.0009
PLAG(-3)	0.148735	0.100958	1.473231	0.1433
PLAG(-4)	-0.300383	0.084413	-3.558489	0.0005
TOTAL_CASES	1.44E-05	3.49E-06	4.136170	0.0001
C	286.4877	63.42658	4.516840	0.0000
R-squared	0.899780	Akaike info criterion		9.980362
Adjusted R-squared	0.895639	Schwarz criterion		10.11473

| F-statistic | 217.2694 | Hannan-Quinn criter. | 10.03496 |
| Prob(F-statistic) | 0.000000 | Durbin-Watson stat | 2.026600 |

Source: own study.

Table 6. Main results of ARDL and short-run coefficients of GVI and total cases of COVID-19

Dependent Variable: GVI, Selected Model: ARDL(3, 0)			
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GVI(-1)	0.981779	0.053332	18.40875	0.0000
GVI(-2)	0.068252	0.075043	0.909509	0.3637
GVI(-3)	-0.101552	0.052429	-1.936932	0.0536
TOTAL_CASES	5.54E-10	1.47E-10	3.773558	0.0002
C	0.041228	0.010914	3.777496	0.0002
R-squared	0.970199	Akaike info criterion	-4.100067
Adjusted R-squared	0.969855	Schwarz criterion	-4.045186
F-statistic	2824.200	Hannan-Quinn criter.	-4.078227
Prob(F-statistic)	0.000000	Durbin-Watson stat	2.000729

Source: own study.

Table 7. Main results of ARDL and short-run coefficients of AMS and total cases of COVID-19

Dependent Variable: AMS, Selected Model: ARDL(8, 0)			
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
AMS(-1)	0.951255	0.053768	17.69177	0.0000
AMS(-2)	0.096144	0.074403	1.292202	0.1972
AMS(-3)	-0.175470	0.074383	-2.358993	0.0189
AMS(-4)	0.156755	0.074383	2.107395	0.0358
AMS(-5)	-0.170456	0.074381	-2.291677	0.0225
AMS(-6)	0.091842	0.074205	1.237681	0.2167
AMS(-7)	0.108321	0.074189	1.460071	0.1452
AMS(-8)	-0.118963	0.052377	-2.271295	0.0238

TOTAL_CASES	2.77E-08	7.65E-09	3.616110	0.0003
C	2.779551	0.655672	4.239241	0.0000
R-squared	0.961328	Akaike info criterion		3.749381
Adjusted R-squared	0.960301	Schwarz criterion		3.859842
F-statistic	936.3290	Hannan-Quinn criter.		3.793353
Prob(F-statistic)	0.000000	Durbin-Watson stat		2.001614

Source: own study.

Table 8. Main results of ARDL and short-run coefficients of BBVA
and total cases of COVID-19

Dependent Variable: BBVA, Selected Model: ARDL(8, 0)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
BBVA(-1)	0.950548	0.053578	17.74123	0.0000
BBVA(-2)	0.070370	0.073192	0.961448	0.3370
BBVA(-3)	-0.078378	0.072525	-1.080700	0.2806
BBVA(-4)	0.063731	0.072747	0.876068	0.3816
BBVA(-5)	0.051546	0.073024	0.705878	0.4807
BBVA(-6)	-0.191403	0.072988	-2.622402	0.0091
BBVA(-7)	0.250146	0.073607	3.398381	0.0008
BBVA(-8)	-0.155189	0.052120	-2.977553	0.0031
TOTAL_CASES	2.79E-09	6.44E-10	4.332096	0.0000
C	0.097914	0.026977	3.629478	0.0003
R-squared	0.987974	Akaike info criterion		-1.606044
Adjusted R-squared	0.987655	Schwarz criterion		-1.495584
F-statistic	3094.389	Hannan-Quinn criter.		-1.562073
Prob(F-statistic)	0.000000	Durbin-Watson stat		1.983012

*Note: p-values and any subsequent tests do not account for model selection.

Source: own study.

As shown in the Tables 4–8 coefficients are statistically significant.

The effect of IKBA variable 1, 3 and 7 times delayed on total cases is statistically significant. The R^2 value is 0.914309, which means that 91.43% of the variation in IKBA can be explained by total cases jointly. This value is very high for estimation. The effect of PLAG variable 1, 2 and 4 delayed on total cases is statistically significant. The R^2 value is 0.899780. It means 89.97% of the variation in PLAG can be explained by Total Cases jointly. This value is very high for estimation. The effect of GVI variable 1 and 3 delayed on total cases is statistically significant. The R^2 value is 0.970199, which means that 97.01% of the variation in GVI can be explained by Total Cases jointly. This value is very high for estimation. The effect of AMS variable 1, 3, 4,5 and 8 delayed on total cases is statistically significant. The R^2 value is 0.961328, which means that 96.13% of the variation in AMS can be explained by total cases jointly. This value is very high for estimation. The effect of BBVA variable 1, 6, 7 and 8 delayed on total cases is statistically significant. The R^2 value is 0.987974, which means that 98.79% of the variation in BBVA can be explained by Total Cases jointly. This value is very high for estimation. All the P-values of F-statistics is 0.0000, which indicates that all models are fit.

The diagnostic test results of variables are presented in Table 9.

Table 9. Diagnostic test results of variables

Variable	Ramsey Reset Test			Breusch-Godfrey Serial Correlation LM Test		Heteroskedasticity Test: Breusch-Pagan-Godfrey	
	F tests	df	p-value	F tests	p-value	F tests	Prob. F
IKBA	3.858557	1, 65	0.06	1.169502	0.3171	1.850886	0.0831
				Obs R-squ.	Prob. Chi-Squ.	Obs R-squ.	Prob. Chi-Squ.
				2.644376	0.2666	13.74300	0.0887
PLAG	0.686408	1, 120	0.4090	1.631227	0.20	1.613454	0.1615
				Obs R-squ.	Prob. Chi-Squ.	Obs R-squ.	Prob. Chi-Squ.
				3.388871	0.1837	7.938055	0.1597
GVI	0.057257	1, 346	0.8110	0.226611	0.7973	0.968291	0.4249
				Obs R-squ.	Prob. Chi-Squ.	Obs R-squ.	Prob. Chi-Squ
				0.461811	0.7938	3.885604	0.4217

AMS	3.618658	1, 338	0.0580	0.481663	0.6182	1.117716	0.3493
				Obs R-squ.	Prob. Chi-Squ.	Obs R-squ.	Prob. Chi-Squ.
				0.994785	0.6081	10.05773	0.3458
BBVA	.010253	1, 338	0.9194	1.680137	0.1879	1.005626	0.4351
				Obs R-squ.	Prob. Chi-Squ.	Obs R-squ.	Prob. Chi-Squ.
				3.445571	0.1786	9.075317	0.4304

Source: own study.

According to results presented in Table 9, Ramsey Reset Test's P-Value of IKBA is 0.06, P-Value of PLAG is 0.4090, P-Value of GVI is 0.8110, P-Value of AMS is 0.0580, P-Value of BBVA is 0.9194. These values are more than the critical significance level (5%). Therefore, this ARDL models are properly specified.

Breusch-Godfrey Serial Correlation LM Test's P-values for IKBA are 0.3171 and 0.2666, P-values for PLAG are 0.20 and 0.1837, P-values for GVI are 0.7973 and 0.7938, P-values for AMS are 0.6182 and 0.6081, P-values for BBVA are 0.1879 and 0.1786. These values are more than 0.05. Therefore, it proves the residual obtained from the ARDL models are free from serial correlation.

Heteroskedasticity Test: Breusch-Pagan-Godfrey's P-values for IKBA are 0.0831 and 0.0887, P-values for PLAG are 0.1615 and 0.1597, P-values for GVI are 0.4249 and 0.4217, P-values for AMS are 0.3493 and 0.3458, P-values for BBVA are 0.4351 and 0.4304. These values are more than 0.05. Therefore, there is no Heteroscedasticity problem for all these models.

Table 10. Bounds test results of variables and total cases of COVID-19

Test Statistic	Value	k
F-statistic (IKBA)	11.34667	1
F-statistic (PLAG)	11.04567	1
F-statistic (GVI)	9.206990	1
F-statistic (AMS)	11.34667	1
F-statistic (BBVA)	11.02968	1

Critical Value Bounds		
Significance	I(0) Bound	I(I) Bound
10%	4.04	4.78
5%	4.94	5.73
2.5%	5.77	6.68
1%	6.84	7.84

Source: own study.

According to Table 10, bounds test coefficients of all variables were above the upper limit of critical values. This suggests that there is a long-term mutual cointegration between all variables and total cases.

Table 11. Cointegrating and long run form results of IKBA and total cases of COVID-19

Dependent Variable: IKBA, Selected Model: ARDL(7, 0)				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(IKBA(-1))	-0.176692	0.110506	-1.598934	0.1146
D(IKBA(-2))	-0.089120	0.111694	-0.797894	0.4278
D(IKBA(-3))	0.198085	0.113276	1.748689	0.0850
D(IKBA(-4))	0.337270	0.115406	2.922452	0.0048
D(IKBA(-5))	0.308170	0.105100	2.932166	0.0046
D(IKBA(-6))	0.231634	0.100664	2.301056	0.0246
D(TOTAL_CASES)	0.000034	0.000007	4.583966	0.0000
CointEq(-1)	-0.424397	0.087291	-4.861870	0.0000
Cointeq = IKBA - (0.0001*TOTAL_CASES + 1271.8788)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL_CASES	0.000080	0.000008	9.716401	0.0000
C	1271.878825	14.352448	88.617553	0.0000

Source: own study.

Table 12. Cointegrating and long run form results of PLAG and total cases of COVID-19

Dependent Variable: PLAG, Selected Model: ARDL(4, 0)				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PLAG(-1))	-0.189780	0.083924	-2.261337	0.0255
D(PLAG(-2))	0.151648	0.086065	1.762014	0.0806
D(PLAG(-3))	0.300383	0.084413	3.558489	0.0005
D(TOTAL_CASES)	0.000014	0.000003	4.136170	0.0001
CointEq(-1)	-0.209199	0.045754	-4.572307	0.0000
Cointeq = PLAG - (0.0001*TOTAL_CASES + 1369.4491)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL_CASES	0.000069	0.000012	5.887912	0.0000
C	1369.449108	20.016058	68.417523	0.0000

Source: own study.

Table 13. Cointegrating and long run form results of GVI and total cases of COVID-19

Dependent Variable: GVI, Selected Model: ARDL(3, 0)				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GVI(-1))	0.033300	0.052254	0.637262	0.5244
D(GVI(-2))	0.101552	0.052429	1.936932	0.0536
D(TOTAL_CASES)	0.000000	0.000000	3.773558	0.0002
CointEq(-1)	-0.051520	0.012629	-4.079428	0.0001
Cointeq = GVI - (0.0000*TOTAL_CASES + 0.8002)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL_CASES	0.000000	0.000000	4.837670	0.0000
C	0.800224	0.045733	17.497829	0.0000

Source: own study.

Table 14. Cointegrating and long run form results of AMS and total cases of COVID-19.

Dependent Variable: AMS, Selected Model: ARDL(8, 0)				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(AMS(-1))	0.011828	0.052475	0.225401	0.8218
D(AMS(-2))	0.107972	0.052491	2.056935	0.0405
D(AMS(-3))	-0.067498	0.052523	-1.285122	0.1996
D(AMS(-4))	0.089256	0.052525	1.699313	0.0902
D(AMS(-5))	-0.081200	0.052540	-1.545482	0.1232
D(AMS(-6))	0.010642	0.052384	0.203157	0.8391
D(AMS(-7))	0.118963	0.052377	2.271295	0.0238
D(TOTAL_CASES)	0.000000	0.000000	3.616110	0.0003
CointEq(-1)	-0.060573	0.013359	-4.534062	0.0000
Cointeq = AMS - (0.0000*TOTAL_CASES + 45.8880)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL_CASES	0.000000	0.000000	4.320044	0.0000
C	45.887952	2.127706	21.566870	0.0000

Source: own study.
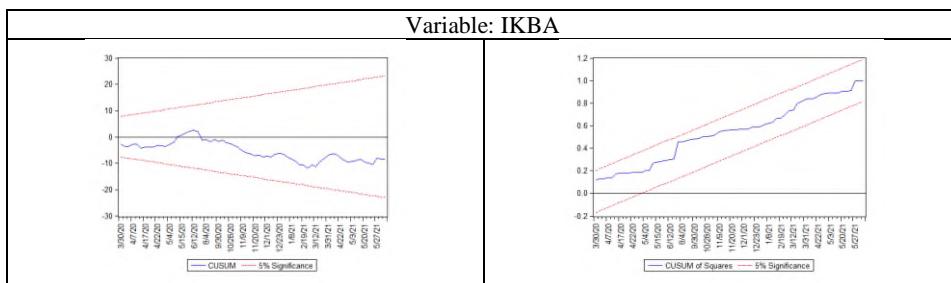
Table 15. Cointegrating and long run form results of BBVA and total cases of COVID-19

Dependent Variable: BBVA, Selected Model: ARDL(8, 0)				
Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(BBVA(-1))	-0.010823	0.052386	-0.206603	0.8364
D(BBVA(-2))	0.059547	0.052112	1.142678	0.2540
D(BBVA(-3))	-0.018831	0.051859	-0.363119	0.7167
D(BBVA(-4))	0.044900	0.051830	0.866301	0.3869
D(BBVA(-5))	0.096446	0.051793	1.862143	0.0634
D(BBVA(-6))	-0.094957	0.051877	-1.830419	0.0681

D(BBVA(-7))	0.155189	0.052120	2.977553	0.0031
D(TOTAL_CASES)	0.000000	0.000000	4.332096	0.0000
CointEq(-1)	-0.038628	0.009022	-4.281707	0.0000
Cointeq = BBVA - (0.0000*TOTAL_CASES + 2.5348)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TOTAL_CASES	0.000000	0.000000	5.937586	0.0000
C	2.534762	0.234462	10.810972	0.0000

Source: own study.

Tables 11–15 show ARDL Cointegrating and Long Run Coefficients. The term represented as CointEq(-1) is negative for all variables with an associated coefficient estimate of -0.424397 for IKBA, -0.209199 for PLAG, -0.051520 for GVI, -0.060573 for AMS and -0.038628 for BBVA. All coefficients range from 0 to 1 and they are statistically significant at 5%. This implies that for IKBA about 42.43% of any movements into disequilibrium are corrected for within one period. Thus, deviations in the short run will be balanced after 2.38 periods. This value implies that for PLAG the speed of adjustment towards long-run equilibrium is 20.91%. Deviations in the short run will be balanced after 5 periods. This implies that for GVI about 5.15% of any movements into disequilibrium are corrected for within one period. Deviations in the short run will be balanced after 20 periods. This value implies that for AMS the speed of adjustment towards long-run equilibrium is 6.05%. Deviations in the short run will be balanced after 16 periods. This implies that for BBVA about 3.86% of any movements into disequilibrium are corrected for within one period. Thus, deviations in the short run will be balanced after 33 periods. According to Long Run Coefficients table, all variables of total cases are statistically significant at 5%.

Variable: IKBA

Variable: PLAG

Variable: GVI

Variable: AMS

Variable: BBVA
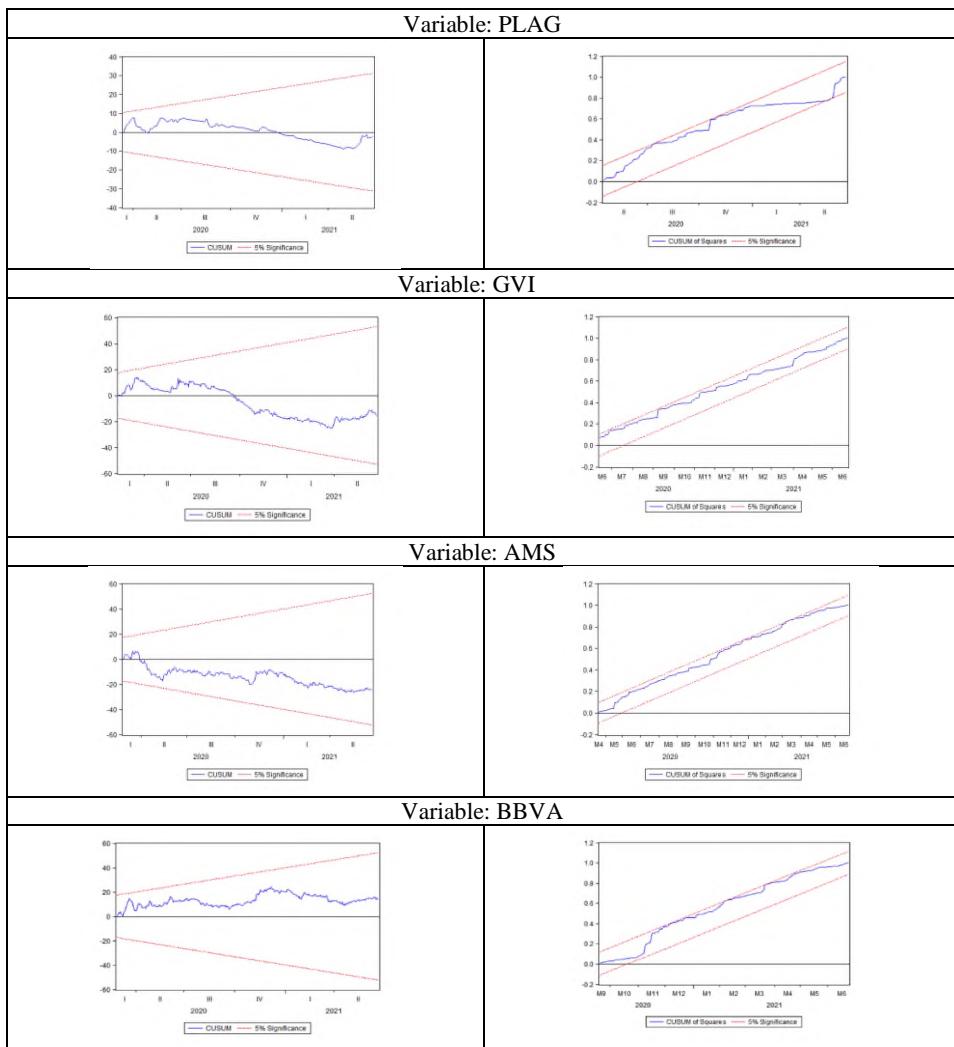
Figure 1. CUSUM and CUSUM of squares tests of variables and total cases of COVID-19

Source: own study.

The Figure 1 shows that the blue line runs between the red lines in the CUSUM and the CUSUM of squares graphs. Therefore, it means all models are stable at a 5% significance level.

The results indicate that COVID-19 affected both tourism and banking sectors.

Table 16. Deviation Balance of Variables

Variable	Periods	Country	Sector
IKBA	2.38	Croatia	Banking
PLAG	5	Croatia	Tourism
GVI	20	Italy	Tourism
AMS	16	Spain	Tourism
BBVA	33	Spain	Banking

Source: own study.

According to Table 16, deviations in the short run will be balanced after 2.38 periods in IKBA variable and 5 periods in PLAG variable. These periods are short for other companies in Italy and Spain. This result shows that the tourism sector in Croatia recovers longer than the banking sector.

The only one variable GVI analyzed in Italy is in the tourism sector. Deviations in the short run will be balanced after 20 periods. This period is also quite long by other companies in Croatia and but short in AMS variable in Spain.

On the other side, deviations in the short run will be balanced after 16 periods in AMS variable and 33 periods in BBVA variable. AMS variable recovers shorter than GVI in Italy but longer than IKBA and PLAG variables in Croatia. Contrary to the results in Croatia this result shows that the banking sector in Spain recovers longer than the tourism sector. BBVA variable recovers itself in the longest time according to market recovery time.

The dynamic models can examine the equilibrium of the market and the time that is necessary to achieve the balance after the information, like the number of new COVID-19 cases announcement, influence the market. According to this study five companies representing touristic and banking sectors in Croatia, Italy and Spain were selected. The findings show that the number of total cases impacted the tourism and banking markets.

According to main results of ARDL and short-run coefficients all models are fit. Diagnostic test results of variables are more than the critical significance level and ARDL models are properly specified, free from serial correlation. There is no heteroscedasticity problem for all. Bounds test coefficients of all variables were above the upper limit of critical values. Stability tests, short-run and long-run forecasts are fixed for all countries and sectors. Changes of total cases have a significant short-run impact on variables.

Based on the results of cointegrating and long run, short-run effects of total cases persist on long-term.

There was a difference in the recovery time between sectors and countries recognized. The results indicate that the short-term deviations in the ARDL model with Bounds coefficient and Error Mode values were balanced after minimum 2.38 and maximum 33 periods, and there was a difference in the recovery time between sectors and countries.

According to results of CUSUM and CUSUM of squares tests of variables all models are stable at a 5% significance level.

In line with the data from the stock prices, the results show that COVID-19 has affected both the tourism and banking sectors.

CONCLUSIONS

COVID-19 number of cases influenced the exchanges and rates of return around the world. Most of the research results related to the beginning of pandemics reported the negative reaction of markets but within the time passing the situation has changed. There are sectors that gained on pandemics compared to others. For instance, Nasdaq Composite Index can be an example of a high growth in the time of pandemic. In the study presented in this paper, the influence of COVID-19 number of cases of selected companies' stocks returns representing tourism and banking sectors in countries with high tourism share in their GDP is analyzed.

These results corroborate the findings of a great deal of the previous works. This finding is consistent with that of Goswami et al. (2021) who found that larger employment dependence on secondary and tertiary sector have suffered significantly larger economic losses due to COVID-19. These results reflect those of Yoon (2021) who also found that in the financial and manufacturing sectors, output and employment have changed in an opposite direction during the COVID-19 pandemic. Additionally, Rasheed et al. (2021) reported that Pakistan's struggling tourism sector is likely to encounter an economic loss of approximately USD 6 million in 2020. According to Ramelli and Wagner (2020) the virus situation in China improved relative to the situation in Europe and in the United States, investors perceived those companies more favorably again. Just and Echaust (2021) found that the numbers of COVID-19 cases and deaths reported in China are negatively correlated with these reported in other countries.

In summary, during the period studied, COVID-19 has a deep impact for both tourism and banking sector in the short-run and long-run. In the investigation of the relationship between the total number of COVID-19 cases and the stock prices of banking and tourism companies of selected countries. They conclude that periodic differences are mean and significant, and that the values of dependent and independent variables in the model are also effective in determining stock prices.

It must be noted that in the literature there are few studies with the ARDL model applied, especially when the COVID-19 issue is taken into consideration. We expect that this study can influence future analysis in the field of dynamic analysis of market processes. Future study, with the same method, can be applied in different sectors and countries to recognize the recovery time of the systems.

FUNDING

DISCLOSURE STATEMENT

The authors report no conflicts of interest.

This study is the extended version of the paper presented orally in SCF International Conference on "Economic, Social, and Environmental Sustainability in the Post Covid-19 World", Istanbul, Türkiye. 2–3 December 2022.

BIBLIOGRAPHY

Acikgoz O. and Gunay A. (2020), The Early Impact of The COVID-19 Pandemic on the Global and Turkish Economy, *Turkish Journal of Medical Sciences*, 50(SI-1), pp. 520–526.

Al-Mughairi M. S. H., Bhaskar, P., Khalfan Hamood Alazri, A. (2021), The economic and social impact of COVID-19 on tourism and hospitality industry: A case study from Oman, *Journal of Public Affairs*, pp. 1–11.

Altay H. & Yilmaz A. (2016), Turkiye'de Ihracat Artislarinin Istihdam Uzerindeki Etkisinin Incelenmesi, *Finans Politik ve Ekonomik Yorumlar Dergisi*, pp. 75–86.

Bai J. and Perron P. (1998), Estimating and Testing Linear Models with Multiple Structural Changes, *Econometrica*, 66(1), pp. 47–78.

Belloumi M. (2014), The Relationship Between Trade, FDI and Economic Growth in Tunisia: An application of the autoregressive distributed lag model, *Economic Systems*, 38(2), pp. 269-287.

Beyer R. C., Franco-Bedoya S. Galdo V. (2021), Examining the Economic Impact Of COVID-19 in India Through Daily Electricity Consumption and Night Time Light Intensity, *World Development*, pp. 1–13.

Brown R. L., Durbin J., Evans J. M. (1975), Techniques for Testing the Constancy of Regression Relationships Over Time, *Journal of the Royal Statistical Society*, pp. 149-192.

Carrion-i-Silvestre J. L., Kim D., Perron P. (2009), GLS-Based Unit Root Tests with Multiple Structural Breaks Under Both the Null and the Alternative Hypotheses, *Econometric Theory*, pp. 1754–1792.

Carter D., Mazumder S., Simkins, B., Sisneros E. (2022), The Stock Price Reaction of The COVID-19 Pandemic On The Airline, Hotel, And Tourism Industries, *Finance Research Letters*, pp. 1–15.

De la Fuente A. (2021), The Economic Consequences of COVID in Spain and How to Deal With Them, *Applied Economic Analysis*, pp. 90–104.

Duasa J. (2007), Determinants of Malaysian Trade Balance: An ARDL Bound Testing Approach, *Global Economic Review*, 36(1), pp. 89-102.

Erdogan S. and Dayan V. (2019), Analysis of Relationship Between International Interest Rates and Cryptocurrency Prices: Case for Bitcoin and LIBOR, Blockchain Economics and Financial Market Innovation. Financial Innovations in the Digital Age. Editor: Umit Hacioglu, Springer, Switzerland.

Erdogan S. & Tatar H. E. (2021), Turkiye'de Uluslararasi Portföy Yatirimlarinin Icsel Faktorleri Uzerine Ardl Analizi. *Uluslararasi Ekonomi ve Siyaset Bilimleri Akademik Arastirmalar Dergisi*, 5(12), pp. 1–17.

Fezzi C. and Fanghella V. (2020), Real-time Estimation of The Short-Run Impact of COVID-19 on Economic Activity Using Electricity Market Data, *Environmental and Resource Economics*, 76(4), pp. 885–900.

Ganie I. R., Wani T. A., Yadav M. P. (2022), Impact Of COVID-19 Outbreak on the Stock Market: An Evidence From Select Economies, *Business Perspectives and Research*, pp. 1–15.

Gormsen N. J. and Koijen R. S. (2020), Coronavirus: Impact on Stock Prices and Growth Expectations*, The Review of Asset Pricing Studies*, 10(4), pp. 574–597.

Goswami B., Mandal R., Nath H. K. (2021), COVID-19 Pandemic and Economic Performances of the States in India, *Economic Analysis and Policy*, pp. 461–479.

Haacker M. (2004), The impact of HIV/AIDS on Government Finance and Public Services, *The Macroeconomics of HIV/AIDS*.

Harris R. and Sollis R. (2003), Applied Time Series Modelling And Forecasting, Wiley.

Henseler M., Maisonnave H., Maskaeva A. (2022), Economic impacts of COVID-19 on the tourism sector in Tanzania*, Annals of Tourism Research Empirical Insights*, pp. 1–12.

Hyndman R.J. and Athanasopoulos G. (2018), Forecasting: Principles and Practice, 2nd Edition, Otexts.

IFC (2021), The Early Impact of COVID-19 on Financial Institutions, International Financial Corporation.

Just M. and Echaust, K. (2021), Stock Market Returns, Volatility, Correlation and Liquidity During the COVID-19 Crisis: Evidence from the Markov switching approach, *Finance Research Letters*, pp. 1–8

Kapetanios G. (2005), Unit-Root Testing Against the Alternative Hypothesis of up to M Structural Breaks, *Journal of Time Series Analysis*, 26(1), pp. 123–133.

Kordestani A., Pashkevich, N., Oghazi, P., Sahamkhadam, M., Sohrabpour, V. (2022), Effects Of The COVID-19 Pandemic on Stock Price Performance Of Blockchain-

Based Companies*, Economic Research-Ekonomska Istraživ*anja, 35(1), pp. 3206–3224.

Korinth B. (2022), Impact Of The COVID-19 Pandemic On International Tourism Income In Tourism Receiving Countries, *Sustainability*, pp. 1–12.

Lasaulce S., Zhang C., Varma V., Morărescz I. C. (2021), Analysis Of The Tradeoff Between Health and Economic Impacts of the COVID-19 Epidemic, *Frontiers in Public Health*, no. 9 pp. 1–13.

Latorre G. (2020), Standing Firm on Shifting Sands, Global banking *M&A Outlook H2 2020*, KPMG International.

Lau L. J.(2020), The Impacts of the Trade War and the COVID-19 Epidemic on China-US Economic Relations, *China Review*, 20(4), pp. 1–38.

Lee J., and Strazicich M. C. (2003), Minimum Lagrange Multiplier Unit Root Test with Two Structural Breaks, *Review of Economics and Statistics*, 85(4), pp, 1082–1089.

Lee J. & Strazicich M. C. (2004), Minimum Lagrange Multiplier Unit Root Test with One Structural Break, Department of Economics Working Papers, no. 04-17.

Liu Y., Cheng X., Liao S. S., Yang F. (2022), The Impact of COVID-19 on the Tourism and Hospitality Industry: Evidence From International Stock Markets, *The North American Journal of Economics and Finance*, pp. 1–23.

Lumsdaine R. L. and Papell D. H. (1997), Multiple Trend Breaks and the Unit-Root Hypothesis, *Review of economics and Statistics*, 79(2), pp. 212–218.

Mele M. and Magazzino C. (2021), Pollution, Economic Growth, And COVID-19 Deaths In India: Machine Learning Evidence, *Environmental Science and Pollution Research*, 28(3), pp. 2669–2677.

Ng S. and Perron P. (2001), Lag Length Selection and The Construction of Unit Root Tests with Good Size And Power, *Econometrica*, 69(6), pp. 1519–1554.

Nkoro E. and Uko A. K. (2016), Autoregressive Distributed Lag (ARDL) Cointegration Technique: Application and Interpretation, *Journal of Statistical and Econometric Methods*, vol. 5(4), pp. 63–91.

Ogundepo E., Folorunso S., Adekanmbi O., Akinsande O., Banjo O., Ogbuju E., Babajide O. (2020), An Exploratory Assessment of a Multidimensional Healthcare and Economic Data on COVID-19 In Nigeria, *Data in Brief*, pp. 1–14.

Paprottka F. J., Rolfes S. B., Richter D. F., Kaye K. O. (2021), COVID-19 Pandemic: Evaluation of Socio-Economic Impact on Aesthetic Plastic Surgery Providers, *Aesthetic Plastic Surgery*, pp. 1877–1887.

Pata U. K. (2020), COVID-19 Induced Economic Uncertainty: A Comparison Between the United Kingdom and the United States, *Ekonomika*, 99(2), pp. 104–115.

Perron P. (1989), The Great Crash, the Oil Price Shock, And the Unit Root Hypothesis, *Econometrica: Journal of the Econometric Society*, pp. 1361-1401.

Perron P. (1997), Further Evidence on Breaking Trend Functions in Macroeconomic Variables, *Journal of Econometrics*, 80(2), pp. 355–385.

Pesaran M. H. & Shin Y. (1998), An Autoregressive Distributed-Lag Modelling Approach to Cointegration Analysis, *Econometric Society Monographs*, pp. 371–413.

Pesaran M. H., Shin Y., Smith R. J. (2001), Bounds Testing Approaches to the Analysis Of Level Relationships, *Journal of Applied Econometrics*, 16(3), pp. 289–326.

Ramelli S. and Wagner A. F. (2020), Feverish Stock Price Reactions to COVID-19, *The Review of Corporate Finance Studies*, 9(3), pp. 622–655.

Rasheed R., Rizwan A., Javed H., Sharif F., Zaidi A. (2021), Socio-Economic and Environmental Impacts Of COVID-19 Pandemic in Pakistan an Integrated Analysis, *Environmental Science and Pollution Research*, 28(16), pp. 19926–19943.

Shakil M. H., Tasnia M., Saiti B. (2018), Is Gold A Hedge or a Safe Haven? An Application of ARDL Approach, *Journal of Economics*, *Finance and Administrative Science,* 23(44), pp. 60-76.

Shrestha M. B. (2006), ARDL Modelling Approach to Cointegration Test. University of Wollongong, New South Wales, Australia and Nepal Rastra Bank – the Central bank of Nepal.

UNWTO (2021), Recommendations for the Transition to a Green Travel and Tourism Economy, World Tourism Organization.

Wang C. H. (2020), A Three-Level Health Inspection Queue Based on Risk Screening Management Mechanism for Post-COVID Global Economic Recovery, *IEEE Access*, pp. 177604–177614.

Wang Q. and Han X. (2021), Spillover Effects of The United States Economic Slowdown Induced by COVID-19 Pandemic on Energy, Economy, And Environment In Other Countries, *Environmental Research*, pp. 1–10.

Wang Q. and Zhang F. (2021), What Does the China's Economic Recovery after COVID-19 Pandemic Mean for The Economic Growth and Energy Consumption of Other Countries?, *Journal of Cleaner Production*, pp. 1–20.

Yach D., Stuckler D., Brownell K. D. (2006), Epidemiologic and Economic Consequences of The Global Epidemics of Obesity and Diabetes, *Nature medicine*, 12(1), pp. 62–66.

Yoon Y. H. (2021), The Macroeconomic Implications of The COVID-19 Economic Crisis, *Investigación Económica*, 80(316), pp. 5–31.

Zivot E. and Andrews D. W. K. (1992), Further Evidence on the Great Crash, the Oil-Price Shock and the Unit-Root Hypothesis, *Journal of Business & Economic Statistics*, 20(1), pp. 25–44.

(www1) Yahoo Finance – *https://finance.yahoo.com/* [Accessed 24.06.2021].

(www2) Our World in Data – *https://ourworldindata.org/coronavirus* [Accessed 24.07.2021].

SIGNIFICANCE OF THE FOUNDING BODY (OWNERSHIP AUTHORITY) FOR FINANCIAL PERFORMANCE OF HOSPITALS IN POLAND – EVIDENCE FROM COUNTY AND PROVINCIAL HOSPITALS

Bartłomiej Krzeczewski[*]

SIGNIFICANCE OF THE FOUNDING BODY (OWNERSHIP AUTHORITY) FOR
FINANCIAL PERFORMANCE OF HOSPITALS IN POLAND – EVIDENCE FROM
COUNTY AND PROVINCIAL HOSPITALS

Abstract

The purpose of the article/hypothesis: The purpose of the article is to identify and assess differences in the financial performance of Polish hospitals according to the type of the founding body. Research hypothesis assumes that the founding body is of great importance for the hospital's financial condition.

Methodology: Selected financial ratios illustrating various areas of financial performance of the analyzed units are used in the study. Statistical significance is also verified in terms of differences between the mean values of indicators characterizing the financial performance of hospitals. The study is conducted on the example of public hospitals subordinated to provinces (voivodships) and counties (poviats).

Results of the research: The assessment of the financial performance shows that the situation of the provincial hospitals seems to be slightly better than that of the county ones. In addition, the study shows significant differences between the analyzed groups of hospitals within the areas of debt, as well as in the case of cash (immediate) financial liquidity, which allows only to partially accept the research hypothesis. In case of current and quick liquidity, as well as obtained profitability, unambiguous verification of the hypothesis is not possible.

Keywords: hospital financial performance; hospital founding body; hospital financial man–agement; hospital ownership authority; hospital financial condition.

JEL Class: I15, H75, G3.

---

[*] Doktor, Wydział Ekonomiczno-Socjologiczny, Uniwersytet Łódzki, e–mail: bartlomiej.krzeczewski@uni.lodz.pl https://orcid.org/0000–0002–7856–0732

INTRODUCTION

The existence of reliable and sound healthcare sector is very important from the social perspective, as its task is to protect and save human health and life. Significant financial resources from public sources are allocated for its financing. Therefore, it can undoubtedly be seen as a socially important sector.

Health expenditures constitute a significant burden for the public finance sector in many countries. The largest part of public funds allocated to financing health services in Poland is dedicated to hospitals. Unfortunately, many of them suffer losses on their core activities, which leads to the growing debt of the hospital sector itself (Paździor and Maj, 2017: 309–321) and the negative situation in the entire healthcare system as well. Taking this into account, it should be stated that the proper functioning of hospitals has a significant impact on the functioning of the overall healthcare system. Therefore, the search for factors determining the efficient functioning of the hospital seems to be a priority task.

The purpose of this study is to indicate the differences in selected areas of the financial condition among Polish hospitals subordinated to various founding bodies (ownership authorities). The considerations contained in the article are based on the following hypothesis: the occurrence of significant differences in the financial condition of hospitals depends on the founding body.

This study extends the subject literature concerning the importance of the founding bodies (ownership authorities) for the financial condition of hospitals – especially the public ones. It brings some evidence in the topic on the example of county and provincial hospitals applying a wide set of financial indicators. The presented results may have a significant meaning and good informative value for healthcare managers, health policymakers, hospitals' founding bodies or ownership authorities.

The structure of the article is as follows. Section 1 presents the concept of the founding body and ownership authority in hospital. Section 2 indicates a comprehensive literature review concerning the meaning of the hospital's founding body or ownership authority for financial performance. Section 3 describes in detail methods applied in the study conducted for the purpose of this article, and Section 4 presents empirical results of the study. The article is finished with the main conclusions made based on the obtained results presented together with the discussion with some other studies in the analyzed matter.

1. FOUNDING BODY AND OWNERSHIP AUTHORITY IN HOSPITAL – DIFFERENT TYPES OF DEFINITIONS

Considering the concept of the founding body and ownership authority in Polish hospitals, it is worth to have an in depth look at the types of definitions that occur both in theory and practice of healthcare management.

In the Polish Act on Medical Activity (UODL, 2011), which is supposed to comprehensively regulate the activity of all medical entities, the founding body is defined as an entity or body that creates a medical entity in the form of an independent public health care facility, budgetary unit or military unit (UODL, 2011: art. 2, sec. 1, point 6). Such a definition emphasizes the public nature of the founding body. Responsibilities of the founding body portrayed in these terms include: preparing the hospital's statute, employing the CEO, appointing and dismissing the social council, supervision and control over the subordinated medical entity, etc. (UODL, 2011: art. 42, paragraph 4; art. 43 sec. 3; art. 48 sec. 5; art. 121).

This trend – emphasizing the public nature of a hospital's founding body is also included in the definition of the founding body, or otherwise the supervisory body presented by the Central Statistical Office in Poland (GUS). According to them, it can be defined as a public administration body which appoints or controls an organizational unit of public administration, acting on the basis of legal provisions. Moreover, in additional explanations supplied by the GUS website, it is argued that the concept of a founding or supervising body should apply only to public sector entities (GUS, 2022).

On the other hand, it should be noted that medical entities in Poland (including hospitals) may be run by entrepreneurs including many different types of legal forms, or also in such forms as: an independent public healthcare unit (SP ZOZ), a budgetary entity (including state budgetary units established and supervised by the Ministry of National Defense, the ministry responsible for internal affairs, the Ministry of Justice or the Internal Security Agency), a research institute, a military unit, a legal person, a foundation or and association (UODL, 2011: art. 4 sec. 1). Bearing this in mind, it should be stated that a hospital as a medical entity in Poland may be run both in a public or non-public form.

Taking the above into account, in the case of non-public hospitals in Poland, one should speak of the ownership authority of the hospital rather than the founding or supervising body. However, in economic practice and in everyday use, the concept of a hospital's founding body is very often also extended to non-public entities (Hass–Symotiuk, 2011: 37; Rabiej, 2013: 100–108; Krzeczewski, 2014a: 569–581; OZZL, 2021; Zdrowie Łódzkie, 2021). Anyway, from the theoretical point of view it can be stated that the concept the founding or supervising body is expressed in narrower terms, covering only public entities, whereas the concept

of the ownership authority can be applied to both public and non-public hospitals or other medical entities – as a concept with a broader meaning.

2. FINANCIAL PERFORMANCE IN HOSPITALS IN ACCORDANCE WITH DIFFERENT TYPES OF FOUNDING BODIES OR OWNERSHIP AUTHORITIES – LITERATURE REVIEW

Polish hospitals may be subordinated to various ownership authorities or founding bodies, which is often related to a specific function of a given hospital (e.g. a general hospital or a specialist one) and providing patients with a specific package of health services. The scope of health services provided may, in turn, have significant impact on the financial condition of the hospital. The private or non-public hospitals in Poland are usually characterized by a much narrower scope of medical activity as compared to their public counterparts (Janik, 2012: 27–44) focusing very often just on the most profitable health services. Public hospitals, on the other hand, must provide the society with a full range of health services. It is mainly due to the fact that public hospitals are responsible for realizing very important social goals in the healthcare system (Paździor and Paździor, 2017: 54–62). Most public hospitals in Poland are local government hospitals, which means that their founding bodies are local government units (Rabiej, 2013: 100–108) i.e. municipalities, counties (poviats) or provinces (voivodships).

One of the studies comparing the financial situation of selected hospitals subordinated to different ownership authorities or founding bodies is presented by Janik (2012: 27–44), who analyzes the situation of two public and two private hospital units. The data used in the study is from 2010. The author notices a number of differences that exist between public and private entities. According to the study, public hospitals are much larger units with much larger assets, which in the first place is a source of costs, and only in the longer term can be perceived as a source of benefits. In public hospitals, the so-called passive fixed assets dominate – i.e. buildings, land, etc. By contrast, in private hospitals, the technical salary predominates in the structure of fixed assets. Moreover, private hospitals usually have a much narrower level of specialization than public hospitals. However, despite the differences, Janik (2012: 27–44) concludes that it is difficult to clearly state which hospitals act more effectively, emphasizing a need for further research in the analyzed area.

A similar study is presented by Krzeczewski (2014a: 569–581), where the financial performance of Polish public hospitals – subordinated to local government units and non-public hospitals operating in the form of limited liability companies is compared. 22 public hospitals and 10 non-public hospitals from the Lodz region are analyzed. The period of the study covers the years between 2007–2011.

The conclusions from the study confirmed the fact that the founding body (ownership authority) is important for the financial condition of the hospital. There occur statistically significant differences between the analyzed groups of hospitals in case of most of the financial ratios applied in the study. However, the obtained results do not make it clear which hospitals actually act more effectively. While non-public hospitals are characterized by higher levels of profitability and generate higher revenues in relation to assets (which may be extremely important from the point of view of financial efficiency), public hospitals are characterized by better levels of financial liquidity. Krzeczewski (2014a: 569–581) indicates that in order to confirm the obtained results, it would be worth conducting research on a much larger scale e.g. throughout the whole country.

In the other study, Krzeczewski (2013: 271–284) compares the financial situation between hospitals subordinated to different types of local government units i.e. county (poviat) and provincial (voivodeship) hospitals in the Lodz region. The study is conducted on the example of data from 8 county (poviat) and 10 provincial (voivodeship) hospitals in the years 2006–2010. Krzeczewski (2013: 271–284) indicates that the financial situation of province (voivodeship) hospitals is much better than in county (poviat) ones. Though, there is also a clear need for further research aimed at verifying the statistical significance of differences in financial ratios obtained by hospitals subordinated to different types of founding bodies.

Dubas-Jakóbczyk et al. (2020: 2188) conducting a cross-sectional study on the example of Polish public hospitals in 2018 also bring some important conclusions to the considerations regarding the importance of the founding body for the financial condition of the hospital. The authors show that the university and local hospitals (municipal and county ones) are characterized by worse financial performance than regional (provincial) and ministerial hospitals. The research coveres such financial categories as gross profit margin, debt ratio, or the share of arrears in total liabilities.

Miszczyńska (2020: 203–212) presents a study to capture the impact of the founding bodies in Polish hospitals on the selected financial liquidity ratios (current and quick liquidity ratios) and debt ratios (debt-to-equity, total debt and financing of fixed assets ratios) in the years 2007–2015. County (poviat), provincial (Marshal's office), university and ministerial hospitals are included in the study. Miszczyńska (2020: 203–212) indicates that the impact of the founding body on the selected financial ratios can be confirmed just in the particular years of the analyzed period. She also draws attention to the difficult financial situation of Polish hospitals, regardless of the type of the founding body in the hospital.

Miszczyńska and Miszczyński (2021: 4596) analyze the situation of 123 county (City Hall) and 134 provincial (Marshal's Office) hospitals using three debt ratios in 2013–2017. Additionally, the study also takes into account the size of the

hospital measured by the number of beds (medium 0–400 beds and large beds over 400 beds). The authors notice that a better situation in terms of the analyzed debt ratios is among provincial hospitals in the group of medium-sized ones. Nevertheless, in the group of large hospitals, the situation is actually the opposite i.e. county hospitals perform better and are characterized by lower indebtedness and ratio values closer to the recommended normative values. However, the authors emphasize the lack of statistical significance in the obtained results.

Some results regarding the importance of the founding bodies or ownership authorities for the financial condition of hospitals can also be found in the study by Krzeczewski (2014b: 209–215). The analysis covers 49 hospital units including 23 local government hospitals (county and provincial), 4 university hospitals, 2 ministerial hospitals and 10 non-public hospitals. The analyzed period covers the years 2007–2011. The author finds that there are differences in the assessment of the financial performance between the analyzed groups of hospitals.

Kautsch (2017: 63–76) analyzes the role of county (poviat) supervision over the subordinated hospitals. The study covers 8 counties (poviats) which perform ownership and supervisory functions in relation to their subordinate medical entities. Kautsch (2017: 63–76) conducts a qualitative study, aimed perhaps not so much at assessing the financial performance of hospitals, but rather on issues related to a supervising process. Nevertheless, there might be found some interesting observations concerning the analyzed topic. Kautsch (2017: 63–76) notes that county (poviat) supervision over hospitals is actually the worst among all types of local government units in Poland. In addition, the author also draws attention to the poor financing level of county hospitals, as well as the lack of adequate funds for employing health care professionals supplying specialist care rather than the general one, whereas specialist care is often much better priced. All of these translates into a worse financial situation in hospitals subordinated to the counties as compared with the ones subordinated to the other local government units in Poland.

The above literature review shows the importance of the analyzed problem. Though, in the opinion of the author of this article, the analysis of the described problem needs to be extended and deepened. It is mainly due to the fact that many of the above studies are based on very small samples or on a relatively small number of financial ratios. Hence, all the generalizations made on their basis may be biased in some way. Additionally, the time periods analyzed in the studies are very often quite short and also distant in time and they need to be updated. The study presented below is aimed at reducing the above-mentioned problems.

3. METHODS

In the study public hospitals subordinated to the local government units are examined. Analyzing the situations of public hospitals in Poland is important because, as it was mentioned earlier, they are responsible for providing comprehensive healthcare protection for the society. Moreover, the analysis of the situation of hospitals subordinated to particular local government units is extremely important because the financial management of hospitals causes many problems on the part of local government units (Miszczyńska, 2013: 187–200). Despite the fact that the importance of private hospitals is systematically growing (Dubas-Jakóczyk and Kamińska, 2017: 185–196) their medical scope is usually much narrower as compared to the public ones. That is why, their role in the healthcare system is limited.

For the purposes of this study, the author applies statistical hypothesis testing assessing financial ratios in two independent groups of hospitals i.e. county and provincial ones. County and provincial hospitals constitute the most numerous groups of public hospitals in Poland.

It is worth emphasizing that in the context of the previous considerations about hospitals' ownership authorities and founding bodies, due to the fact that the examined units are public hospitals, the narrower concept of ownership authority portrayed just through the prism of the founding body might be applied.

Time period of the analysis covers the years 2005–2017. The financial data comes from the Amadeus database. 92 public hospitals are examined – including 49 provincial hospitals and 43 county ones. In the study, a number of financial ratios to illustrate the basic areas of the financial performance have been used. The formulas of the analyzed indicators are presented below:

Table 1. Formulas of financial ratios applied in the study

Ratio	Formula
Profitability:	
Return on assets ratio (ROA)	Net profit / Total assets
Return on sales ratio (ROS)	Net profit / Sales revenue
Debt:	
Total debt ratio (DT)	(Current liabilities + Non-current liabilities) / Total assets
Long-term debt ratio (DL)	Non-current liabilities / Total assets
Financial liquidity:	
Current ratio (CR)	Current assets / Current liabilities
Quick ratio (QR)	(Current assets – Stocks) / Current liabilities
Acid test ratio (ATR)	Cash and Cash Equivalent / Current liabilities

Source: own elaboration.

In the case of profitability ratios, the return on equity (ROE) ratio is omitted due to the fact that in some hospitals there occur negative equity values. In such a situation, it is necessary to refrain from calculating the ROE as obtained values may be misleading (Stępień, 2015: 101–110). Because of the legal exclusions regarding the bankruptcy of hospitals in Poland operating in the form of the SP ZOZ, i.e. independent public health care units, (UPU, 2003: art. 6 sec. 3) the negative equity values sometimes might occur. Though, it is usually a temporary situation. In the case of presenting aggregate data, taking into account negative values of equity would give a false picture of the situation in the functioning of the analyzed hospitals.

Statistical hypothesis testing is based on comparing the mean values between two independent groups i.e. provincial and county hospitals. The null hypothesis of equality of means in both groups is tested, which can be written as follows:

$$\begin{cases} H_0: m_1 = m_2 \\ H_1: m_1 \neq m_2 \end{cases}$$

where:
m_1 – the mean values of the first group of hospitals,
m_2 – the mean values of the second group of hospitals.

Before deciding on the equality of two mean values, the distribution in each of two independent groups should be analyzed to find out if the data distribution is a normal one or not. One of the most commonly used tests for this type of analyses is Kolmogorov-Smirnov test. For normally distributed data, the null hypothesis can be tested with the t-Student test. Otherwise, nonparametric tests are used. In this case, one of the most commonly used tests is the Mann-Whitney test. The construction here is as follows:

$$\begin{cases} H_0: F_1(x_1) = F_2(x_2) \\ H_1: F_1(x_1) \neq F_2(x_2) \end{cases}$$

where:
F_1 – distribution of the variable x_1,
F_2 – distribution of the variable x_2.

It is necessary to apply such a procedure to all of the financial ratios used in the study.

4. RESULTS

The results presenting financial ratios and differences between them in both analyzed groups of hospitals are shown in the table below.

Table 2. The mean values of financial ratios in the years 2005–2017

Ratio	The mean value of provincial hospitals (1)	The mean value of country hospitals (2)	Difference (1) – (2)
Profitability			
ROA (%)	–0,34	–0,55	0,21
ROS (%)	–1,11	–0,95	–0,16
Debt			
DT (%)	57,90	63,53	–5,63
DL (%)	15,60	17,86	–2,26
Financial liquidity			
CR	1,05	0,86	0,19
QR	0,97	0,79	0,18
ATR	0,35	0,26	0,09

Source: own elaboration based on financial data from Amadeus database.

As it can be observed, county hospitals achieve slightly lower levels of ROA and, at the same time, slightly higher levels of ROS as compared to their provincial counterparts. Nevertheless, both groups of hospitals are featured by negative levels of profitability. Though, it must be pointed out that generating a profit in the case of public hospitals in Poland is not the primary goal. This does not mean, however, that such entities cannot or should not generate profits. Rational and balanced functioning should be the goal considering all healthcare entities, including hospitals as well (Węgrzyn, 2013: 197; Węgrzyn, 2015: 311–322). Such a rationality should be portrayed as a balanced activity, which could be ensured by maintaining even small, but still positive levels of profitability.

Looking at financial liquidity, it can be noticed that county hospitals generally achieve slightly lower levels of financial ratios as compared to the provincial ones, which should be assessed negatively. Though, comparing financial liquidity ratios in both groups of hospitals with the normative values presented in the subject literature (Grzywacz, red., 2014: 13–14), it might be noticed that hospitals in Poland achieve lower values than desired. In the case of provincial hospitals, however, the deviations from the normative values are much lower than in the case of county hospitals. Moreover, it should be remembered that making an assessment based on normative values should be treated with a high level of caution, as the lower values of financial liquidity ratios may result from the specificity of the hospital sector.

The county hospitals are characterized by slightly higher values of debt ratios as compared with the provincial ones, which can also be assessed negatively. It is worth noting that in both groups of hospitals, total debt accounts consist of more than half of the total assets. Bearing this in mind, the share of long-term debt in total assets seems to be relatively low. This may indicate a low level of investment in Polish hospitals as long-term financing is usually spent on investments in business entities. This situation may be to some extent explained by the fact that investment activity in hospitals is often carried out with funds coming from the subsidies of the founding bodies or the European Union (Bem et al., 2014a: 27–36; Janik and Paździor, 2017: 137–147), as well as various types of foundations, etc. Moreover, it shows that hospitals in their current operations mainly use short-term financing.

Having in mind the foregoing differences in financial condition between county and provincial hospitals, it is obviously justified to find out if they are statistically significant. The table below presents the results of the Kolmogorov-Smirnov test, indicating that none of the analyzed variables is described by a normal distribution.

Table 3. Results of Kolmogorov–Smirnov test

Ratio	Provincial hospitals		County hospitals	
	KS test statistic	Critical value of the test statistic for $\alpha = 0{,}05$	KS test statistic	Critical value of the test statistic for $\alpha = 0{,}05$
Profitability				
ROA	0,210	0,060	0,124	0,064
ROS	0,111	0,060	0,125	0,064
Debt				
DT	0,118	0,060	0,140	0,064
DL	0,191	0,060	0,169	0,064
Financial liquidity				
CR	0,162	0,060	0,104	0,064
QR	0,169	0,060	0,103	0,064
ATR	0,228	0,060	0,185	0,064

Source: own elaboration based on financial data from Amadeus database.

In order to assess whether the differences in financial ratios between the analyzed groups of hospitals are statistically significant, it is necessary to conduct a non-parametric test. For this purpose, the Mann-Whitney test is used in accordance with the previously described methodology. The results of the non-parametric Mann-Whitney test are summarized in the table below:

Table 4. Results of the Mann-Whitney test for the mean values of the ratios in the analyzed groups of hospitals

Ratio	Z value	p-value
Profitability		
ROA	–0,02	0,98
ROS	0,12	0,90
Debt		
DT	**–2,92**	**0,00**
DL	**–3,27**	**0,00**
Financial liquidity		
CR	0,82	0,41
QR	0,82	0,41
ATR	**2,28**	**0,02**
Bold – indicates the statistical significance of the differences in the mean values of the ratios		

Source: own elaboration based on financial data from Amadeus database.

The obtained results indicate that significant differences between the average values of the ratios in provincial and county hospitals occur only in the area of debt (DT and DL), and also in the case of cash (immediate) financial liquidity, i.e. the acid test ratio (ATR). In the case of the remaining financial liquidity ratios (CR and QR), as well as profitability ratios (ROA and ROS), the null hypothesis regarding the equality of means cannot be rejected in favor of the alternative hypothesis.

CONCLUSIONS

Financial results of Polish hospitals are generally poor. Analysing the results of the study, it seems that hospitals' authorities should pay more attention to maintain positive levels concerning profitability. As it was mentioned earlier, obtaining high levels of profitability does not have to be the main goal in case of hospitals, though keeping rational and balanced financial activity and generating, even if not a very high but positive level of profitability should be a kind of priority. Moreover, it seems that authorities of Polish hospitals should try to limit the level of short-term debt in favor of long-term one, which would have positive impact on financial liquidity.

Anyway, it is worth to remember that introducing the changes among hospitals in Poland in the aspects mentioned above, might be sometimes difficult due to some problems occurring in the Polish healthcare system i.e. monopolistic position of third-party payer and longtime of collecting receivables, financing overperformance in hospitals or some political reasons (Krzeczewski, 2020: 73–77, 130–141, 199).

The results presented in the foregoing study indicate that the adopted hypothesis assuming the existence of significant differences in the financial condition of hospitals subordinate to different founding bodies (ownership authorities) can only be partially verified. Such differences occur in case of debt (DT and DL) and cash financial liquidity (ATR). On the other hand, in the case of current (CR) and quick (QR) liquidity, as well as the profitability (ROA and ROS) it was not possible to reject the null hypothesis in favor of an alternative hypothesis. Thus, it is not fully clear if the differences observed in these areas of financial condition are significant or not.

The presented study covers a relatively long period of analyzes, a broad set of financial ratios and is conducted on a relatively large group of hospitals as compared to the studies conducted among hospitals both in Poland and abroad (Aggarwal and Hahn, 1979: 13; Chu et al., 1991: 39–58; Upadhyay et al., 2015: 1–9; Upadhyay and Smith, 2016: 148–157; Prędkiewicz and Prędkiewicz, 2013a: 169–179; Prędkiewicz and Prędkiewicz, 2013b: 311–323; Bem et al., 2014b: 41–48). Additionally, concerning some studies devoted to the importance of the founding body (ownership authority) for the financial condition of a hospital (Janik, 2012: 27–44; Krzeczewski, 2013: 271–284; Krzeczewski, 2014a: 569–581; Krzeczewski, 2014b: 209–215; Kautsch, 2017: 63–76), this study extends a time period, a number of the analyzed units, or the range of the analyzed financial ratios.

The foregoing study fulfills and extends somehow the subject literature concerning the importance of the founding bodies (ownership authorities) for the financial condition of hospitals – especially the public ones (Krzeczewski, 2013: 271–284; Dubas–Jakóbczyk et al., 2020: 2188; Miszczyńska, 2020: 203–212; Miszczyńska and Miszczyński, 2021: 4596). This study confirms that hospitals subordinated to different founding bodies i.e. provinces and counties are characterized by different financial condition. It turns out that the situation of province hospitals is slightly better than the situation of county hospitals. Such a situation may partly result from a different approach to the control and supervision of provinces and counties as founding bodies over their subordinated hospitals, or from different levels of funding supplied to hospitals by different types of local government units (i.e. provinces and counties), indicated by Kautsch (2017: 63–76). However, significant differences in financial condition between the analyzed groups of hospitals apply only to some areas of financial management assessment i.e. the area of debt and cash liquidity. In the case of the remaining areas of the financial condition, it was not possible to unequivocally state whether the observed differences in the values of financial ratios are statistically significant. The obtained results are consistent with the study by Dubas–Jakóbczyk et al. (2020: 2188), where significant differences in terms of debt among public hospitals subordinated to various ownership authorities are also presented. Though, the results obtained in this study, are inconsistent with the study by Miszczyńska and

Miszczyński (2021: 4596), where the differences in debt ratios of hospitals subordinated to various provinces and couties turn out to be statistically insignificant. Such an inconsistency may, however, result from a different research sample size or from methodological issues.

Due to the scope of the analyzes performed for the purposes of this study, it is not possible to confirm the consistency or inconsistency regarding the importance of the ownership authority for the financial condition of public and non-public hospitals, indicated in the studies by Janik (2012: 27–44) and Krzeczewski (2014a: 569–581). Difficulties in these types of analyzes are related primarily to constructing adequately comparable groups consisting of public and non-public hospitals. Significant differences between public and non-public entities as well as the access to reliable financial data concerning the latter ones constitute the main reasons for such difficulties. Taking this into account, gathering a research sample large enough to conduct a sound and reliable study might be a very difficult task.

This study undoubtedly broadens the set of financial ratios used to assess the financial condition of Polish public hospitals with the usage of relatively large samples (Dubas–Jakóbczyk et al., 2020: 2188; Miszczyńska, 2020: 203–212; Miszczyńska and Miszczyński, 2021: 4596). Nevertheless, the author is aware that the presented deliberations do not fully exhaust the analyzed research problem. First of all, the study is conducted using the groups of provincial and county hospitals. However, among public hospitals in Poland, one can distinguish also other types of hospitals subordinated to different founding bodies like medical universities or particular ministries. This indicates the place for further studies in the analyzed topic as the concept of the founding body or ownership authority in hospital is broader. Additionally, due to some difficulties in obtaining financial data, the study covers 92 hospital units. Although, as compared with some other studies in the analyzed topic (Janik, 2012: 27–44; Krzeczewski, 2013: 271–284; Krzeczewski, 2014a: 569–581; Krzeczewski, 2014b: 209–215; Kautsch, 2017: 63–76) the research group seems to be quite large, it is worth to bear in mind that there are much more hospitals operating in Poland. According to the estimates of the Ministry of Health, in Poland in 2017 (the last year of the analyzed time period in the study) there were 930 general inpatient hospitals (CSIOZ, 2018 : 59), whereas according to the data from the Register of Healthcare Entities in Poland, the number of entities providing hospital services at the end of December 2017 is estimated at 1389 (RPWDL, 2021). Taking this into account, in the event of gathering more relevant financial data, it is possible to expand the presented analyzes further and validate the obtained results and conclusions. What is more, in recent years, there have been introduced many dynamic changes in the Polish healthcare system, which might have a significant impact on the activity of Polish hospitals.

Among others, introducing the so-called hospital networks or COVID-19 pandemic could be mentioned, when there were temporarily founded so called dedicated COVID-19 hospitals by transforming many of the existing hospitals in Poland. All these changes introduced in the recent years into the Polish healthcare system might constitute very interesting topics expanding the presented study. Hence, it is advisable to perform further analyzes and update the current conclusions.

FUNDING

ACKNOWLEDGEMENT

BIBLIOGRAPHY

Aggarwal R., Hahn, D.B. (1979), *More emphasis should be on working capital management*, "Hospital Financial Management", vol. 33(12).

Bem A., Prędkiewicz K., Prędkiewicz P., Ucieklak–Jeż P. (2014a), *Determinants of Hospital's Financial Liquidity*, "Procedia Economics and Finance", vol. 12.

Bem A., Prędkiewicz K., Prędkiewicz P., Ucieklak–Jeż P. (2014b), *Hospital's Size as the Determinant of Financial Liquidity*, "The European Financial Systems 2014 Proceedings".

Chu D. K., Zollinger T. W., Kelly A. S., Saywell R. M. (1991), *An empirical analysis of cash flow, working capital, and the stability of financial ratio groups in the hospital industry*, "Journal of Accounting and Public Policy", vol. 10(1).

CSIOZ (2018), Centrum Systemów Informacyjnych Ochrony Zdrowia, Biuletyn Statystyczny Ministerstwa Zdrowia, Warszawa.

Dubas-Jakóbczyk K., Kocot E., Kozieł A. (2020), *Financial performance of public hospitals: a cross–sectional study among Polish providers*, "International Journal of Environmental Research and Public Health, vol. 17(7).

Dubas-Jakóbczyk K., Kamińska K. (2017), *Szpitale prywatne w Polsce – znaczenie w systemie lecznictwa oraz potencjał rozwoju*, „Zdrowie Publiczne i Zarządzanie", nr 15(3).

Grzywacz J. red .(2014), *Płynność finansowa przedsiębiorstw w Polsce*, Oficyna Wydawnicza Szkoły Głównej Handlowej w Warszawie.

GUS (2022) Strona internetowa Głównego Urzędu Statystycznego – zakładka „Pojęcia stosowane w statystyce publicznej" – *https://stat.gov.pl/* [Accessed 10.11.2021].

Hass–Symotiuk M. (2011), *System pomiaru i oceny dokonań szpitala*, Wolters Kluwer, Warszawa.

Janik W., Paździor A. (2017), *Ocena źródeł finansowania systemu ochrony zdrowia*, „Marketing i Zarządzanie", nr 3(49).

Janik W. (2012) *Sytuacja finansowa wybranych szpitali w warunkach kryzysu systemu opieki zdrowotnej w Polsce*, „Przedsiębiorczość i Zarządzanie", nr 13(9).

Kautsch M. (2017) *Nadzór właścicielski powiatów nad podmiotami leczniczymi*, „Zarządzanie Publiczne", nr 4(42).

Krzeczewski B. (2013), *Jednostka samorządu terytorialnego jako organ prowadzący szpital–porównanie i ocena sytuacji finansowej szpitali powiatowych i wojewódzkich w regionie łódzkim*, „Przedsiębiorczość i Zarządzanie", nr 14(8/1).

Krzeczewski B. (2014a), *Wpływ organu założycielskiego na efektywność finansową szpitali w województwie łódzkim,* „Zeszyty Naukowe Uniwersytetu Szczecińskiego", nr 802.

Krzeczewski B. (2014b), *The impact of the founding body on financial performance of Polish hospitals*, "Proceedings of MAC–EMM 2014".

Krzeczewski B. (2020), *Finanse szpitali w Polsce. Strategie płynności*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź.

Miszczyńska K. M. (2013), *Wydatki na ochronę zdrowia a budżet jednostek samorządu terytorialnego*, „Acta Universitatis Lodziensis. Folia Oeconomica", nr 279.

Miszczyńska K.M. (2020), *Do Polish Hospitals Perform Well? Selected Aspects of Financial Performance* (in:) K. Daszyńska–Żygadło (ed.), A. Bem (ed.), B. Ryszawska (ed.), E. Jáki (ed.),T. Hajdíková (ed.), *Finance and Sustainability*, Springer, Cham.

Miszczyńska K. M., Miszczyński P. (2021) *Debt, Ownership, and Size: The Case of Hospitals in Poland*, "International Journal of Environmental Research and Public Health", vol. 18(9).

OZZL (2021), Ogólnopolski Związek Zawodowy Lekarzy, *Jak założyć Niepubliczny ZOZ*, *http://ozzl.org.pl/index.php/11700–582* [Accessed 23.12.2021].

Paździor A., Maj G. (2017) *Wpływ zmian organizacyjnych na efektywność finansową podmiotów leczniczych na przykładzie szpitala X*, „Zarządzanie i Finanse", nr 15 (2/2).

Paździor A., Paździor M. (2017), *Pomiar efektywności działalności podmiotów leczniczych. Wybrane aspekty*, „Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu", nr 481.

Prędkiewicz, K., Predkiewicz, P. (2013a). *Płynność finansowa szpitali samorządowych w Polsce – wyniki badań empirycznych*, Zeszyty Naukowe Uniwersytetu Szczecińskiego, nr 766.

Prędkiewicz K., Predkiewicz P. (2013b), *Zarządzanie kapitałem obrotowym szpitali samorządowych w Polsce*, „Zarządzanie i Finanse", nr 2(2/11).

Rabiej E. (2013), *Formy organizacyjne podmiotów leczniczych–uwarunkowania prawne i ekonomiczne*, „Przedsiębiorstwo i Region", nr 5(1).

RPWDL (2021), Strona internetowa Rejestru Podmiotów Wykonujących Działalność Leczniczą, *https://rpwdl.csioz.gov.pl/* [Accessed 10.11.2021].

Stępień, K. (2015), *Definicyjne i metodyczne problemy rentowności*, Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie, nr 920.

UODL (2011) Ustawa z dnia 15 kwietnia 2011 r. o działalności leczniczej (Dz.U. 2011 nr 112 poz. 654).

Upadhyay S., Sen B., Smith D. (2015), *The cash conversion cycle and profitability: A study of hospitals in the State of Washington*, "Journal of Health Care Finance", vol. 41(4).

Upadhyay S., Smith, D. G. (2016), *Hospital liquidity and cash conversion cycle: A study of Washington hospitals*, "Journal of Health Care Finance", vol. 43(2).

UPU (2003), Ustawa z dnia 28 lutego 2003 r. Prawo upadłościowe (Dz.U. 2003 nr 60 poz. 535).

Węgrzyn M. (2013), *Uwarunkowania systemowe restrukturyzacji publicznych podmiotów leczniczych w Polsce*, Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław.

Węgrzyn M. (2015), *Zmiana formy prawnej szpitali z samodzielnych publicznych zakładów opieki zdrowotnej na spółki prawa handlowego – oczekiwania i implikacje na przykładzie województwa dolnośląskiego*, "Ekonomiczne Problemy Usług", nr 118.

Zdrowie Łódzkie (2021), Zdrowie Łódzkie – Regionalny Serwis Informacyjny, *https://zdrowie.lodzkie.pl/* [Accessed 12.11.2021].

ZNACZENIE ORGANU ZAŁOŻYCIELSKIEGO (WŁAŚCICIELSKIEGO) DLA KONDYCJI FINANSOWEJ SZPITALI W POLSCE – WYNIKI BADAŃ EMPIRYCZNYCH DLA SZPITALI POWIATOWYCH I WOJEWÓDZKICH

Streszczenie

Cel artykułu/hipoteza: Celem artykułu jest wskazanie różnic w zakresie osiąganej kondycji finansowej przez polskie szpitale podległe różnym organom założycielskim (właścicielskim). Pozwoli to na ocenę jakości zarządzania finansowego, które może być uzależnione właśnie od takiego organu. Rozważania oparto na następującej hipotezie: występowanie istotnych różnic w kondycji finansowej szpitali uzależnione jest od organu założycielskiego (właścicielskiego).

Metodyka: Badanie zostało oparte na analizie finansowej wybranych jednostek szpitalnych. Została w nim również dokonana weryfikacja istotności statystycznej w zakresie różnic pomiędzy wartościami wskaźników charakteryzujących kondycję finansową szpitali podległych różnym organom założycielskim (właścicielskim). Badanie zostało wykonane na przykładzie szpitali podległych jednostkom samorządów wojewódzkich oraz samorządów powiatowych.

Wyniki/Rezultaty badania: Ocena kondycji finansowej wykazała, że sytuacja szpitali wojewódzkich prezentuje się nieco lepiej, niż szpitali powiatowych. Ponadto w badaniu wykazane zostały istotne różnice pomiędzy analizowanymi grupami szpitali w ramach obszarów zadłużenia, a także w przypadku gotówkowej (natychmiastowej) płynności finansowej, co pozwala jedynie na częściowe przyjęcie postawionej hipotezy. W przypadku

natomiast płynności bieżącej i szybkiej, a także uzyskiwanej rentowności jednoznaczna weryfikacja postawionej hipotezy nie była możliwa.

Słowa kluczowe: kondycja finansowa szpitala; organ właścicielski szpitala; zarządzanie finansami szpitala; organ założycielski szpital; organ tworzący szpital.

JEL Class: I15, H75, G3.

ANALIZA I OCENA PŁYNNOŚCI FINANSOWEJ SPÓŁEK O NISKIEJ WARTOŚCI RYNKOWEJ NOTOWANYCH NA GPW W WARSZAWIE

Andrzej Kuciński[*]

ANALYSIS AND EVALUATION OF FINANCIAL LIQUIDITY OF COMPANIES WITH LOW MARKET VALUE LISTED ON THE WARSAW STOCK EXCHANGE

Abstract

The purpose of the article/hypothesis: The purpose of this article is to analyze and evaluate the liquidity of listed companies with low capitalization, whose market value did not exceed PLN 20 million. The study takes as a hypothesis that companies with low market value listed on the Main Market of the Warsaw Stock Exchange maintain low levels of financial liquidity ratios, which translate into a negative evaluation of financial liquidity.

Methodology: The study covered companies listed on the Main Market of the Warsaw Stock Exchange, whose market value was less than PLN 20 million. The study covered the years 2018–2020. The study used classical tools applied in the evaluation of corporate liquidity: the current liquidity ratio, quick liquidity ratio and cash liquidity ratio, as well as tools of descriptive statistics.

Results of the research: Based on the research, it was found that companies with small market capitalization listed on the Main Market of the Warsaw Stock Exchange maintain liquidity ratios that are often below theoretical values. This means that the activities of companies whose market value was less than PLN 20 million are accompanied by an increased solvency risk, which translates into a worse assessment of the financial situation of companies and their low market valuation. In addition, on the basis of the research conducted, it was shown that there is a large differentiation of financial liquidity by sector of companies.

Keywords: financial liquidity, static liquidity ratios, capitalization, company, Warsaw Stock Exchange.

JEL Class: G39, M21.

---
[*] Doktor, Wydział Ekonomiczny, Akademia im. Jakuba z Paradyżaw w Gorzowie Wielkopolskim, e-mail: akucinski@ajp.edu.pl, https://orcid.org/0000-0002-8988-8872

WSTĘP

Płynność finansowa od zawsze koncentrowała uwagę zarządzających przedsiębiorstwem, ponieważ determinuje ona sytuację finansową jednostki, kształtuje strukturę kapitałową, jak i tworzy warunki dla bieżącego i przyszłego funkcjonowania podmiotu gospodarczego. Płynność finansowa nie jest wyłącznie celem korporacyjnym, to warunek, którego spełnienie jest niezbędne do tego, aby zapewnić przedsiębiorstwu ciągłość działania (Shim i Siegel, 2000: 46–47). Płynność finansowa ma za zadanie zapewnić bieżące funkcjonowanie jednostki gospodarczej w krótkim okresie, natomiast w długim okresie przetrwanie i rozwój przedsiębiorstwa w głównej mierze zależy od osiąganej rentowności (Niresh, 2012: 35).

Dbanie o płynność finansową w przedsiębiorstwie wydaje się być oczywiste i jednocześnie nie mniej ważne od wysiłków, mających na celu zapewnienie jednostce rentowności. Z reguły główny cel przedsiębiorstwa formułowany jest przez pryzmat zysku, którego osiągnięcie jest możliwe, pod warunkiem zapewnienia jednostce określonej płynności finansowej, rozumianej najczęściej jako zdolność podmiotu gospodarczego do wywiązywania się z zobowiązań finansowych w terminach ich wymagalności. Jak wynika z praktyki gospodarczej, przedsiębiorstwa nierentowne mogą kontynuować działalność gospodarczą pod warunkiem, że zostanie zapewniona im płynność finansowa, w sytuacji odwrotnej prowadzenie działalności jest często niemożliwe. Tym samym płynność finansowa stała się jednym z podstawowych obszarów oceny kondycji finansowej i wyznacznikiem siły ekonomicznej przedsiębiorstwa (Bardia, 2004; Ehiedu, 2014: 82). Płynność finansowa stanowi fundament, na którym opiera się działalność, rozwój oraz wzrost przedsiębiorstwa (Zimon, 2020: 365).

Płynność finansowa i rentowność uważane są za kluczowe obszary działalności wpływające na kondycję finansową przedsiębiorstwa. W literaturze można spotkać się ze stwierdzeniem, że płynność finansowa toruje drogę rentowności i jest warunkiem niezbędnym do tego, aby tą rentowność osiągnąć (Bednarski i Waśniewski, 1996: 333; Łojek, 2020:138). Według S. Saravanan'a dążenie do zwiększenia zysków kosztem płynności finansowej może prowadzić do problemów finansowych w przedsiębiorstwie, jednocześnie przedsiębiorstwo bez zysków nie jest w stanie przetrwać, a bez zachowania płynności finansowej staje się ono niewypłacalne (Saravanan, 2011: 173). A. Irawan i T. Faturohman uważają, że przedsiębiorstwo, które ma problemy z regulowaniem na bieżąco swoich zobowiązań finansowych nie jest w stanie generować zysków oraz bogactwa dla właścicieli (akcjonariuszy). W ten sposób podkreślają oni znaczenie płynności finansowej w zarządzaniu przedsiębiorstwem, która jest szczególnie istotna w cza-

sach kryzysu (Irawan i Faturohman, 2015: 87). Według badaczy zarządzanie płynnością jest ważne, ale staje się ono jeszcze ważniejsze w okresach zwiększonej niestabilności, zmienności w gospodarce (Eljelly, 2004: 49).

Zaniedbania w obszarze zarządzania płynnością finansową w przedsiębiorstwie prowadzą do utraty płynności finansowej i należą do głównych przyczyn upadłości jednostek gospodarczych (Maślanka, 2019: 23–24; Zuba, 2009: 35). Niedobór płynności finansowej w przedsiębiorstwie prowadzi zwykle do wzrostu kosztów finansowych oraz obniżenia sprawności działania. Małe przedsiębiorstwa wykazują często ograniczony dostęp do długoterminowych rynków finansowych, a finansowanie swojej działalności zwykle opierają na kapitałach pochodzących od właścicieli lub zaciągniętych kredytach bankowych. Tym samym małe przedsiębiorstwa borykają się zazwyczaj z problem dużego udziału w majątku jednostki aktywów obrotowych o niskiej płynności oraz uzależnieniem od zadłużenia krótkoterminowego, co przekłada się na rentowność prowadzonej działalności (Peel i in., 2000: 17–37).

Płynnością finansową zainteresowani są różni interesariusze, a wśród nich inwestorzy, którzy lokując swoje wolne kapitały na rynku finansowym, dostrzegają w płynności finansowej źródła informacji o kondycji finansowej przedsiębiorstwa (Walczak, 2007: 356). Należy zaznaczyć, że zarówno niski poziom płynności finansowej jest tak samo niepożądany, jak jej wysoki poziom. W artykule skoncentrowano się na pierwszym z wyodrębnionych aspektów, gdzie utrzymywanie płynności poniżej zalecanych poziomów, prowadzi do znacznie większych problemów niż nadpłynność. Utrata płynności finansowej determinuje ryzyko upadłości przedsiębiorstwa, stąd inwestorzy stronią od tego rodzaju aktywów, zaś ich posiadacze w reakcji na pojawiające się ryzyko, decydują się na ich sprzedaż, czego efektem jest malejąca wartość rynkowa przedsiębiorstw wykazujących problemy z płynnością finansową.

Celem artykułu jest analiza i ocena statycznej płynności finansowej przedsiębiorstw notowanych na Rynku Głównym GPW w Warszawie, których wartość rynkowa nie przekraczała 20 mln złotych. W artykule za hipotezę badawczą przyjęto, że spółki o niskiej wartości rynkowej notowane na Rynku Głównym GPW w Warszawie utrzymują niskie poziomy wskaźników płynności finansowej, które przekładają się na negatywną ocenę płynności finansowej. W badaniu wykorzystano klasyczne narzędzia stosowane przy ewaluacji płynności finansowej przedsiębiorstw tj. statyczne wskaźniki płynności finansowej: wskaźnik bieżącej płynności finansowej, wskaźnik płynności szybkiej oraz wskaźnik płynności gotówkowej, a także narzędzia statystyki opisowej w analizie płynności finansowej. Badania przeprowadzono za lata 2018–2020 wykorzystując dane finansowe pochodzące z serwisu Notoria Serwis S.A.

1. PŁYNNOŚĆ FINANSOWA W PRZEDSIĘBIORSTWIE

Z przeglądu literatury wynika, że płynność finansowa może być rozpatrywana w różnych aspektach (Bolek i Wiliński, 2012: 39). Jednym z nich jest aspekt majątkowy przedstawiający płynność finansową jako: „*zdolność aktywów do zamiany na środki pieniężne w jak najkrótszym czasie i bez utraty wartości*" (Wędzki, 2003: 33). Ten punkt widzenia płynności finansowej dowartościowuje rolę środków pieniężnych w zarządzaniu finansowym przedsiębiorstwa. Posiadanie środków pieniężnych jest niezbędne do tego, aby za ich pomocą regulować wymagane zobowiązania finansowe stąd, gdy przedsiębiorstwo nie dysponuje w danej chwili wystarczającymi zasobami pieniężnymi, to o potencjale płynności finansowej jednostki gospodarczej świadczyć będzie możliwość zamiany aktywów na środki pieniężne. Tym samym zdolność i tempo zamiany poszczególnych elementów majątku na środki pieniężne determinuje płynność finansową przedsiębiorstwa (Sierpińska i Jachna, 2004: 146). Zgodnie z ujęciem majątkowym, im większy udział aktywów obrotowych w strukturze majątku, tym płynność finansowa przedsiębiorstwa jest większa, niż gdyby struktura majątku była zdominowana przez aktywa trwałe (Kuciński, 2018: 95).

Płynność finansowa rozpatrywana w aspekcie majątkowo-kapitałowym jest najczęściej przytaczanym podejściem w literaturze. W tym ujęciu przez płynność finansową rozumie się „*zdolność przedsiębiorstwa do terminowego regulowania zobowiązań krótkoterminowych*" (Kusak, 2006: 9). Płynność finansowa odnosi się nie tylko do majątku przedsiębiorstwa za sprawą, którego następuje dopływ środków pieniężnych do jednostki (Gabrusewicz, 2005: 255), ale i do wykorzystywanych źródeł finansowania (kapitałów) w działalności jednostki. Tym samym zgodnie z tym podejściem płynność finansową w przedsiębiorstwie wyznacza stopień płynności majątku, to jest zdolność spieniężenia aktywów, a także stopień wymagalności zobowiązań finansowych. Tym samym płynność finansową w aspekcie majątkowo-kapitałowym determinują wzajemne relacje między majątkiem, który stanowi zabezpieczenie spłaty zobowiązań w terminie, a zobowiązaniami finansującymi ten majątek (Cicirko, 2010: 12). W tym miejscu należy odnieść się do problemu jaki można dostrzec w literaturze, a mianowicie do kwestii zamiennego stosowania terminów „płynność finansowa" oraz „wypłacalność". D. Wędzki wyjaśniając istotę płynności finansowej posługuje się terminem wypłacalności wskazując, że płynność finansowa to inaczej wypłacalność krótkoterminowa, która odnosi się do zdolności przedsiębiorstwa do regulowania bieżących zobowiązań (Wędzki, 2019: 128). Należy jednak przyjąć stanowisko, że płynność finansowa oraz wypłacalność opisują odmienne stany rzeczywistości. Płynność finansowa określa zdolność przedsiębiorstwa do spłaty bieżących zobowiązań, zaś wypłacalność odnosi się do możliwości uregulowania wszystkich zobowiązań, zarówno długo-, jak i krótkoterminowych. Zatem można przyjąć, że

warunkiem sprawnego i efektywnego działania przedsiębiorstwa jest zachowanie zarówno zdolności do bieżącego regulowania zobowiązań, jak i utrzymanie przewagi aktywów nad finansującymi je zobowiązaniami.

Dotychczasowe omówione ujęcia płynności finansowej miały charakter statyczny, z uwagi na to, że płynność definiowana była na podstawie elementu sprawozdania finansowego jakim był bilans. Sytuacja ta wiąże się z tym, że uzyskuje się informacje o ograniczonej użyteczności – obraz płynności finansowej przedsiębiorstwa na określony moment – dzień bilansowy. Tym samym biorąc pod uwagę niedoskonałość podejścia statycznego, za którym kryją się braki informacyjne, powstało podejście dynamiczne płynności finansowej, które odnosi się do zdolności w zakresie możliwości regulowania zobowiązań, rozpatrywanej z punktu widzenia rachunku przepływów pieniężnych. W myśl tego podejścia o płynności finansowej przedsiębiorstwa nie decydują zgromadzone środki pieniężne bądź posiadane aktywa, które mogą być spieniężone, lecz zdolność do generowania i synchronizowania strumieni pieniężnych równoważących wpływy i wydatki gotówkowe (Bednarski i Waśniewski, 1996: 333; Śnieżek, 1999: 5). Zatem płynność finansową w aspekcie przepływów pieniężnych można określić jako „*zdolność przedsiębiorstwa do osiągania przepływów pieniężnych umożliwiających regulowanie wymagalnych zobowiązań i pokrywanie niespodziewanych wydatków gotówkowych*” (Śnieżek i Wiatr, 2015: 778). Z definicji tej wynika, że płynność finansową determinują przepływy pieniężne. Tym samym przedsiębiorstwo będzie posiadało płynność finansową, kiedy strumienie wpływów środków pieniężnych pozwolą w pełni i na czas uregulować wymagalne zobowiązania, z kolei gdy wydatki będą większe niż wpływy środków pieniężnych, wówczas zachowanie zdolności płatniczej wymagać będzie wykorzystania środków pieniężnych zgromadzonych we wcześniejszych okresach.

2. POMIAR PŁYNNOŚCI FINANSOWEJ W PRZEDSIĘBIORSTWIE

Pomiar i badanie płynności finansowej w przedsiębiorstwie można przeprowadzić na wiele sposobów. Do tego celu wykorzystuje się różne narzędzia, w tym wskaźniki płynności finansowej, które można przypisać do dwóch zasadniczych grup:

– wskaźników statycznych oraz
– wskaźników dynamicznych.

Podział ten bezpośrednio odwołuje się do nurtów, w jakich definiowana jest płynność finansowa, ale i źródeł informacji finansowych, na których opiera się pomiar i ocena płynności finansowej. Wskaźniki statyczne ukazują płynność finansową na podstawie danych pochodzących z bilansu, a więc na określony moment bilansowy, co przesądza o statycznym charakterze płynności finansowej.

Z kolei wskaźniki dynamiczne bazują na danych pochodzących z rachunku przepływów pieniężnych, dzięki którym można uzupełnić niedostatki informacyjne płynące ze wskaźników statycznej płynności finansowej.

Z dwóch wyodrębnionych grup wskaźników płynności finansowej, najczęściej w praktyce wykorzystywane są wskaźniki statyczne. Wynika to z faktu, że rachunek przepływów pieniężnych nie stanowi obligatoryjnego elementu sprawozdania finansowego, a tym samym dostęp do danych niezbędnych przy ocenie płynności finansowej w ujęciu dynamicznym jest ograniczony do tych przedsiębiorstw, które taki element sprawozdania sporządzają. Koncentrując swoją uwagę na wskaźnikach płynności statycznej, pomiar i ocena płynności finansowej dokonywana jest na podstawie relacji między aktywami obrotowymi o różnym poziomie ich płynności a zobowiązaniami krótkoterminowymi. Tym samym do oceny płynności finansowej wykorzystać można trzy główne wskaźniki, które ukazują różne stopnie płynności finansowej (Nowak, 2017: 236):

- – wskaźnik bieżącej płynności finansowej,
- – wskaźnik podwyższonej płynności finansowej,
- – wskaźnik płynności gotówkowej.

Wskaźnik bieżącej płynności finansowej (ang. *current ratio*) obrazuje relację jaka zachodzi między aktywami obrotowymi a zobowiązaniami krótkoterminowymi. Przy czym w celu zapewnienia poprawności merytorycznej wskaźnika bieżącej płynności wymagane jest, aby aktywa obrotowe skorygować o należności z tytułu dostaw i usług powyżej 12 miesięcy, z uwagi na to, że ze wzoru bilansu, według polskiego prawa bilansowego wynika, iż w ramach należności krótkoterminowych wykazywane są zarówno należności z tytułu dostaw i usług do 12 miesięcy i powyżej 12 miesięcy. Z kolei zobowiązania krótkoterminowe należy skorygować o zobowiązania z tytułu dostaw i usług powyżej 12 miesięcy oraz jednocześnie dodać rezerwy krótkoterminowe oraz krótkoterminowe rozliczenia międzyokresowe (Maślanka, 2013: 256).

$$wskaźnik\ bieżącej\ płynności = \frac{aktywa\ obrotowe}{zobowiązania\ krótkoterminowe}$$

Wskaźnik bieżącej płynności informuje o poziomie pokrycia zobowiązań krótkoterminowych aktywami obrotowymi. Literatura jasno nie wskazuje jaki poziom wskaźnika byłby najbardziej właściwy, formułowane są różne ich przedziały. Najczęściej są to następujące przedziały: 1,5–2,0 (np. Bednarski i Waśniewski, 1996: 343; Nowak, 2017: 237) lub 1,2–2,0 (no. Sierpińska i Jachna, 2004: 147). Oznacza to, że zachowanie płynności finansowej wymaga, aby aktywa obrotowe były od 1,2 do 2,0 razy większe od zobowiązań krótkoterminowych. Jednocześnie, jeżeli poziom aktywów obrotowych jest poniżej dolnych

przedziałów wskaźnika, wówczas w przedsiębiorstwie mogą mieć miejsce problemy z terminowym regulowaniem wymagalnych zobowiązań, z kolei utrzymywanie aktywów obrotowych powyżej postulowanych wartości oznacza zjawisko nadpłynności.

Wskaźnik podwyższonej płynności (ang. *quick ratio*) odzwierciedla poziom pokrycia zobowiązań krótkoterminowych aktywami obrotowymi o podwyższonym poziomie płynności. Efekt ten uzyskujemy poprzez wyeliminowanie z aktywów obrotowych najmniej płynnych jej składników, to jest zapasów oraz krótkoterminowych rozliczeń międzyokresowych. Aktywa w bilansie wykazywane są zgodnie z zasadą rosnącej płynności, w związku z czym najmniej płynnym aktywem obrotowym są zapasy. W związku z tym formuła wskaźnika podwyższonej płynności może przyjąć następującą postać:

$$wskaźnik\ płynności\ szybkiej = \frac{aktywa\ obrotowe - zapasy - krótkoterminowe\ rozliczenia\ międzyokresowe}{zobowiązania\ krótkoterminowe}$$

Wskaźnik płynności szybkiej poprzez wyłączenie m.in. zapasów z aktywów obrotowych, bardziej precyzyjnie określa zdolność przedsiębiorstwa w zakresie regulowania zobowiązań krótkoterminowych. Podobnie jak to miało miejsce w przypadku wskaźnika bieżącej płynności nie ma jednego ogólnie przyjętego wzorca, w ramach którego powinien mieścić się poziom tego wskaźnika. Najczęściej literatura przedmiotu przywołuje jako normy wskaźnika następujące jego przedziały: 1,0–1,2 (np. Gabrusewicz, 2005: 257) lub co najmniej 1,0 (np. Sierpińska i Jachna, 2004: 147).

Wskaźnik płynności gotówkowej (ang. *cash ratio*) obrazuje pokrycie zobowiązań krótkoterminowych będącymi w dyspozycji przedsiębiorstwa środkami pieniężnymi. Wskaźnik ten można interpretować jako gotowość techniczną przedsiębiorstwa do spłaty zobowiązań, gdyż o płynności finansowej nie świadczy wartość nagromadzonych środków pieniężnych, lecz zdolność do zsynchronizowania w czasie strumieni wpływów i wypływów środków pieniężnych. Jednocześnie należy zaznaczyć, że przedsiębiorstwo musi posiadać pewien rezerwuar środków pieniężnych niezbędnych w bieżącym zarządzaniu, czy w sytuacjach trudnych do przewidzenia. W stosunku do wskaźnika płynności gotówkowej często nie są podawane wartości wzorcowe wskaźnika, które byłyby punktem odniesienia dla utrzymywanych środków pieniężnych w przedsiębiorstwie. Formuła wskaźnika może przyjąć następującą postać:

$$wskaźnik\ płynności\ gotówkowej = \frac{środki\ pieniężne\ i\ inne\ aktywa\ pieniężne}{zobowiązania\ krótkoterminowe}$$

Ocena płynności finansowej w przedsiębiorstwie może być dokonana również na podstawie ujęcia dynamicznego, które powstało w odpowiedzi na krytykę ujęcia statycznego. Często argumentuje się, że normy graniczne wskaźników statycznych formułowane w literaturze są trudne do wykorzystania w praktyce gospodarczej, ze względu na ich ogólne ujęcie, które nie odzwierciedla zróżnicowania sektorowego (Białas, 2017: 9). Tym samym ujęcie dynamiczne płynności finansowej, które bazuje na wielkościach strumieniowych, pochodzących z rachunku przepływów pieniężnych, pozwala ocenić płynność finansową z innej perspektywy niż płynność statyczna. W praktyce pomiar i badanie płynności finansowej w ujęciu dynamicznym opiera się na trzech grupach wskaźników: wskaźnikach struktury przepływów pieniężnych, wskaźnikach wydajności gotówkowej oraz wskaźnikach wystarczalności gotówki (Cicirko, 2010: 103). Wskaźniki struktury przepływów pieniężnych pozwalają zobrazować jakie źródła działalności przedsiębiorstwa: działalność operacyjna, działalność inwestycyjna czy działalność finansowa odpowiadają za dopływ lub odpływ środków pieniężnych. Z kolei wskaźniki wydajności środków pieniężnych są miarą efektywności pozyskiwania środków pieniężnych z działalności operacyjnej, zaś wskaźniki wystarczalności gotówkowej pozwalają ocenić, czy środki pieniężne pochodzące z działalności operacyjnej pozwalają pokryć wydatki związane z inwestycjami w majątek trwały, działalnością finansową oraz ze spłatą różnego rodzaju zobowiązań.

3. METODYKA BADANIA

Celem artykułu jest analiza i ocena płynności finansowej w grupie spółek giełdowych cechujących się niską wartością rynkową. Płynność finansowa należy do głównych determinant kształtujących sytuację finansową przedsiębiorstwa, która znajduje swoje bezpośrednie odzwierciedlenie w jego wycenie rynkowej. Na szczególną uwagę zasługuje problem związany z utratą płynności finansowej. Tego rodzaju sytuacja postrzegana jest przez akcjonariuszy jako zjawisko negatywne, gdyż utrata płynności finansowej wiąże się z zagrożeniem, które prowadzić może do niewypłacalności, a w ostateczności do upadłości spółki. Tym samym częstą reakcją akcjonariuszy na problemy spółek z płynnością finansową jest ich sprzedaż, co przekłada się na niską wycenę rynkową. Z punktu widzenia nakreślonego celu badaniem objęto spółki notowane na Rynku Głównym GPW w Warszawie, które charakteryzowały się niską kapitalizacją. Wykorzystując informacje na temat wartości rynkowej spółek na koniec roku, pochodzących z roczników giełdowych GPW, ustalono liczbę spółek zakwalifikowanych do badania. Za spółkę o niskiej kapitalizacji przyjęto jednostkę, której wartość rynkowa była nie większa niż 20 mln złotych. Warunek ten w 2018 r. spełniło 85 spółek,

w 2019 r. było to 75 przedsiębiorstw, zaś w 2020 r. 58 spółek. Następnie, na podstawie przeglądu rocznych sprawozdań finansowych ustalono kompletność danych finansowych niezbędnych przy wyznaczeniu statycznych wskaźników płynności finansowej uwarunkowanych ich dostępnością, co pozwoliło badaniem objąć 76 spółek w 2018 r., 68 spółek w 2019 r. oraz 52 spółki w 2020 r.

Na podstawie tak wyodrębnionej grupy badawczej wyznaczono statyczne wskaźniki płynności finansowej: wskaźnik bieżącej płynności finansowej, wskaźnik płynności szybkiej oraz wskaźnik płynności gotówkowej. Uwzględniając, iż ryzyko płynności finansowej obejmuje dwa jego aspekty, a mianowicie sytuację utraty płynności finansowej oraz nadpłynności (Adamska, 2016: 128-129), zdecydowano, że w badaniu zostanie odzwierciedlony jedynie aspekt braku płynności finansowej, który przekłada się na problemy finansowe, a te z kolei w zależności od wagi tych problemów na niską wycenę rynkową. Tym samym z badania zostały wyłączone podmioty, które wykazywały nadpłynność. Biorąc pod uwagę zróżnicowanie sektorowe przyjęto arbitralnie, iż spółki, które wykazywały poziom wskaźnika bieżącej płynności powyżej 5,0 zostały wykluczone z dalszego badania. Z tego powodu z badania wyłączono w 2018 r. 11 przedsiębiorstw, w 2019 r. 5 spółek, zaś z 2020 r. 5 podmiotów.

Informacje na temat wskaźników płynności finansowej dla spółek o niskiej kapitalizacji zestawiono w dwóch częściach. W pierwszej części przedstawiono ogólne informacje, zestawione w ujęciu tabelarycznym, na temat wartości średnich wskaźników bieżącej płynności, płynności szybkiej oraz gotówkowej dla spółek o niskiej kapitalizacji, które uzupełniono o charakterystyki statystki opisowej (mediana, kwartyl 1, kawartyl 3 oraz wartości minimalne i maksymalne wyznaczonych wskaźników) za lata 2018–2020. W drugiej części badania informacje na temat kształtowania się wskaźników płynności finansowej dla spółek o niskiej kapitalizacji zobrazowano w ujęciu sektorowym. Analizowane spółki zostały przyporządkowane do pięciu sektorów, zgodnie z giełdową klasyfikacją sektorową według następującej kolejności: sektor finanse, sektor produkcja przemysłowa i budowlano-montażowa, sektor dobra konsumpcyjne, sektor handel i usługi oraz sektor technologie. Następnie w układzie pudełkowym zestawiono statyczne wskaźniki płynności dla spółek wchodzących w skład poszczególnych sektorów w latach 2018–2020. Na wykresie „pudełko" obejmuje długość przedziału, w którym znalazło się 50% obserwowanych wartości, „kreska" wewnątrz prostokąta określa medianę, tj. wartość środkową, zaś „wąsy górne" oraz „wąsy dolne" to przedziały wskaźnika obejmujące wartości wskaźnika, na którym usytuowano jego minimalne i maksymalne wartości.

4. WYNIKI BADAŃ

Z zestawienia tabelarycznego na temat kształtowania się wskaźników płynności statycznej w grupie spółek o niskiej kapitalizacji rynkowej, których wartość rynkowa była mniejsza niż 20 mln złotych w latach 2018–2020 wynikało, że duża grupa przedsiębiorstw wykazywała problemy z utrzymaniem właściwej płynności finansowej.

Wskaźnik bieżącej płynności finansowej, który stanowił podstawę dla oceny zdolności płatniczej przedsiębiorstwa, powinien według różnych autorów kształtować się na poziomie nie mniej niż 1,2. Posiadanie płynnych aktywów, które przeważałyby nad bieżącymi zobowiązaniami jest niezbędne do tego, aby zapewnić przedsiębiorstwu bezproblemowe regulowanie wymagalnych zobowiązań, bądź też, aby zminimalizować ryzyko utraty tej zdolności. Z analizy wskaźnika bieżącej płynności w grupie spółek o niskiej kapitalizacji rynkowej wynikało, że w poszczególnych latach ponad 50% spółek wykazywało poziom płynności poniżej dolnej granicy wskaźnika. Z grupy 76 spółek o niskiej kapitalizacji, notowanych na koniec 2018 r., 38 spółek utrzymywało aktywa bieżące, które pokrywały w stopniu nie większym niż 95% zobowiązanie bieżące. Sytuacja taka, w sposób wyraźny pokazuje, że spółki o niskiej kapitalizacji w 2018 r. dysponowały niewystarczającymi aktywami bieżącymi, które pozwalałyby na bezproblemowe regulowanie zobowiązań krótkoterminowych. W roku 2019 z poziomu mediany wskaźnika bieżącej płynności wynikało, że z grupy 68 przedsiębiorstw 34 wykazywało poziom wskaźnika poniżej 0,84, zaś w 2020 r. 26 spółek wykazywało wskaźnik bieżącej płynności poniżej poziomu 1,07. Z kolei z rozkładu kwartyla 1 wynikało, że 25% jednostek w badanej grupie przedsiębiorstw w 2018 r. wykazywało poziom bieżącej płynności, który był mniejszy lub równy od 0,41, w 2019 r. 0,36, zaś w 2020 r. 0,31. Na podstawie tych obserwacji można stwierdzić, iż spółki o niskiej wartości rynkowej utrzymywały niskie poziomy wskaźników bieżącej płynności. Ponadto stopień pokrycia zobowiązań bieżących aktywami obrotowymi w wielu przypadkach wskazywał na problemy z jej utrzymaniem.

Z analizy wskaźnika płynności szybkiej, który wskazuje na pokrycie zobowiązań krótkoterminowych aktywami bieżącymi bez uwzględnienia m.in. najmniej płynnego składnika jakim są zapasy wynika, że spółki o niskiej wartość rynkowej utrzymują niski poziom płynnych aktywów, co może być źródłem ich problemów z płynnością finansową. Z norm wskaźnika wynika, że powinien być on nie mniejszy niż 1. Z przedstawionych wyników badań (tabela nr 1) wynika, że 50% badanych spółek w 2018 r. wykazywało poziom wskaźnika poniżej 0,55. W kolejnych dwóch latach analizy wartość wskaźnika nie przekraczała 0,68 (w 2019 r.) i 0,80 (w 2020 r.). O wyraźnych problemach spółek o niskiej kapitalizacji informował kwartyl 1 wskaźnika płynności szybkiej. W latach 2018–2020

znajdował się on w przedziale 0,19 – 0,27, co oznaczało, że 25% badanych przedsiębiorstw utrzymywało poziom płynnych aktywów, które pokrywały krótkoterminowe zobowiązania przedsiębiorstw od 19% do 27%. Z zachowania wskaźnika płynności szybkiej w czasie, m.in. na podstawie wartości średniej wskaźnika i mediany wynika, że w latach 2018–2020 płynność finansowa spółek o niskiej wartości rynkowej uległa nieznacznej poprawie, jednakże nie zmienia to ogólnej oceny, iż analizowane przedsiębiorstwa utrzymywały niskie pokrycie zobowiązań krótkoterminowych płynnymi składnikami wchodzącymi w zakres aktywów obrotowych.

Tabela 1. Wskaźniki płynności statycznej spółek giełdowych Rynku Głównego GPW o niskiej kapitalizacji wraz ze statystykami opisowymi w latach 2018–2020
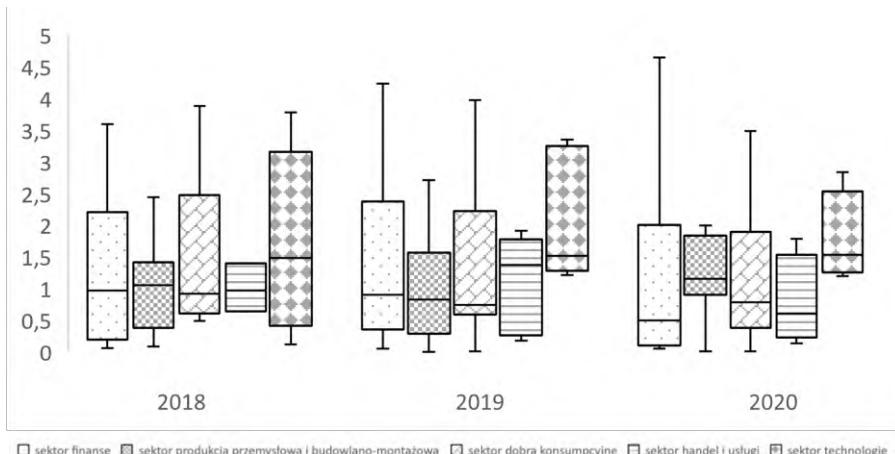
Wskaźnik	Wskaźnik bieżącej płynności	Wskaźnik płynności szybkiej	Wskaźnik płynności gotówkowej
2018			
Średnia	1,15	0,92	0,17
Mediana	0,95	0,55	0,05
Kwartyl 1	0,41	0,19	0,01
Kwartyl 3	1,47	1,26	0,16
Zakres (min; max)	0,04 – 3,89	0,03 – 3,57	0,00 – 1,55
2019			
Średnia	1,21	1,01	0,23
Mediana	0,87	0,68	0,06
Kwartyl 1	0,36	0,27	0,02
Kwartyl 3	1,76	1,46	0,22
Zakres (min; max)	0,00 – 4,24	0,00 – 4,24	0,00 – 2,24
2020			
Średnia	1,25	1,03	0,27
Mediana	1,07	0,80	0,11
Kwartyl 1	0,31	0,23	0,01
Kwartyl 3	1,81	1,40	0,37
Zakres (min; max)	0,01 – 4,66	0,01 – 4,66	0,00 – 2,18

Źródło: opracowanie własne na danych z bazy Notoria Serwis S.A.

Podobne wnioski można sformułować na podstawie obserwacji wskaźnika płynności gotówkowej. Zarówno mediana, rozkład kwartyli 1 i 3 wskaźnika płynności gotówkowej informuje o niskim poziomie utrzymywanej gotówki, która mogłaby być wykorzystana w sytuacji konieczności natychmiastowego uregulowania zobowiązań.

Na podstawie zobrazowanych statystyk opisowych wskaźników płynności finansowej (tabela nr 1) wynika, że spółkom o niskiej kapitalizacji towarzyszyły problemy z płynnością finansową, które przekładały się na wysokie ryzyko ich upadłości oraz niską wycenę rynkową.

Spółki o niskiej kapitalizacji notowane na Rynku Głównym GPW w Warszawie, zgodnie z giełdową klasyfikacją sektorową, reprezentowały pięć sektorów, które na wykresach nr 1–3 zostały przedstawione w następującej kolejności: sektor finanse, sektor produkcja przemysłowa i budowlano-montażowa, sektor dobra konsumpcyjne, sektor handel i usługi oraz sektor technologie.
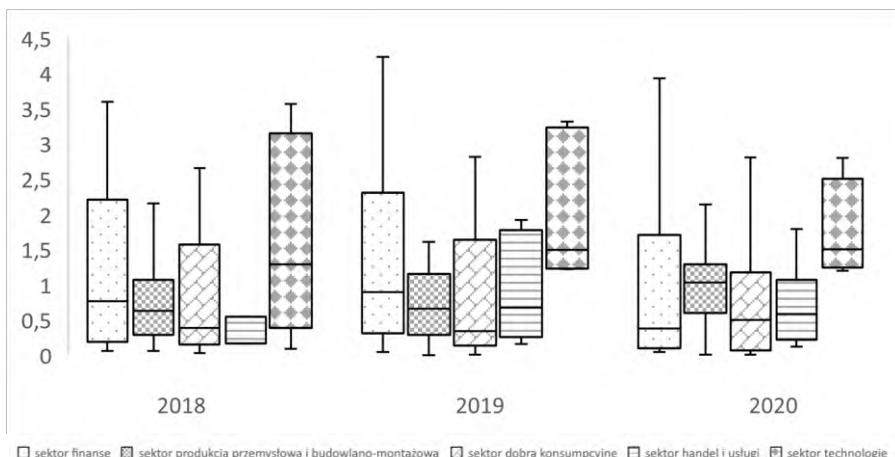
Wykres 1. Wskaźnik bieżącej płynności w ujęciu sektorowym dla spółek giełdowych Rynku Głównego GPW o niskiej kapitalizacji w latach 2018–2020

Źródło: opracowanie własne na podstawie bazy danych Notoria Serwis S.A.

Przedstawione wyniki badań (wykresy nr 1–3) pokazują znaczne zróżnicowanie sektorowe wskaźników płynności finansowej występujące w grupie badanych przedsiębiorstw. Z analizy wskaźnika bieżącej płynności w ujęciu sektorowym (wykres nr 1) oraz rozpiętości kwartyla 1 i 3 wynika, że najniższe poziomy wskaźnika utrzymywane były w sektorze produkcja przemysłowa i budowlano-montażowa oraz handel i usługi, co wskazywałoby na największe problemy z zachowaniem płynności finansowej dla przedsiębiorstw zaklasyfikowanych do tych

sektorów. Najwyższe poziomy wskaźnika odnotowano w sektorze technologie. Podobne wnioski można sformułować na podstawie mediany wskaźnika bieżącej płynności. Wśród sektorów, w których mediana wskaźnika bieżącej płynności była najniższa (poniżej poziomu 1) w 2018 r. należał sektor dobra konsumpcyjne, sektor handel i usługi oraz sektor finanse, w 2019 r. sektor dobra konsumpcyjne, sektor produkcja przemysłowa i budowlano-montażowa oraz sektor finanse, a w 2020 r. w grupie 50% spółek, którego poziom wskaźnika bieżącej płynności był poniżej 1 należał sektor finanse, sektor handel i usługi oraz sektor dobra konsumpcyjne.
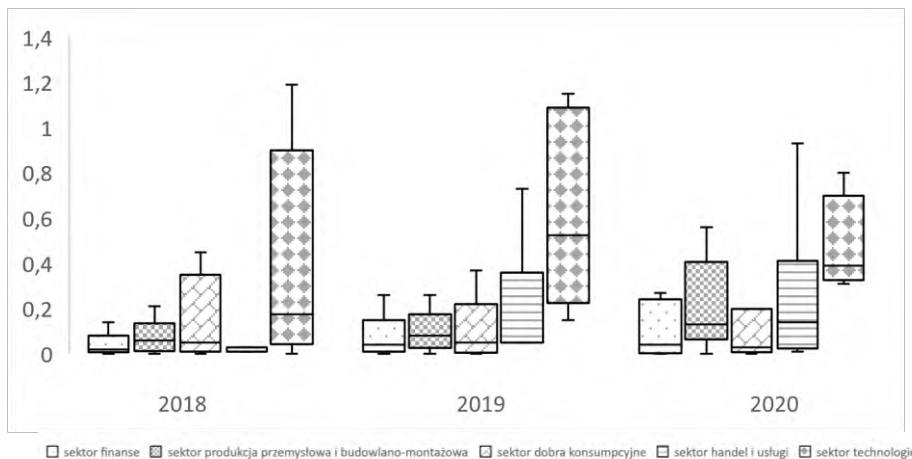
Z analizy wskaźnika płynności szybkiej w ujęciu sektorowym (wykres nr 2) wynika, że spółki reprezentujące sektor technologie wykazywały najwyższy poziom płynności finansowej w porównaniu z pozostałymi sektorami w całym badanym okresie. Z kolei najniższy poziom płynności finansowej, mierzony rozpiętością kwartyla 1 i 3, dla analizowanych spółek o niskiej kapitalizacji rynkowej w 2018 r. zaobserwowano w sektorze handel i usługi oraz sektorze produkcja przemysłowa i budowlano-montażowa, w 2019 r. w sektorze produkcja przemysłowa i budowlano-montażowej, a w 2020 r. w sektorze handel i usługi, sektorze dobra konsumpcyjne oraz sektorze produkcja przemysłowa i budowlano-montażowa.

Wykres 2. Wskaźnik płynności szybkiej w ujęciu sektorowym dla spółek giełdowych Rynku Głównego GPW o niskiej kapitalizacji w latach 2018–2020

Źródło: opracowanie własne na podstawie bazy danych Notoria Serwis S.A.

Z analizy wskaźnika płynności gotówkowej w ujęciu sektorowym (wykres nr 3) wynika, że spółki należące do sektora technologie utrzymywały najwyższy poziom gotówki, która mógłby być wykorzystana do natychmiastowego uregulowania zobowiązań. Z kolei najniższy poziom zgromadzonej gotówki towarzyszył działalności przedsiębiorstw skoncentrowanych głównie w ramach sektora finanse, sektora produkcja przemysłowa i budowlano-montażowa oraz sektora dobra konsumpcyjne.


Wykres 3. Wskaźnik płynności gotówkowej w ujęciu sektorowym dla spółek giełdowych Rynku Głównego GPW o niskiej kapitalizacji w latach 2018–2020

Źródło: opracowanie własne na podstawie bazy danych Notoria Serwis S.A.

PODSUMOWANIE

Na podstawie przeprowadzonych badań można zaobserwować, iż spółkom o niskiej kapitalizacji rynkowej towarzyszą problemy z zachowaniem płynności finansowej. Płynność finansowa stanowi jeden z kluczowych obszarów oceny kondycji finansowej, który warunkuje jego siłę ekonomiczną. Jednocześnie kondycja finansowa przedsiębiorstwa poddawana jest nieustannej ocenie na rynku kapitałowym, czego wynikiem jest określona wartość rynkowa przedsiębiorstwa. Akcjonariusze reagują na pogarszającą się kondycję finansową przedsiębiorstwa wyprzedażą aktywów, co przekłada się na malejącą ich wycenę rynkową. Podmioty notowane na GPW w Warszawie, które charakteryzują się bardzo niską kapitalizacją często wykazują poziomy wskaźników płynności finansowej, które informują o poważnych problemach lub braku płynności finansowej. Problemy

z płynnością finansową przedsiębiorstw oznaczają rosnące ryzyko ich upadłości, a jednocześnie niską wycenę rynkową na rynku kapitałowym.

Analiza płynności finansowej w ujęciu sektorowym wykazała, że spółki o niskiej wartości rynkowej charakteryzowały się zróżnicowaną płynnością finansową. Ujęcie sektorowe pozwala wskazać, które spółki z racji ich przynależności do określonej gałęzi w gospodarce, charakteryzują się lepszą lub gorszą płynnością finansową. Z przeprowadzonej analizy wynika, że na tle analizowanych spółek o niskiej kapitalizacji rynkowej, przedsiębiorstwa należące do sektora technologie utrzymywały wyższy poziom płynności finansowej niż spółki należące do pozostałych analizowanych sektorów.

BIBLIOGRAFIA

Adamska A. (2016), *Ryzyko płynności finansowej przedsiębiorstwa i jego raportowanie*, (w:) Przewrotność współczesnych finansów, pod red. P. Deca, Oficyna Wydawnicza Szkoła Główna Handlowa, Warszawa.

Bardia S.C. (2004), *Liquidity Management: A Case Study of Steel Authority of India Ltd*. Management Accountant Calcutta. ICWAI, Kolkata.

Bednarski L., Waśniewski T. red. (1996), *Analiza finansowa w zarządzaniu przedsiębiorstwem*, Fundacja Rozwoju Rachunkowości w Polsce, Warszawa.

Białas K. (2017), *Rola dynamicznych wskaźników płynności finansowej w zarządzaniu przedsiębiorstwem,* Finanse i Prawo Finansowe, Vol. 1, tom 13, *https://doi.org/10.18778/2391-6478.1.13.02.*

Bolek M., Wiliński W. (2012), *The influence of liquidity on profitability of Polish construction sector companies,* e-Finanse: Financial Internet Quarterly, Vol. 8, Issue 1.

Cicirko T. red. (2010), *Podstawy zarządzania płynnością finansową przedsiębiorstwa,* Oficyna Wydawnicza Szkoła Główna Handlowa w Warszawie, Warszawa.

Eljelly A. M. A. (2004), *Liquidity - profitability tradeoff: An empirical investigation in an emerging market,* International Journal of Commerce and Management, Vol. 14, No. 2, *https://doi.org/10.1108/10569210480000179.*

Ehiedu V. C. (2014), *The impact of liquidity on profitability of some selected companies: The financial statement analysis (FSA) approach,* Research Journal of Finance and Accounting, Vol.5, No.5.

Gabrusewicz W. (2005), *Podstawy analizy finansowej,* Polskie Wydawnictwo Ekonomiczne, Warszawa.

Irawan A., Faturohman T. (2015), *A Study Of Liquidity And Profitability Relationship: Evidence From Indonesian Capital Market*, International Journal of Management and Applied Science, Vol. 1, Issue 9.

Kuciński A. (2018), *Statyczna ocena płynności finansowej przedsiębiorstwa – ujęcie teoretyczne. Research on Enterprise in Modern Economy – theory and practice,* Quarterly Journal, No. 2 (25), *https://doi.org/10.19253/reme.201.02.007.*

Kusak A. (2006), *Płynność finansowa: analiza i sterowanie*, Wydawnictwo Naukowe Wydziału Zarządzania Uniwersytetu Warszawskiego, Warszawa.

Łojek, P. (2020), *The relationship between profitability and financial liquidity among the importers of best-selling brands of new cars in Poland,* Central European Economic Journal, Vol.7, No.54, *https://doi.org/10.2478/ceej-2020-0011.*

Maślanka T., (2019), *Płynność finansowa determinantą zdolności kontynuacji działalności przedsiębiorstwa,* Wydawnictwo CeDeWu, Warszawa.

Maślanka T. (2013), *Zakłócenia metodologiczne w ocenie bieżącej płynności finansowej polskich przedsiębiorstw,* Zarządzanie i Finanse, Vol. 2, Issue 2.

Niresh J. (2012), *Trade-Off between Liquidity & Profitability: A Study of Selected Manufacturing Firms in Srilanka*, International Refereed Research Journal, Vol. 3, No. 4.

Nowak E. (2017), *Analiza sprawozdań finansowych,* Wydawnictwo PWE, Warszawa.

Peel M. J., Wilson N., Howorth C. (2000), *Late payment and credit management in the small firm sector: some empirical evidence*, International Small Business Journal: Researching Entrepreneurship Vol.18, No.2, *https://doi.org/10.1177/026 6242600182001.*

Saravanan S. (2011*), Empirical Research on Relationship between Working Capital and Profitability - A Case Study of Pricot Meridian Ltd, Coimbatore*, International Journal of Marketing and Management Research, Vol. 2, Issue 10.

Shim J. K., Siegel J. G. red. (2000), *Financial Management*, Publisher Barron's.,

Sierpińska M., Jachna T. (2004), *Ocena przedsiębiorstwa według standardów światowych*, Wydawnictwo Naukowe PWN, Warszawa.

Śnieżek E. (1999), *Przepływy pieniężne ex post ex ante*, Fundacja Rozwoju Rachunkowości w Polsce, Warszawa.

Śnieżek E., Wiatr M. (2015), *Przepływy pieniężne,* Wolters Kluwer, Warszawa.

Walczak M. red., (2007), *Analiza finansowa w zarządzaniu współczesnym przedsiębiorstwem,* Wydawnictwo Difin, Warszawa.

Wędzki D. (2019), *Analiza wskaźnikowa sprawozdania finansowego według polskiego prawa bilansowego,* Wydawnictwo Nieoczywiste, Łódź.

Wędzki D. (2003), *Strategie płynności finansowej przedsiębiorstwa – przepływy pieniężne a wartość dla właścicieli*, Wydawnictwo Oficyna Ekonomiczna, Kraków.

Zimon G. (2020), *Financial Liquidity Management Strategies in Polish Energy Companies*, International Journal of Energy Economics and Policy, Vol.10, No.3, *https://doi.org/10.32479/ijeep.9150.*

Zuba M. (2009), *Związek rentowności i płynności finansowej przedsiębiorstwa,* Zeszyty Naukowe WSEI w Lublinie, seria Ekonomia.

ANALIZA I OCENA PŁYNNOŚCI FINANSOWEJ SPÓŁEK O NISKIEJ WARTOŚCI RYNKOWEJ NOTOWANYCH NA GPW W WARSZAWIE

Streszczenie

Cel: Celem niniejszego artykułu jest analiza i ocena płynności finansowej spółek giełdowych o niskiej kapitalizacji, których wartość rynkowa nie przekraczała 20 mln złotych. W opracowaniu za hipotezę przyjęto to, że spółki o niskiej wartości rynkowej notowane

na Rynku Głównym GPW w Warszawie utrzymują niskie poziomy wskaźników płynności finansowej, które przekładają się na negatywną ocenę płynności finansowej.

Metodyka/podejście badawcze: Badaniem objęto spółki notowane na Rynku Głównym GPW w Warszawie, których wartość rynkowa była mniejsza niż 20 mln złotych. Badaniem objęto lata 2018–2020. W badaniu wykorzystano klasyczne narzędzia stosowane przy ewaluacji płynności finansowej przedsiębiorstw: wskaźnik bieżącej płynności, wskaźnik płynności szybkiej, wskaźnik płynności gotówkowej oraz narzędzia statystyki opisowej.

Wyniki: Na podstawie przeprowadzonych badań ustalono, że spółki o małej kapitalizacji rynkowej notowane na Rynku Głównym GPW w Warszawie utrzymują wskaźniki płynności finansowej, które są często poniżej teoretycznych wartości. Oznacza to, że działalności spółek, których wartość rynkowa była mniejsza niż 20 mln złotych towarzyszy podwyższone ryzyko utraty wypłacalności, co przekłada się na gorszą ocenę sytuacji finansowej przedsiębiorstw oraz ich niską wycenę rynkową. Ponadto na podstawie przeprowadzonych badań wykazano duże zróżnicowanie płynności finansowej w ujęciu sektorowym przedsiębiorstw.

Słowa kluczowe: płynność finansowa, statyczne wskaźniki płynności finansowej, kapitalizacja, spółka, Giełda Papierów Wartościowych w Warszawie.

Kody JEL: G39, M21.

CIVIL LIABILITY INSURANCE FOR USERS OF PERSONAL TRANSPORT EQUIPMENT (PTE) AS AN ELEMENT OF PROTECTION FOR SHARING ECONOMY PARTICIPANTS

Iwona Laskowska[*] **Stanisław Wieteska**[**] **Sławomir Juszczyk**[***]

CIVIL LIABILITY INSURANCE FOR USERS OF PERSONAL TRANSPORT EQUIPMENT (PTE) AS AN ELEMENT OF PROTECTION FOR SHARING ECONOMY PARTICIPANTS

Abstract

The purpose of the article/hypothesis: In recent years, there has been a noticeable and dynamic development of micromobile equipment intended for the transport of people. These types of vehicles are known as personal transport equipment (PTE). Like any road vehicle, PTE can also cause numerous accidents and collisions. A natural consequence of damage related to the use of PTE is posing the question about securing the interests of the aggrieved parties. Considering the above, the aim of this paper is to present the role of civil liability insurance for users of personal transport equipment in the context of claims related to the use of this type of vehicles and to provide a brief description of insurance products available on the market. The paper presents the following thesis: although the regulations do not oblige PTE users to have a civil liability insurance policy, a wide catalogue of adverse events related to the PTE use requires the popularisation of insurance protection for users of this type of vehicles. Such insurance protection should cover: equipment users, renters, sellers, and operators, as well as households. **Methodology:** The paper is theoretical and analytical in its nature. In addition to the review of the available literature, the existing offer of voluntary insurance for PTE users is also analysed. **Results of the research:** Insurance addressed to users of personal transport equipment is a relatively new product on the market and still few insurance companies have it in their offer. PTE users can utilise their civil liability insurance often being part of their home insurance in their private life, which offers protection in the event of damage to third parties. One of the solutions leading to the dissemination of insurance protection could be a proposal of insurance tailored to the type of risk and short-term use associated with this kind of equipment (e.g. travel-type insurance). **Keywords:** insurance, sharing economy, civil liability, personal transport equipment, risk, micromobility. **JEL Class:** G22, G20, G52.

[*] Dr hab., prof. UŁ, Faculty of Economics and Sociology, Department of Insurance, University of Lodz, e-mail: iwona.laskowska@uni.lodz.pl, https://orcid.org/0000-0002-1657-5541.
[**] Prof. dr hab., Jan Kochanowski University in Kielce Branch in Piotrków Trybunalski, e-mail: s.wieteska@ujk.edu.pl, https://orcid.org/0000-0002-6578-9861
[***] Prof. dr hab., Warsaw University of Life Sciences Institute of Economics and Finance e-mail: slawomir.juszczyk@sggw.edu.pl, https://orcid.org/0000-0003-3790-6247.

INTRODUCTION

The systematically increasing number of motor vehicles in cities and rural areas contributes to many unfavorable phenomena, especially in city centers, where congestion (traffic jams) and difficulties in getting to destinations arise. Communication difficulties and ecological considerations (Gatzert and Oster-rieder, 2020) argue for supplementing traditional means of transport with alternative solutions. In recent years, there has been a noticeable dynamic development of micromobile equipment, such as electric scooters, electric skateboards and other equipment of similar design, equipped with an electric drive, intended for transporting people. These types of vehicles are referred to as personal transport equipment (PTE). They tend to be more environmentally friendly and take up less road space (Insurance Europe, 2019). The growing interest in micromobile vehicles is also influenced by the dissemination of the concept of the sharing economy, which is already contributing to changing many business models (Curtis, 2021; Laukkanen and Tura, 2020; Banaszek, 2016). The sharing economy is seen as a way to support sustainable consumption (Gupta and Chauhan, 2021).

Although personal transport equipment are becoming more and more available and popular, mainly among the inhabitants of large urban agglomerations, it should be emphasized that micromobile vehicles are not competition for other means of transport, but their complement, most often used to move on the first or last stage of the journey (Janczewski, 2019).

However, the use of personal transport equipment raises serious concerns regarding the safety of road users. Like any road vehicle, also PTE can cause numerous accidents and collisions. The regulations contained in the draft Act of March 30, 2021 amending the Act - Road Traffic Law and some other acts serve to improve safety related to the use of personal transport equipment. These proposals specify the definition of personal transport equipment, specify technical requirements and rules for their movement on the roads. The above issues are currently not yet regulated by law.

A natural consequence of the loss ratio related to the use of PTE is to raise the question of securing the interests of the injured parties (Insurance Europe, 2019). PTE users and operators need appropriate protection tailored to the risk involved. From a business perspective, the emergence of new forms of risk creates potential for the development of insurance addressed to individual users and companies. The issue of insurance of platforms and participants of the sharing economy as a major challenge that the insurance industry will face over the next decade is addressed in many studies (Gatzert and Osterrieder, 2020). In Poland, this problem is also noticed and considered increasingly important (PIU[1], 2019).

---

[1] Polish Insurance Association.

Bearing the above in mind, the aim of this study is to present important issues regarding third party liability insurance for users of personal transport equipment in the context of the loss ratio related to the use of such vehicles. The study presents basic information on PTEs, assesses the risk, and then presents an attempt to formulate a general framework for third party liability insurance for PTE users, along with a brief description of the insurance products available on the market.

The study was based on a review of the literature on the subject, legal acts and offers of selected insurance companies.

1. GENERAL CHARACTERISTICS OF PTE

The issue of the use of personal transport equipment is part of the widely discussed issue of electromobility, considered one of the key factors shaping the modern transport system (Gajewski et al., 2019). In particular, there is talk of micromobility as its element. Personal transport equipment (PTE) are used in many countries around the world, including Western Europe and North America. Since 2018, a rapid quantitative and qualitative development of these equipment has also been observed in Poland. Nevertheless, it has not been possible to develop a uniform definition of PTE so far. The International Light Electric Vehicles Organization (LEVO) defines a PTE as an electric and hybrid personal transport device typically weighing up to 100 kg. Examples of equipment of this type include: electric bicycle, electric scooter, segway, hoverboard/monowheel, electric skateboard, vehicle for the disabled, electric scooter (PIU, 2019). In the draft amendment to the Act - Road Traffic Law and some other acts, which is to regulate the legal situation of personal transport equipment, PTE is understood as *"an electrically driven vehicle, without a seat and pedals, structurally designed to be moved only by the driver on this vehicle (e.g. electric skateboard, electric self-levelling device"*[2].

The most popular type of micromobile equipment are e-scooters[3], hoverboards, segways, used, among others, by young people, airport employees, postmen, city policemen, hypermarket employees, golf course users, tourists visiting historic parts of cities. They are also useful in recreational areas. The basic advantages of PTE can be summarized as follows:
- allow you to move around traffic jams quite quickly;
- they are quiet, they do not emit exhaust fumes;

---

[2] www1.

[3] It is worth noting that according to the provisions contained in the aforementioned amendment, the electric scooter will constitute a separate category of vehicles.

- they reduce the costs of public transport (tickets, ticket machines are not needed, their direct control is not required);
- it is possible to place them in the trunk of a car, which can be useful for the last leg of the final journey;
- they do not require parking spaces corresponding to the area of passenger cars;
- they are competitive to taxi corporations;
- they are not subject to approval, identification numbers, driving licenses;
- may be parked in places that do not interfere with pedestrian and road traffic at any time;
- they can be rented.

In turn, the disadvantages of using PTE include:

- need to recharge after driving several kilometers;
- potential for electric shock during misuse or recharging due to generally poor insulation;
- risk of a short-circuit of the installation, which may cause a fire;
- the need for regular maintenance, especially of brakes and audible signals.

A separate problem is the short-term life of this type of device. With the development of PTE, the problem of their recycling is growing (Śmietana and Otto, 2019). Local and municipal authorities in various cities in Poland react differently to the functioning of PTEs (Otto, 2019).

2. PTE MARKET IN POLAND AS AN ELEMENT OF THE SHARING ECONOMY

The development of the micromobile vehicle market is related to the electrification of the transport sector and the growing interest in the concept of sharing economy, based on the assumption of better use of resources through sharing, transfer, making available, exchanging or sharing products (Knauf, 2018). The main goal of the sharing economy is to shift from ownership to access (Banaszek, 2016). The sharing economy is considered an important direction in thinking about the future of cities (Koźlak, 2020), it is the subject of numerous scientific studies (e.g. Belk, 2014; Kathan et. al.,2016; Habibi et al., 2017).

The subject of the sharing transaction is an open catalog that dynamically changes and adapts to human needs. One of its areas is mobility (Novikova, 2017; Le Vine and Polak, 2015), of which electromobility is a part (Shaheen and Chan, 2016).

For the dynamic development of personal transport equipment, which are often also referred to as shared vehicles contributed to the popularization of the electric drive and the development of sharing platforms. Changes in the number of selected shared vehicles before the COVID-19 pandemic are presented in Chart 1.
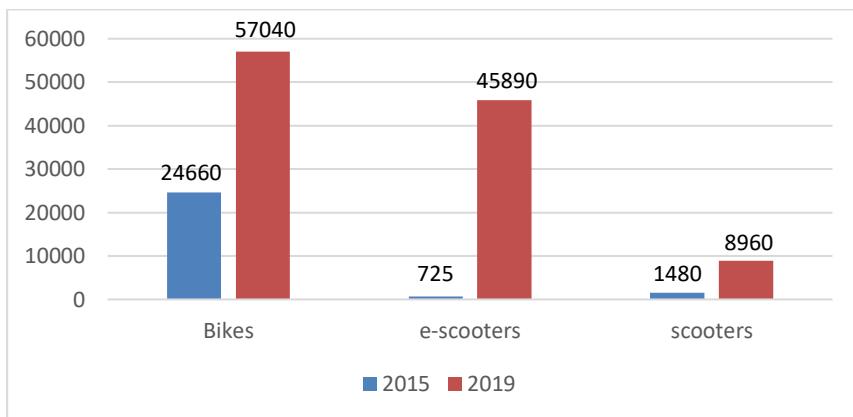
Chart 1. Number of selected shared vehicles before the COVID-19 pandemic.

Source: own study based on Duszczyk, 2019a.

According to the presented data, the market of shared vehicles in Poland was characterized by high dynamics, especially in the field of e-scooters and scooters. Bicycles, however, remained the most popular form. The value of the market for shared scooters and scooters in relation to the market for shared bicycles is presented in Table 1.

Table 1. General characteristics of the PTE market in Poland before the COVID-19 pandemic (as of 30.06.2019)

Specification	Number of cities	Number of potential users (million people)	Number of registered users (thousands)	Market value (million PLN)
Bikes	67	11,1	2200	92,9
e-scooters	9	9,8	220	57,2
scooters	18	7,6	310	15,7

Source: Duszczyk, 2019a.

The growing popularity of city bikes in Poland allowed us to assume that we should also expect an increase in the popularity of e-scooter rentals, as well as

other PTEs. The quantity of e-scooters in the largest cities in Poland is presented in Table 2.

Table 2. The quantity of e-scooters in Poland before the COVID-19 pandemic (2019)

Cities	Number of vehicles	Number of operators
Warszawa	4573	5
Wrocław	583	3
Poznań	1211	2
Trójmiasto	660	3
Kraków	137	2
Łódź	49	1

Source: Duszczyk, 2019b.

Companies such as Uber Movement expanded their offer with application services for e-scooters (Duszczyk, 2019d). The research conducted among PTE network operators before the pandemic showed that their aspirations are as follows (Duszczyk, 2019c):
- expanding the current fleet (86% of respondents),
- expanding the fleet with new types of vehicles (85% of respondents),
- entering other cities (64% of respondents),
- replacement of the fleet with a new one (46% of respondents).

The COVID-19 pandemic has had inevitable consequences for every sphere of economic activity, resulting from a number of restrictions introduced. In the case of micromobility, the restrictions concerned the demand side (numerous restrictions and low mobility of residents) and the supply side (the pandemic limited the development of suppliers) (Jędrzejewski, 2020). Despite the restrictions in force, according to research conducted in 2020, the pandemic has not managed to stop the development of the shared vehicle industry, especially e-scooters. Both the number of vehicles and the number of towns where they are available has increased. These vehicles move not only in the largest Polish cities, but often also in medium-sized and smaller cities, often in tourist destinations. The supply of shared e-scooters in 2020 increased significantly and accounted for 95 percent of the supply of shared bicycles. Also, the "per minute" electric scooter market in 2020 was stable (Jędrzejewski, 2020).

It follows that PTE vehicles permanently fit into the transport systems of cities. It is worth mentioning that the Association of Users of Personal Transport Devices was established, focusing on their dissemination and supporting users of these devices. The dynamics of changes in the use of PTEs will probably be influenced by the creation of the Low-Emission Transport Fund, whose tasks

include financing projects related to the development of electromobility. From a business perspective, it is an area that can drive economic development through production, sales credits, safe use courses and insurance.

3. POTENTIAL HAZARDS ASSOCIATED WITH THE USE OF PTE

Like any vehicle on the road, PTEs also pose numerous risks. Pedestrians on sidewalks and pedestrian crossings complain about these vehicles. The fast and quiet ride of the devices surprises the pedestrian, which leads to accidents, damage to property and serious hit-and-runs of children led by adults. There are also collisions with people driving animals. Driving fast is a potential possibility of hitting lamps, poles, advertisements, road signs, benches and other devices on the sidewalks.

In the case of congested streets, moving on PTE among other vehicles may cause scratches to the bodywork, damage to mirrors, car bumpers, etc. Uncontrolled road entries may result in collisions with motor vehicles. It is a risk to drive a PTE in bad weather conditions, e.g. fog, storms, icy roads, torrential rain, snow, frost, strong winds. The use of PTE in such circumstances poses a threat not only to the user himself, but also to third parties. In addition, unevenness on the pavement, curbs, potholes can cause accidents. The use of PTE at night poses an additional threat to people, their property and health.

A very serious threat is fast, reckless driving, in particular the use of PTE by hyperactive youth or those left without the care of parents and guardians. Many controversies are caused by the use of PTE under the influence of alcohol and drugs (Szymaniak, 2019). Such cases are a potential threat and should be severely punished.

The risk of a collision is increased by facts such as accelerated driving on bicycle paths with a large incline. Also, driving in compact buildings (often historic buildings), narrow streets and sidewalks (e.g. in Krakow) can contribute to a higher accident rate. Very often in city centers and parks there are separate zones only for pedestrian traffic. The use of these zones by PTE users poses an additional risk of collision.

In practice, the most important events involving e-scooters are: accidents involving only scooters and third parties (70%), collision with road infrastructure (11%) and collisions with other vehicles (28%). It is worth noting that victims of collisions with speeding e-scooters are brought to hospitals all over Poland every day (Śmietana, 2019). The most common injuries resulting from accidents on e-scooters are: bone fractures (40%), head injuries (32%), cuts and sprains (28%) (Duszczyk, 2019b).

The issue of parking e-scooters is controversial (Łukaszewicz, 2019a and 2019b). In many cities, we encounter e-scooters abandoned on sidewalks, bicycle paths, blocking pedestrian traffic. Abandoned PTEs cause barriers for the blind as well as difficulties for people with disabilities.

An important aspect of the issue is that poor technical condition of the PTE, deficiencies in brakes, lighting, other identification signs can cause accidents. Doubts arise when using these devices by elderly drivers. It is worth emphasizing that these devices are relatively expensive, hence the cases of their theft are also an important problem.

In Poland, as in most other EU countries, the person driving a personal transport device bears civil liability under general rules for damage caused (Skibińska, 2019). It should be borne in mind that manufacturers and rental companies may also be liable, as the borrower is responsible for the technical condition of the micro-vehicle.

Analyzing this issue, it can be concluded that micromobile vehicles are gaining more and more popularity. Speed, recklessness, lack of separate driving lanes may result in damage, property and financial losses. A natural consequence of the growing loss ratio by PTEs is the question of securing the interests of the injured parties. Research conducted in 2019 using the method of direct interviews in the homes of respondents showed that approx. 45% of respondents believe that drivers of e-vehicles should have voluntary third party liability insurance[4].

4. OUTLINE OF GENERAL ASSUMPTIONS OF CIVIL LIABILITY INSURANCE OF PTE USERS

Although the government's bill does not regulate the insurance of PTE users, the considerations so far indicate that there is a need to cover them with insurance. Such insurance should cover the third party liability of users, including people using these devices, regardless of age and gender, and rentals from equipment operators. The subject of insurance should be the civil liability of PTE users for damage caused in connection with their use, regardless of place and time. We are talking here about damages caused by the movement of these devices and their parking in an organized and unorganized manner. This may also apply to damages caused unintentionally, accidentally, fortuitously or resulting from an error in their use. Civil liability for using PTEs in extreme weather conditions should be considered. The scope of insurance cover should exclude damage caused by willful misconduct, related to the use of PTE under the influence of alcohol or drugs. Damage caused as a result of criminal activity should also be excluded from civil liability.

---

[4] Użytkownicy e-hulajnóg gotowi na OC, „Gazeta Ubezpieczeniowa", 22-28 lipca 2019 r.

The freedom to enter into an insurance relationship remains an open question. The introduction of compulsory insurance similar to motor third party liability insurance is a costly undertaking and, what is more, it requires changes in many legal provisions. Each new compulsory third-party liability insurance introduced by the legislator should, inter alia, guarantee the effectiveness of the obligation fulfillment control. With no obligation to register PTE devices, it is impossible to enforce the obligation to insure (Orlicki, 2019).

A reasonable solution at the current stage of PTE development could be the popularization of voluntary insurance dedicated to PTE users or third-party liability insurance for owners of these devices, as an additional option in various insurance products, providing protection against the financial consequences of damage caused to third parties by the insured and his immediate family, as well as by persons with whom the policyholder maintains a household.

The limit of the insurance company's financial liability is determined by the guarantee sum. It is the amount specified in monetary units by the insurance company or by agreement between the insurance company and the policyholder. The insurance company is obliged to inform the aggrieved party or the beneficiary about the possibility of exhaustion of the guaranteed sum specified in the contract if the total amount of claims, benefits and the created provision exceeds 80% of its amount. The amount of the guarantee sum is a debatable value in the initial phase of introducing insurance to the practice of PTE entities and results from the potential damage that PTEs may cause.

The guaranteed sum is the basis for calculating the insurance premium. In §22 of the Act of 11 September 2015 on insurance and reinsurance activity (Journal of Laws of 2015, item 1844), the legislator formulated only general rules related to the method of its calculation. According to Article 33 section 1 of the Act on insurance and reinsurance activity, the insurance company determines the amount of premiums based on its own insurance risk assessment. A clearly defined catalog of potential damages, their amount and frequency of occurrence is the basis for the creation of specific technical provisions. It is understandable that, in accordance with the principle of equivalence, the insurance company is forced to determine the amount of insurance premiums in such a way as to be convinced with a high probability (usually exceeding 95%) that they will cover all damages and operating costs arising from concluded insurance contracts. A fundamental parameter for insurance tariffs is the determination of the annual probability (frequency of claims) based on reliable statistical data. This task is difficult when a new insurance product is introduced. In practice, this amounts to determining the likely annual frequency of claims. Most often, the insurance company does not have such data, and besides, it is not possible to obtain them from, for example, official statistics or other institutions. Despite legal acts on

disclosing economic information being in force[5], there are still difficulties in obtaining data for the purposes of calculating insurance tariffs. In such circumstances, insurance companies use the concept of subjective probability, which is determined by their own experience or expert opinions, while creating provisions for exceptional risks. Pursuant to Article 33 section 3 of the Act on insurance and reinsurance activity, the insurance company is obliged to collect data on the amount of claims and benefits as well as the costs of their adjustment. It is worth emphasizing here that the amount of the insurance premium cannot hinder (from the economic point of view) the work of insurance intermediaries, nor should it radically increase the price of insurance cover. Importantly, it should also comply with the principles of fair competition.

Another important aspect of the insurance under consideration is the loss adjustment process (a potential catalog of them is listed in point 3). The list of potential damages and the specific behavior of PTE users show that the majority of damages may be minor. Therefore, it is acceptable to use a simplified procedure for their liquidation. However, there may be more serious events (e.g. traffic collisions) where the procedures applicable to compulsory third party liability insurance of motor vehicle owners should be adopted. Therefore, there is a need for claims handling by persons with appropriate qualifications, experience and knowledge of the nature of claims generated by PTE users. Loss adjusters are obliged to determine the causes and circumstances of the loss, determine its size as well as their valuable valuation and documentation in such a way that both parties to the insurance contract are satisfied. It is worth emphasizing that the task of claims adjusters is also to prevent insurance fraud.

5. PTE CIVIL LIABILITY INSURANCE AS A NEW PRODUCT ON THE INSURANCE MARKET

The growing number of PTE vehicles and the associated risks indicate the need for insurance companies to join in with a new insurance product that allows for the transfer of risk from the client to the insurer.

As you can easily see, it is an insurance product protecting a social group with risky behavior, belonging to the 2nd group of property and personal risks with a 12-month period of insurance cover. The introduction of the insurance in question is not a one-time decision, but a long-term, strategic decision. The strategy of introducing the insurance product in question should be coordinated with other conditions (products) and prices of insurance cover. An important element for the product in question is the monthly observation of the behavior of all technical and economic parameters (premiums, number of insured persons, number and value

---

[5] Announcement of the Marshal of the Sejm of the Republic of Poland of 24 May 2014 on the announcement of the consolidated text of the Act on Disclosure of Economic Information and Exchange of Economic Data (Journal of Laws of 2014, item 1015, as amended).

of claims). Ongoing observation of the above-mentioned parameters by the insurance company will allow for the rational shaping of the content of the general insurance conditions.

According to the proposals presented by the Polish Insurance Association, risk insurance cover for alternative means of transport may be related to individual insurance, corporate insurance and existing motor insurance. Individual insurance covers the risk of damage to the health or property of a third party (civil liability of the user of the alternative means of transport for the vehicle owner or during the rental of the vehicle) and the risk of damage to the health of the user (consequences of personal accidents of the user of the alternative means of transport or during the rental of the vehicle). The corporate insurance group includes insurance of the risk of damage to health or property of the user or third parties (civil liability of a corporation that rents alternative means of transport) and the risk of theft or damage to the vehicle (civil liability for the rental company). Existing motor insurance may, however, mitigate the effects of the risk of damage to the health or property of users of alternative means of transport, e.g. being hit by a cyclist by a car (mandatory liability insurance for motor vehicle owners) (PIU, 2019)

Some insurance companies responded to market demand in this regard and decided to introduce voluntary insurance coverage for PTE users. Users of personal transport devices may take advantage of their third party liability insurance in private life, concluded mainly with insurance of houses and flats, constituting security in the event of damage to third parties. On the other hand, own damages can be covered by accident insurance: individual, family or school.

Different companies have a slightly different civil liability insurance package, which translates into a different scope of protection, as well as the maximum amount of compensation and premium. Examples of insurance premiums are presented in table 3.

Table 3. Costs of housing insurance including PTE insurance

Insurance Company	Housing policy with third party liability insurance in private life (in PLN)	Housing policy with civil liability insurance in private life and burglary insurance (in PLN)
Proama	248	277
Generali	257	285
Mtu24.pl	266	526
Link4	286	404
Inter Polska	315	800

Source: www2.

The supplement in the form of civil liability insurance in private life for scooter owners and users costs several dozen zlotys per year. The policy for PTE users can be an addition to the motor policy or it can be an independent insurance product (Drozdalski, 2021). Most often, these types of policies include equipment insurance, liability insurance, theft and accident insurance. Insurance dedicated to owners of personal transport devices is a relatively new product on the market and not many insurance companies offer it yet.

SUMMARY

Insurance of users of personal transport devices is not obligatory. Unlike drivers of cars or motorcycles, the regulations do not oblige PTE drivers to have a motor third party liability insurance.

The dynamic development of the PTE market and the wide catalog of adverse events related to the use of personal transport devices argue for the popularization of third-party liability insurance in private life, covering liability for damages resulting from the use of personal transport devices. The scope of insurance cover should include: users, renters of equipment, sellers, operators and households.

The development of alternative means of transport is a challenge for insurance companies in terms of offering insurance solutions tailored to the needs of users.

Currently, there are still few insurance products dedicated to PTE users. Most often it is a combination of liability insurance and accident insurance. One of the solutions is to propose insurance tailored to the type of risk and the short time of using the equipment (e.g. only using of PTE insurance).

BIBLIOGRAPHY

Act of 11 September 2015 on insurance and reinsurance activity (Journal of Laws of 2015, item 1844.

Banaszek M. (2016), Sharing economy as an alternative direction of urban development, "Social Economy", No. 1/2016, *http://dx.doi.org/10.15678/ES.2016.1.04*

Belk R. (2014), You are what you can access: sharing and collaborative consumption, Online Journal of Business Research, pp. 1595-1600, *https://doi.org/10.1016/j.jbusres.2013.10.001*

Curtis S. (2021), Business model patterns in the sharing economy, Sustainable Production and Consumption, Vol. 27, *https://doi.org/10.1016/j.spc.2021.04.009*

Drozdalski L. (2021), Scooter insurance, *https://rankomat.pl/nieruchomosci/ubezpiec-zenie-hulajnogi* [Accessed: 02.04.2021].

Duszczyk M, (2019a), Vehicles for minutes will flood Polish cities, "Rzeczpospolita", July 17, 2019.

Duszczyk M.(2019b), New regulations will kill the business on scooters, "Rzeczpospolita", August 12, 2019.

Duszczyk M. (2019c), There are already the first victims of the fierce scooter war, "Rzeczpospolita", September 6, 2019.

Duszczyk M. (2019d), Bus and scooter combined in one application, "Rzeczpospolita", December 12, 2019.

Gajewski J., Paprocki W., Pieriegud J. (2019), Electromobility in Poland against the background of European and global trends, CeDeWu, Warsaw.

Gatzert N., Osterrieder K. (2020), The future of mobility and its impact on the automobile insurance industry, "Risk Management and Insurance Review", Wiley, *https://doi.org/10.1111/rmir.12140*

Gupta P., Chauhan S. (2021), Mapping intellectual structure and sustainability claims of sharing economy research – a literature review, Sustainable Production and Consumption ,Volume 25, pp. 347-362, *https://doi.org/10.1016/j.spc.2020.09.006*

Habibi, M. R., Davidson, A., Laroche, M. (2017), What managers should know about the sharing economy. Business Horizons, pp. 113–121, *https://doi.org/10.1016/j.bushor.2016.09.007.*

Insurance Europe (2019), Insuring mobility — today and tomorrow, *https://www.insuranceeurope.eu/mediaitem/d51c959d-3b94-4a20-8abc-7ee7406babd0/Insuring%20mobility%20%E2%80%94%20today%20and%20tomorrow.pdf* [Accessed 06.04.2021].

Janczewski J. (2019), Micromobility - selected problems, "Innovative management in economy and business", No. 1(28)/2019, *https://doi.org/10.25312/2391-5129.28/2019_09jj*

Jędrzejewski A. (2020), Micromobility did not succumb to the pandemic, *https://smartride.pl/Strefa_Danych/sharingowa-mikromobilnosc-nie-poddala-sie-pandemii-pisze-adam-jedrzejewski/* [Accessed: 29.08.2021]

Kathan W., Matzler K., Veider V. (2016), The sharing economy: your business model's friend or foe? Business Horizons, pp. 663-672, *https://doi.org/10.1016/j.bushor.2016.06.006.*

Knauf S. (2018), Sharing economy as a tool for creating a smart city, Scientific Papers of the Silesian University of Technology, series: Organization and Management, issue 120, p. 145.

Koźlak A. (2020), The relationship between the concepts of sharing economy and smart cities: the case of shared mobility and smart transport, International Journal of Sustainable Society, Vol. 12, No. 2, *https://doi.org/10.1504/IJSSOC.2020.107894*

Laukkanen M., Tura N. (2020), The potential of sharing economy business models for sustainable value creation, Journal of Cleaner Production, Volume 253, *https://doi.org/10.1016/j.jclepro.2020.120004*

Le Vine, S., Polak, J. (2015), *Introduction to special issue: new directions in shared-mobility research*. Transportation 42, pp. 407–411, *https://doi.org/10.1007/s11116-015-9603-4.*

Łukaszewicz A., 2019a, Cities have to deal with e-scooters themselves, Rzeczpospolita, October 1, 2019.

Łukaszewicz A., 2019b, The user will pay for the abandoned scooter, "Rzeczpospolita", October 21, 2019.

Novikova O. (2017), *The Sharing Economy and the Future of Personal Mobility: New Models Based on Car Sharing*, Technology Innovation Management Review, Vol. 7, Issue 8.

Announcement of the Marshal of the Sejm of the Republic of Poland of 24 May 2014 on the announcement of the consolidated text of the Act on Disclosure of Economic Information and Exchange of Economic Data (Journal of Laws of 2014, item 1015, as amended).

Orlicki M. (2019), Civil liability resulting from the use of personal transport equipment and its insurance, "Prawo Asekuracyjne", No. 4/2019 (101).

Otto P. (2019), Cities are trying to tame scooters themselves, "Dziennik Gazeta Prawna", June 24, 2019.

Polish Insurance Association (2019), New urban mobility - What does it mean for insurance?, *https://piu.org.pl/wp-content/uploads/2021/03/Nowa-miejska-mobilnosc_co-oznacza-dla-ubezpieczen.pdf* [Accessed: 07.04.2021].

Shaheen S., Chan, N. (2016), Mobility and the Sharing Economy: Potential to Overcome First- and Last-Mile Public Transit Connections, UC Berkeley Transportation Sustainability Research Center, *https://doi.org/10.7922/G2862DN3*

Skibińska R. (2019), It's better on an electric scooter with the OC policy, "Rzeczpospolita", March 21, 2019.

Szymaniak P. (2019), A dispute about drunks on one leg, "Dziennik Gazeta Prawna", June 24, 2019.

Śmietana K. (2019), City: do not allow e-scooters on the sidewalks, "Dziennik Gazeta Prawna", September 9, 2019.

Śmietana K., Otto P. (2019) Elektryczne hulajnogi wcale nie takie eko, „Dziennik Gazeta Prawna" 29 maja 2019 r.

Użytkownicy e-hulajnóg gotowi na OC, „Gazeta Ubezpieczeniowa", 22-28 lipca 2019 r.

(www1) *https://www.gov.pl/web/infrastruktura/nowe-przepisy-dotyczace-hulajnog-electric-i-urzadzen-transportu-osobistego* [Accessed: 08.04.2021].

(www2) *https://rankomat.pl/nieruchomosci/ubezpieczenie-hulajnogi* [Accessed: 09.04.2021].

UBEZPIECZENIE ODPOWIEDZIALNOŚCI CYWILNEJ UŻYTKOWNIKÓW URZĄDZEŃ TRANSPORTU OSOBISTEGO (UTO) JAKO ELEMENT OCHRONY UCZESTNIKÓW *SHARING ECONOMY*

Streszczenie

Cel/hipoteza: W ostatnich latach zauważalny jest dynamiczny rozwój urządzeń mikromobilnych, przeznaczonych do transportu osób. Tego rodzaju pojazdy określa się mianem urządzeń transportu osobistego (UTO). Jak każdy pojazd drogowy, także i UTO mogą powodować liczne wypadki i kolizje. Naturalną konsekwencją szkodowości związanej z wykorzystaniem UTO jest postawienie pytania o zabezpieczenie interesów poszkodowanych. Mając powyższe na uwadze za cel niniejszego opracowania przyjęto przybliżenie roli ubezpieczeń od odpowiedzialności cywilnej użytkowników urządzeń transportu osobistego w kontekście szkodowości związanej z użytkowaniem tego rodzaju pojazdów oraz krótką charakterystyką dostępnych na rynku produktów ubezpieczeniowych. W pracy postawiono tezę: mimo iż przepisy nie zobowiązują kierujących UTO do posiadania polisy komunikacyjnej OC, szeroki katalog niekorzystnych zdarzeń związanych z użytkowaniem urządzeń transportu odpowiednio wymaga upowszechnienia ochrony ubezpieczeniowej użytkowników tego rodzaju pojazdów. W polu ochrony ubezpieczeniowej powinni się znaleźć: użytkownicy, wypożyczający sprzęt, sprzedawcy, operatorzy a także gospodarstwa domowe.

Metodyka: Opracowanie ma charakter teoretyczno-analityczny. Obok przeglądu dostępnej literatury przeanalizowano również dostępną na rynku ofertę dobrowolnych ubezpieczeń adresowanych do użytkowników UTO.

Wnioski z badań: Ubezpieczenie dedykowane posiadaczom urządzeń transportu osobistego jest stosunkowo nowym produktem na rynku i jeszcze niewiele towarzystw ubezpieczeniowych posiada je w swojej ofercie. Użytkownicy urządzeń transportu osobistego mogą korzystać z posiadanych ubezpieczeń odpowiedzialności cywilnej w życiu prywatnym, zawieranych głównie przy ubezpieczeniach domów i mieszkań, stanowiącym zabezpieczenie na wypadek wyrządzenia szkody osobom trzecim. Jednym z rozwiązań prowadzących do upowszechnienia ochrony ubezpieczeniowej mogłaby być propozycja ubezpieczeń dostosowanych do rodzaju ryzyka oraz krótkiego charakteru użytkowania sprzętu (np. ubezpieczeń na czas przejazdu).

Słowa kluczowe: ubezpieczenia, ekonomia współdzielenia, odpowiedzialność cywilna, urządzenia transportu osobistego, ryzyko, mikromobilność.

Kody JEL: G22, G20, G52.

DIGITAL BANKING TRANSFORMATION THROUGH COOPERATION WITH FINTECH STARTUPS IN UKRAINE

Sophia Lobozynska[*] **Ulyana Vladychyn**[**] **Iryna Skomorovych**[***]

**DIGITAL BANKING TRANSFORMATION THROUGH COOPERATION
WITH FINTECH STARTUPS IN UKRAINE**

Abstract

The purpose of the article/hypothesis: Is to identify the peculiarities of Fintech startups activities, to track trends and perspectives of interaction between classic banks and Fintech companies, as well as to research the activities of neobanks and formulate proposals for improving the Fintech ecosystem in Ukraine with the aim of providing quality digital financial services to various categories of consumers.

Methodology: Methods of statistical analysis, analogy, synthesis and theoretical generalization were used when researching the materials of specialized analytical agencies, official websites of foreign and domestic banks, state financial strategies and scientific literature.

Results of the research: The active growth of a number of Fintech startups in the world and in Ukraine forms a positive dynamic of the digital transformation of the banking sector. The cooperation between banks and Fintechs allows the use new innovative products in banking, such as artificial intelligence, robo-consultation, blockchain, cryptocurrencies, the Internet of Things, virtual and augmented reality. For the further digital transformation of banking in Ukraine the financial market participants must implement international open banking standards and tools for remote identification and verification of clients, actively introduce artificial intelligence and machine learning tools into finance, and develop a Fintech ecosystem.

Keywords: digital transformation of banking, Fintech startups, digital financial products, neobanks, regulatory sandbox.

JEL Class: G21, G24, N24, O32.

---

[*] Doctor of Economic Sciences, Professor, Professor of Department of Banking and Insurance Business, Ivan Franko National University of Lviv, Ukraine, e-mail: sofiya.lobozynska@lnu.edu.ua, http://orcid.org/0000-0001-5483-6864

[**] Doctor of Economic Sciences, Professor, Professor of Department of Banking and Insurance Business, Ivan Franko National University of Lviv, Ukraine ,e-mail: ulyana.vladychyn@lnu.edu.ua, https://orcid.org/0000-0002-6916-6688

[***] Doctor of Economic Sciences, Professor, Professor of Department of Banking and Insurance Business, Ivan Franko National University of Lviv, Ukraine, e-mail: iryna.skomorovych@lnu.edu.ua, https://orcid.org/0000-0002-8574-6770

INTRODUCTION

The development of technologies creates new rules of the game for banks, stimulating them to digital transformation processes. New customer needs, mobile Internet, cloud technologies, and blockchain technology require banks to actively implement digital innovations and build modernized business processes. New providers of innovative financial services began to appear on the domestic financial market. The interaction of banks and financial technology companies has become a new reality that requires in-depth research and delineation of prospects for the development of banking.

The main purpose of research is to identify the peculiarities of the activity of Fintech startups, to track the trends and perspectives of the interaction of classic banks with Fintech companies, as well as to study the activities of neobanks and formulate proposals for improving of the Fintech ecosystem in Ukraine with the aim to provide high-quality digital financial services to various categories of consumers.

The conducted research is aimed at improving the theoretical foundations of the " Fintech startup" phenomenon, outlining global trends in financial transformation, finding ways to create a favorable environment for the development of financial and technological innovations in banking by improving the state policy of supporting this segment.

The study of the modernization of banking through interaction with financial and technological startups was carried out with the help of a systematic scientific analysis of existing scientific and applied research in this area. The method of statistical analysis, analogy, synthesis and theoretical generalization was used in the study of analytical materials of the McKinsey company, the Ukrainian Association of Fintech and Innovative Companies, the state strategy for the development of the financial market and Fintech in Ukraine, informational materials of the official websites of foreign and domestic neobanks.

1. THEORETICAL STUDY OF FINTECH DEFINITION

With the rapid development of digital technologies, which have already become an integral part of human everyday life, the financial and banking sector of the economy also needs digitization. The integration of digital technologies into financial and banking activities significantly strengthens the competitiveness of the national economic system on the world stage.

Digital transformation of financial and banking services is a dynamic process of introducing innovations into existing financial and banking offers to clients or in the form of new products, which consists in restructuring the organizational

structure, the process of providing services to clients and the transformation of information support through the integration of digital technologies in all stages of the financial banking sector activities.

Financial technologies or Fintech is the modern way of interaction of financial activities and digital innovative products and services with the use of information technologies, in particular mobile applications and Internet resources, which have now become an integral part of any person's life. For the most part, Fintech includes startups created based on previously unknown, breakthrough inventions and technologies in the field of financial services.

At the same time, financial technologies are being modernized and transformed against the background of changes in consumer needs with incredible speed, resulting in uncertainty and an ambiguous interpretation of the concept of "Fintech". This can be seen in the approaches to defining its essence by different experts in this field of knowledge and targeted external consumers.

The analysis of a large number of scientific works and publications at external resources proves the existence of multiple interpretations of the concept of "financial technologies". The vast majority of scientists consider them as a separate type of technology that has its own specific features. In general, this approach is logical, but its use does not allow to fully reflect all the features of the development of this category.

In the scientific research there are four approaches for determining the definition of Fintech:

- the institutional approach that defines Fintech as an economic industry consisting of companies that use technologies to improve the efficiency of financial systems (www1);
- the industry approach considers Fintech as technologies used in the financial industry to optimize costs, increase added value in its products, speed up the passage of various processes, security (www2);
- the functional approach that reveals Fintech as a financial service that includes innovative technologies to meet future needs (Zavolokina et al., 2016);
- the operational approach, characterizes Fintech as technological projects in the field of financial services (Mazaraki and Volosovych, 2018).

The Basel Committee on Banking Supervisio (BCBS) has opted to use the Financial Stability Board (FSB)'s working definition for Fintech as "technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services" (The Basel Committee..., 2017).

Thereby, the essence of Fintech involves the relationship of two components

innovations, based on the technologies of the traditional financial and banking sector, and new business models for providing financial services.

Fintech startups operate in different verticals such as banking, finance, payments, corporate finance, crowdfunding, investment, big data, personal finance management, insurance, asset management, hubs, blockchain and crypto coins (Figure 1).
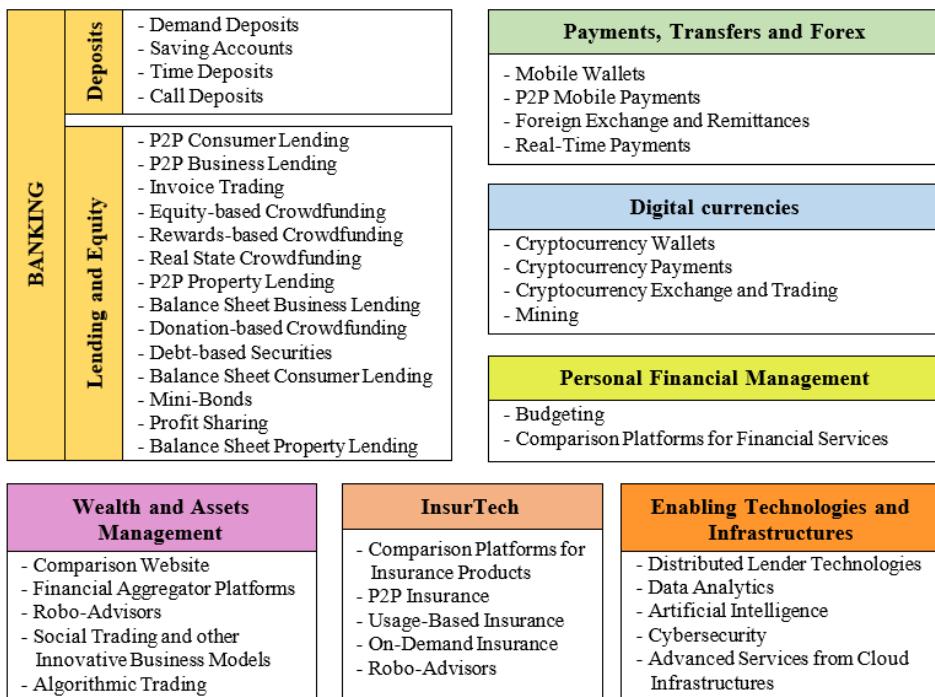
Figure 1. Fintech services classification

Source: grouped by authors based on generalized research sources.

The researcher of financial markets, Chris Skinner, considers Fintech to be a new hybrid market that integrates finance and technology (Skinner, 2018). The era of Fintech is the beginning of an industrial revolution marked by new and disruptive financial and technological advances, such as artificial intelligence, roboconsulting, blockchain, cryptocurrencies, the Internet of Things, virtual and augmented reality. This era is characterized by the rapid pace of introduction of Fintech products into the financial sector, an increase in the number of users of the Fintech industry and the volume of financing. This era creates a new organizational structure, which is primarily based on customer expectations and reducing the cost part of financial institutions' activities.

2. FINTECH COMPANIES ON THE GLOBAL MARKET OF BANKING SERVICES

Due to the high demand for digital transformation of financial services, the number of Fintech startups in the world is increasing every year. As of November 2021, there were 26.346 Fintech (financial technology) startups in the world. There were 10.755 Fintech startups in the Americas, making it the region with the most Fintech startups globally. In comparison, there were 9.323 such startups in the EMEA region (Europe, the Middle East, and Africa) and 6.268 in the Asia Pacific region (Number of Fintech startups...,2023).

Financial and technological startups are maximally focused on the retail segment. In particular, the share of their presence in terms of consumer segments is as follows: retailing – 62%; the commercial segment – 28%, the segment of large corporations – 11% (Fintechnicolor…,2023). The implementation of financial products by financial technology companies according to the given segments is shown in Figure 2.
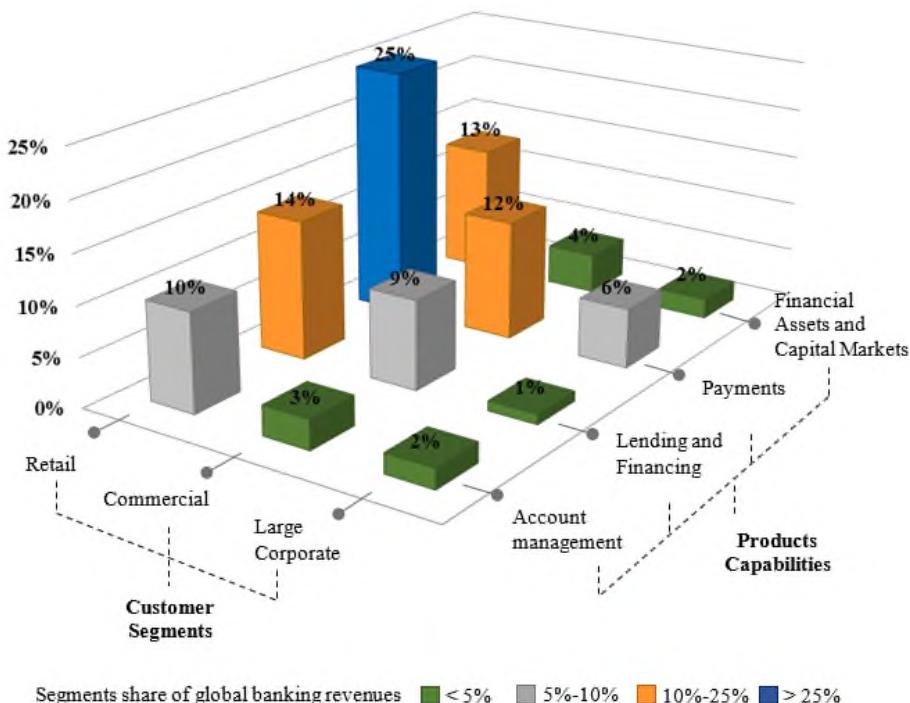
Figure 2. Product and Customer Focus for a Sample of 350 Fintech Startaps

Source: built by the authors based on McKinsey&Company research (Fintechnicolor…,2023).

The total value of investments into Fintech companies worldwide increased dramatically between 2010 and 2019, when it reached 215.1 billion U.S. dollars. In 2020, however, Fintech companies saw investments drop by more than one third, reaching a value of 127.7 billion U.S. dollars. Falling volumes of investments in innovations in the Fintech market occurred due to the Covid-19 lockdown. Investors prioritized investing in low-risk assets, but the investment value increased again in 2021 up to 226.5 billion U.S. dollars. Investors once again believed in the potential of technological financial innovations and in their ability to bring adequate returns on invested resources (Investments into Fintech…, 2023).

Banks are one of the most powerful investors in Fintech startups Only US banks alone have invested 3.6 billion U.S. dollars in 56 different Fintech startups. Conversely, only 7% of banks have done the hardest job of setting up their own Fintech R&D offshoot to create proprietary solutions (Table 1).

Table 1. Fintech Startup Investments by Sector for US Banks

	Blockchain	Data Analytics	Insurance	Personal Finance	Wealth Management	Financial Services Software	Lending	Payment and Settlement	Real Estate	Regulatory Tech	TOTAL
Citi	5	5		2	1	5	3	2		2	25
Goldman Sachs	2	3	1	1	1	2	2	6	2	2	22
JPMorgan Chase & Co	2	1			1	4	1	2		1	12
Morgan Stanley		2	1			3	1			1	8
Wells Fargo	2	2		1		1	1	1		1	9
Bank of America Merill Lynch	1	2				1		1		1	6
TD Bank	1							1		1	3
Capital One	1							1			2
US Bancorp	1							1			2
PNC	1							1			2
TOTAL	16	15	2	4	3	16	8	16		9	91

Source: built by the authors based on www12.

The cooperation between classic institutions and Fintech companies is important for the development of the Fintech industry in the banking sector. Indeed,

banks have a wide client base, which is strongly needed by Fintech companies. They are legally protected and have experience in carrying out credit operations, but on the plus side Fintech companies are available to a wider range of people. Additionally, they are able to adapt to market fluctuations and produce new technological solutions, which maximally satisfy the needs of consumers. A few years ago banks and innovative companies were competing in the field of finance, but today we can observe the establishment of cooperation between these players of the financial market.

3. FINTECH IN UKRAINE

Fintech in Ukraine has been developing dynamically since 2017. COVID-19 has given Fintech startups new impetus to gain a foothold in the banking services market. In general, in 2021, the number of Fintech companies in Ukraine was 203. Their total valuation is about USD 1 billion. IT specialists (33%) and financiers (17%) predominate among the founders of Fintech companies, as well as founders from the legal and insurance spheres. Founders mostly fund the creation of Fintech companies with their own funds (65%), private investors' money attracted 18% of Fintech startups, while angel investment attracted only 2% of Fintechs (Ukrainian Fintech Catalog, 2021).

More than half of Ukrainian Fintechs work on the domestic market, of which 81% of companies focus exclusively on the Ukrainian market. Among foreign markets the largest number of Ukrainian Fintechs can be found in European countries – 15% and in USA – 7%. 79% of the companies operating exclusively in Ukraine plan to develop operation in foreign markets, 45% plan to enter the EU market. Poland and Germany are considered the most attractive among European countries (Ukrainian Fintech Catalog, 2021).

The largest segment of the Ukrainian Fintech market was technology and infrastructure – 22%. Payments and money transfers accounted for 19%, consumer lending – 14% (Ukrainian Fintech Catalog, 2021). Crowdfunding and services for comparing financial services remain the least developed. Business lending and blockchain have worsened their positions, while law and insurance have improved (Figure 3).
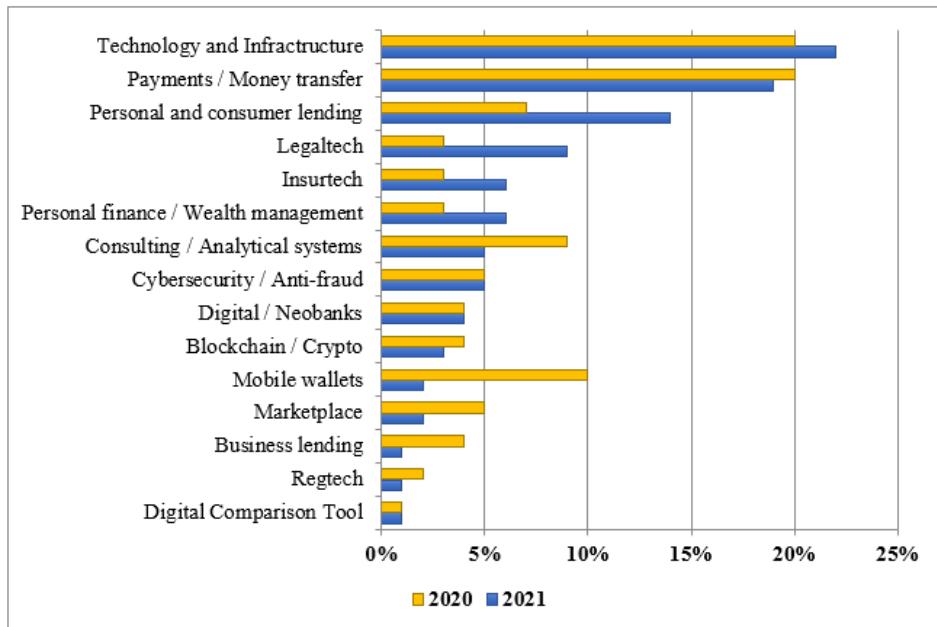
Figure 3. Distribution of Ukrainian Fintech-companies according to
their spheres of activity

Source: built by the authors based on Ukrainian Fintech Catalog, 2021.

The partnership of Fintech startups with banks will allow to expand the list of digital banking services, especially digital SMBs lending, digital consumer lending, which are determined as priority verticals. Such cooperation allows to get "win-win" results for banks and Fintech companies. Taking into account the current trends in the development of the banking business it is possible to predict the close cooperation of banks and technology companies to accelerate the digital transformation of banking services.

4. INTERACTION BETWEEN BANKS AND FINTECH STARTUPS

Studying the global experience of cooperation between traditional banks and Fintech companies, the following ways of their interaction are distinguished: the banks' development and implementation of acceleration and incubation programs (43%), investing in promising Fintech startups with the help of internal venture capital funds (20%), concluding bilateral agreements on partnership (20%), acquisition of Fintech companies by banks (10%), opening of their own Fintech companies by the banks (7%).
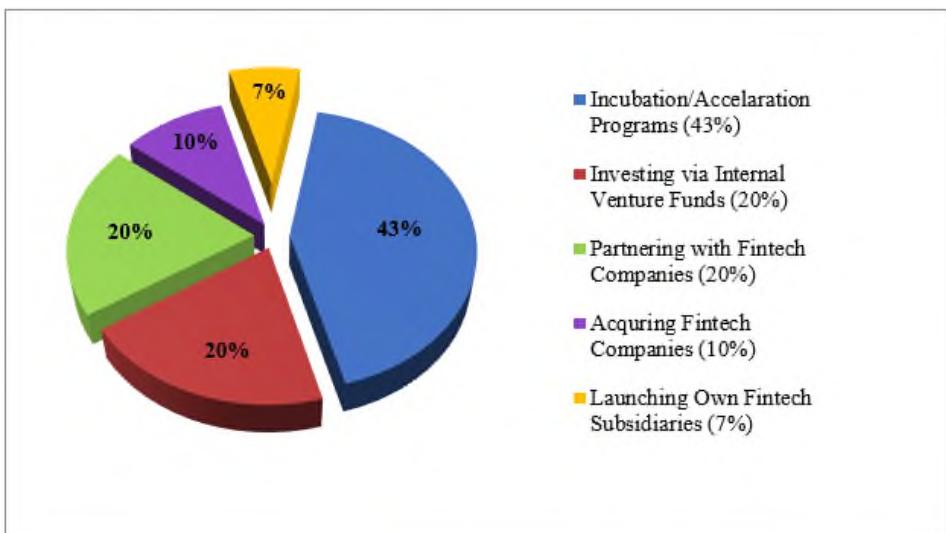
Figure 4. How banks are currently responding to the Fintech movement

Source: built by the authors based on www12.

Since 2017, similar transformational and technological processes have been taking place in the banking sector in Ukraine. Banks actively cooperate with Fintech startups, widely use technological solutions in the creation and promotion of banking products, a favorable ecosystem is being formed for the emergence and operation of neobanks in Ukraine.

According to the results of the study, all the largest banks of Ukraine have, or plan to have joint projects with Fintech companies, except PrivatBank, which independently develops innovative products and services (Ukrainian Fintech Catalog, 2021). The banks prefer joint projects with innovative companies, because it is easier and much cheaper than maintaining their own teams of IT specialists. However, in-house "innovation centers" and in-house incubation/acceleration centers are also popular. As for investing in Fintech startups, it is generally absent due to limited investment resources. The results of the study are shown in the Table 2.

Table 2. Participation of banks in the innovative and technological transformation of the financial sector

Banks	Joint projects Yes	Plan	No	Own development of innovative projects Yes	Plan	No	Own incubation/acceleration Yes	Plan	No	Investments in startups Yes	Plan	No
PrivatBank			V	V				V				V
Oschadbank	V					V			V			V
UKRGAS-BANK	V			V					V			V
Raiffeisen Bank	V			V				V				V
SENSE BANK	V			V					V			V
UKRSIBBANK	V					V		V				V
FUIB	V			V					V			V
CREDIT AGRICOLE BANK		V		V				V				V
OTP Bank	V					V	V					V
TASKOMBANK		V		V					V			V
MEGABANK	V			V					V			V

Source: compiled by the authors based on Ukrainian Fintech Catalog, 2021.

The result of the interaction of banks with financial and technical startups is the provision of opportunities for Ukrainian consumers to use electronic wallets, quickly receive information from chatbots, use online banking and mobile banking (Table 3).

Table 3. Fintech-products of Ukrainian banks

Bank	International fintech-products Google Pay	Apple Pay	Garmin Pay	Acceleration programs	Projects of acceleration finalists	Banking fintech-products
Oschadbank	+	+	+			Chat-bot «Online assistant» Oschad Pay, Oschad 24/7
UKRSIB-BANK	+			POPCORP	UKRSIB CHAT-BOT	UKRSIB online
OTP Bank	+		+	Open Banking Lab	YouScore, bNesis, CoinyPay, Future Agro Finance	OTP Smart

SENSE BANK	+		+	Alfa Digital		Alfa-mobile
PrivatBank	+	+	+			Airpay, IPay, LigPay, QR-payments, Privat24
Raiffeisen Bank	+			Raiffeisen Digital Hab		Raiffeisen Pay, Raiffeisen Online
FUIB	+		+			FUIB online, FUIB mobile

Source: compiled by the authors based on the official websites of banks: www5–11.

The Ukrainian research of banking digital transformation grouped all domestic banks according to the degree of digital transformation into four groups: Front-end only; Active integration; Own R&D; Digital native (Bank Roadmap ..., 2020).

At the first stage "Front-end only" there are 41 domestic banks. In their activities, these banks use only the simplest digital tools in interaction with customers: website, self-service points, electronic administration, mobile application.

At the second stage of the development the "Active integration" banks are actively working with ARI, establishing cooperation with technological startups. This group of banks is characterized by the use of omnichannel access (website, application, chatbot), providing opportunities for customers to make contactless payments, use electronic wallets, receive cashback, discounts. There are 34 such banks in Ukraine, they have automated back-office services and cooperate with Apple or Google Pay systems.

Being at the "Own R&D" stage, banks have their own staff for the development and implementation of technical solutions, actively work in various segments with APIs, cooperate with third-party providers of Fintech services (payments, accounts, etc.), use remote authentication in the BankID system of the NBU. There are 22 such banks in Ukraine.

At the "Digital native" stage, the bank is completely digitized: from interaction with the client to the execution of internal processes. These banks perform customer analytics based on large databases, fully digitize interaction with customers, and use cloud solutions. There are only two such banks in Ukraine and one neobank (PrivatBank, UNIVERSAL BANK and financial technology company Monobank).

It is appropriate to note that, taking into account the financial and technological functionality, the researchers of the digital transformation of the banking sector for the first time classified a Fintech company that implements financial products based on the license of UNIVERSAL BANK, the first neobank in Ukraine in the "Digital native" category. In total, six neobanks operate in Ukraine as of January 1, 2023.

5. DIGITAL SERVICES OF NEOBANKS IN UKRAINE

It should be noted that in many cases the emergence of neobanks is the result of the interaction of Fintech startups and classic banks. In general, neobanks are modern financial and technological startups that provide financial products through technological channels, taking into account the maximum convenience for consumers.

Thanks to the dynamic digital transformation, banks are actively involved in the process of the emergence of neo-banks in Ukraine.

Monobank was created in November 2017 by the Fintech Band team and immediately took a leading position in the banking market of Ukraine, because since its opening it has issued more cards than all other banks combined. As of January 2023, the number of Monobank clients is 6.798.763 (www3). In the first quarter of 2023, Monobank plans to launch a startup called Stereo.

A new wave of creation of neobanks in Ukraine took place in 2019. Two new virtual banks appeared this year – todobank and Sportbank. In 2020, three neobanks entered the market with their financial products: O.Bank – a project of Idea Bank, NEOBANK – a startup from CONKORD, and Izibank, which operates on the platform of TASKOMBANK. If O.Bank and Izibank offer simple classic banking products for individual customers, then NEOBANK is an Internet bank that is primarily focused on serving business entities, although a set of services is also provided for individuals. In 2021, "Bank Vlasnyi Rakhunok", which was created on the basis of BANK VOSTOK and Fozzy Group, began its activities. One of the features of this bank's activity is the accrual of bonuses to cardholders when making payments in the "Fozzy" retail chain (Budina, 2021). The characteristics of domestic neobanks are given in Table 4.

Table 4. Neobanks in Ukraine, 2017–2021

Neobank name	The year of foundation	Banking license	Number of clients	Banking products	Consumer segment
Monobank	2017	UNIVERSAL BANK	3.1 million	Online payments, transfers. deposits, loans, cashback, issuance of cards in bitcoins, purchase of shares on the American stock market (at the stage of implementation)	Individuals individual entrepreneurs

Sportbank	2019	TASCOM-BANK, OXI BANK	240 thousand	Online payments, transfers, deposits, loans, 10% cash-back when buying sports-wear and subscriptions to fitness clubs	Individuals
todobank	2019-2022	MEGABANK	-	Online payments, transfers, deposits, loans, payment of utility services without fees, the possibility to use a payment card issued by another bank in the mobile application	Individuals
izibank	2020	TASKOMBANK	100 thousand	Online payments, transfers, deposits, loans, 1% cash-back on all categories of payments	Individuals
O.Bank	2020	Idea Bank	120 thousand	Online payments, deposits, loans, contactless P2P transfers, cash withdrawals from ATMs without fees in the first 4 months of card use.	Individuals
NEOBANK	2020	CONCORD	-	Online payments, transfers, deposits, loans, cash register in the phone, own acquiring, reminders about the payment of interest on the loan and taxes	Individual entrepreneurs, legal entities and individuals
Bank Vlasnyi Rahunok	2021	BANK VOSTOK	-	Online payments, transfers, deposits, loans, crediting of bonuses to a payment card when purchasing in the Fozzy retail chain	Individuals

Source: compiled by the authors based on: Barabash, 2021; Zhumatyi, 2019; Budina, 2021; Hrynkov, 2021; Tartasiuk, 2021, Loshakova, 2020, www3 and www4.

In general, all domestic neobanks provide classic banking services, focusing on the retail segment. However, aware of significant competition from traditional banks and among themselves, neobanks are looking for specific niches for the implementation of banking services: Monobank is starting brokerage activities, Sportbank is targeting at physically active people, NEOBANK is positioning itself as a bank for business and serving individual entrepreneurs, "Bank Vlasnyi Ra-hunok" serves customers of the Fozzy retail chain, etc. This makes it possible to provide users with high-quality financial services and stimulate digital banking transformation.

CONCLUSIONS

The active growth of the number of Fintech startups in the world and in Ukraine forms a positive dynamic of the digital transformation of the banking sector. The further development of banking is connected with the introduction of open banking standards and remote identification and verification tools by financial market participants. This becomes possible thanks to the adoption by the Parliament of Ukraine of the Law of Ukraine "On Payment Services", which implements EU directives (in particular, PSD 2) and creates conditions for the development of innovative products and services.

The organization of the process of creating a regulatory sandbox in Ukraine, in which 16–20 innovative products per year could be tested, requires special attention of state managers. The functioning of the regulatory sandbox should become an integral element of the stimulating regulation of the financial market, which would be strengthened by state funding programs for the creation of new structural elements of the Fintech ecosystem, namely accelerators and incubators. The appearance of such structural elements will allow for the active development of cooperation between banks and innovative participants, therefore it is worth stimulating joint projects of traditional players of the financial market with Fintech companies. The successful global examples of such collaboration are the English bank, Barclays and its accelerator Rise.

The development of digital banking transformation will also be facilitated by the implementation of the strategic direction "Innovative development" of the Strategy for the Development of the Financial Sector of Ukraine until 2025, which involves performing the following tasks (Strategy of Ukrainian…, 2021):

- implementation and dissemination of artificial intelligence and machine learning tools in finance (AML, cyber security, personalized financial products);
- development of the possibility of customer identification based on biometric data;
- legal regulation of the market of digital assets;
- implementation of international standards in the field of financial services.

In addition, in accordance with the Strategy for the development of Fintech in Ukraine until 2025, the efforts of all branches of government should be focused on creating favorable opportunities for financial market participants (Develop strategy Fintech…, 2020):

- adopt and implement progressive policy and regulation;
- attract investments and invest transparently, with legal protection of investors' rights;

- form demand for transformed financial services and products;
- have access to talents and highly qualified specialists.

Since the demand for digital financial services from users side is constantly growing, it is necessary to detail the described above strategic directions from the point of view of protecting the rights of consumers of financial services and increasing the digital and financial literacy of the population.

In addition, the success of the digital transformation of the banking sector and neobanking will be facilitated by the establishment of a loyal attitude of the state financial regulator to the latest digital technological processes in banking and the introduction of a preferential taxation system for innovative companies in the field of Fintech.

BIBLIOGRAPHY

Bank Roadmap – research on the digital transformation of Ukrainian banks (2020), The Ukrainian Association of Fintech and Innovation Companies, *https://fintechu a.org/en/news/bankroadmap* [Accessed 28.01.2023]

Barabash Yu (2021), *Ukrainian neobanks: key players and potential niches for development,* NV Business, *https://biz.nv.ua/ukr/experts/monobank-izibank-abo-sportbank-u-kogo-keshbek-bilshe-novini-ukrajini-50138385.html* [Accessed 15.01.2023]

Budina L. (2021), Fozzy Group together with Bank Vostok launch the neobank «Bank Own account», *https://retailers.ua/news/menedjment/12038-fozzy-group-sovmestno-s-bankom-vostok-zapuskayut-onlayn-bank-vlasniy-rahunok* [Accessed 15.01.2023]

Develop strategy Fintech 2025 (2020), National Bank of Ukraine, *https://bank.go v.ua/ua/files/DDWIAwXTdqjdClp* [Accessed 29.01.2023]

Fintechnicolor: The New Picture in Finance (2023), McKinsey&Company. *fintechnicolor-the-new-picture-in-finance.ashx (mckinsey.com)* [Accessed 21.01.2023]

Hrynkov D. (2021), How many neo-banks does Ukraine need? *https://minfin.com.ua/ua/* [Accessed 15.01.2023]

Investments into Fintech companies globally 2010-2022 (2023), *https://www.statista.com/statistics/719385/investments-into- Fintech-companies-globally/* [Accessed 29.01.2023]

Loshakova N. (2020), *The market is large enough to have several neobanks in Ukraine – Anna Tigipko, Izibank*, News portal of Ukraine Delo.ua, *https://delo.ua/business/rinok-dostatno-velikij-i-vilnij-schob-v-ukrajin-376810/* [Accessed 17.01.2023]

Mazaraki A., Volosovych S. (2018), *Fintech in the system of social transformations*, Herald of Kyiv National University of Trade and Economics, no 2, pp. 5-18, *http://journals.knute.edu.ua/scientia-fructuosa/article/view/676/607* [Accessed 29.01.2023]

Number of Fintech startups worldwide from 2018 to 2021, by region (2023), *https://www.statista.com/statistics/893954/number- Fintech-startups-by-region/* [Accessed 21.01.2023]

Skinner Chris (2018), Digital Human: The Fourth Revolution of Humanity Includes Everyone, Marshall Cavendish International (Asia) Private Limited.

Strategy of Ukrainian Financial Sector Development until 2025 (2021), National Bank of Ukraine, *https://bank.gov.ua/admin_uploads/article/Strategy_FS_2025.pdf?v=4* [Accessed 29.01.2023]

Tartasiuk S. (2021), Can financial companies turn into neobanks? *https://minfin.com.ua/ua/2021/07/16/68068914/* [Accessed 17.01.2023]

The Basel Committee on Banking Supervision (2017), Consultative Document: Sound Practices: Implications of Fintech Developments for Banks and Bank Supervisors, Bank for International Settlements, *https://www.bis.org/bcbs/publ/d415.pdf* [Accessed 29.01.2023]

Ukrainian Fintech Catalog (2021), *The Ukrainian Association of Fintech and Innovation Companies*, *https://fintechua.org/market-map* [Accessed 25.01.2023]

Zavolokina L., Dolata M. and Schwabe G. (2016), *The Fintech phenomenon: antecedents of financial innovation perceived by the popular press, https://jfin-swufe.springeropen.com/articles/10.1186/s40854-016-0036-7* [Accessed 12.01.2023]

Zhumatyi A. (2019), *Sportbank is another mobile bank*, *https://finance.ua/ua/cards/sportbank* [Accessed 15.01.2023]

(www1) *What is Fintech? https://www.whartonfintech.org* [Accessed 25.01.2023]

(www2) *Financial technologies in the world and Ukraine*, *http://groshi-v-kredit.org.ua/finansovi-tehnolohiji-v-sviti-ta-ukrajini.html* [Accessed 25.01.2023]

(www3) Monobank, *Official website: https://www.monobank.com.ua* [Accessed 10.01.2023]

(www4) Todobank, *Official website*: *https://todobank.ua* [Accessed 23.01.2023]

(www5) Oschadbank, *Official website*: *https://www.oschadbank.ua/mob-oschad* [Accessed 15.01.2023]

(www6) UKRSIBBANK, *Official website*: *https://ukrsibbank.com/private-individuals/online-services/* [Accessed 17.01.2023]

(www7) OTP Bank, *Official website*: *https://www.otpbank.com.ua/privateclients/online-service/* [Accessed 22.01.2023]

(www8) SENSE BANK, *Official website*: *https://sensebank.com.ua/* [Accessed 21.01.2023]

(www9) PrivatBank, *Official website*: *https://privatbank.ua/* [Accessed 13.01.2023]

(www10) Raiffeisen Bank, *Official website*: *https://raiffeisen.ua/privatnim-osobam/online-servisi* [Accessed 24.01.2023]

(www11) FUIB, *Official website*: *https://www.digital.pumb.ua/internet-banking* [Accessed 19.01.2023]

(www12) Fintech and Banks: How Can the Banking Industry Respond to the Threat of Disruption? *https://www.toptal.com/finance/investment-banking-freelancer/Fintech-and-banks* [Accessed 25.01.2023]

CYFROWA TRANSFORMACJA BANKOWOŚCI POPRZEZ WSPÓŁPRACĘ ZE *STARTUPAMI* FINTECH W UKRAINIE

Streszczenie

Cel artykułu/hipoteza: Identyfikowanie specyfiki startupów Fintech, śledzenie trendów i perspektyw współpracy między klasycznymi bankami a firmami Fintech, a także badanie działalności neobanków i formułowanie propozycji poprawy ekosystemu Fintech w Ukrainie w celu świadczenia wysokiej jakości cyfrowych usług finansowych dla różnych rodzajów konsumentów.

Metodyka: Dla badania materiałów wyspecjalizowanych agencji analitycznych, oficjalnych stron internetowych banków zagranicznych i krajowych, strategii finansowych państwa oraz literatury naukowej zastosowano metody analizy statystycznej, analogii, syntezy i uogólnienia.

Wyniki/Rezultaty badania: Aktywny wzrost liczby *startupów* Fintech na świecie i w Ukrainie tworzy pozytywną dynamikę cyfrowej transformacji sektora bankowego. Współpraca banków i Fintechów pozwala na wykorzystanie nowych, innowacyjnych produktów w bankowości, takich jak sztuczna inteligencja, robo-konsultacje, blockchain, kryptowaluty, Internet rzeczy, wirtualna i rozszerzona rzeczywistość. W celu dalszej cyfrowej transformacji bankowości w Ukrainie uczestnicy rynku finansowego muszą wdrożyć międzynarodowe standardy otwartej bankowości oraz narzędzia do zdalnej identyfikacji i weryfikacji klientów, aktywnie wprowadzać narzędzia sztucznej inteligencji i uczenia maszynowego do finansów oraz budować ekosystem Fintech.

Słowa kluczowe: cyfrowa transformacja bankowości, startupy Fintech, cyfrowe produkty finansowe, neobanki, piaskownica regulacyjna.

JEL Class: G21, G24, N24, O32.

CONSEQUENCES OF CHANGES IN CONSUMER BANKRUPTCY REGULATIONS

Joanna Stępińska[*]

CONSEQUENCES OF CHANGES IN CONSUMER BANKRUPTCY REGULATIONS

Abstract

The purpose of the article/hypothesis: The aim of the article is to review and present changes to the consumer bankruptcy law and the implications of these changes for individual debtors.

Methodology: The study deals with the effects of bankruptcy proceedings against individual debtors who do not conduct business activity (remission of bankrupt's liabilities, or at least partial repayment of creditors by the debtors) together with the analysis of changes in the law. It will be used to verify the hypothesis that the liberalization of regulations has resulted in an increase in the number of consumer bankruptcy petitions filed, as well as open bankruptcy proceedings conducted against individual debtors.

Results of the research: The results of the analysis presented in the paper support the hypothesis that the liberalization of regulations in the area of consumer bankruptcy has resulted in a significant increase in the number of consumer bankruptcy petitions and open bankruptcy proceedings against individual debtors. It seems that as crucial as creating a possibility for the indebted to return to normality in the form of consumer bankruptcy, it is equally important to take care of the sense of equality in this process. It is vital to be aware that consumer debt relief comes at the expense of other market participants – obviously direct creditors but the general public as well.

Keywords: consumer bankruptcy, individual debtor, indebtnes and insolvency of natural person, bankruptcy law, discharge of debts.

JEL Class: K35, G33.

---

[*]   Magister, Wydział Ekonomiczno–Socjologiczny, Uniwersytet Łódzki, e–mail: joanna.stepinska@uni.lodz.pl https://orcid.org/0000–0002–1283–4622

INTRODUCTION

Many people face financial difficulties in repaying their debts. Sometimes the problem is so serious that they are unable to cope with it on their own. The solution in such a situation may be a consumer bankruptcy. The aim of this article is to review and present changes to the consumer bankruptcy law and the implications of these changes for individual debtors. The study of the effects of bankruptcy proceedings against individual debtors who do not conduct business activity (remission of bankrupt's liabilities or at least partial repayment of creditors by the debtors) together with the analysis of changes in the law will be used to verify the hypothesis that the liberalization of regulations has resulted in an increase in the number of consumer bankruptcy petitions filed, as well as open bankruptcy proceedings conducted against individual debtors.

The article will be divided into five parts. The first part contains review of the literature and legal regulations of consumer bankruptcy in Poland, while the second part focuses on the situation and regulations in this area in European countries and the USA. Then, in the third part the essence of consumer bankruptcy in comparison with the bankruptcy of business entities is briefly characterized. The next part of the article – the fourth one focuses on a description of the process of indebtedness and debt relief of consumers in Poland on the background of changing regulations, indicating the sources, the course and the effects of this issue. For this purpose the analysis of the regulations and data in the area of consumer bankruptcy was made. In the next step – in the fifth part of the article, the sense of social equality in the context of progressive liberalization of consumer bankruptcy laws is discussed. The final part of the article – summary shows conclusions resulting from the study.

1. OVERVIEW OF THE LEGAL REGULATIONS OF CONSUMER INSOLVENCY IN POLAND

The institution of consumer bankruptcy has been implemented in Poland on the occasion of changes in bankruptcy legislation – by the Act of 5 December 2008 amending the Act – Bankruptcy and Reorganisation Law and the Act on court costs in civil cases. The provisions came into force on 31.03.2009. As Michalak (2009) notes in The Commentary to Article 1 of the Act, the act has introduced bankruptcy proceedings against natural persons not conducting business activity, long advocated in the doctrine. Thus, consumer bankruptcy has been regulated as a separate proceeding. In this legal order, prior to the implementation of subsequent changes, bankruptcy for individuals not conducting business activity was declared if the condition was met that their insolvency was caused by exceptional circumstances beyond their control. Additionally, declaring bankruptcy

was not possible if the debtor incurred liabilities while being insolvent, or if the termination of the debtor's employment relationship occurred for reasons attributable to the employee, or with his or her consent. It should be noted that the conditions allowing to declare bankruptcy were so strongly limited that this solution was used very rarely.

Over the last years the regulations have been amended. The problem of regulatory changes has already been discussed by Wiśniewska (2018: 80–109). It is worth tracing the changes in the provisions governing the prerequisites affecting the court's decision to open proceedings in the event that the debtor has committed gross negligence causing an increase in the state of their liabilities. An important change in the regulations occurred on 31.12.2014 (by the Act of 29.08.2014). The prerequisites for opening proceedings were modified – they became significantly more flexible. At the same time, the list of cases in which the court dismissed the bankruptcy petition was expanded. The assessment of the case when a debtor caused his or her insolvency, or substantially increased its amount intentionally or as a result of gross negligence has been mitigated. While these regulations came into force, there has been a noticeable increase in the number of both applications filed and bankruptcies opened.

Another significant change occurred under the Act of 30.08.2019 amending the provisions of the Bankruptcy Law, effective from 24.03.2020. The existing need for the court to examine whether the debtor intentionally contributed to the state of his or her indebtedness was withdrawn. At the same time, a provision indicating the possibility for the court to refuse to approve a plan for repayment of creditors or to cancel the bankrupt's liabilities unless, as indicated in Article 491[14a], it is "*justified by considerations of equity or humanitarian reasons*" has been introduced into the legislation.

2. CONSUMER BANKRUPTCY – OVERVIEW OF SOLUTIONS USED WORLDWIDE

The institution of consumer bankruptcy is also used around the world. The development of legislative systems for consumer bankruptcy in the EU was presented by Walter and Krenchel (2021). The authors looked into comparing regulations in EU countries and measuring their leniency. Regulatory developments in U.S. law were described by Albanesi and Nosal (2018). They described the impact of the reform in US laws on bankruptcy and insolvency and the resulting consequences for households. Li and White (2019), on the other hand, focused on studying the impact of the change in the US regulations on the increase in financial difficulties of the elderly.

It is worth to look at the experience of other countries in this area. Cukiernik and Teluk (2007) point to the example of the United States, where the model of

open and easy debt relief has worked for a long time. Consumer bankruptcy has become an increasingly popular solution in the U.S. and the increase in its popularity has not been accompanied by a decrease in macroeconomic indicators; on the contrary, the number of consumer bankruptcies has grown along with economic growth. The authors explain this by the fact that consumers began to treat bankruptcy "*as an instrument to optimally allocate risk in the consumer credit market*". This even made it necessary to tighten the rules in 2005, so that this solution would not be abused by people who wanted to go bankrupt in a relatively easy way without suffering onerous consequences.

In Europe, as Szymańska (2013: 54–67) points out, EU countries started to introduce consumer bankruptcy legislation in the 1980s and 1990s. Most Central and Eastern European countries decided to implement relevant regulations in this area at the end of the first decade of the 21st century.

Data on the solutions applied in Europe is provided by the project of the Law on Amendments to the Law – Bankruptcy Law and Certain Other Laws from May 2019. The regulations in force in the Czech Republic since 2008, were amended in 2017 in order to counter unfair practices when it comes to declaring bankruptcy. The Lithuanian regulations largely focus on the cause of the consumer's insolvency. A debtor cannot benefit from a consumer bankruptcy solution if his or her insolvency is due to illegal behaviours, fraud and unfair conduct. Similarly, in France, the assessment must be made as to whether the debtor created the insolvency without malicious intent and whether, in good faith, he or she became insolvent. French law also requires that a number of material and formal legal prerequisites must be met in order to benefit from the debt relief. Not all categories of individuals can take benefit from such solutions.

Some countries decide to facilitate the use of the institution of consumer bankruptcy. The legislation in Slovakia introduced in 2005 was amended in 2017 so as to broaden the circle of entities that could be affected by the procedures contained in the regulations.

In turn, the British legislation does not provide for an automatic repayment plan for creditors. The repayment is made only if the debtor earns enough to cover his or her living expenses and those of his or her closest family and has a financial surplus after paying them. However, British solutions assume a period of one-year restrictions. During this time, the debtor cannot perform certain professions, cannot sit on the board of directors of a limited liability company or hold certain government positions. In addition, during this period, the debtor is not authorized to incur new financial obligations without the trustee's approval, his or her income is controlled, and he or she is required to report any additional income beyond the level of resources needed for a normal, dignified life. The solution assuming that the discharge of the consumer's debts occurs automatically, 12 months after the

initiation of the bankruptcy procedure, as indicated by Hrycaj and Michalska (2018: 7–37), is practiced in England, Wales, Scotland and Northern Ireland.

As, in turn, creators of portal spiralazadluzenia.pl (www5), who specialize in tracking consumer bankruptcy solutions, state that in Germany regulations are much more restrictive in this aspect. The debtor remains under the supervision of the trustee for six years. During that time, the debtor is obliged to take up a job even below his or her qualifications and to hand over to the trustee any amount of surplus money above the seizure-free amount. Debt relief is not granted until after this six-year period, unless there are grounds to refuse relief for remaining debts.

In Norway, restrictive regulations are in place to ensure that the debtor faces long term consequences related to the debt settlement process. Great importance is attached to the enforcement of claims at the stage of first calls for payment. Failure to do so may result in being entered in the register of debtors, which in turn will result in e.g. inability to obtain credit or limited access to post-paid services, such as telephone, television or Internet. In turn, Dutch regulations focus on supporting the debtor's self-reliance in getting out of debt. This is done by giving consumers support in dealing with formal matters, such as reading and interpreting payment notices, helping them find a job, and even giving the debtor a consolidation loan from the municipal bank to help them get out of debt.

It can be noted that the problem of indebtedness of individuals, resulting in the introduction of the institution of consumer bankruptcy into the legal systems, as well as the abuse of this method for solving problems with consumers excessive debt is also present in other countries. The law is being amended and attempts are being made to eliminate the abuse. Preventive methods are used in the form of strict regulations that are supposed to discourage people from getting into debt. On the other hand, solutions such as providing consumers with official assistance are used, so that the debtor, if possible, first tries to deal with financial problems on his or her own.

3. CONSUMER BANKRUPTCY VS. BUSINESS BANKRUPTCY

The description in this section of the article refers to Poland. The state obligation to help people who, for various reasons in life, in an unfaulted manner, have found themselves in a difficult material situation, i.e. making it impossible to repay their debts, may seem obvious. What is needed is a solution that allows such people to safely get out of debt and rebuild a normal life. However, a question arises as to how to implement such support in an effective way and to the right group of people. As pointed out by the President of the Office of Competition and Consumer Protection (www3), "*It would not be good if we allowed bankruptcy*

also for those who intentionally, through their own fault, fell into debt loops with no guarantee that they will incur liabilities in a responsible manner in the future."

Bankruptcy proceedings were regulated by the act dated 28 February 2003. Bankruptcy proceedings[1] – conducted against a private person not running business activity as well as against a business entity – seem to be largely similar. The bankrupt (an entrepreneur as well as a consumer) is obliged to indicate and hand over to the trustee all of their assets as well as documentation regarding these assets and debts. Subsequently, after the identification of the bankruptcy estate and the list of receivables, the bankruptcy estate is liquidated and the funds obtained are distributed among the creditors participating in the proceedings.

However, there are fundamental differences between the two types of proceedings. In case of an entrepreneur, the bankruptcy petition may be filed by the debtor or any of its personal creditors. In case of a natural person who does not conduct business activity, such a request may be filed only by the debtor[2]. A significant difference is also expressed in the purpose of conducting proceedings and the possibilities of their realization in both cases.

In case of the proceedings conducted in respect of business entities, the court shall dismiss the application for bankruptcy if the assets of the insolvent debtor are not sufficient to cover the costs of the proceedings or are only sufficient to cover these costs. This means that the proceedings shall not be conducted if the assets gathered in the bankruptcy estate are not sufficient to partially satisfy the creditors. The situation of individuals is approached differently. According to the law, the court may conclude the bankruptcy proceedings also in the absence of the bankruptcy estate or when, after the bankruptcy estate has been completely liquidated, no final distribution plan has been drawn up due to the absence of the bankruptcy estate funds that could be subject to distribution.

It is also worth noting that the main aim of the proceedings conducted against a company is to try to satisfy the creditors' claims as much as possible. It is different in the case of individuals not running business activity. With regard to this group of debtors, proceedings should be conducted in such a way as to enable satisfying the creditors' claims and to remit the debtor's liabilities not fulfilled in bankruptcy proceedings as well.

A comparison of the provisions of the Bankruptcy Law for individuals and business entities shows a significant preference for the first group. As Adamus (2015: 33–37) points out, in the case of consumer bankruptcy, "*the priority is therefore the debt relief of the bankrupt*".

---

[1] Previously – Bankruptcy and Reorganization Law.

[2] With certain exceptions – a creditor may file a bankruptcy petition against an individual who has carried on business if less than one year has elapsed since the date the individual was removed from the relevant register or ceased to carry on business.

4. DEBT AND DEBT RELIEF PROCESS

4.1. Causes of indebtedness

Successive amendments of Polish bankruptcy laws concerning individuals are aimed at improving the rules where they appear to be imperfect. Commentators on the subject, however, point to the source of the debt problem among consumers.

As Gurgul and Podczaszy (2019: 9–16) note, the August 2019 amendment project to the law lacked an examination of the socio-economic conditions that induce consumers to behave in certain ways, as well as an analysis of the reasons for their insolvency and the extent of debt problems both nationally and globally. The authors predict further relaxation of the rules and point out that "*there is a steady process of social familiarization with the total economic default of a single individual*" and that "*it could be stated that any intermediate proposals for change are only temporary solutions on the way to final solutions, where anyone who finds that the burden of debt prevents them from freely pursuing their goals will be able to obtain legal debt relief upon application*." Podczaszy (2017: 61–67) further emphasizes that "*The totalization and infantilization of the society by consumption has already gone so far that perhaps soon no legal instruments will help anymore.*" As Dąbrowska and Janoś-Kresło (2020: 37–55) add, "*the purchase of goods and services and their consumption has ceased to be dependent on the purpose it serves, becoming an end in itself.*"

Also, Swoboda (2014: 241–255) states that "*the sudden technological development, IT and social transformations have caused the development of indebtedness beyond the measure of average citizens and falling into a debt spiral*". Similarly, Żurawski (2017: 372–386) points to the ease of access to credit and loans, which is associated with the growing indebtedness of society. Chybiński (2021: 6–12) notes that regulations may not sufficiently counteract abuses by people overusing the services of financial institutions. The author also draws attention to the role of mechanisms conducive to indebtedness, such as imperfect creditworthiness testing procedures or conditions for using the services of shadow banking system, indicating that financial institutions are focused on generating profits without paying attention to the future material situation of their customers.

Cecchetti et al. (2011) point out "*Debt is a two–edged sword. Used wisely and in moderation, it clearly improves welfare. But, when it is used imprudently and in excess, the result can be disaster. For individual households and firms, overborrowing leads to bankruptcy and financial ruin*".

Lewicka-Strzałecka (2019), on the other hand, underlines that "*generally speaking, the extent of social consent to consumer fraud in the area of finance is*

large and shows a growing trend". It turns out that consumers are willing to justify the behaviour of others, such as: taking out a loan without carefully studying the terms of its repayment, frequent changes of bank accounts to avoid seizure by a bailiff, transferring assets to the family to escape from a creditor, or working illegally to avoid collecting debts from their wages.

Liberalization of bankruptcy laws may foster the danger described by Cukiernik and Teluk (2007) of encouraging overconsumption instead of prudent spending planning and timely payment of liabilities.

In conclusion, the authors dealing with the subject, referring to the issue of increasing indebtedness among consumers, point to the ease of access to credit and loans, the progressive tendency to increase consumption in society, a certain social acceptance of consumer abuse in the financial area, as well as the liberalization of regulations in this field.

4.2. (De)motivating activities related to indebtedness

The liberalization of the regulations is consistent with the message sent to debtors by the Ministry of Justice in its documents: Consumer Bankruptcy, a guide issued in 2015 and Consumer bankruptcy and consumer arrangement, a practical debtor's guide published in 2021. These are booklets prepared for debtors, from which they can obtain basic information on the conditions and the course of bankruptcy proceedings. It is worth noting the style of writing used in these documents and its subsequent changes.

While the former study points to the importance of "*the legal and property consequences associated with this proceeding*" the message from the 2021 Guide is much softer in tone. It provides tips for those considering taking advantage of debt relief through consumer bankruptcy. There are phrases such as: "*Consumer bankruptcy should be a quick, simple and transparent process leading to your debt relief*" as well as: "*Can a creditor apply for my bankruptcy? NO. It is your privilege.*" and further on "*The ability to discharge your debts in consumer bankruptcy is your right and privilege*". So one may get the impression that consumer bankruptcy is an uncomplicated and easy procedure. Only a consumer seeking bankruptcy is entitled to initiate bankruptcy proceedings and the creditors have, in principle, no voting rights in this process

The Guide further states that: "*Conscious or grossly negligent increasing your state of insolvency e.g. by incurring effectively unmanageable debts will result in an extension of your plan to repay your creditors*". Thus, from reading this excerpt one may conclude that evident, intentional increasing of the debt status is not unethical or improper, but may only lead to prolongation of the creditors' repayment plan. As the regulations indicate, this period may not exceed 7 years

maximum. The attention should also be focused on the article 370d paragraph 2 of the Bankruptcy Law, which states that in case of significant improvement of material conditions of the bankrupt during the period of execution of the plan of repayment of creditors, the creditor and the bankrupt may apply for a change in the plan of repayment of creditors. However, the improvement of the material conditions of the bankrupt must result from reasons other than the increase of remuneration for work or income obtained from personally performed gainful activity of the bankrupt. This means that if the debtor e.g. improves his or her qualifications and, as a result, finds a noticeably better remunerated job, it will not affect the possibility of his or her creditors to recover their claims. It should be emphasized that if the liabilities were enforced by way of enforcement proceedings, the deduction would be subject to the share in the debtor's remuneration set forth by law, i.e. with the increase of the debtor's income, the amount going to the creditor would increase.

During bankruptcy proceedings, the debtor's salary is subject to deduction. Half of the salary is protected, however, it cannot be less than the amount corresponding to the minimum wage. It seems fair and obvious to leave a part of the salary with the debtor, thanks to which he or she will be able to cover the costs of ongoing maintenance, just as it is indisputable to collect a part of the debtor salary to cover the costs of bankruptcy proceedings and repay creditors. However, for those who earn less than twice the minimum wage, there is no motivation to increase the level of their earnings, as the whole amount earned will go to the bankruptcy estate anyway. It is only when the level of earnings exceeds twice the minimum wage that the amount actually received by the bankrupt will increase. It is conceivable that in case of some people this may lead to seeking solutions to get around the law and find employment in the grey area. Since their salary is to be subject to seizure, it may be more advantageous for them to work in an officially undeclared way (although in this situation the debtor is deprived of the obvious rights and protection resulting from legal employment) and to use all the money they earn. Another type of the attempt to get around the regulations could be the debtor's agreement with the employer to work for a non-deductible minimum wage rate and to arrange for payment of the remaining salary in an "informal" way. However, such solutions will certainly not be possible for all jobs, moreover, changes in the regulations (such as in tax and labour law) are aimed at eliminating such situations.

Another aspect to mention is the fact that the protection applies to all the financial means received by the debtor, such as social benefits, alimony, family and parental benefits (including 500+); family, nursing and childbirth allowances;

one-off childbirth benefit[3]. For some people who could potentially find employment, taking a job could turn out to be an unfavourable solution because it would result in losing (at least some of) the social support benefits. Financial support should certainly be targeted at those who need it, but the key is how the funds are distributed so that they go where they are actually needed. In some cases, poorly targeted support may cause counterproductive effects, such as lack of motivation to seek employment and permanent use of government support as requiring less commitment. As Adamus points out (2019: 9–15), excessive consumer protection may contribute to the phenomenon of so-called moral hazard, expressed in the consumer's claims attitude and lack of responsibility for his or her decisions, which may ultimately work against them.

4.3. Causes of indebtedness

In order to illustrate the impact of changes in regulations, it is worthwhile to track the data on the effects of their introduction, concerning both the number of applications filed and proceedings initiated. As indicated in the explanatory memorandum to the draft of changes in regulations, in the period from the entry into force of the changes in regulations (31.03.2009) until the end of 2012, 2 161 applications for bankruptcy were filed and only 60 decisions to open proceedings were made. Therefore, only about 3% of requests resulted in opening bankruptcy proceedings by the court. As can be seen from the subsequent explanatory memorandum to the draft amendments to the regulations (2014), in 2014 there were 300 applications and 32 open proceedings, which gives 11% share of cases of opening proceedings in relation to the applications. To sum up, in the period 03.2009–12.2014 the institution of consumer bankruptcy was not very popular and in addition the fraction of the announced proceedings to applications filled was low.

The data for the next period obtained from the Statistical Directory of Justice Department are different. The significant increase in the number of filed applications from 5,616 to 15,458, as well as in the number of open proceedings from 2,153 to 7,781 in 2015, 2019 is recorded. The ratio of cases opened to applications for the described period was nearly 50%.

However, the originator of the recently introduced changes (in force from 24.03.2020) as well as the legislator considered these results still insufficient and, as mentioned, the requirement for the judge to examine the consumer's negligence in causing his/her insolvency was eliminated. Nowadays, bankruptcy proceedings

---

[3] *Consumer bankruptcy and consumer arrangement, a practical debtor's guide.*

are declared for all applications filed[4] and, according to data published by the Statistical Directory of Justice Department, 17,532 bankruptcies were declared in 2021, and 22,035 applications for bankruptcy were filed in the same time. These changes are illustrated on the Chart 1. Thus, one can see a jump in both areas discussed – the number of bankruptcy applications filed and the share of cases opening proceedings in relation to filings. The ratio of cases opened to applications in 2021 was nearly 80%. The increase in the number of proceedings opened in relation to consumer bankruptcy applications filed is shown in Chart 2.
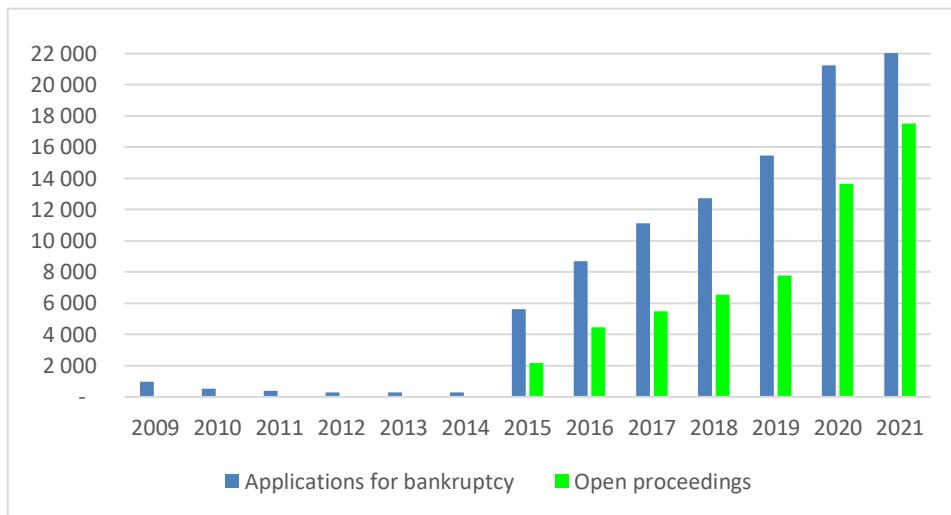

Chart 1. Bankruptcy filings vs. open proceedings

Source: own analysis based on data form www4 (Bankruptcy, reorganization, restructuring proceedings in 2005–2021)

---

[4] However, applications that do not meet formal requirements may be rejected.
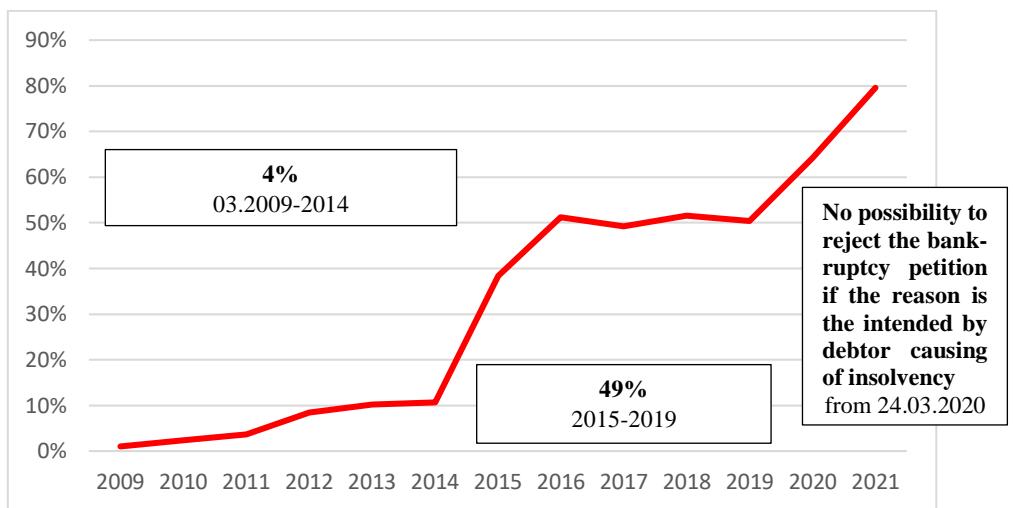
Chart 2. Relation of open proceedings to number of applications filed

Source: own analysis based on data from www4 (Bankruptcy, reorganization, restructuring proceedings in 2005–2021)

Table 1. Age structure of debtors against whom bankruptcy proceedings were opened in 2015–2021

The age of the debtors (inyears)	2015	2016	2017	2018	2019	2020	2021
<20	0,05%	0,11%	0,16%	0,14%	5,76%	6,38%	7,02%
20–29	5,16%	5,05%	5,68%	5,04%			
30–39	25,15%	23,18%	23,67%	20,74%	20,41%	22,03%	22,58%
40–49	24,90%	25,54%	24,39%	23,09%	23,18%	23,86%	26,17%
50–59	20,68%	21,01%	19,35%	19,38%	17,67%	18,31%	17,61%
60–69	18,30%	18,09%	18,60%	21,32%	20,88%	19,08%	17,48%
70–79	5,21%	6,07%	7,04%	8,83%	10,22%	9,17%	8,14%
80–93	0,55%	0,95%	1,11%	1,46%	1,88%	1,17%	1,00%
< 60	75,94%	74,89%	73,25%	68,39%	67,01%	70,58%	73,39%

Source: own analysis based on data from www1 (Consumer Bankruptcy Reports for 2015–2021)

The brief analysis of the data published by the Central Economic Information Centre regarding the age structure of debtors shows (Table 1) that in the years 2015–2021 from 67% to 76% of debtors in relation to whom consumer bankruptcy was declared are persons under 60 years of age, so (except the special cases) persons able to work or persons (also underage or studying) able to take up work in the future[5].

4.4. Effects of conducted proceedings – cancellation of liabilities without setting a repayment plan

The law[6] allows the debtor to be relieved of the payment of debts, but only in an exceptional situation. It is briefly described in the Guide of the Ministry of Justice: "*Debt relief without establishing a plan for repayment of creditors is completely exceptional. It may take place only if your personal situation clearly indicates that you are permanently incapable of making any repayments under a plan to repay your creditors*". The Guide goes on to point out that this situation applies mostly to single-person pensioner households.

It is necessary to take a closer look at what is meant by this specific circumstance of cancelling the bankrupt's debts without establishing a repayment plan. Some clues may be found in statistics concerning the effects of conclusion of conducted proceedings. Unfortunately they are not publicly available (perhaps they are not registered at all) and in order to demonstrate the data presented below, it was necessary to review daily editions of Court and Economic Monitor (www2) for the year 2021. In this way, summary information on all court decision requiring such disclosure according to the provisions and concerning the termination of bankruptcy proceedings against individuals not conducting business activity was collected.

An analysis of court decisions shows that termination of bankruptcy proceedings without setting a repayment plan, however, is not as rare as the regulations would indicate. A study conducted for 2021 shows that courts issued decisions to close bankruptcy proceedings[7] without setting a repayment plan[8] (or conditional

---

[5] Data on the number of debtors in 2019–2021 are given cumulatively for persons under 30 years of age. In the years 2015–2018 the category of persons under 20 years of age was also included, the percentage of the youngest persons in the group of debtors was marginal at 0.05%–0.16%, therefore, it can be assumed that the reported data refers to working age persons.

[6] Article 491^{16} of the Bankruptcy Law.

[7] Article 491^{14} paragraph 8 of the Bankruptcy Law provides that the issuance of a decision on establishing a plan for repayment of creditors, or discontinuance of the bankrupt's obligations without establishing a plan for repayment of creditors, or conditional discontinuance of the bankrupt's obligations without establishing a plan for repayment of creditors shall mean the closing of the proceedings.

[8] According to article 491^{21}, these are not subject to redemption: obligations of alimony nature, obligations resulting from pensions for compensation due to illness, incapacity to work, disability or death, obligations to pay fines adjudged by the court, as well as to fulfil the obligation to repair damage and compensate for harm

non-repayment) in as much as 32% of all cases. In 56% of cases, the court established a repayment plan or an agreement with creditors was reached, meaning that the debtor was obliged to make repayments to creditors. In the remaining 12% cases it was not clear from the decision whether a repayment plan was set in the proceedings or whether all the bankrupt's liabilities were written off without setting a repayment plan. It is worth noting that after eliminating the last group of cases with unclear conclusion the percentage of proceedings ending with cancellation of all of the bankrupt's liabilities without a repayment plan amounts to 36% of all cases.

In the situation when bankrupts at the working age (or able to work in the future) represent in recent years even 3/4 of the group of bankrupts (those under 60 years of age, indicated in Table 1), attention is drawn by the high percentage of cases, constituting 1/3 of all completed proceedings, in which debtors are deemed permanently incapable of making any repayments[9].

The article raises important ethical issues, which are difficult to regulate by law, but referring to the hypothesis presented in the introduction, it should be pointed out that in Polish legislation it is possible to notice a leniency of the rules on the possibility of bankruptcy for individuals, and consequently an increase in the number of consumer bankruptcy petitions filed, as well as open bankruptcy proceedings conducted against individuals who do not conduct any business activity.

5. BANKRUPTCY RULES AND THE SENSE OF EQUALITY

In the light of the above considerations and the data presented, a question arises about the consequences of consumer bankruptcy for the directly concerned creditors, financial market participants and, finally, for the society as a whole. Does the realization of protection goals for the debtor-consumer not violate the rights of other market participants?

Debt relief for people who, for reasons beyond their control, find themselves in a difficult financial situation seems to be a solution that does not raise many doubts. But should the same treatment be offered to people who clearly contributed to their own insolvency? Such a solution means that obligations of some consumers are written off, while others have to pay their debts. This may result in

suffered, obligations to pay restitution or pecuniary performances ordered by the court as a punishment or a measure connected with placing the offender on probation, as well as obligations to redress damage resulting from a crime or misdemeanour established by a final judgment, and obligations that the bankrupt intentionally failed to disclose, if the creditor did not participate in the proceedings.

[9] The age structure of bankrupts between 2015 and 2021 was used for comparison. In the analysed period it is rather constant, which made it possible to relate this data to the results of bankruptcy proceedings completed in 2021. Bankruptcy proceedings are usually completed after a period of not less than one year from the date of opening the proceedings.

more people opting for a consumer bankruptcy solution, as it is easier and requires less effort on the part of the debtor, instead of trying to repay creditors (if it is actually possible).

It also seems that not enough attention is given to creditors in the situation of debt relief for a non–business individual. These creditors may include banks, financial institutions, other economic entities, but also other individuals. Cancellation of the bankrupt's liabilities in the process of bankruptcy proceedings or setting the repayment plan at a level that satisfies only a small part of the claims may lead to deterioration or even loss of liquidity by creditors. Langer (2020: 207–218) recognizes this issue, wondering "*whether opening the access of wider range of debtors to legal resources enabling their debt relief does not excessively violate the constitutional rights of creditors. As an analogy, one can mention the numerous jurisprudence of the Constitutional Court on the imbalance in the landlord– tenant relationship, in which the Court declared unconstitutional legal regulations that interfere too much with the rights of landlords, providing protection for tenants that is disproportionate to the goal*"[10].

In a broader perspective, the effects of the progressive liberalization of consumer bankruptcy laws on the society as a whole cannot be ignored either. Financial institutions, which will not be able to enforce their claims against debtors declared bankrupt, will try to seek compensation for their losses. This, in turn, may result in higher costs of credits and loans or stricter thresholds for creditworthiness examination. Consequently, this will limit access to the aforementioned services or increase their costs for the remaining financial market participants. As a result, access to credit and loans may become more difficult for the poorest individuals and paradoxically lead to an increase in consumer bankruptcy due to the increased debt servicing costs resulting, for example, from seeking financing from the nonbank financial companies. Current regulations are more and more attractive for people considering taking advantage of the institution of consumer bankruptcy. What is important, the liberalization of regulations has made the access to this solution easier for people who have intentionally increased their level of indebtedness. The number of proceedings terminating bankrupt's debts without setting a repayment plan is not marginal, as it should be expected from the regulations, but it occurs in about 1/3 of cases. In this situation, excessive consumption and the resulting indebtedness of the society may lead to the violation of the principle of social equality.

---

[10] At this point, one may wonder whether any constitutional rights may be considered to be more or less violated, whether it is possible to graduate the violation of the constitutional rights.

CONCLUSIONS

The paper presented the institution of consumer bankruptcy and the review of its legal regulations applied in Poland and some other countries. The process of consumer indebtedness and debt relief was described. The causes of insolvency of individuals and important aspects of the debt relief process were discussed. The results of the data analysis show that the number of bankruptcy applications and proceedings have definitely increased in recent years. As the study of changes in consumer bankruptcy laws shows, this growing trend is correlated with the progressive liberalization of these laws. In addition, about 1/3 of consumer bankruptcy proceedings completed in 2021 were concluded with the cancellation of the bankrupt's liabilities without establishing a repayment plan. This is a very high fraction considering that this way of closing bankruptcy proceedings is indicated in the regulations as to be used in exceptional situations.

The results of the analysis, and conclusions of the observations support the hypothesis put forward at the beginning that the liberalization of regulations in the area of consumer bankruptcy has resulted in a significant increase in the number of consumer bankruptcy petitions and open bankruptcy proceedings against individual debtors. A total of 2,161 bankruptcy petitions were filed in the first less than four years after the changes to the laws allowing consumer bankruptcy came into force (by the end of 2012). In 2021 only, there were already 22,035 such applications. In the first six years after the implementation of the regulations allowing the announcement of consumer bankruptcy (2009–2014), a total of 120 decisions to open bankruptcy proceedings were issued, in 2019 there were already 7,781, and two years later – 17,532 cases. Thus, one can see a clear jump in the number of cases in both areas analyzed.

It seems that as important as creating the possibility for the indebted to return to normality in the form of consumer bankruptcy, it is equally important to take care of the sense of equality in this process. It is vital to be aware that consumer debt relief comes at the expense of other market participants – obviously direct creditors but also the general public. Therefore, the subject of the next research in this area could be the verification whether such a direction of changes in the consumer bankruptcy institution in Poland is really in line with the social norms accepted in the Polish society.

BIBLIOGRAPHY

Adamus R. (2019), *Importance of Payment Morality in the Polish Bankruptcy Law*, Journal of Business Law and Ethics December, vol. 7, no. 1&2. *https://doi.org/10.15640/jble.v7n1_2a2*

Adamus R. (2015), *Zaspokojenie wierzyciela rzeczowego w upadłości konsumenckiej*, Przegląd Prawa Handlowego 2/2015.

Albanesi S, Nosal J. (2018), *Insolvency After the 2005 Bankruptcy Reform*, National Bureau of Economic Research Working Papers, Working Paper 24934, *https://www.nber.org/papers/w24934* [Accessed 03.08.2022].

Cecchetti S.G., Mohanty M.S., Zampolli F. (2011), *The real effects of debt*, BIS Working Paper no. 352, *https://www.bis.org/publ/othp16.pdf* [Accessed 03.08.2022].

Chybiński R. (2021), *Upadłość konsumencka – realna pomoc czy katastrofa regulacyjna?*, Przegląd Prawa Publicznego, nr 9/2021.

Cukiernik T., Teluk T. (2007), *Najlepsze praktyki upadłości konsumenckiej*, Raport Instytutu Globalizacji Czerwiec 2007, *http://globalizacja.org/download/pr-globalizacja_org-2007-06-13-raport.pdf* [Accessed 03.08.2022].

Dąbrowska J., Janoś-Kresło M. (2020), *Upadłość konsumencka – pomoc dla zadłużonych konsumentów*, Prakseologia i Zarządzanie, Zeszyty Naukowe TNP nr 1/2020. *http://www.zntnp.pl/wp-content/uploads/2020/08/ZESZYT_1_2020_TNP4789-3-1.pdf* [Accessed 03.08.2022].

Gurgul S., Podczaszy J. (2019*), Dalsza liberalizacja przepisów o upadłości konsumenckiej – konieczne zmiany w świetle uwarunkowań społeczno-gospodarczych*, Przegląd Prawa Publicznego, nr 3/2019.

Hrycaj A., Michalska A. (2018), *Wpływ postępowań likwidacyjnych wszczynanych w wybranych krajach europejskich systemu prawnego common law na bieg postępowań rozpoznawczych i egzekucyjnych toczących się w Polsce oraz wpływ wszczęcia i wyniku postępowania w wyżej wymienionych krajach na istnienie roszczenia dochodzonego przed sądem polskim,* Prawo w Działaniu, Instytut Wymiaru Sprawiedliwości. *https://iws.gov.pl/wp-content/uploads/2018/09/Anna-Hrycaj-Anna-Michalska.pdf* Accessed 03.08.2022].

Langer M. (2020), *Liberalizacja przepisów dotyczących upadłości konsumenckiej,* Folia Iuridica Universitatis Wratislaviensis, *https://www.repozytorium.uni.wroc.pl/dlibra/publication/127544/edition/118584/content* [Accessed 03.08.2022].

Lewicka-Strzałecka A. (2019), *Moralność finansowa Polaków, Raport z badań – IV edycja,* Konferencja Przedsiębiorstw Finansowych w Polsce, *https://zpf.pl/pliki/raporty/moralnosc_finansowa_polakow_2019.pdf* [Accessed 03.08.2022].

Li W., White M.J. (2019), *Financial Distress among the Elderly: Bankruptcy Reform and the Financial Crisis*, Wharton Pension Research Council Working Papers, Working Paper Number WP2019–11. *https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3540468* [Accessed 03.08.2022].

Michalak K. (2009), *Prawo upadłościowe i naprawcze, Komentarz do ustawy z dnia 5 grudnia 2008 r. o zmianie ustawy – Prawo upadłościowe i naprawcze oraz ustawy o kosztach sądowych w sprawach cywilnych*, LEX/el. 2009.

Podczaszy J., (2017), *Instytucja upadłości konsumenckiej jako warunek utrzymania systemu społeczno-gospodarczego opartego na długu*, Przegląd Prawa Publicznego, nr 9/2017.

Swoboda K. (2014), Upadłość konsumencka, Acta Erasmiana VII, Z badań nad prawem i administracją *http://www.repozytorium.uni.wroc.pl/Content/66281/16_K_Swoboda_Upadlosc_konsumencka.pdf* [Accessed 03.08.2022].

Szymańska A. (2013), *Upadłość konsumencka w wybranych krajach Unii Europejskiej a kryzys gospodarczy*, Problemy Zarządzania, vol. 11, *https://pz.wz.uw.edu.pl/resources/html/article/details?id=166658* [Accessed 28.02.2022].

Walter G., Krenchel J.V. (2021), *The Leniency of Personal Bankruptcy Regulations in the EU Countries,* Risks 2021, 9(9), 162, */10.3390/risks9090162*.

Wiśniewska D. (2018), *New Consumer Bankruptcy in Poland – a New Start not only for the Customer?* Safe Bank, No 4(73), *http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.ojs-doi-10_26354_bb_5_4_73_2018*[Accessed 28.02.2022].

Żurawski M. (2017), *Pozytywne i negatywne przesłanki ogłoszenia upadłości konsumenckiej,* Studia Iuridica Toruniensia, tom XX, s. 372–386, *https://repozytorium.umk.pl/bitstream/handle/item/4993/SIT.2017.019%2cZurawski.pdf?sequence=1* [Accessed 28.02.2022].

Ustawa z dnia 28 lutego 2003 r. Prawo upadłościowe (Dz.U. 2003 nr 60 poz. 535) – Bankruptcy proceedings.

Ustawa z dnia 5 grudnia 2008 r. o zmianie ustawy – Prawo upadłościowe i naprawcze oraz ustawy o kosztach sądowych w sprawach cywilnych. (Dz.U.2008 nr 234 poz. 1572). Act of 5 December 2008 amending the Act – Bankruptcy and Reorganisation Law and the Act on court costs in civil cases.

Ustawa z dnia 29 sierpnia 2014 r. o zmianie ustawy – Prawo upadłościowe i naprawcze, ustawy o Krajowym Rejestrze Sądowym oraz ustawy o kosztach sądowych w sprawach cywilnych (Dz. U. 2014 poz. 1306) – Act of 29 August 2014 amending the Act - Bankruptcy and Insolvency Law, the Act on the National Court Register and the Act on court costs in civil cases.

Ustawa z 30.08.2019 r. o zmianie ustawy – Prawo upadłościowe oraz niektórych innych ustaw (Dz.U. 2019 poz. 1802) – Act of 30.08.2019 amending the provisions of the Bankruptcy Law.

Rządowy projekt ustawy o zmianie ustawy – Prawo upadłościowe oraz niektórych innych ustaw. Druk nr 3480 –The project of the Law on Amendments to the Law – Bankruptcy Law and Certain Other Laws.

Poselski projekt ustawy o zmianie ustawy – Prawo upadłościowe i naprawcze oraz niektórych innych ustaw. Druk nr 2265 – The project of the Law on Amendments to the Law – Bankruptcy Law and Certain Other Laws.

Publikacja Ministerstwa Sprawiedliwości Upadłość konsumencka, poradnik, stan prawny na 1 stycznia 2015 r. – Consumer Bankruptcy, a guide issued in 2015.

Publikacja Ministerstwa Sprawiedliwości Upadłość konsumencka oraz układ konsumencki, praktyczny poradnik dłużnika, stan prawny na 1 lutego 2021 r. – Consumer bankruptcy and consumer arrangement, a practical debtor's guide published in 2021.

[www1] *https://www.coig.com.pl/* – Centralny Ośrodek Informacji Gospodarczej [Accessed 28.02.2022].

[www2] *https://ems.ms.gov.pl/msig/przegladaniemonitorow* – Monitor Sądowy i Gospodarczy [Accessed 28.02.2022].

[www3] *https://uokik.gov.pl/aktualnosci.php?news_id=321* – Upadłość konsumencka – komentarz Prezesa UOKiK z 06.07.2007 [Accessed 28.02.2022].

[www4] *https://isws.ms.gov.pl/pl/baza-statystyczna/opracowania-wieloletnie/* – Postępowanie upadłościowe, naprawcze, restrukturyzacyjne w latach 2005–2021 [Accessed 03.08.2022].

[www5] *https://spiralazadluzenia.pl/zagranica/warto-oglaszac-upadlosc-konsumencka-granica.html* – Czy warto ogłaszać upadłość konsumencką za granicą? [Accessed 28.02.2022].

KONSEKWENCJE ZMIAN PRZEPISÓW O UPADŁOŚCI KONSUMENCKIEJ

Streszczenie

Cel artykułu/hipoteza: Celem artykułu jest dokonanie przeglądu i przedstawienie zmian przepisów dotyczących upadłości konsumenckiej oraz konsekwencji, które wynikają z tych zmian dla osób fizycznych nieprowadzących działalności gospodarczej.

Metodyka: Przeprowadzone badanie efektów postępowań upadłościowych prowadzonych wobec osób fizycznych nieprowadzących działalności gospodarczej wraz z dokonaną analizą zmian przepisów posłużą do zweryfikowania hipotezy, że liberalizacja przepisów spowodowała wzrost liczby złożonych wniosków o ogłoszenie upadłości konsumenckiej, jak i otwartych postępowań upadłościowych prowadzonych wobec osób fizycznych nieprowadzących działalności gospodarczej.

Wyniki/Rezultaty badania: Wyniki przeprowadzonej w artykule analizy pozwalają stwierdzić, że hipoteza została potwierdzona, ponieważ liberalizacja przepisów w obszarze upadłości konsumenckiej spowodowała istotny wzrost liczby wniosków o ogłoszenie upadłości konsumenckiej oraz otwartych postępowań upadłościowych prowadzonych wobec osób fizycznych nieprowadzących działalności gospodarczej. Wydaje się, że również ważne, jak stwarzanie możliwości do powrotu do normalności dla osób zadłużonych w postaci rozwiązania jakim jest upadłość konsumencka, jest zadbanie o wiążące się z tym zagadnienie poczucia równości. Trzeba mieć świadomość, że oddłużenie konsumenta odbywa się kosztem innych uczestników rynku – bezpośrednich wierzycieli oraz ogółu społeczeństwa.

Słowa kluczowe: upadłość konsumencka, dłużnik indywidualny, zadłużenie i niewypłacalność osoby fizycznej nieprowadzącej działalności gospodarczej, prawo upadłościowe, zwolnienie z długu.

JEL Class: K35, G33.

SUSTAINABLE FINANCE – WHERE WE ARE AND HOW WE CAN GO FURTHER

Marika Ziemba[*]

Abstract

The purpose of the article/hypothesis: The purpose of the paper is to present the historical background of sustainable development and importance of sustainable finance, and to discuss the most important challenges currently facing sustainable finance. The article verifies the research hypothesis: recent changes (implementing of the EBA Action Plan, the Sustainable Finance Disclosure Regulations and facing the COVID-19) in the finance sector can help institutions pursue an effective, sustainable development policy.

Methodology: The article contains an extensive literature review of the sustainable development policy (including legal acts).

Results of the research: Sustainable development in the finance sector plays an important role and is currently facing three main challenges: the implementation of the EBA Action Plan, the Sustainable Finance Disclosure Regulation and COVID-19. The EBA Action Plan and SFDRs may initially require financial institutions to change their policy and thus complicate their operations, but later bring only benefits (e.g. transparency). On the other hand, the COVID-19 pandemic is a significant obstacle to the implementation of the sustainable development policy due to countries and entities focused on fighting this threat (including using financial resources). However, it should be mentioned that sustainable development brings long-term effects (including more effective development), thanks to which companies can achieve the desired benefits and overcome the obstacles and crises caused by the pandemic and future crisis.

Keywords: sustainable development policy, EBA Action Plan, Sustainable Finance Disclosure Regulations, COVID-19.

JEL Class: Q01, F63.

[*] Assistant professor, Faculty of Economics and Sociology, Institute of Finance, Banking Department, University of Lodz, e-mail: marika.swieszczak@uni.lodz.pl, https://orcid.org/0000-0002-8813-4489.

INTRODUCTION

Sustainable development concentrates on three aspects: economic, social, and environmental, which influence on world economy (Schoenmaker and Schramade, 2019). The main goal of a sustainable development policy is to provide current and future generations with the needed for life resources. On the basis of this challenge is avoiding stressing the Earth system (Raworth, 2017). The issue of sustainability development concerns on economic and social problems to the outcomes of environmental transformations around the world. The conception of sustainable development is currently a key policy goal of organizations and institutions across all scales of public life.

The first definition we find in *Our Common Future*, published by the Brundtland Commission, is: *"sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"[1]*. This concept focuses on maintaining economic growth while protecting the environment in the long term. The basic thesis that today's sustainable development should not come at the expense of the future's has gained widespread popularity.

The financial sector plays an important role in sustainable development because it helps to allocate resources to the most effective projects – sustainable investments and sustainable companies. Currently, there are three important challenges related to sustainable development in the financial sector: implementing the EBA (European Banking Authority) Action Plan, the Sustainable Finance Disclosure Regulations (SFDRs), and COVID-19. EBA has decided to include issues related to sustainable financing, including ESG (Environmental, Social, Governance) issues, in the priorities of its supervisory activities for 2020–2021. The sustainable development policy requires the financial sector to disclose whether its funds carry ESG risks and how they invest in sustainable development, which requires the financial institutions to meet a number of disclosure requirements and the fund classification process, i.e., the SFDRs. The goal of the SFDRs is to channel private investments towards sustainable investments and make the policy of sustainable development more transparent.

The purpose of the paper is to present the historical background of sustainable development and its importance in the financial sector, and to discuss the most important challenges currently facing sustainable finance. The article presents and systematizes the basic definitions related to sustainable development policies, showing the role of finance in the whole process, and presenting current changes in sustainable development in the financial sector. The article provides an extensive literature review to verify the research hypothesis: recent changes in the financial sector (implementing of the EBA Action Plan, the Sustainable Finance

---

[1] United Nations General Assembly, 1987.

Disclosure Regulations and facing the COVID-19) can help financial institutions pursue an effective, sustainable development policy.

1. HISTORICAL BACKGROUND OF SUSTAINABLE DEVELOPMENT

The concept of sustainable development developed significantly in the 1970s and 1980s. The concept of sustainable development is based on the concept of development (socio-economic development while respecting ecological boundaries), the concept of needs (allocating resources to meet the needs of all people), and the concept of future generations (using resources over a long period to optimize the quality of life of future generations). The idea of sustainable development focuses on two concepts – development and sustainable development. Numerous discussions can be found in the literature, which can be divided into two trends: 1) those that believe combining development and sustainability would not bring any of these goals (Sharpley, 2000), and 2) (represented by neoclassical economists) those that talk about the benefits of combining the two (Lele, 1991). A more radical approach assumes that without development, sustainable development is impossible, and vice versa (Sachs, 2010). Some neoliberal and modern theories of development (Willis, 2005), as well as modern understanding, argue that development is a process that leads to an improvement in the quality of life and increases the efficiency of economies (Remenyi, 2004).

When analyzing the historical background of sustainable development, four world summits (in Stockholm, Nairobi, Rio de Janeiro, and Johannesburg) should be considered (Engfeldt, 2002). Importantly, during these events, representatives of the country realized that implementing sustainable development is a necessity, not an alternative (Shah, 2008). The 1972 UN conference in Stockholm raised the topic of preserving the environment (Boudes, 2011) and its biodiversity (Handl, 1972). Interestingly, the developing countries highlighted the importance of development, whereas the developed countries argued how crucial environmental protection and enhancement are[2]. During this event, the term eco-development, the forerunner of the term sustainable development, was discussed for the first time, and also the report "The Limits to Growth", known as the Meadows Report, was presented, later published in 1972 by the Club of Rome. This publication was considered the argument for zero growth in developing countries due to environmental degradation and the scarcity of the planet's resources.

The 1982 Nairobi Summit aimed to verify the goals set during the Stockholm Conference and how they were implemented. It turned out that it was necessary

---

[2] Report of the United Nations Conference on the Human Environment, 1973.

to intensify activities for environmental protection and to tighten international co-operation[3].

In 1986, the Ottawa Conference established five requirements for achieving sustainable development:

1. Integrating conservation and development,
2. Satisfying basic human needs,
3. Achieving equity and social justice,
4. Providing self-determination, social and cultural diversity,
5. Maintaining ecological integration[4].

Another important step in implementing sustainable development was the establishment of the United Nations Environment and Development Commission in 1983, and in particular, the publication in 1987 of the Brundtland Report. The document clearly indicates that economic, social, and environmental development is possible simultaneously and that each country can achieve its full economic potential while increasing its resource base. The report also highlights three basic elements of sustainable development: environmental protection, economic growth, and social justice. Between 1972 and 1992, over 200 agreements and conventions in the field of environmental protection were signed at regional, national, and global levels. However, most of them were not generally binding agreements, and there was no systemic integration in these activities.

The Earth Summit in 1992 brought about a debate on what sustainable development should look like in the 21st century. The simultaneous Global Forum also brought discussions on this subject, this time between non-governmental organizations. These intensified efforts highlighted the importance of this topic for society as a whole. The Earth Summit adopted Agenda 21 as a comprehensive action plan for sustainable development, as well as the Rio Declaration, which set out the principles to guide countries in terms of environmental protection and development. During the Johannesburg Summit in 2000, governments set Millennium Development Goals (MDGs) related to poverty, hunger, education, gender, health, environmental sustainability, and a global partnership for development (Hens and Nath, 2003). Unfortunately, the nations at the Earth Summit failed to find the financial resources to implement Agenda 21, and the WSSD in Johannesburg failed to turn the agenda into actions.

Sustainable development has been the focus of EU policy, especially since 1997. The Sustainable Development Goals (SDGs) finally produced a list of 17 items at the United Nations Conference on Sustainable Development (Rio + 20) in Brazil in 2012. The SDGs replace the MDGs, which had been implemented over 15 years. The main effect of implementing the MDGs was reducing global poverty. But experience gained over those 15 years was not less important; for

---

[3] United Nations Environment Programme: Nairobi Declaration on the State of Worldwide Environment, 1982.
[4] Ottawa Charter for Health Promotion, First International Conference on Health Promotion, 1986.

example, it showed how to use updated datasets to achieve goals. The 193 UN Member States and representatives from 178 national governments accepted the Sustainable Development Goals (SDGs). The framework, also known as Agenda 2030, consists of 17 goals for the environment, society, economics, peace, justice, governance, and partnerships, with 169 associated targets..

In the literature, we can find many definitions of sustainable development, but the one most often used is from the Brundtland Commission (Cerin, 2006): *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*[5]. This aspect of sustainable development (preserving resources for future generations) differentiates it from traditional environmental policies, which also focus on environmental protection. The concept and definition of sustainable development have been modified from its origins, and subsequent definitions of sustainable development largely follow the basic definition of the World Commission on Environment and Development.

The main goal of the sustainable development policy is long-term economic and environmental stability. But achieving this goal is possible only by integrating activities in three aspects: economic, environmental, and social.

Sustainable development can be defined from four basic perspectives:
- preservation for future generation (WCED, 1987),
- conceptual socio-economic system which ensures the sustainability of goals (Pearce et al., 1989; Lele, 1991; Dernbach, 1998; Stoddart, 2011; Elkington, 2018),
- process of improving the quality of human life as a consequence of sustainable ecosystems (IUCN, 1991; UNDP, 2020; Meadows et al., 1972; Vare and Scott, 2007),
- contradiction to the contemporary western culture and lifestyle.

The concept of sustainable development is based on three fundamental principles:
- a holistic approach, which means linking economic, social, and environmental issues,
- futurity, because it concerns preserving the ecosystem for future generations,
- equity – focuses on ensuring that all members of society (now and in the future) have equal access to resources (Klarin, 2018; Dernbach, 1998; Elkington 2018; Stoddart, 2011).

The objectives of sustainable development are:
- control of population levels,
- minimizing the exploitation of non-renewable natural resources,
- optimizing the use of renewable resources,

---

[5] Report of the World Commission in Environment and Development: Our Common Future (1987).

- reduction of pollutant emissions (Streeten, 1977; Pearce et at., 1989; WCED, 1987; IUCN, 1991).

2. SUSTAINABLE FINANCE - KEY CHALLENGES TODAY AND FOR THE FUTURE

Although the Brundtland Report does not give a universal interpretation of the term sustainable development, the idea of sustainable development is spreading to many aspects of modern life. Many reports (e.g., Stern, 2007) state that the transition to a more climate-friendly economy is a huge challenge and that capital markets are the right actors to finance most of the costs of this venture. Importantly, financing for sustainable development is of great importance not only for combating climate change, but also in the process of implementing new technologies and innovative products. The financial sector plays an important role in the modern economy, but it must also be said that banking and finance contribute to sustainable development (Gerster, 2011). The financial system aims to allocate resources to the most effective projects. Therefore, finance is used in sustainable investments and sustainable companies. It also helps to transform the economy into a low-carbon and circular economy. This aspect deals with sustainable finance, which bridges the gap between finance (investments and loans) and economic, social, and environmental issues. Sustainable finance plays a key role in allocation as it helps achieve sustainable goals by focusing on strategic sustainable development activities (Schoenmaker, 2017).

The World Business Council for Sustainable Development developed the case for sustainability in the finance sector:

- investors minimize risk, improve the bottom line, and create long-term value by implementing social and environmental aspects,
- sustainable development changes businesses and creates new business opportunities,
- sustainable development helps build an ethical reputation and stakeholder trust,
- integrating environmental and social considerations into business evaluation processes can create new opportunities,
- implementing a sustainable development policy in every aspect of an entity improves long-term relationships with stakeholders,
- a transparency policy improves external and internal communication and changes the working conditions of employees (Strandberg, 2005).

Sustainable finance can be defined as:

- *"Financing and related institutional and market arrangements that contribute to the achievement of strong, sustainable, balanced and*

> *inclusive growth, through supporting directly and indirectly the framework of the Sustainable Development Goals"*[6],
> - *"The process of taking due account of environmental and social considerations in investment decision-making, leading to increased investments in longer-term and sustainable activities"*[7],
> - *"Addressing environmental, social, and governance (ESG) impacts of financial services. In addition, the sustainability concept includes a longer term financial dimension and an ethical dimension"*[8],
> - *"Finance that protects the fundamental right of 'all human beings' to 'an environment adequate for their health and well-being' and safeguards inter-generational equity"*[9],
> - *"The provision of financial capital and risk management products and services in ways that promote or do not harm economic prosperity, the ecology and community well-being"*[10].

The financial sector faces many challenges connected to the sustainability approach. Philanthropy and corporate social responsibility are just one side of sustainable development, and financial institutions are looking for more environmental, social, and financial opportunities while complying with regulations, voluntary standards, and good practices in ethics and governance.

There are three important challenges related to sustainable development in the banking sector today: implementing the EBA Action Plan, the SFDRs, and COVID-19. EBA has decided to include issues related to sustainable financing, including ESG issues, in the priorities of its supervisory activities for 2020–2021. Taking into account these priorities, we can talk about these directions of development of sustainable finance:

- reorienting capital flows towards sustainable investment to achieve sustainable and inclusive growth,
- managing financial risks that stem from climate change, resource depletion, environmental degradation, and social issues,
- fostering transparency and long-termism in financial and economic activity (EBA, 2019).

EBA has transformed these aims into real actions, ready to implement in the financial sector, including:

- sustainable actions that are classified by a common EU system,
- green financial products that are marked by EU standards and labels,
- support of investments in sustainable projects,

---

[6] Sustainable Finance Study Group, Synthesis Report (2018).
[7] European Commission, Sustainable Finance.
[8] Gerster, 2011.
[9] Sigurthorsson, 2012.
[10] Strandberg, 2005.

- financial consulting in the field of sustainable development,
- the development of sustainable development models,
- better implementation of sustainability in ratings and market research,
- explaining institutional investors' and asset managers' obligations in terms of disclosures,
- incorporating sustainability into prudential requirements,
- implementing a policy on the disclosure of information on sustainable development and creating accounting principles,
- supporting sustainable corporate governance and mitigating short-termism in capital markets[11].

The Action Plan has already achieved several of its key milestones, which is why the European Commission decided to develop a renewed sustainable finance strategy[12].

The plan to make the financial industry more sustainable requires the banking sector to disclose whether their funds have ESG risks and to inform how they invest in sustainability. By 10 March 2021, banks should meet many information requirements and the fund classification process. The Sustainable Finance Disclosures Regulation is the center of the European Commission's 2018 Action Plan for financing sustainable growth. With the SFDR, consumers have greater transparency about the degree of sustainability of financial products. The goal of the SFDR is to channel private investment into sustainable investments while at the same time preventing "greenwashing"[13]. It is worth mentioning the Disclosure Regulation related to sustainable development:

- Taxonomy Regulation – sustainable activities are classified according to a unified system,
- Benchmark Regulation – green products are classified by sustainable standards,
- Markets in Financial Instruments Directive and Insurance Distribution Directive – financial advice is classified according to sustainability,
- Directive 2009/65/EC (UCITS Directive) and Directive 2011/61/EU (AIFMD) – Sustainability risks and sustainability factors are integrated into UCITS and AIFMD,
- Corporate non-Financial Disclosure – focusing on ESG data reporting and accounting,

---

[11] European Commission, Communication from the Commission, Action Plan: Financing Sustainable Growth.
[12] Guide to the EU Sustainable Disclosure Regulation, 2020, p. 8.
[13] Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector.

- Green Bonds – comparability and transparency are growing based on common standards,
- EU Ecolabel – sustainable products (also financial products) are marked by a common EU Ecolabel,
- Corporate Governance – sustainable corporate governance fosters and prevents short-term pressure from the capital market,
- Capital Requirements Regulation (CRR)/Solvency II – integrating sustainable development into prudential requirements,
- Credit Ratings – integrating sustainability in the process of credit rating and market researching[14].

The SFDR contains new obligations for financial institutions that are treated at the legal entity level. It is vital because there are different obligations related to disclosures for financial market participants (who provide SFDR products) and financial advisers (who advise on SFDR products). The first group must disclose on their website information about their policies on integrating sustainability risks both into the investment decision-making process and into their investment advice or insurance advice. Financial market participants should disclose (whenever large entities and large holdings are concerned) or adhere to or explain (in other cases) the main negative effects of investment decisions on sustainable development and information on due diligence. On the other hand, financial advisers should explain the negative impacts on sustainability in their investment (www1). The SFDR contains proposals for the content, methodologies, and presentation of sustainability disclosures in the fields of principal adverse impact disclosure, pre-contractual product disclosure, website product disclosure, and product periodic disclosures[15].

The main part of this regulation is related to transparency. The SFDR explains how sustainability risks and adverse effects on sustainability are calculated in the financial product. The requirements cover both the unit and product levels. The regulation helps to compare financial products based on their degree of sustainability (www2). They include:

- calculating the sustainability risk (including the risk of depreciation in the value of the underlying asset under certain environmental or social circumstances),
- investments in a sustainable business that promotes environmental or social goals,
- considering the negative effects on the environmental, social, and economic issues that arise from the investment (www3).

---

[14] Guide to the EU Sustainable Disclosure Regulation, 2020, p. 8.

[15] Joint Consultation Paper ESG Disclosure – Draft regulatory technical standards with regard to the content, methodologies and presentation of disclosures pursuant to Article 2a, Article 4(6) and (7), Article 8(3), Article 9(5), Article 10(2) and Article 11(4) of Regulation (EU) 2019/2088 (2020).

Financial products include those that relate to sustainable development and belong to the following groups:

- investment and mutual funds,
- insurance-based investment products,
- private and occupational pensions,
- insurance consultancy,
- investment consultancy (www4).

In conclusion, the new regulation aims to define rules on duties and information regarding sustainable development. Specifically, the three main pillars of these new rules are: limiting possible "greenwashing", regulatory neutrality (creating a disclosure toolbox), and defining the financial services sectors covered by the regulation (www5).

The financial system has had to face a crisis the size of the COVID-19 pandemic; in other words, it has to face current and future problems, including the challenges of life or death. In a few short weeks, the financial system in its current shape changed irreversibly and similar in magnitude to the most significant events in the world since the Second World War (McDaniels, 2020). The future of our financial system is uncertain but, it will never be the same as it was before the COVID-19 pandemic (McKinsey & Company, 2020).

What differentiates this crisis from previous financial crises are the underlying causes. With COVID-19, there are physical reasons, while previously, it was due to, e.g., a loss of confidence. Many organizations have struggled to survive, which is why the topic of sustainable development was suspended in the face of the pandemic – all attention focused on countering this extreme threat (IFLR, 2021). Considering the legal transformations that the financial sector is undergoing, there will soon be new opportunities to channel capital to the low-carbon economy, and companies will also be able to do this. Some countries and companies argue that the COVID-19 pandemic is not the time for sustainability due to too high costs, which is understandable when we view this time as a struggle to survive. However, from a broader perspective, sustainable investments create opportunities for business development and positive effects for society and the environment. Hence, looking from a longer perspective, the move towards a low-carbon economy is an optimal and beneficial direction for everyone. The European Commission is committed to delivering the European Green Deal (priced at more than US$1 trillion), despite member states claiming that the cost of this investment is too high in the face of the pandemic. Central banks and governments have supported the financial system to survive COVID-19. This is short-term support rather than long-term policy, but it can make a difference in dealing with the immediate effects of the pandemic and pursuing a sustainable development policy (UNDP, 2020).

COVID-19 has highlighted several important ESG-related threats and opportunities that financial institutions should consider. One example is that the economic crisis has made a "disorderly transition" more likely, and regulators and industry should focus on less optimistic climate scenarios (Klein, 2020). Many of the effects of the COVID-19 crisis are already known (e.g., company closures, bankruptcies, rising unemployment, falling interest rates), but they can also threaten balance sheets. The pandemic and the lessons learned from recent times can be critical to sustainable development (www6). Being aware of the links between the economy, society and government helps decarbonize the economy and bring about other important changes. Financial institutions will be key in this transformation, given their influence and strengths in lending, insurance, and investing over the long term. Countries are committed to moving to a low-carbon economy, and sustainable financing will be key to this. Only time can show how COVID-19 will be a catalyst for sustainability (www7).

CONCLUSIONS

Sustainable development has been the subject of EU policy, especially since 1997. An analysis of the historical background of sustainable development highlighted four world summits (Stockholm, Nairobi, Rio de Janeiro, and Johannesburg) due to the importance of their findings. The experience gained during those 15 years makes it possible to confirm the participants' awareness of the importance of sustainable development and to define the key priorities for action.

There are three important challenges regarding sustainable development in the financial sector today: implementing the EBA Action Plan, the Sustainable Finance Disclosure Regulations, and COVID-19. The former plays a key role in improving transparency, promoting sustainable investment, and managing the risks associated with these activities, but it requires actors to follow specific rules and procedures. The plan to make the financial sector more sustainable requires the banking sector to disclose whether its funds carry environmental, social, or corporate governance risks and how they invest in sustainability. The solution is the Sustainable Finance Disclosures Regulations, which are the center of the European Commission's 2018 Action Plan for financing sustainable growth. With the SFDRs, it is easy for consumers to see how sustainable financial products are.

Implementing EBA's Action Plan and the Regulations on the disclosure of information on sustainable finance may initially require financial institutions to take further action and thus complicate their operations, but later, it will only benefit the financial sector. On the other hand, the COVID-19 pandemic is a significant obstacle to implementing the sustainable development policy due to states and entities focusing on fighting this threat (including financial resources). As

sustainable development brings long-term effects, implementing sustainable investments, despite the pandemic crisis, will allow enterprises to achieve the desired benefits. Hence, it is imperative that the actors somehow overcome their reluctance to pursue sustainable policies during COVID-19 and continue their activities despite the adversities. To sum up, these challenges may be treated by financial institutions as complications (because the changes are time-consuming and expensive), but may bring them multidimensional benefits in the long perspective.

REFERENCES

Boudes Ph. (2011), United Nations Conference on the Human Environment, [in:] J. Newman (ed.), Green Ethics and Philosophy – The Green Series: Toward a Sustainable Environment, Vol. VIII, Sage Publications Inc., pp. 410-413. ISBN: 9781412996877.

Cerin P. (2006), Bringing economic opportunity into line with environmental influence: A Discussion on the Coase theorem and the Porter and van der Linde hypothesis, "Ecological Economics", No. 56, pp. 209-225, *https://doi.org/10.1016/j.ecolecon.2005.01.016*

Dernbach J. C. (1998), Sustainable development as a framework for national governance, "Case Western Reserve Law Review", no. 49(1), pp. 1–103.

European Commission, Action Plan on Sustainable Finance (2019), *https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf* [Accessed 01.10.2020].

Engfeldt L. G. (2002), Some highlights of the Stockholm – Rio – Johannesburg journey, [in:] Stockholm Thirty Years On – Proceedings from an International Conference 17–18 June 2002, Ministry of the Environment, Stockholm, pp. 52–54.

Elkington J. (2018), 25 Years Ago I Coined the Phrase "Triple Bottom Line." Here's Why It's Time to Rethink It, *https://hbr.org/2018/06/25-years-ago-i-coined-the-phrase-triple-bottom-line-heres-why-im-giving-up-on-it* [Accessed 01.10.2020].

European Commission, Communication from the Commission, Action Plan: Financing Sustainable Growth, COM(2018) 97 final, pp.4-11, *https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:52018DC0097* [Accessed 27.01.2023]

European Commission, Sustainable Finance, *https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en* [Accessed 17.01.2020].

Gerster R. (2011), Sustainable Finance: Achievements, Challenges, Outlook, *http://www.gersterconsulting.ch/docs/Sustainable_finance_final_11.02.10.pdf* [Accessed 05.10.2020]

Guide to the EU Sustainable Disclosure Regulation (2020), Maples Group, AIMA, p. 8, *https://www.google.pl/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjsq5S8xOf8AhVE_SoKHaeiAQMQFnoECBIQAQ&url=https%3A%2F%2Fmaples.com%2F-%2Fmedia%2Ffiles%2Fpdfs%2Fesg%2Fmap*

les-aima-guide-to-the-eu-sustainable-disclosure-regulation-updated-oct-2020.pdf &usg=AOvVaw1aeQPW_WsSOTH3s8Xx35tX [Accessed 27.01.2023].

Handl G. (1972), Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), and the Rio Declaration on the Environment and Development *https://legal.un.org/avl/pdf/ha/dunche/dunche_e.pdf* [Accessed 29.08.2020].

Hens L., Nath B. (2003), The Johannesburg Conference, "Environment Development and Sustainability", no 5(1), pp. 7-39, *https://doi.org/10.1023/A:1025303511864*

IFLR (2021), Sustainable finance will emerge stronger from Covid-19 rebalancing *https://www.iflr.com/article/b1mq8sprtjdz01/sustainable-finance-will-emerge-stronger-from-covid-19-rebalancing* [Accessed 14.04.2021].

IUCN (1991), Caring for the Earth: A Strategy for Sustainable Living, World Conservation Union, Gland Switzerland, pp. 89-150, ISBN 2-8317-0074-4.

Joint Consultation Paper ESG Disclosure – Draft regulatory technical standards with regard to the content, methodologies and presentation of disclosures pursuant to Article 2a, Article 4(6) and (7), Article 8(3), Article 9(5), Article 10(2) and Article 11(4) of Regulation (EU) 2019/2088 (2020), *https://www.esma.europa.eu/sites/default/files/jc_2020_16_-_joint_consultation_paper_on_esg_disclosures.pdf* [Accessed 14.04.2021]

Klarin T. (2018), The Concept of Sustainable Development: From its Beginning to the Contemporary Issues, "Zagreb International Review of Economics & Business" Vol. 21, No. 1, pp. 67-94, *https://doi.org/10.2478/zireb-2018-0005*

Klein A. (2020), When it comes to sustainable finance in the COVID era, let the private sector lead the way, *https://blogs.worldbank.org/climatechange/when-it-comes-sustainable-finance-covid-era-let-private-sector-lead-way* [Accessed 14.04.2021].

Lele S. M. (1991), Sustainable development: A Critical Review, "World Development", no 19(6), pp. 607-621.

McDaniels J. (2020), Implications of the COVID-19 Pandemic for Global Sustainable Finance, *https://unepinquiry.org/publication/implications-of-the-covid-19-pandemic-for-global-sustainable-finance/* [Accessed 01.10.2020].

McKinsey & Company (2020), Addressing climate change in a post-pandemic world, *https://www.mckinsey.com/business-functions/sustainability/our-insights/addressing-climate-change-in-a-post-pandemic-world* [Accessed 14.04.2021].

Meadows D. H., Meadows D. L., Randers J., Behrens W. W. (1972), The limits to growth, pp. 48, *http://www.donellameadows.org/wp-content/userfiles/Limits-to-Growth-digital-scan-version.pdf* [Accessed 29.08.2020].

Ottawa Charter for Health Promotion, First International Conference on Health Promotion, (1986), *https://www.euro.who.int/__data/assets/pdf_file/0004/129532/Ottawa_Charter.pdf* [Accessed 01.10.2020].

Pearce D., Markandya A., Barbier E. (1989), Blueprint for a Green Economy, Earthscan Publications, London, p. 192, ISBN: 1853830763.

Raworth K. (2017) Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist, Random House Business Books, London, p. 33, ISBN-10 : 1847941397.

Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector *https://eur-lex.europa.eu/eli/reg/2019/2088/oj* [Accessed 14.04.2021].

Remenyi J. (2004), What is Development?, [in:] D. Kingsbury, J. Remenyi, J. McKay & J. Hunt, (Eds.), Key Issues in Development, Palgrave Macmillan, Hampshire, New York, p. 22, ISBN-10 : 1403900450.

Report of the United Nations Conference on the Human Environment (1973), Stockholm 5-16 June 1972, United Nations, New York, pp. 8-10.

Sachs W. (2010), The Development Dictionary: A guide to knowledge as power (2nd ed.), Zed Books, London, New York, pp. 24-37, ISBN: 848133792.

Schoenmaker D., Schramade W. (2019), Principles of Sustainable Finance, Oxford University Press, Oxford, p. 4, ISBN: 9780198826606.

Schoenmaker D. (2017), Investing for the common good: a sustainable finance framework, Bruegel Essay and Lecture Series, Bruegel, p. 8, ISBN: 978-9-078910-43-5.

Shah M. M. (2008), Sustainable development, Reference Module in Earth Systems and Environmental Sciences, Encyclopedia of Ecology, Elsevier, pp. 3443-3446, ISBN: 9780444637680.

Sharpley R. (2000), Tourism and Sustainable Development: Exploring the Theoretical Divide, "Journal of Sustainable Tourism", no 8(1), pp. 1-19, *https://doi.org/10.1080/09 669580008667346.*

Sigurthorsson D. (2012), The Icelandic Banking Crisis: A Reason to Rethink CSR?, "Journal of Business Ethics", No. 111, pp. 147–156, *https://doi.org/10.1007/s10551-012-1207-8*

Stern N. (2007), The economics of climate change - The Stern review, "The American Economic Review", Vol. 98, No. 2, pp. 1-37.

Stoddart H. (2011), A Pocket guide to sustainable development governance, Stakeholder Forum., p. 38, *https://www.circleofblue.org/wp-content/uploads/2012/07/Pocket-GuidetoSDGEdition2webfinal%E2%80%93Stakeholder-Forum.pdf* [Accessed 14.04.2021].

Strandberg C. (2005), Best practices in sustainable finance, *https://dev-chm.cbd.int/financial/privatesector/several-privatebestpractices.pdf* [Accessed 14.04.2021]

Streeten P. (1977), The basic features of a basic needs approach to development, "International Development Review", No. 3, pp. 8–16.

Sustainable Finance Study Group, Synthesis Report (2018), *http://www.g20.utoronto.ca/2018/g20_sustainable_finance_synthesis_report.pdf* [Accessed 14.04.2021]

UNDP (2020), Implications of the COVID-19 Pandemic *for Global Sustainable Finance: an initial framework for response strategies, https://wedocs.unep.org/handle/20.500.11822/32465* [Accessed 14.04.2021].

United Nations (1987), Report of the World Commission in Environment and Development: Our Common Future *http://www.un-documents.net/our-common-future.pdf* [Accessed 14.01.2021]

United Nations General Assembly (1987), *Our Common Future*, pp. 43, *https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf* [Accessed 14.04.2021]

United Nations Environment Programme: Nairobi Declaration on the State of Worldwide Environment (1982), Volume 21, Issue 3, pp. 676-678.

Vare P., Scott W. (2007), Learning for a change exploring the relationship between education and sustainable development, "Journal of Education for Sustainable Development", no 1, pp. 191-198, *https://doi.org/10.1177/097340820700100209*

WCED (1987), Our Common Future, The World Commission on Environment and Development, Oxford University Press, Oxford, pp. 41-58.

Willis K. (2005), Theories and Practices of Development, Routledge, London, New York, p. 27, ISBN 9780415590716.

(www1) Sustainable Finance Disclosure Regulation, *https://www.pwc.ch/en/publications/2020/sustainable-finance-disclosure-regulation.pdf* [Accessed 14.04.2021].

(www2) Co oznacza SFDR (Sustainable Finance Disclosure Regulation)? *https://www2.deloitte.com/pl/pl/pages/zarzadzania-procesami-i-strategiczne/articles/co-oznacza-SFDR-Sustainable-Finance-Disclosure-Regulation.html* [Accessed 14.04.2021].

(www3) Sustainable Finance Disclosure Regulation *https://aipmanagement.dk/sustainable-finance-disclosure-regulation/* [Accessed 14.04.2021].

(www4) What is the purpose of SFDR? *https://investors-corner.bnpparibas-am.com/investing/an-introduction-to-the-sustainable-finance-disclosure-regulation/* [Accessed 14.04.2021].

(www5) The EU is getting closer to disclosure rules on sustainable finance *https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/sustainable-dev/lu-regnewsalert-eu-disclosure-rules-sustainable-finance_14032019.pdf* [Accessed 14.04.2021]

(www6) Covid-19 as a wake-up call for sustainable finance, *https://www.db.com/whatnext/responsible-growth/dossier-covid-sustainable-development/covid19-a-wake-up-call?language_id=1* [Accessed 14.04.2021].

(www7) EY, How COVID-19 drives change in financial services sustainability, *https://www.ey.com/en_gl/sustainability-financial-services/how-covid-19-drives-change-in-financial-services-sustainability* [Accessed 14.04.2021]

DO EXTERNAL DEBT AND FOREIGN DIRECT INVESTMENT (FDI) INFLOW SUPPORT ECONOMIC GROWTH? EVIDENCE FROM GHANA

Evans Yeboah[*] Dastan Bamwesigye[**] Seval Ozbalci[***] Francis Atiso[****]

Abstract

The purpose of the article/hypothesis: The prime objective of this study is to discover whether external debt and foreign direct investment promote economic development. The paper investigates whether external debt and foreign direct investment inflows stimulate economic growth, intending to determine the causal relationship between the variables to serve as a substantial factor for policymakers.

Methodology: Numerous econometrics techniques were employed to ensure the findings' effectiveness and accuracy, including the stationarity test, Johansen cointegration test, and multiple regression (ordinary least squares). The hypothesis test that external debt and foreign direct investment inflows do not attain their justification of ensuring economic growth was conducted empirically.

Results of the research: The outcome revealed that external debt and foreign direct investment positively and significantly support Ghana's economic growth. This leads to the conclusion that these variables fulfilled their purpose.

Keywords: External debt, FDI, economic growth, GDP, Ghana.

JEL Class: E22, F14, H63.

[*] Department of Business Economics, Faculty of Business and Economics, Mendel University in Brno, Czech Republic, e-mail: xyeboah1@mendelu.cz, https://orcid.org/0000-0002-0934-3996

[**] Department of Forest and Wood Products Economics and Policy, Department of Landscape Management Faculty of Forestry and Wood Technology, Mendel University in Brno, CREA Hydro&Energy Z. S., Czech Republic, e-mail: xbamwesi@mendelu.cz, https://orcid.org/0000-0002-5114-443X

[***] Department of Business Administration, University of the People and Manisa Celal Bayar University, Turkiye. e-mail: seval.ozbalci@cbu.edu.tr, https://orcid.org/0000-0002-7823-4654

[****] Faculty of Economics and Management, Tomas Bata University in Zlin, Czech Republic, e-mail: atiso@utb.cz, https://orcid.org/0000-0003-0179-3877

INTRODUCTION

Most developing countries, including Ghana, depend on external loans and foreign direct investment (FDI) inflows as a medium of capital accumulation for developmental projects. Countries that get fever investments through domestic or foreign trade may need to borrow to support and boost their economic development and growth (Agyapong and Bediabeng, 2019: 81-98; Bese and Friday, 2021: 1-11; Joshua et al., 2021: 1–13; Gaies and Nabi, 2021: 736–761). Between 1973 and 1977, the outstanding external debt of emerging countries doubled and then doubled again by 1981. In 1996, the HIPC initiative was launched by the International Monetary Fund and World Bank to ensure that no low-income country faces a debt burden it cannot manage. According to OCED, FDI is a type of cross-border investment in which investors from one country have a long-term stake and significant influence over a company from another economy. As per the OCED detailed definition, FDI can be in the form of loans. The debt instrument of the FDI component consists of marketable securities, bonds, debenture, commercial paper notes, promissory notes, non-participating preference shares, and other marketable non-equity securities and loans, deposits, trade credit, and other accounts payable/receivable (OECD, 2008: 59–90). Obtaining external loans with repayment conditions puts Ghana and most countries in an adverse fiscal situation. For example, the Buidam financing contract, in which cocoa will be used to pay the cost of credits, is an investment with strict conditions attached.

Eternal Debt and FDI inflow could positively or negatively impact an economy. More debt servicing can increase the government's interest bill and budget deficit, diminishing public savings; this, in turn, can expand interest rates or crowd out credit for private investment, depressing economic growth (Benedict et al., 2003: 1–25). Besides, external funding, including FDI, can devastate some economies in the short and long run. Foreign and domestic debts harm the gross domestic product (GDP); policymakers should avoid heavily relying on debt to finance fiscal deficits as there is a pressing need to increase revenue (Munasinghe et al., 2018: 775–789). However, during the 1971–1979 period, there was a negative linkage between the growth of debt burden and economic growth in the heavily indebted developing countries (Rosemary, 1993: 115–126). On the other hand, a minimum aggregate external debt level is associated with a significant growth rate (Alfredo, 2004: 1–37).

In recent times, the consequences of Ghana depending on external funds and credit facilities for its economic activities are against the current administration. Most people in Ghana believe that external loans harm the country in both the long and short run. The nation's increasing GDP to debt ratio has also raised

economic concerns (Agyapong and Bediabeng, 2019: 81–98; Bese and Friday, 2021: 1–11; Joshua et al., 2021: 1–13; Gaies and Nabi, 2021: 736–761). Ghana's overall government debt was US$ 8,345 million as of December 2005, or 78% of gross domestic product (MOFEP, 2011: 1–46). The aggregate government debt consists of US$ 6,348 million in external Debt and US$ 1,997 million in local Debt (MOFEP, 2011: 1–46).

As a result of debt relief provided to Ghana through the HIPC and Multilateral Debt Relief Initiatives (MDRI), the total public debt was reduced dramatically to around US$ 5,310 million in 2006 (MOFEP, 2011). Due to debt forgiveness, external debt for the same year dropped significantly to around US$ 2,177 million (MOFEP, 2011: 1–46). However, Ghana's public debt started increasing in 2007 because of the maiden Eurobond issuance in the same year. The nominal debt as of December 2020 was GH¢ 291,630.7 million (US$ 50,0832.4 million), compared to the stock level of 2019 at GH¢ 218,228.9 million (US$ 39,387.2 million) (Ken, 2020: 1–77). The expansion in the external debt stock by GH¢ 29,049.1 million (US$ 4.366.4million) from the 2019 stock of GH¢ 112,474.7 million was mainly due to extra disbursement of loans, the US$ 3,000 million Eurobond issuance in February 2020, as well as exchange rate fluctuations (Ken, 2020: 1–77). As the flow of FDI and external debt continue to increase, this study aims to determine the impact of external debt and FDI inflow in Ghana using GDP as a proxy for economic growth. The out-comes from the results of this study are expected to be significant to policy-makers, investors, and academic researchers who want to gain much insight into Ghana's economic responsiveness to FDI and external debt.

1. LITERATURE REVIEW

The effect of external debt and FDI on economic growth have been re-searched by many scholars using different methods and obtained different results and conclusions. However, (Asafo and Matuka, 2019: 45–53) employed a cointegration analysis and an error correction methodology to investigate the effect of external debt on economic growth in Ghana. The outcome showed that foreign debt inflows increase growth in Ghana both in the long and short run. They also confirmed the crowding-out effect, debt overhang impact, and external debt's non-linear effect on Ghana's economic growth. Conversely, (Frimpong and Oteng-Abayie, 2007: 121–130) estimated the empirical impact of external debt on economic growth in Ghana to determine the existence of a 'debt overhang' and 'crowding-out' effect. The findings indicate that external debt influences gross domestic product positively and negatively by servicing, revealing a 'crowding out effect'. The outcome further showed that a 'debt overhang effect' is also found through the negative impact of domestic investment. Additionally, (Wondatir,

2020: 6–27) is an effort to determine the effect of public external debt on economic growth.

Authors tried to answer whether stock of foreign public debt and public external debt servicing have significance on economic growth and determined the magnitude effect. The result showed that a high level of stock of public external debt hurts economic growth and poses great challenges to an economy in the long run. Furthermore, (Hakimi et al., 2019: 725–745) analyzed whether external debt drives investment and economic growth in low-income nations. Their empirical results of the seemingly unrelated regression model show that foreign debt significantly decreases investment and economic growth. However, (Naeem, 2013: 29–52) studied the consequences of public debt on economic growth and investment in four South Asia. The results show that foreign public debt and debt servicing negatively affect economic growth and investment, pointing to the "debt overhang effect" and "crowding out effect". In addition, it also stated that local debt exhibits a negative and significant relationship with economic growth and investment.

Furthermore, (Ebenezer and Xicang, 2013: 64–74) investigated the relationship between FDI and economic growth in Ghana using the cointegration method. The study established a long-run equilibrium and causal relationship between the dependent variable, FDI, and the two independent variables under consideration. It was indicated that the impact of GDP and GNI volatility on FDI in the short run is nearly imaginary. On the other hand, (Tee et al., 2017: 240–246) studied the relationship between FDI and economic growth in Ghana using linear regression. The research established that FDI and the other two control variables significantly impact Ghana's economic advancement. It was determined that an increasing trend of FDI inflows has also significantly expanded the GDP in the country.

Conversely, (George et al., 2013: 573–584) identified the factors influencing Ghana's FDI flows. The outcomes showed trade openness, exchange rate, natural resources, and infrastructure as FDI drivers in Ghana. They further indicated that Macroeconomic variables, such as inflation and per capita gross domestic product, were also registered as the impact determinants of FDI in Ghana. Additionally, (Samuel et al., 2013: 18–25) studied the relationship between FDI and economic progress in Ghana. They concluded that the independent variables GDP, GDPG, GNI, MVA, GDPc, and TRA are significant in explaining FDI since their corresponding p-value of the t-statistic is less than 5% and thus influences FDI in Ghana.

Conversely, (Mustapha et al., 2015: 167–184) investigated the impact of FDI on Ghana's economic growth and service sector value addition. The study employed the Johansen Co-integration approach, and the outcome showed that FDI has an essential positive impact on economic growth both in the long-run and

short-run. Finally, (Michael et al., 2019: 56–75) examined the determinants of FDI in Ghana using Johansen's method of Co-integration within the autoregressive vector framework. The study indicated that both the long-run and short-run findings found statistically significant but negative effects of inflation, exchange rate, and interest rate on FDI in Ghana. Whiles GDP, electricity production, and telephone usage positively impacted FDI.

According to the United Nations Conference on Trade and Development, the total net flow resource flows rose sharply between 1990 and 1996. Following a surge in the 1970s, when they began a supplant official as the primary source of external funding, net private capital flows to developing nations plummeted during the 1980s debt crisis, reaching their lowest point in 1986 (UNCTAD, 2004: 1–15). Conversely, the aggregate external debt contains long-term debt, short-term debt, and access to the International Monetary Fund (IMF) credit. However, the Debt of African and least developed nations, most of which have no or limited access to the international capital market, has been growing over the years (UNCTAD, 2004: 1–15). The source of external loans and financial funding comes from Multilateral institutions, the IMF, International Development Assistance (IDA), African Development Bank (AfDB), International Fund for Agricultural Development (IFAD), Official Bilateral, Paris Club, Non-Paris Clubs, and other Creditors. Ghana's external Debt was GH¢ 124.79 million at the end of March 2020, accounting for 52.87% of the aggregate public debt and 31.35% of GDP, while local debt was GH¢ 111.26 million, reflecting 47.13% of the total debt stock and 27.95% of GDP (Treasury and Debt Management Division, 2020: 1–25).

The trend in public debt from March 2018 to March 2020 indicated a growth of 2% increase in 2019 and 3% in 2020. Commercial debt dominates the external debt portfolio, accounting for 41.1% of the total, followed by multilateral creditors with 28.9% in March 2020 (Treasury and Debt Management Division, 2020: 1–25). Other concessional debt accounted for 7.3% of the total debt in the same period. Official Bilateral and Export Creditors come second and third with 5.2% and 4.4% of the market. The stock of Eurobonds is primarily responsible for the commercial debt's dominance in the foreign debt portfolio in March 2020 (Treasury and Debt Management Division, 2020: 1–25). World Bank loans account for most multilateral debt in the same period.

FDI inflow in Ghana comes in joint ventures and foreign wholly owned. Foreign wholly owned investment is an enterprise or project 100% controlled and managed by investors from abroad in Ghana. On the other hand, Ghanaians and their foreign counterparts' control and regulate joint venture investment. Investments are from developed economies and some developing countries in Asia, such as China and India. China is the top investing country in the Ghanaian economy, followed by India.

However, in most cases, the Netherlands often tops concerning the monetary value of these FDI projects (Yeboah and Anning, 2020: 6–16). According to the Ghana Investment Promotion Centre (GIPC), FDI comes in the form of registered projects undertaken by investors in the various sectors of the economy. FDI has had a higher share of the total estimated value of the investment over the past decades. The GIPC accumulated an estimated number of 4,714 registered projects between 1994 and 2013, with the manufacturing sector accounting for 22.14 percent, 29.29 percent to the service sector, general trading for 16.35 percent, building and construction for 8.67 percent, tourism for 8.54 percent, and liaison for 5.17 percent (Kusi, 2013: 1–24). Conversely, the GIPC recorded 1,312 foreign FDI projects from 2013 to 2018 (Yeboah and Anning, 2020: 6–16). As per the GIPC investment reports, joint venture investment has much more monetary value than foreign wholly-owned investment.

2. METHODOLOGY

Evaluating the effect of FDI and External Debt continuous variable on GDP requires systematic and rigorous tests, which include not only a correlation analysis to determine trends and association between variables, but also linearity, multivariate normal, multicollinearity, auto-correlation, and homoscedasticity tests to ascertain a linear relationship between the dependent variable and independent variables. In the following steps, the study performs the various tests needed to adopt the simple linear regression method of analysis to establish the relationship between Economic Growth, Foreign Direct Investment and External Debt. The study used data from the World Bank from 1990 to 2020. However, all analyses were performed using Gretl software.

Firstly, descriptive and correlation analysis are performed using 31 dataset each of all variables. A correlation coefficient is calculated for each of the association between variables to obtain matrix as shown below.

$$r = \frac{Cov(X,Y)}{\sigma_x \sigma_y} = \frac{E((X - \mu_x)(Y - \mu_y))}{\sigma_x \sigma_y} \qquad (1)$$

Where X and Y are the independent and dependent variables respectively, and r represents the correlation coefficient. However, a cointegration test was conducted using the Johansen test. Cointegration's goal is to match the degree of non-stationarity in time series so that residuals become stationary and false regression is avoided (Vaclav, 2014: 1–34). Two cointegration tests are used: the trace rank test and the loglikelihood maximum test. The first hypothesis is that there is no cointegration (r = 0). There is at least one cointegration equation,

according to the alternative hypothesis. According to the second hypothesis, there is just one (r = 1).

The last test was to account for no autocorrelation between predicted variables and error terms to be obtained. Using the Durbin-Watson autocorrelation test, we test the hypothesis as H0: There is no first order autocorrelation. The test statistic is calculated as shown below in equation 2:

$$d = \frac{\sum_{t=2}^{T}(e_t - e_{t-1})^2}{\sum_t^T e_t^2} \tag{2}$$

Where d is the Durbin-Watson test statistic, e_t is the residual from the ordinary least square regression (OLS). The test statistic runs between 0 and 4 where value around 2 depicts no autocorrelation. The rule of thumb has $1.5 < d < 2.5$ as a no autocorrelation range, where values below 1.5 show a positive autocorrelation of residuals and values above 2.5 indicates a negative one. The test statistics in the critical region of the Durbin-Watson table, depend on the sample size, alpha value, and the number of independent variables in the regression model.

2.1 Model Specification

Understanding the influence of external debt and FDI inflow on Ghana's economic growth is critical as the country depends heavily on them for its developmental projects. As a result, the primary research question is: Is there a link between Ghana's external debt, FDI inflow, and economic growth? The study investigated the relationship between the abovementioned factors by constructing econometrics model equations to ascertain a correct model specification. Firstly, we tested for the impact of external debt and FDI inflow on economic growth in Ghana using GDP as a proxy for growth. It is well known that gross domestic product is one the of most used indicators and is widely accepted for assessing the growth of a country. The model equation 3 has GDP as the explained variable.

$$lnGDP_t = \alpha_0 + \beta_1 lnFDI_t + \beta_2 ExtD_t + \varepsilon_t \tag{3}$$

Consequently, to ascertain the relationship between FDI, GDP and external debt towards economic development, FDI was the dependent variable, whereas GDP and external debt became the regressors. This helps to investigate the effects of GDP and external debt on FDI inflow as indicated in model equation 4. However, in the model with FDI as the dependent variable, all the variables were transformed into their logarithm for a correct model specification.

$$lnFDI_t = \alpha_0 + \beta_1 lnExtD_t + \beta_2 lnGDP_t + \varepsilon_t \tag{4}$$

Where GDP is Gross Domestic Product, FDI is Foreign Direct Investment inflows, ExtD is External Debt. All the variables are measured in billions of US dollars. Also, $\beta_1 and \beta_2$ are the regression coefficients while ε_t represents the error term, and α_0 represents the constant term of the obtained model.

3. STATISTICS AND RESULTS

The descriptive statistics (Table 1) showed less dispersion of all variables under consideration when the standard deviations were compared to the mean values. However, GDP had the largest standard deviation, indicating high volatility in the data.

Table 1. Summary of statistics

Variable	Mean	Median	S.D.	Min	Max
Log of GDP	31.3	25.6	16.0	13.2	62.7
Log of FDI inflow	1.40	0.244	1.47	0.005	3.88
External Debt	10.6	7.10	7.64	3.69	31.3

Source: own study.

Table 2 gives a correlation matrix between the variables of interest. There was a general high positive association between the variables, with the highest being GDP-External debt, followed by GDP-FDI inflow, and the least being FDI-External debt. It was realized again from Table 3 that there was no multicollinearity between the independent variables. Thus, the correlation coefficient for FDI-External debt of 0.71 was less than 0.8. Furthermore, the variance inflation factor (VIF) found in both models are far less than 10 and well below 5, buttresses the fact that there was no multicollinearity between predictor variables, as indicated in Table 3 and 4.

Table 2. Correlation Matrix

GDP	FDI inflow	External Debt	
1.0000	0.891	0.925	GDP
	1.000	0.709	FDI inflow
		1.000	External Debt

Source: own study.

Table 3. Collinearity test for model 1

Variables	Variance Inflation Factor
FDI inflow	2.010
External debt	2.010

Source: own study.

Table 4. Collinearity test for model 2

Variables	Variance Inflation Factor
Log of external Debt	4.091
Log of GDP	4.091

Source: own study.

3.1 Stationarity Test

Table 5 shows unit root test using Kwiatkowski-Phillips-Schmidt-Shin (KPSS). The null hypothesis under the KPSS unit root test states that there is no unit root in the variables at level and the alternative hypothesis indicates a unit root presence. The test statistics must be greater than 10% critical value to reject the null hypothesis. However, after the selected variables' first difference, the test statistics must be lower than 10% critical value.

Table 5. KPSS unit root test at level and first difference

Variables	Sample size	T-stats	p-value	T-stats	p-value
Log of GDP	1990-2020	0.751	< .01	0.085	> .10
Log of FDI inflow	1990-2020	0.335	< .01	0.092	> .10
External debt	1990-2020	0.647	< .01	0.081	> .10

Source: own study.

The outcome of the unit root test in Table 5 displays that, at level, unit root exists in the series. It means that the variables are non-stationarity based on the obtained test statistics since they are all greater than the 10% critical value. However, after the first difference, the variables became stationarity because their test statistics are below the critical value, showing that the series are integrated at first order (1).

3.2 Johansen Test

The Johansen cointegration test between FDI and GDP is indicated in Table 6. The hypothesis (r = 0) which states that there is no cointegration equation between these two indicators is not rejected because the p-value is more significant 5% significance level. Conversely, the hypothesis(r = 1) which states that at most one cointegration equation cannot be rejected since the trace and loglikelihood test produced the same p-value greater the critical value.

Table 6. Johansen Test between FDI and GDP

Rank	Eigenvalue	Trace test	p-value	Lmax test	p-value
0	0.368	13.351	0.102	12.891	0.080
1	0.016	0.459	0.497	0.459	0.497

Source: own study.

The cointegration equation with FDI as the dependent variable can be written as follows:

$$\text{FDI inflow} = 0.022135(\text{GDP}) - 32.72$$

The cointegration equation shows a positive long-run relationship between FDI and GDP, and it means that an increase in GDP will lead to a rise in FDI inflow. On the other hand, Table 7 indicates the cointegration outcome between FDI and external debt.

Table 7. Johansen Test between FDI and External debt

Rank	Eigenvalue	Trace test	p-value	Lmax test	p-value
0	0.233	9.395	0.336	7.462	0.444
1	0.066	1.933	0.164	1.933	0.164

Source: own study.

The outcome of the Johansen test in Table 7 found a cointegration relationship between FDI and external debt towards economic growth in the long-term. There is a positive relationship between these two variables based on the cointegration equation. The cointegration equation is written below as follows:

$$\text{FDI inflows} = 1.9986 \, (\text{external debt}) - 73.8$$

Based on the cointegration equations, an expansion external debt will lead to an increase in FDI inflow in the Ghanaian economy in the long run. Furthermore, there was a long positive relationship between external debt and GDP with external debt as the dependent variable as indicated in the cointegration test in Table 8.

Table 8. Johansen Test between External debt and GDP

Rank	Eigenvalue	Trace test	p-value	Lmax test	p-value
0	0.241	7.869	0.486	7.742	0.414
1	0.004	0.126	0.721	0.126	0.721

Source: own study.

Cointegration equation with external debt as the dependent variable is written below:

$$\text{External debt} = 0.66601 \, (GDP) - 3.78$$

This proved that in the long run an increase in GDP will lead to a rise in external debt. The Johansen test proved that FDI and external debt support economic growth in the long-term and their impact is positive.

3.3 Regression Results

Table 9 shows the regression coefficients for the model estimation with GDP as the proxy for economic development. The outcome shows that FDI and external debt positively affect economic growth. However, FDI supports economic growth rather than external debt based on the coefficients as in the equation below.

Table 9. Model 1 estimation

Variables	Coefficient	Std. Error	t-ratio	p-value
constant	3.122	0.055	56.77	0.000***
Log of FDI inflow	0.158	0.015	10.23	0.000***
External Debt	0.030	0.003	7.961	0.000***

Note: significant codes: *** 1%

R-squared	0.94
Adjusted R-squared	0.93
F-statistic (2, 28) = 229	P-value (F) = 0.000
Number of observations	31

Source: own study.

$$lnGDP_t = 3.122 + 0.158 lnFDI_t + 0.030 ExtD_t + \varepsilon_t$$

The regression statistics of model 1 shows an R-squared of 94% which indicates the percentage of variation explained in the GDP by the regressors (FDI and external debt). The normality test produced test statistic of 5.88532 with a p-value of 0.341129 which shows that the error term is normally distributed. Null hypothesis which states that heteroskedasticity not present found no heteroskedasticity because of the test statistic 8.83434 with p-value 0.115857 greater than 5% significance level. Furthermore, the model 2 coefficients are indicated in Table 10. The outcome shows that external debt has e negative impact on FDI inflows whereas GDP has positive effect on it. The negative effect of external debt on FDI based on the coefficient means that an increase in external debt will reduced FDI inflow into Ghana's economy.

$$lnFDI_t = -14.030 - 1.281 lnExtD_t + 4.810 lnGDP_t + \varepsilon_t$$

Table 10. Model 2 estimation

Variables	Coefficient	Std. Error	t-ratio	p-value
constant	−14.030	1.115	−12.58	0.000***
Log of External Debt	−1.281	0.444	−2.885	0.000***
Log of GDP	4.810	0.552	8.713	0.000***

Note: Significance codes: *** 1%

R-squared	0.85
Adjusted R-squared	0.84
F-statistic (2, 28) = 82.9	P-value (F) = 1.72e-12
Number of observations	31

Source: own study.

The R-squared from the regression statistics of model 2 indicates that 85% variation is explained by the regressors (GDP and external debt). However, the model 2 was burden with first-order autocorrelation based on the Durbin-Watson value.

Ghana's dependency on external loans, credit facilities, and FDI inflows for its developmental schemes and economic growth is significant. The statistics showed that a slow rise in FDI has a huge spike in Ghana's GDP even though other factors influence the same. This is irrespective of the increase in external debt, which has equally increased rapidly. Our results are in tandem with some of the previous global studies (Agyapong and Bediabeng, 2019: 81–98; Bese and Friday, 2021:

1–11; Joshua et al., 2021: 1–13; Gaies and Nabi, 2021: 736–761). The significance of Ghana's dependency on external funding and credit services for its financial muscle can be dangerous if not taken good care of by the current government. The Ghanaians think that external loans are harmful to the country in both the short and long. The rate of debt ratio to the nation's GDP has also raised alarms about the economic track for the future.

CONCLUSIONS

The study aimed to analyze the impact of external Debt and FDI inflows on Ghana's GDP. The study evaluated the effect of FDI and External Debt as continuous variables on GDP. Herein, we thoroughly and rigorously tested the correlation to determine the association between the variables. Multicollinearity and cointegration tests were conducted to establish the relationship between the dependent and independent variables. It was observed that there is no multicollinearity amongst the independent variables.

Given that the external debt of 0.71 is less than 0.8, the variance inflation factor of 2.010 and 4.091 in both models being far less than 10 and below 5 supports the fact that there is no multicollinearity amongst predictor variables. The multivariate normal conditions for linear regression were met. The KPSS unit root test found a unit root presence in the variables and was integrated at first-order difference I (1). In contrast, the Johansen cointegration analysis indicated a long-run positive relationship between the variables toward economic growth. The regression coefficients demonstrated that external debt and FDI inflow positively and significantly influenced GDP in Ghana. If well utilized, both FDI and external debt could turn around major sectors in Ghana, among other developing nations.

ABSTRACT

Like many nations in the Global South, Ghana has depended on external funding for most development projects. The country's Foreign Direct Investment (FDI) inflows have increased over two decades hence the debt burden. This trend could only hinder national development in the long run if carefully analyzed. Besides understanding Ghana's situation, it could also bail out numerous other African countries in a similar situation. The prime objective of this study is to discover whether external debt and foreign direct investment promote economic development. The paper investigates whether external debt and foreign direct investment inflows stimulate economic growth, intending to determine the causal relationship between the variables to serve as a substantial factor for policymakers. Policymakers seek foreign credit facilities and depend on foreign direct investment for

economic development, but these factors often do not achieve the anticipated advantages. Numerous econometrics techniques were employed to ensure the findings' effectiveness and accuracy, including the stationarity test, Johansen cointegration test, and multiple regression (ordinary least squares). The hypothesis test that external debt and foreign direct investment inflows do not attain their justification of ensuring economic growth was conducted empirically. The outcome revealed that external debt and foreign direct investment positively and significantly support Ghana's economic growth, which leads to the conclusion that these variables fulfilled their purpose.

BIBLIOGRAPHY

Agyapong D. and Bediabeng K. (2019), *External debt stock, foreign direct investment and financial development: Evidence from African economies.* Journal of Asian Business and Economic Studies, 27(1), pp. 81–98, *https://doi.org/10.1108/JABES-11-2018-0087*

Alfredo S. (2004), *Debt and Economic Growth in Developing and Industrial Countries,* Mimeo, 46(0), pp. 1–37.

Benedict C., Rina B. and Toan Q. N. (2003), *External Debt, Public Investment, and Growth in Low-Income Countries,* IMF Working Papers, 03(249), pp. 1–25.

Bese E. and Friday H. (2021), *The Effect of External Debt on Life Expectancy Through Foreign Direct Investment: Evidence from Turkey,* International Journal of Economics and Financial Issues, 11(2), *https://doi.org/10.32479/ijefi.10958*

Ebenezer S. A. and Xicang Z. (2013), *Impact of Foreign Direct Investment and Economic Growth in Ghana: A Cointegration Analysis.* International Journal of Business and Social Research, 3(1), pp. 64–74.

Frimpong J., and Oteng-Abayie E. (2007), *The Impact of External Debt on Economic Growth in Ghana: A Cointegration Analysis,* Journal of Science and Technology (Ghana), 26(3), *https://doi.org/10.4314/just.v26i3.33013*.

Gaies B. and Nabi M. (2021), *Banking crises and economic growth in developing countries: Why privileging foreign direct investment over external debt?* Bulletin of Economic Research, *https://doi.org/10.1111/boer.12271*

George O.A., James A. and Peter K. (2013), *Foreign Direct Investment: A Journey to Economic Growth in Ghana - Empirical Evidence,* International Business & Economics Research Journal, 12(5), *https://doi.org/10.19030/iber.v12i5.7832*.

Hakimi A., Boussaada R., and Karmani M. (2019), External Debt, Investment, and Economic Growth: A Seemingly Unrelated Regression Model for Low-Income Countries. Journal of Economic Integration, 34(4), *https://doi.org/1 0.11130/jei.2019.34.4.725*

Joshua U., Babatunde D. and Sarkodie S. (2021), *Sustaining Economic Growth in Sub-Saharan African: Do FDI inflow and External Debt Count?* Journal of Risk and Financial Management, 14(4), *https://doi.org/10.3390/jrfm14040146*

Ken O. A. (2020), *The Annual Public Debt Report for the 2019 Financial Year,* Accra: Ministry of Finance and Economic Planning.

Kusi G. (20130, *Regulatory Framework for Investing in Ghana.* Ghana Investment Promotion Centre, Accra: Ghana Investment Promotion Centre.

Matuka A. and Asafo S. S. (2019), *External Debt and Economic Growth in Ghana: A Cointegration and a Vector Error Correction Analysis,* Theoretical and Practical Research in Economic Fields,1(19), pp. 45–53, *https://doi.org/10.14505/tpref.v1 0.1(19).05*.

Michael A., Daniel O. and Jacob A. (2019), *Analysis of the determinants of foreign direct investment in Ghana,* Journal of Asian Business and Economic Studies, 26(1), pp. 56-75, *https://doi.org/10.1108/JABES-08-2018-0057*

MOFEP, (2011), Medium Term Debt Management Strategy 2012–2014, Accra: Ministry of Finance and Economic Planning.

Munasinghe M., Attapattu A. and Padmasiri H. (2018), *Long Run Association between Public Debt and Economic Growth in Sri Lanka,* Modern Economy, pp. 775–789.

Mustapha I., Joseph Y., Sahabi I., and Baba A. (2015), *FDI, Economic Growth and Service Sector Value Additions in Ghana,* International Journal of Academic Research in Business and Social, 5(12).

Naeem A. (2013), *Empirical Examination of Debt and Growth Nexus in South Asian Countries.* Asia-Pacific Development Journal, 20(2), pp. 29–52.

OECD (2008), FDI Components, Accounts and Scope. In OECD, OECD Benchmark Definition of Foreign Direct Investment, Fourth Edition ed., pp. 59–90.

Rosemary T. C. (1993), *The Effects of Debt Burden on Economic Growth in Heavily Indebted Developing Nations.* Journal of Economic Development, 18(1).

Samuel A., Ebenzer F. E., Gifty, A. M. and Xicang Z. (2013), *Impact of Foreign Direct Investment on Economic Growth: Empirical Evidence from Ghana.* International Journal of Academic Research in Accounting, Finance and Management Sciences, 3(1), pp. 18–25.

Tee E., Larbi F. and Johson R. (2017), *The Effect of Foreign Direct Investment (FDI) on the Ghanaian Economic Growth,* Journal of Business and Economic Development, 2(5), pp. 240–246.

Treasury and Debt Management Division (2020), First Quarter 2020 Public Debt Statistical Bulletin. Accra: Ministry of Finance, Ghana.

UNCTAD (2004), External finance and debt Foreign direct investment, United Nations Conference on Trade and Development.

Vaclav A. (2014), *Econometry II*. Brno, Mendel University.

Wondatir A. (2020), *External debt-growth nexus: Empirical evidence from Ethiopian economy. Economics,* Management and Sustainability, 5(2), pp. 6–27, *https://doi.org/10.14254/jems.2020.5-2.1.*

Yeboah E., and Anning L. (2020), *Investment in Ghana: An overview of FDI components and the impact on employment creation in the Ghanaian economy,* Economics, Management and Sustainability, 5(1), pp. 6–16, *https://doi.org/10.14254/jems.2020.5-1.1*

CZY ZADŁUŻENIE ZEWNĘTRZNE I NAPŁYW BEZPOŚREDNICH INWESTYCJI ZAGRANICZNYCH (FDI) WSPIERAJĄ WZROST GOSPODARCZY? DOWODY Z GHANY

Streszczenie

Cel artykułu/hipoteza: Podstawowym celem niniejszego badania jest odkrycie, czy zadłużenie zewnętrzne i bezpośrednie inwestycje zagraniczne sprzyjają rozwojowi gospodarczemu. W artykule zbadano, czy zadłużenie zewnętrzne i napływ bezpośrednich inwestycji zagranicznych stymulują wzrost gospodarczy oraz określono związek przyczynowy między zmiennymi, które będą istotnym czynnikiem dla decydentów.

Metodyka: Aby zapewnić skuteczność i dokładność wyników, zastosowano liczne techniki ekonometryczne, w tym test stacjonarności, test kointegracji Johansena oraz regresję wielokrotną (Metoda Najmniejszych Kwadratów). Hipoteza artykułu, czy zadłużenie zagraniczne i napływ bezpośrednich inwestycji zagranicznych nie znajdują uzasadnienia dla zapewnienia wzrostu gospodarczego, została przeprowadzona empirycznie.

Wyniki/Rezultaty badania: Wyniki wykazały, że zadłużenie zewnętrzne oraz bezpośrednie inwestycje zagraniczne pozytywnie i istotnie wypływają na wzrost gospodarczy Ghany, co prowadzi do wniosku, że zmienne te spełniły swoje zadanie.

Słowa kluczowe: dług zewnętrzny, FDI, wzrost gospodarczy, PKB, Ghana.

**JEL Class:** E22, F14, H63.

DODATEK KWARTALNY
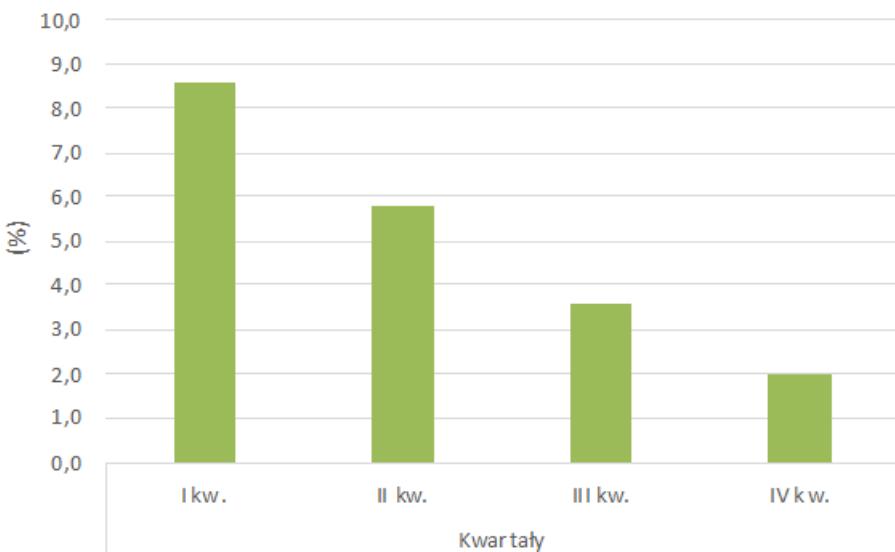
Sytuacja gospodarcza w Polsce po III kwartale 2022 r.

Zuzanna Pakuła, Patryk Krykwiński, Anna Peruga[*]

PKB

Na przestrzeni ostatnich trzech lat, a wreszcie i ostatnich czterech kwartałów, w gospodarce polskiej dochodziło do wielu znaczących zmian. Wpływ nie tylko pandemii COVID-19, ale także działań wojennych toczących się tuż za wschodnią granicą Polski pozostaje widoczny w kolejnych odczytach wzrostu gospodarczego.

Omawiany w niniejszym artykule IV kwartał 2022 r. charakteryzuje się najniższym, jak dotąd, poziomem wzrostu produktu krajowego brutto – na poziomie 2,0% (niewyrównany sezonowo) jest oceniany przez analityków jako zwiastujący początek recesji technicznej polskiej gospodarki, co nie miało miejsca od kilku ostatnich dziesięcioleci. Dane podsumowujące ubiegły rok nie napawają optymizmem, a wniosek taki można łatwo wysunąć na podstawie wykresu nr 1, który przedstawia kwartalny, niewyrównany sezonowo wzrost PKB.

Wykres 1. Dynamika zmian PKB niewyrównanego sezonowo w ujęciu kwartalnym r/r (odpowiedni kwartał roku poprzedniego równa się 100).

Źródło: opracowanie własne na podstawie danych GUS.

[*] Studenckie Koło Naukowe Analiz i Prognozowania Gospodarczego 4Future.

Wyraźnie widać, że każdy kolejny kwartał cechował się znacznie mniejszą dynamiką wzrostu gospodarczego r/r. Kiedy w I kwartale 2022 r. odnotowano ponad ośmioprocentowy wzrost, w ostatnim kwartale tego samego roku odnotowano już wzrost ponad czterokrotnie (w punktach procentowych) mniejszy. I choć naturalnie produkcja w IV kwartale jest zazwyczaj mniejsza od poziomu produkcji osiąganego w takich kwartałach, jak II oraz III, co ma związek z charakterystyczną sezonowością gospodarek naszej strefy klimatycznej, to jednak nie powinna odbiegać ona tak znacząco.
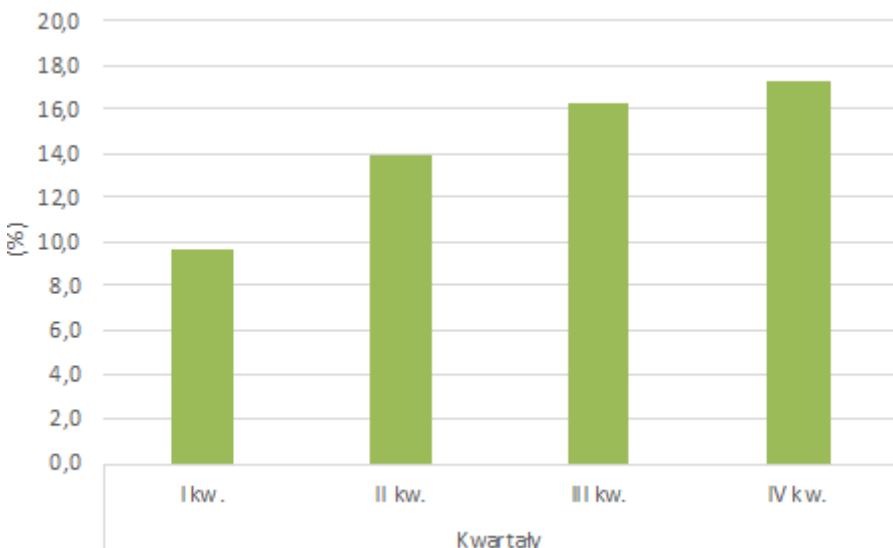
Na taką sytuację w dużej mierze wpłynął wzrost cen, spadek siły nabywczej PLN i zubożenie społeczeństwa polskiego. Przedstawiony wskaźnik PKB jest realny, a nie nominalny. Jednakże dane przedstawione przez Główny Urząd Statystyczny wyraźnie wskazują na spadek spożycia w sektorze gospodarstw domowych o 0,7% r/r w IV kwartale 2022 r. – co właśnie jest skutkiem pogorszenia się siły nabywczej polskich konsumentów. Spożycie publiczne spadło w omawianym kwartale o 0,3%. Warto jednak wskazać, że saldo obrotów z zagranicą w badanym okresie było najwyższe spośród wszystkich pozostałych w 2022 r. i na poziomie +0,9% r/r wpłynęło dodatnio na poziom wzrostu gospodarczego.

INFLACJA

Jednym z częściej dyskutowanych tematów, a także przedstawianych w mediach, pozostaje wątek postępującej wciąż inflacji w wielu państwach na świecie. Sprawia to, że problem ten nie jest już ograniczony do danego regionu czy np. kraju – w tym przypadku Polski – a jest problemem globalnym, z którymi walczą banki centralne oraz rządy wielu państw.

Podczas gdy, w przypadku PKB widzieliśmy stały spadek wartości kwartalnego wzrostu gospodarczego, to w przypadku wskaźnika cen towarów i usług konsumpcyjnych obserwujemy jego nieustający wzrost na przestrzeni całego 2022 r.

Wykres 1. Wskaźnik cen towarów i usług konsumpcyjnych w 2022 r.
w ujęciu kwartalnym r/r.

Źródło: opracowanie własne na podstawie danych GUS.

W ostatnim kwartale 2022 r. wskaźnik cen towarów i usług konsumpcyjnych wzrósł do 17,3%. Jest to największy jego wzrost w omawianym okresie, a także w całym XXI wieku. Nie pozostaje on bez wpływu na zachowania konsumentów, a także ich nastroje, między innymi na budowanie oczekiwań inflacyjnych i utratę zaufania do polskiej waluty.

Na tak wysoki wzrost wpłynęły najbardziej gwałtowne wzrosty w kategorii użytkowania mieszkania i nośników energii, które w ostatnim kwartale ubiegłego roku wynosiły 25,7% r/r. Powodów takiego wzrostu należy doszukiwać się także w ograniczeniu podaży surowców energetycznych z kierunku wschodniego, wymuszonej dywersyfikacji dostaw w krótkim czasie nie tylko w Polsce, ale i w innych krajach członkowskich Unii Europejskiej, a ostatecznie w problemach dostosowawczych gospodarki do nowej sytuacji w obliczu groźby pojawienia się *blackoutów,* jak również przeprowadzenia skutecznej transformacji energetycznej.

Wysokie ceny widoczne w sklepach wyraźnie wskazują, że wzrost w kategorii żywność i napoje bezalkoholowe miał równie ważny wpływ na poziom wzrostu całego wskaźnika CPI. Według danych GUS w ostatnim kwartale 2022 r. wzrost ten rok do roku wyniósł 21,9%. Wartość tej kategorii jest szczególnie ważna ze względu na fakt, że jej wpływ na poziom wskaźnika CPI, w przypadku polskiego społeczeństwa, jest najważniejszy spośród wszystkich innych. Oznacza to, że

DODATEK KWARTALNY

Polacy największą część konsumpcji przeznaczają na żywność i napoje alkoholowe, co w przypadku wzrostu cen, przekłada się na znaczne pogorszenie nastrojów w społeczeństwie.

Nieco bardziej optymistycznie przedstawia się wzrost cen w kategorii transport. Największe wzrosty zostały odnotowane w II, a także w III kwartale 2022 r. W porównaniu z II kwartałem, wzrost cen w transporcie w IV kwartale 2022 r. r/r był niemal o 12 punktów procentowych mniejszy, a sytuacja na rynku paliw wydaje się być ustabilizowana.

INWESTYCJE

Według wstępnych szacunków Głównego Urzędu Statystycznego, w IV kwartale 2022 r., nakłady brutto na środki trwałe (niewyrównane sezonowo) wzrosły o 4,9% (wobec wzrostu w III kwartale 2022 r. o 2,0%). Patrząc na udział wpływu popytu inwestycyjnego na PKB należy zauważyć wzrost o 1,0 p.p. (wobec 0,3 p.p. w III kwartale 2022 r.). Z kolei nakłady brutto na środki trwałe w ujęciu wyrównanym sezonowo zwiększyły się realnie o 1,3%. Stopa inwestycji wyniosła 21,7% wobec 21,8% w analogicznym okresie w roku poprzedzającym.

W ujęciu rocznym stopa inwestycji w gospodarce narodowej (relacja nakładów brutto na środki trwałe do produktu krajowego brutto w cenach bieżących) w 2022 r. wyniosła średnio 16,8% wobec 17% w 2021 r. Spadek ten wynika, w dużej mierze, z utrzymywania się podwyższonej inflacji, co koreluje z ograniczeniem inwestowania z oszczędności krajowych (efekt tzw. „podatku inflacyjnego"). Widać to zarówno w przypadku inwestycji publicznych, jak i prywatnych. Sytuację mogłyby poprawić inwestycje z zewnątrz, jednak inwestycje zagraniczne są ograniczone ze względu na obniżony poziom zaufania do państwa polskiego (w wymiarze chwiejnej polityki finansowej oraz podwyższonego ryzyka w zakresie bezpieczeństwa i potencjalnych zmian związanych z niepewną sytuacją polityczną w pobliżu Polski). Dodatkowo opóźniają się wyczekiwane środki na inwestycje z KPO (łącznie 35 mld euro na inwestycje pozostaje zamrożonych, co tylko spowalnia dynamikę inwestycji). Na chwilę obecną projekty przewidziane w ramach KPO są realizowane z Polskiego Funduszu Rozwoju, natomiast sam prezes NBP oszacował, że brak środków z UE oznacza utratę wzrostu PKB o 0,4-0,5%.

RYNEK PRACY

Biorąc pod uwagę wyniki badań prowadzonych przez Główny Urząd Statystyczny, stopa bezrobocia rejestrowanego w IV kwartale 2022 r. w poszczególnych miesiącach (październik, listopad, grudzień) kształtowała się odpowiednio na poziomie 5.1%, 5.1% oraz 5.2%. Natomiast według BAEL stopa bezrobocia

w ostatnim kwartale 2022 r. wyniosła 2,9%. Warto również zwrócić uwagę iż, z tych samych danych wynika, że stopa bezrobocia dla kobiet była niższa niż dla mężczyzn i kształtowała się odpowiednio na poziomie 2,8% i 3,0%. Mimo tego, iż w skali roku nie odnotowano istotnych zmian stopy bezrobocia, to ze względu na podział na poszczególne grupy wiekowe, jej wysokość zmniejszyła się najwięcej w takich grupach wiekowych, jak 25–34 lata oraz 35–44 lata (o 0,3 p.p. w każdej z wymienionych grup).

W IV kwartale 2022 r. współczynnik aktywności zawodowej osób w wieku 15–89 lat wynosił 58,2%. W porównaniu z wielkością osiągniętą w III kwartale 2022 r., jest on wyższy o 0,4 p.p. Godne podkreślenia jest również to, iż w porównaniu z poprzednim kwartałem współczynnik ten zwiększył się zarówno wśród mężczyzn, jak i kobiet. Natomiast biorąc pod uwagę cały rok 2022 wyraźnie widać wzrost u kobiet, a spadek u mężczyzn. Populacja pracujących w wieku 15–89 lat liczyła 16 796 tys. osób i zwiększyła się względem poprzedniego kwartału o 106 tys., tj. o 0,6%. Bez pracy pozostawało 499 tys. osób. Jest to o 3 tys. mniej niż w poprzedzającym kwartale.

Na koniec IV kwartału 2022 r. w Polsce odnotowano 115,7 tys. wolnych miejsc pracy. Było to o 19,8 tys. miejsc mniej niż w poprzednim okresie. Wskaźnik wolnych miejsc pracy w IV kwartale 2022 r. wyniósł 0,92%. W skali roku zmniejszyła się zarówno liczba nowo utworzonych (o 21,3%), jak i zlikwidowanych miejsc pracy (o 14,3%). Analizując wskaźnik wolnych miejsc pracy na koniec IV kwartału 2022 r. w przekroju regionów można zauważyć, że najwyższa jego wartość wystąpiła w regionie zachodniopomorskim (1,67%), gdzie liczba wolnych miejsc pracy zwiększyła się w skali roku o 29,6%. Wysoki wskaźnik wystąpił również w regionach dolnośląskim (1,29%), warszawskim stołecznym (1,19%) i lubuskim (1,09%). Najniższą wartość wskaźnika wolnych miejsc pracy odnotowano w regionie lubelskim (0,46%), gdzie liczba wolnych miejsc pracy w porównaniu z IV kwartałem 2021 r. zmalała o 15,7%. W 2022 r. przeciętne zatrudnienie powróciło do wartości odnotowywanych na początku 2020 r. W grudniu 2022 r. w stosunku do poprzedniego miesiąca przeciętne zatrudnienie nieznacznie zmniejszyło się, o ok. 2,8 tys. etatów. W okresie narastającym całego roku 2022 w porównaniu z rokiem 2021 najwyższy wzrost przeciętnego zatrudnienia o 11,3% w sektorze przedsiębiorstw wystąpił w sekcji „Informacja i komunikacja", natomiast najgłębszy spadek zaobserwowano w sekcjach „Obsługa rynku nieruchomości" oraz „Górnictwo i wydobywanie", gdzie spadek wynosił odpowiednio 1,2% i o 1,1%.

Przeciętne wynagrodzenie w IV kwartale 2022 r. wyniosło 6 733,49 PLN wobec 6 480,67 PLN w III kwartale2022 r. Oznacza to wzrost względem poprzedniego okresu o 3,9% oraz wzrost w stosunku do III kwartału 2021 r. o 12,3%. Sytuacja demograficzna, niedobory pracowników o wyższych kwalifikacjach, a także spadek inwestycji oraz kryzys energetyczny i inflacja mogą doprowadzić

w roku 2023 do wzrostu stopy bezrobocia w pesymistycznym wariancie o 0,5 p.p. Jednak zdaniem Studenckiego Koła Naukowego Analiz i Prognozowania Gospodarczego „4Future", mimo dwukrotnego zwiększenia minimalnego wynagrodzenia (pierwsza podwyżka od 1 stycznia 2023 r. oraz druga od 1 lipca 2023 r.), stopa bezrobocia najprawdopodobniej pozostanie na takim samym lub zbliżonym poziomie. Nie należy oczekiwać nagłego spadku wskaźnika, gdyż może być to „zablokowane" przez pracodawców, którzy będą woleli zainwestować w zatrudnionych już pracowników, bądź zatrudnić specjalistów ze wskazanych niżej branż. Stan wskaźnika wolnych miejsc pracy na koniec IV kwartału 2022 r. w wymienionych grupach zawodowych kształtował się następująco: robotnicy przemysłowi i rzemieślnicy (1,48%), operatorzy i monterzy maszyn i urządzeń (1,18%), specjaliści (1,12%), technicy i inny średni personel (0,82%), pracownicy usług i sprzedawcy (0,62%), pracownicy biurowi (0,62%) oraz pracownicy wykonujący prace proste (0,55%).

Zdaniem ekspertów inflacja będzie działała zarówno negatywnie, jak i pozytywnie na rynek pracy. Negatywny skutek będzie można zaobserwować w produkcji przemysłowej, zaś pozytywny w branży TSL (transport-spedycja-logistyka). Zapotrzebowanie na pracowników produkcyjnych (operator maszyn i urządzeń, pracownik linii produkcyjnej), jak również pracowników z sektora logistyki tj. specjaliści ds. obsługi klienta, eksperci w zakresie cyberbezpieczeństwa oraz automatyzacji, inżynierowie ds. logistyki, magazynierzy, operatorzy wózków widłowych, pakowacze czy kurierzy nadal będzie rosło. Dla wielu pracodawców wciąż będzie ważne doświadczenie na produkcji oraz zdolności manualne i techniczne. Dla nadchodzących kwartałów, biorąc pod uwagę spowolnienie gospodarcze, Studenckiego Koła Naukowego Analiz i Prognozowania Gospodarczego „4Future", przewiduje stopę bezrobocia na poziomie 5,3%–5,4%. Z kolei przeciętne wynagrodzenie w I kwartale 2023 r. wzrośnie o około 1,5 % w stosunku do poprzedniego kwartału, a wskaźnik wolnych miejsc pracy utrzyma się na zbliżonym poziomie. Większe zmiany wskaźników może przynieść II kwartał 2023 r.

PODSUMOWANIE

Podsumowując, wzrost PKB w IV kwartale 2022 r. o 2% należy uznać za niewielkie, ale jednak pozytywne zaskoczenie (mimo, iż jest to spodziewane, wyraźne spowolnienie dynamiki) biorąc pod uwagę niepewny klimat inwestycji oraz znaczący spadek najbardziej proinflacyjnej składowej PKB, czyli popytu konsumpcyjnego. Ujemny wskaźnik popytu spotkał się ze wzrostem nakładów brutto na środki trwałe, co ostatecznie skutkowało wynikiem PKB nieznacznie niższym od oczekiwań analityków. Niespodzianką okazał się wzrost nakładów brutto na środki trwałe (spowodowany najprawdopodobniej inwestycjami publicznymi,

ponieważ inwestycje w typowych dla gospodarstw domowych kierunkach, np. w nieruchomości, charakteryzowały się spadkiem popytu). Warto zwrócić uwagę na przyczynę spadku konsumpcji - otóż w odróżnieniu od podobnego spadku w okresie pandemii, w omawianym okresie na negatywny wynik wpłynęła głównie inflacja, obniżając siłę nabywczą gospodarstw domowych. Nie bez znaczenia był też spadek globalnej koniunktury.

Początek 2023 r., zdaniem Studenckiego Koła Naukowego Analiz i Prognozowania Gospodarczego „4Future", nie będzie należał do udany, ze wzrostem PKB nie przekraczającym 2% w ujęciu kwartalnym, a w skali całego 2023 r. na poziomie 1,3%. Główną przyczynę spowolnienia w nadchodzącym okresie będzie wysoka inflacja, a co za tym idzie obniżona konsumpcja, spowodowana zmniejszeniem realnej siły nabywczej w gospodarstwach domowych. Dodatkowo, z punktu widzenia przedsiębiorstw, wysokie stopy procentowe i wspomniany już spadek popytu (zarówno krajowego, jak i zagranicznego) będą przekładać się na pogorszeniu klimatu do inwestycji. Pewnym wsparciem dla inwestycji, a co za tym idzie całego PKB, mogą okazać się inwestycje w sektorze publicznym (sektor zbrojeniowy) oraz ewentualne wsparcie finansowe dotychczasowych planów inwestycyjnych przy wykorzystaniu środków z KPO (po ich odmrożeniu).

DODATEK KWARTALNY

Zmiany w świecie podatków na I kwartał 2023 r.

Radosław Witczak[*]

W niniejszym, cyklicznym artykule omówione zostaną niektóre konsekwencje wynikające z Polskiego Ładu dotyczące wybranych ulg przysługujących podatnikom.

Podatnicy, wyjątkowo w połowie 2022 r. oraz po zakończeniu roku 2022 r. otrzymali możliwość zmiany formy opodatkowania, a także częściowego odliczenia składek zdrowotnych w niektórych formach opodatkowania, o czym pisaliśmy w ubiegłorocznym numerze czasopisma. Dla niektórych form opodatkowania np. ryczałtu ewidencjonowanego przewidziano mechanizm dopłaty składek na ubezpieczenie zdrowotne ze względu na przekroczenie określonych w przepisach limitów dotyczących podstawy wymiaru składek. Normalnie przy pozostaniu przy danej formie opodatkowania takie dopłaty składek na ubezpieczenie zdrowotne można odliczać według przewidzianych w przepisach zasad. Jednakże w przypadku zmiany formy rozliczania za rok 2022, ustawodawca wprowadził zakaz odliczania dopłat związanych ze składkami na ubezpieczenie zdrowotne po zmianie zasad opodatkowania. Przykładowo, podatnik ryczałtu ewidencjonowanego, który przeszedł na podatek z podstawową stawką 19% (zwany liniowym, ale po wprowadzeniu daniny solidarnościowej utracił on ten charakter), nie odpisze dopłaconych za 2022 r. składek na ubezpieczenie zdrowotne, pomimo faktu, że ulga przysługuje w obu formach rozliczenia (Wojtasik P., *Po zmianie podatku nie ma ulgi na dopłaty do ZUS*, Rzeczpospolita z 13 marca 2023 r., s. A9).

Chociaż ograniczono odliczania składki zdrowotnej, a w przypadku rozliczania za pomocą skali podatkowej zlikwidowano je całkowicie, to warto przyjrzeć się niektórym ulgom wprowadzonym przez Polski Ład, które teraz mogą być rozliczane w zeznaniach podatkowych w podatkach dochodowych. Zaliczyć do nich można między innymi ulgi na:

- sponsoring,
- prototyp,
- ekspansję,
- robotyzację oraz
- zabytki.

Jedną z nowych ulg, jest ulga określana jako sponsoringowa, chociaż ustawodawca nie używa tego sformułowania. W jej ramach można odliczyć 50% kosztów uzyskania przychodów poniesionych na działalność: sportową, kulturalną w rozumieniu Ustawy z 1991 r. o organizowaniu i prowadzeniu działalności

[*] Doktor, Instytut Finansów, Wydział Ekonomiczno-Socjologiczny, Uniwersytet Łódzki.

kulturalnej oraz wspierającą szkolnictwo wyższe i naukę. Oznacza to, że podatnik rozliczy 150% poniesionych wydatków: 100% jako koszty uzyskania przychodów oraz dodatkowo 50% w ramach ulgi (Wojda A., *Pięć ulg podatkowych dla firm*, Rzeczpospolita z 2 stycznia 2023 r., s. D4). Limitem odliczenia jest wysokość uzyskanych w danym roku dochodów z działalności gospodarczej. Szczególnie interesujące dla przedsiębiorców może być odliczenie w zakresie sponsorowania sportu jako jednego z najpopularniejszych form sponsoringu.

Powołując się na uzasadnienie wprowadzanych przepisów wskazuje się, że odliczeniu będą podlegały koszty poniesione na kluby sportowe, które realizują cele określone w art. 28 Ustawy o sporcie, tj. m.in. zakup sprzętu sportowego, pokrycie kosztów organizowania zawodów sportowych lub uczestnictwa w tych zawodach, pokrycie kosztów korzystania z obiektów sportowych dla celów szkolenia sportowego. Ulga obejmuje również wydatki poniesione na imprezę sportową niebędącą masową imprezą sportową, o której mowa w Ustawie o bezpieczeństwie imprez masowych. Sponsor może także sfinansować stypendium sportowe (Szymankiewicz M., *Ulga dla wspierających sport, kulturę i edukację*, Rzeczpospolita z 19 stycznia 2022 r. wyd. el.).

W przypadku sfinansowania stypendium uznano, że może być one przyznane konkretnemu sportowcowi za osiągnięcie określonego wyniku lub przygotowanie się do zawodów. Natomiast za stypendium sportowe rozumie się finansowane przez podatnika jednostronne, bezzwrotne świadczenie pieniężne, które jest przyznawane przez jednostki samorządu terytorialnego, ministra właściwego do spraw kultury fizycznej, organizacje pożytku publicznego lub kluby sportowe, za osiągnięcie określonego wyniku sportowego lub umożliwiające przygotowanie się do imprezy sportowej. Co ciekawe przepisy nie zakazują odliczenia wydatków na sfinansowanie przygotowania do zawodów sportowych albo stypendium własnego dziecka lub innego członka rodziny (Pogroszewska M., *Są nowe preferencje dla sponsorów*, Rzeczpospolita z 3 stycznia 2022 r., s. D2).

Ulga na prototyp dotyczy wprowadzenia na rynek nowego produktu. Obejmuje wydatki od zakończenia prac badawczo-rozwojowych do przystąpienia do seryjnej produkcji opracowanego produktu. Podatnik może odliczyć od postawy opodatkowania 30% kosztów związanych z produkcją próbną nowego produktu (etap rozruchu technologicznego) i wprowadzeniem na rynek nowego produktu (Rodak M., *Przywileje nie tylko dla innowatorów*, Rzeczpospolita z 13 marca 2023 r., s. D4; Wojda A., *Pięć ulg podatkowych dla firm*, Rzeczpospolita z 2 stycznia 2023 r., s. D4).

Kolejna nowa ulga to ulga na ekspansję. Pozwala ona odliczyć koszty poniesione na zwiększenie sprzedaży produktów, zdobycie nowych zagranicznych rynków lub wejście na rynek z nowym produktem. Istota ulgi polega na tym, że przedsiębiorcy, którzy spełniają ustawowe przesłanki, są uprawnieni do dwukrotnego rozliczenia kosztów poniesionych na zwiększenie sprzedaży produktów jako

koszt uzyskania przychodu oraz w ramach ulgi. Odliczyć można wydatki do miliona złotych w roku podatkowym (Rodak M., *Przywileje nie tylko dla innowatorów*, Rzeczpospolita z 13 marca 2023 r., s. D4; Wojda A., *Pięć ulg podatkowych dla firm*, Rzeczpospolita z 2 stycznia 2023 r., s. D4).

Ulga na robotyzacje daje możliwość odliczenia od postawy opodatkowania dodatkowo 50% kwoty kosztów podatkowych poniesionych m.in. na nabycie fabrycznie nowych robotów przemysłowych oraz określonych maszyn i urządzeń związanych z robotami przemysłowymi. Nabyte przez podatnika roboty i inne maszyny muszą być nowe, pozyskane na rynku pierwotnym. Podatnik nie musi natomiast prowadzić działalności badawczo-rozwojowej. Ulga na robotyzacje ma zastosowanie do kosztów uzyskania przychodów poniesionych na robotyzację w latach 2022–2026. Zatem dotyczy także robotów, które zostały nabyte przed 2022 r., ale w dalszym ciągu podlegają amortyzacji (Rodak M., *Przywileje nie tylko dla innowatorów*, Rzeczpospolita z 13 marca 2023 r., s. D4; Wojda A., *Pięć ulg podatkowych dla firm*, Rzeczpospolita z 2 stycznia 2023 r., s. D4).

W przypadku ulgi na zabytki, przedstawienie zasad jej rozliczenia nie jest proste ze względu na zmiany obowiązujące od 2023 r. Podatnicy wypełniający deklarację za 2022 r. mogą korzystać z dawnych korzystniejszych regulacji. Dotyczy ona indywidualnych właścicieli zabytkowych nieruchomości oraz ich współwłaścicieli, czyli osób, które są członkami wspólnot lub spółdzielni mieszkaniowych i mają mieszkania w zabytkowych kamienicach. Przepisy wskazują następujące tytułu odliczeń:

- wpłaty na fundusz remontowy wspólnoty mieszkaniowej lub spółdzielni mieszkaniowej utworzony zgodnie z odrębnymi przepisami dla zabytku nieruchomego wpisanego do rejestru zabytków lub znajdującego się w ewidencji zabytków,
- wydatki na prace konserwatorskie, restauratorskie lub roboty budowlane w zabytku nieruchomym wpisanym do rejestru zabytków lub znajdującym się w ewidencji zabytków,
- odpłatne nabycie zabytku nieruchomego wpisanego do rejestru zabytków lub udziału w takim zabytku, pod warunkiem że podatnik na nabytą nieruchomość poniósł wydatek o charakterze remontowo-konserwatorskim. W tym przypadku prawo do ulgi daje nie tylko sam zakup nieruchomości, ale trzeba spełnić jeszcze jeden warunek: na nabytą nieruchomość podatnik musi ponieść wydatek o charakterze remontowo-konserwatorskim (Tarka A., *Wydatki na zabytkowe nieruchomości z ulgą*, Rzeczpospolita z 4 lutego 2022 r., wyd. el.).

Ulga na zabytki pozwala na odliczenie od podstawy opodatkowania 50% kwoty wydatków poniesionych na wpłaty na fundusz remontowy oraz na prace konserwatorskie, restauratorskie lub roboty budowlane, dotyczące zabytku bez ograniczeń kwotowych. Natomiast wydatki na nabycie zabytku ograniczone są

limitem do wysokości kwoty odpowiadającej iloczynowi 500 PLN i liczby metrów kwadratowych powierzchni użytkowej tego zabytku. Zarazem odliczenia na wszystkie inwestycje podatnika z tego tytułu nie mogą przekroczyć 500 tys. PLN (Piskor A., *Ulga na zabytki mocno okrojona*, Rzeczpospolita z 2 stycznia 2023 r., s. D5).

Od 2023 r. zlikwidowano odpis z tytułu nabycia zabytkowej nieruchomości. Odliczeniu podlegają wydatki poniesione na wpłaty na fundusz remontowy oraz na prace konserwatorskie, restauratorskie lub roboty budowlane, dotyczące zabytku. Dodatkowo zmodyfikowano warunki odliczenia wydatków na wskazane prace. Od 1 stycznia 2023 r. warunkiem odliczenia jest uzyskanie zaświadczenia wojewódzkiego konserwatora zabytków, potwierdzającego wykonanie tych prac, co oznacza, że korzyść pojawi się dopiero po zakończeniu prac, które mogą trwać dłużej niż rok kalendarzowy (Piskor A., *Ulga na zabytki mocno okrojona*, Rzeczpospolita z 2 stycznia 2023 r., s. D5).

DODATEK KWARTALNY

Koniunktura w sektorze przedsiębiorstw niefinansowych

Artur Zimny[*]

Analiza bieżącej koniunktury w sektorze przedsiębiorstw niefinansowych jest o tyle trudna, że najpełniejsze dane dotyczące ich wyników finansowych (kwartalne, obejmujące szczegółowe dane o przychodach, kosztach, aktywach i pasywach) pojawiają się z pewnym opóźnieniem, czasem znacznym. Obecnie (marzec 2023 r.) dostępne są dane do III kwartału 2022 r. włącznie, a więc charakteryzujące sytuację przedsiębiorstw, w jakiej znajdowały się pół roku wcześniej. Przy aktualnej dynamice wydarzeń część wniosków, jakie z tych danych można wysnuć, jest obarczona sporym ryzykiem nieaktualności. Świeższe dane są jednak jedynie fragmentaryczne, dlatego analizę warto zacząć od wspomnianych danych kwartalnych.

Dynamika przychodów przedsiębiorstw niefinansowych w III kwartale 2022 r. była nadal dość wysoka, ale nieco niższa niż w kwartale poprzedzającym. Przychody były o 11,7% wyższe (realnie, tj. po skorygowaniu o inflację) od przychodów w III kwartale 2021 r., podczas gdy w poprzednich czterech kwartałach z rzędu wskaźnik ten oscylował wokół wartości 20%, czyli zdecydowanie wyższej. Jednoznaczne pogorszenie koniunktury widać natomiast w dynamice wyniku finansowego netto, dla którego w poprzednich kwartałach odnotowywano dodatnią dynamikę rok do roku, a w III kwartale 2022 r. okazała się ona ujemna (pierwszy raz od II kwartału 2020 r., kiedy swoje żniwo zbierała pandemia). Wynik finansowy był o 14,1% niższy niż w III kwartale 2021 r. Wyraźnym spadkom uległa też rentowność obrotu netto (4,5% w III kwartale 2022 r. wobec 6,1% w kwartale poprzedzającym i ponad 5% w pięciu wcześniejszych kwartałach), a także wskaźniki płynności (wykresy poniżej). Słabnącą koniunkturę potwierdza też spadek tempa wzrostu PKB, które (po urealnieniu i uwzględnieniu sezonowości) osiągnęło w III kwartale 2022 r. poziom 4,5%, czyli najniższy po I kwartale. 2021 r.

Ciekawe zjawisko można zaobserwować w zakresie zarządzania kapitałem obrotowym. Jeszcze w pierwszej połowie 2018 r. cykl inkasa należności wynosił (średniorocznie) ok. 44 dni i było o ok. 10 dni dłuższy od cyklu rotacji zapasów. W kolejnych okresach tempo obrotu zapasami pozostawało względnie stabilne, ale czas ściągania należności stopniowo się skracał. W kilku ostatnich kwartałach skracanie cyklu inkasa przybrało na sile (cykl wyniósł niecałe 39 dni w III kwartale 2022 r.), podczas gdy cykl rotacji zapasów wydłużył się do ponad 36 dni. Szybsze inkasowanie należności, skądinąd korzystne dla firm, może wynikać z obawy o spodziewane dalsze pogarszanie się płynności, a wydłużający się średni

---

[*] Doktor, Wydział Ekonomiczno-Socjologiczny, Uniwersytet Łódzki.

czas obrotu zapasami znamionuje kumulowanie zapasów, prowokując pytanie, czy firmy w ten sposób przygotowują się do wzrostu popytu, czy raczej przeciwnie – doświadczają problemów ze zbytem, bo popyt słabnie. Trudno ocenić, czy już można w przewidywaniach pozwolić sobie na optymizm, czy jeszcze na to za wcześnie. Dynamika nakładów inwestycyjnych w III kwartale 2022 r. była umiarkowana, nakłady te wzrosły w porównaniu do analogicznego kwartału rok wcześniej o 2,6% (po uwzględnieniu inflacji) i był to wzrost generalnie niższy niż odnotowywany w poprzednich pięciu kwartałach.

Niemniej jednak, perspektywy wyrażane wskaźnikami badającymi „nastroje" wydają się od pewnego czasu pozytywne. Indeks PMI (ang. *Purchasing Managers' Index*) pozostaje co prawda niższy od wartości 50 (co oznacza, że w ocenie perspektyw gospodarczych opinie pesymistyczne przeważają nad optymistycznymi), ale jego trend zmienił się ze spadkowego na wzrostowy i od października 2022 r. wartość wskaźnika wzrosła z 42,0 do 48,5 w lutym 2023 r., pozwalając oczekiwać niebawem przekroczenia progu, powyżej którego przewidywania optymistyczne wezmą górę nad pesymistycznymi. Taka sama zmiana trendu, notowana również od października 2022 r., charakteryzuje wyprzedzający wskaźnik ufności konsumenckiej (WWUK), który w tym okresie z wartości –35,7 wzrósł do –25,3. Ze spadkowych na wzrostowe zmieniły się również, tylko nieco później, trendy wskaźników ogólnego klimatu koniunktury gospodarczej (WOKKG) dla poszczególnych branż. „Realnym" potwierdzeniem tego przezwyciężania pesymizmu są notowania spółek giełdowych, bowiem WIG – również od października 2022 r. dość dynamicznie rósł. Optymizm chłodzi natomiast zmiana tego trendu, obserwowana od stycznia bieżącego roku, a zwłaszcza dość mocne spadki, jakie zaszły w okresie najświeższym (w ciągu ostatnich dwóch tygodni WIG stracił ponad 7%).

Spośród pięciu głównych branż polskiej gospodarki, energetyka mogła w III kwartale 2022 r. poszczycić się najwyższą dynamiką przychodów (wzrost realny o 54% w stosunku do analogicznego kwartału rok wcześniej), ale pozostałe mierniki wykazała złe: wynik finansowy spadł aż o 43%, mocno spadły wskaźniki płynności, pogorszyła się rentowność i zmniejszono nakłady na inwestycje. Należy się spodziewać pogłębienia problemów tej branży, biorąc pod uwagę wprowadzone na przełomie roku regulacje sektora energetycznego, sprowadzające się *de facto* do regulowania cen energii na dotąd wolnokonkurencyjnym, co do zasady, rynku (znacznie uregulowane były dotąd tylko segmenty przesyłu i dystrybucji). Zapowiedzi tych działań spowodowały mocne spadki notowań spółek energetycznych na giełdzie latem i jesienią ubiegłego roku, wskutek czego obecnie (w połowie marca 2023 r.) indeks WIG-Energia wykazuje ponad 20% straty w skali roku (choć tylko ok. 3% straty w ciągu ostatnich trzech miesięcy).

Największą branżę, tj. przemysł przetwórczy, charakteryzują trendy podobne jak energetykę, ale o słabszym nasileniu – wzrost przychodów w III kwartale

2022 r. (realnie, rok do roku) wyniósł tu 18%, ale wynik finansowy spadł o 10%, rentowność i płynność też nieco się obniżyły. Pozytywnie natomiast wyróżniają się inwestycje w przemyśle – realne nakłady wzrosły o prawie 12%. Wskaźnik ogólnego klimatu koniunktury gospodarczej (WOKKG) dla przemysłu ma na tle innych gałęzi gospodarki relatywnie niską wartość, ale przeszedł z trendu spadkowego we wzrostowy wcześniej niż dla innych branż, a jego wzrost w ostatnich miesiącach jest najbardziej dynamiczny.
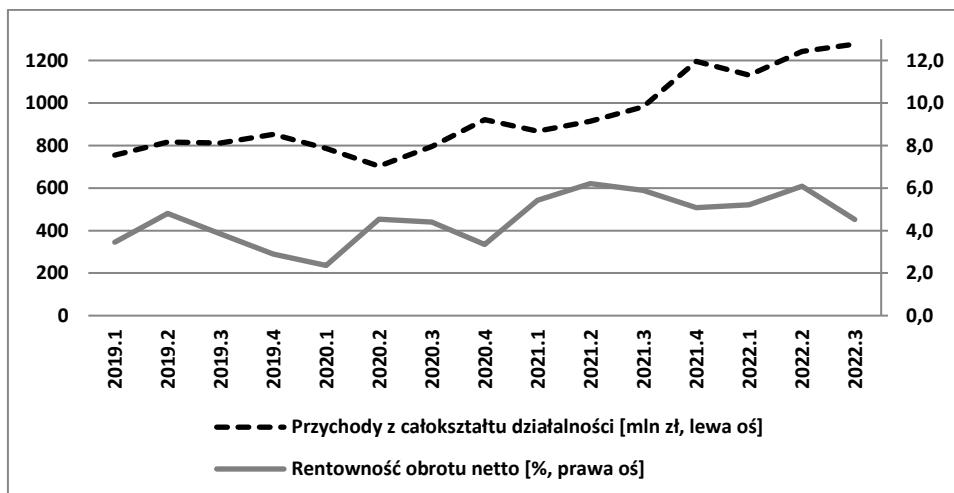
W branży handlowej przychody wzrosły realnie tylko o niecałe 8%, ale wynik finansowy wykazał dynamikę dodatnią, choć symboliczną (niecałe 2% wzrostu rok do roku), dzięki czemu i rentowność nie uległa obniżeniu. Firmy handlowe wyraźnie odczuły jednak pogorszenie płynności, która na dodatek w tej branży jest tradycyjnie znacznie niższa niż w innych. Mimo to nakłady inwestycyjne w handlu odnotowano realnie o prawie 9% wyższe niż przed rokiem. Wskaźnik ogólnego klimatu koniunktury gospodarczej (WOKKG) dla branży handlowej jest relatywnie dobry, w porównaniu z innymi branżami – wskaźnik wyższy (choć ujemny, jak i inne) ma tylko branża transportowa.

Spośród sektorowych indeksów giełdowych, najbliższych branżom przemysłowej i handlowej, bardzo negatywnie wyróżniają się WIG-Spożywczy i WIG-Leki, dla których w przeciągu roku odnotowano spadki o ponad 23%. Notowania indeksu WIG-Odzież spadły o ponad 6%, a jedynie WIG-Chemia jest na poziomie o 13,5% wyższym niż rok temu. W ciągu ostatnich trzech miesięcy spośród tych czterech indeksów WIG-Chemia nadal wykazuje wzrosty (o 10%), WIG-Spożywczy też notuje odbicie (+5,6%), WIG-Leki pozostaje praktycznie bez zmian, a WIG-Odzież traci 5%. Wzrosty w krótkim okresie pozwalają na pewien optymizm, ale raczej umiarkowany.

Wyniki dla budownictwa są dość niespójne. W III kwartale 2022 r. branża wykazała ponad 7% realnego wzrostu przychodów i ponad 29% wzrostu wyniku finansowego (deklasując w tym zakresie inne branże, oprócz transportu), z czym wiąże się także poprawa rentowności. Mimo to, znacząco spadła płynność tej branży, a nakłady inwestycyjne ograniczono o prawie 26% (w porównaniu z III kwartałem 2021 r. i z uwzględnieniem inflacji). Ma to swoje odzwierciedlenie we wskaźniku ogólnego klimatu koniunktury gospodarczej (WOKKG), który dla budownictwa osiąga wartość niższą niż dla innych branż, dla których wskaźnik ten jest liczony. Wbrew niekorzystnym prognozom sugerowanym przez ujemną dynamikę inwestycji i relatywnie niskiemu WOKKG wskaźniki giełdowe związane z budownictwem (WIG-Budownictwo i WIG-Nieruchomości) wykazują wzrosty, zarówno w perspektywie ostatniego roku (odpowiednio +32% i +9%), jak i ostatnich trzech miesięcy (+8% i +13%). Być może optymizm inwestorów w tym zakresie napędza oczekiwanie spadku inflacji i w ślad za tym stóp procentowych (co już widać w pewnym spadku wskaźników WIBOR), co powinno obniżyć ceny kredytów i – zwiększając ich dostępność – pobudzić popyt na mieszkania i domy.
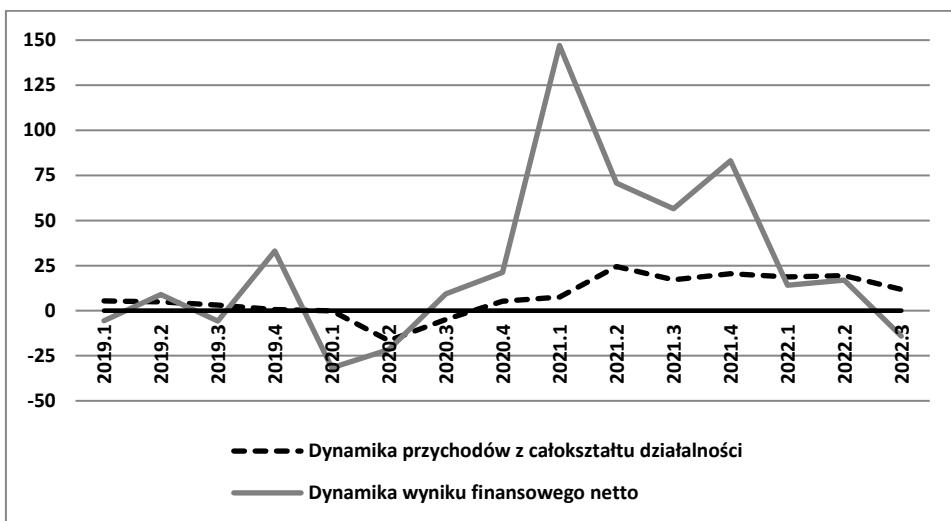
Najlepszymi wynikami spośród pięciu głównych branż wyróżnia się transport, który w III kwartale 2022 r. wykazał (w porównaniu z analogicznym kwartałem rok wcześniej i z uwzględnieniem inflacji) wzrost przychodów o ponad 10%, wzrost wyniku finansowego o prawie 29%, wzrost rentowności, a także wskaźników płynności; jedynie nakłady inwestycyjne były o 7% niższe niż rok wcześniej. Poprawa koniunktury tej branży zapewne jest w pewnym stopniu spowodowana efektem bazy (znaczne pogorszenie wyników w okresie pandemii, rozciągnięte w czasie), ale też niewątpliwie znaczenie miała tu fala uchodźców z Ukrainy, zwiększająca popyt na usługi transportowe, jak i na towary, których dystrybucja wymaga usług branży transportowej. Także wskaźnik ogólnego klimatu koniunktury gospodarczej (WOKKG) dla transportu jest – choć nadal ujemny – najlepszy w porównaniu z pozostałymi głównymi branżami. W pewnym stopniu pokrewny z tą branżą sektorowy indeks giełdowy WIG-Motoryzacja wykazał imponujące wzrosty zarówno w skali ostatniego roku (+35%), jak i ostatnich trzech miesięcy (+33%). W kontrze do tych danych stoją natomiast ujemne stopy zwrotu z indeksu WIG-Paliwa, który wykazał spadek o 19% w ciągu ostatniego roku i o 11% w ciągu trzech ostatnich miesięcy. Być może doniesienia o taniejących paliwach na rynkach światowych, będące dobrą nowiną dla społeczeństwa i wielu innych branż, dla których paliwa są kosztem działalności, dla inwestorów giełdowych oznaczają zły prognostyk dla firm paliwowych, dla których spadające ceny oznaczają zmniejszanie się wartości osiąganych przychodów (przy niemalejących kosztach, np. wynagrodzeń).

Wykres 1. Kwartalne wyniki przedsiębiorstw niefinansowych
w mln PLN, ceny bieżące
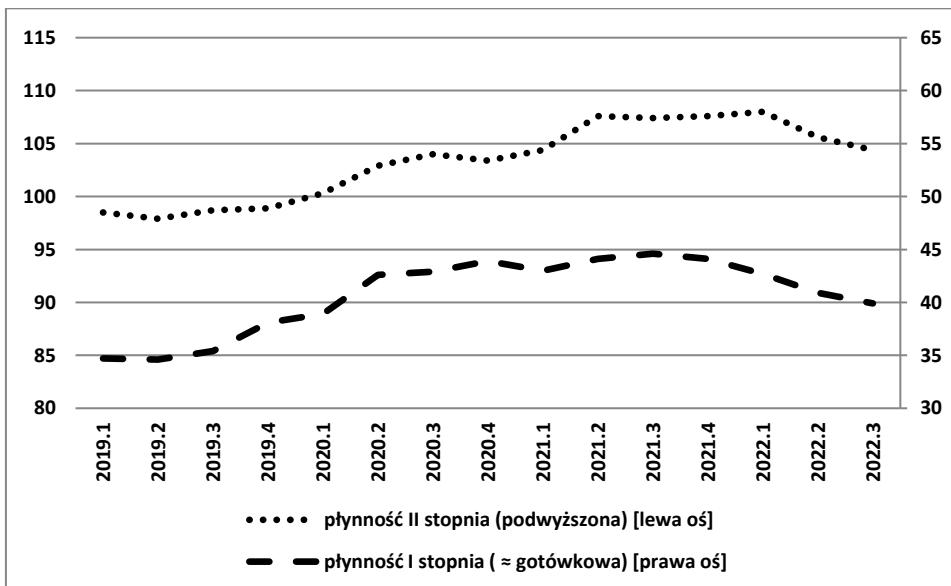
Źródło: opracowanie własne na podstawie danych GUS.

Wykres 2. Dynamika wyników kwartalnych (zmiana w % w stosunku do analogicznego kwartału roku poprzedniego), urealniona o wskaźnik CPI
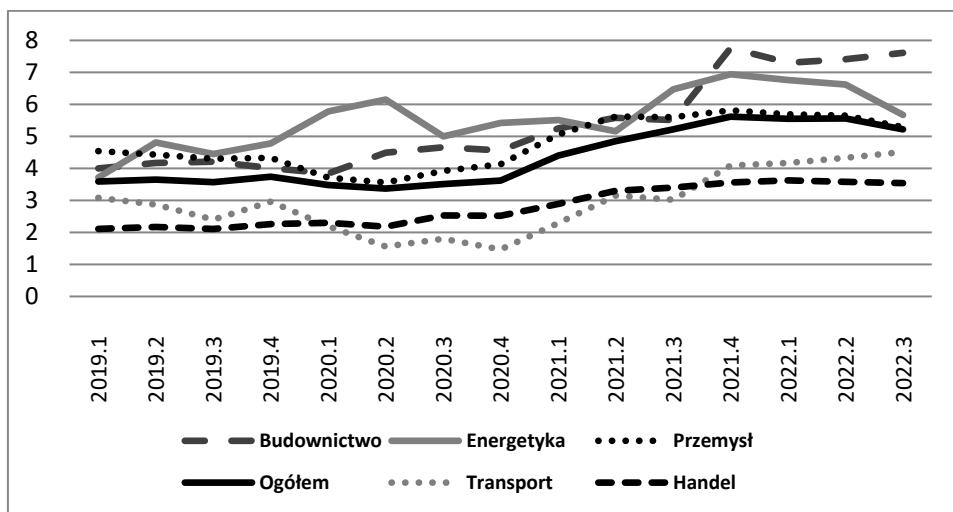
Źródło: opracowanie własne na podstawie danych GUS.

Wykres 3. Wskaźniki płynności przedsiębiorstw niefinansowych (w %)
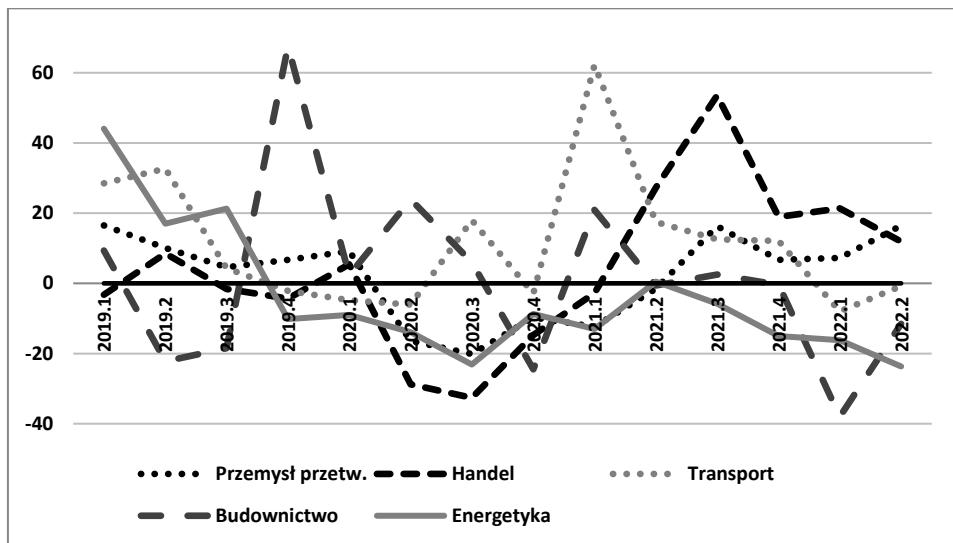
Źródło: opracowanie własne na podstawie danych GUS.

Wykres 4. Rentowność obrotu netto za ostatnie cztery kwartały (w %)

Źródło: opracowanie własne na podstawie danych GUS.

Wykres 5. Dynamika realna nakładów inwestycyjnych (zmiana w % w stosunku do analogicznego kwartału roku poprzedniego, urealniona o wskaźnik CPI)

Źródło: opracowanie własne na podstawie danych GUS.

Wykres 6. Notowania indeksu WIG w okresie ostatnich 12 miesięcy

Źródło: opracowanie własne na podstawie danych stooq.pl