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Impact of Profitability of Ukrainian Enterprises on Their Bankruptcy

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ABSTRACT

Company bankruptcy is a mechanism that serves a dual purpose. On the one hand, it facilitates the removal (liquidation) of financially insolvent enterprises from the market, particularly those unable to settle their accounts payable and lacking prospects for growth. On the other hand, it plays a vital role in establishing the necessary conditions for restoring solvency and liquidity, thus ensuring opportunities for future development. This can be achieved, in particular, by concluding an amicable agreement and rehabilitation procedure. Shifting the focus in the crisis management system from the challenge of acquiring borrowed capital to enhancing profitability is a promising approach to overcome financial difficulties faced by companies. This shift not only reduces the likelihood of bankruptcy but also minimizes the prospect of subsequent liquidation. The purpose of the paper is to investigate how the profitability of operating activities in Ukrainian enterprises affects the number of bankruptcy cases, because it is an important task in preventing financial difficulties, bankruptcy, and liquidation of companies. The paper conducts a correlation and regression analysis to assess the impact of the profitability of operating activities on the number of bankruptcy cases completed with the approval of the liquidator's report. Based on the statistical data from the State Statistics Service of Ukraine (SSSU) for the period from 2014 to 2021, the above-mentioned analysis shows a negative relationship between the profitability of operating activities of Ukrainian enterprises and the number of completed bankruptcy cases approved by the liquidator's report ($r = -0.86$; $D = 0.74$). It has been determined that operating activity of Ukrainian enterprises accounts for 74% of all factors affecting the number of bankruptcy cases completed with the approval of the liquidator's report. The validation of the constructed regression equation and the estimation of its parameters confirm its statistical reliability and alignment with real economic processes. Specifically, the Fisher transformation ($F = 4.11$) exceeds the tabulated value ($F_t = 2.45$), i.e. ($F > F_t$), $Se = 0.45$; $C_{.95\%} = 1.96$). Based on the constructed equation, the number of bankruptcy cases completed with the approval of the liquidator's report was forecasted as an important task in preventing financial difficulties faced by companies,

INTRODUCTION

In a market economy, bankruptcy is an integral part of companies' functioning and a mechanism that allows unprofitable and insolvent enterprises, including those with negative profitability, to be removed from the market. On the other hand, this mechanism, when accompanied by rehabilitation measures and amicable agreements, allows them to resume operations and ensures their continued development (Prusak, 2018; Civelek et al., 2022). Between 2021 and 2022, the business activity situation for the vast majority of EU enterprises deteriorated, as indicated by the Business Registration and Bankruptcy Index (BRBI). With an average BRBI value of 121.2% across the EU27 in 2022, the business activity situation significantly worsened in some countries. For instance, in France, this value is 1.55 times higher than the average, and in Romania, it is 1.51 times higher (Eurostat, 2023). The average value of the indicator of business demographics of enterprises, known as the Death Rate of All Enterprises (DRE), as of January 1, 2021, for 14 countries that are members of the Organization for Economic Cooperation and Development (OECD), was 6.99% (OECD, 2020). This indicates that, on average, every fourteenth enterprise is liquidated throughout the year, particularly through bankruptcy proceedings. In Ukraine, the situation is more severe; according to the DRE, on average, one in ten enterprises is liquidated (SSSU, 2019).

To prevent company bankruptcies and their subsequent liquidation, it is essential to explore additional tools that can effectively manage relevant financial indicators (Pardal et al., 2021; Kislovska & Tamosiuniene, 2022; Roshchyk et al., 2022). These indicators include solvency; liquidity; coverage ratio; expenses and financial results from core, operating, financial, and investment activities; net profit, profitability, etc. Indicators such as capital turnover and profitability, especially from operating activities, depend on how efficiently a company utilizes its assets. The increase in profitability of operating activities fosters equity growth, enabling companies to attract additional credit resources while minimizing the risk of insolvency and, consequently, reducing the likelihood of bankruptcy. Furthermore, the level of an enterprise's liquidity is so critical in determining the likelihood of bankruptcy that in Germany, proof of a liquidity (solvency) deficit of a legal entity serves as the basis for initiating insolvency proceedings based on § 17 of *Insolvenzordnung* (1994), signifying the existence of payment inability for the debtor. As evident from the court practice, a debtor's liquidity deficit of up to 10% is allowed, as stated by the German Supreme Court in its judgment of May 24, 2005 in case IX ZR 123/04 (URTEIL, 2005). "If the deficit is less than 10%, it is insufficient to prove insolvency." Additionally, it is noteworthy to mention the recent stance of the German Supreme Court, outlined in its judgment on June 28, 2022, in case II ZR 112/21 (URTEIL, 2022): "*It is therefore considered acceptable to demonstrate insolvency by means of the liquidity status as of the key date, combined with a financial plan for three weeks after the key date, where daily deposits and withdrawals are compared...*". Thus, the control over positive liquidity by German companies should now be strengthened.

Simultaneously, liquidity, solvency, and coverage ratio indicators will play a pivotal role not only in Germany but also in other countries. For example, in England, by virtue of the provisions of Article 123(1)(e) of *Insolvency Act 1986* (Insolvency Act, 1986), the court can initiate winding up proceedings if it's proven that the debtor will be unable to meet its obligations as they fall due. Moreover, considering that stagnation of mentioned indicators can result in payment suspension, and this circumstance, in line with the provisions of Art. L631-1 and Art. L640-1 *French Commercial Code* (French Commercial Code (2022)), serves as the basis for initiating regular rehabilitation or liquidation procedures, respectively. Certainly, in Ukraine, payment inability also serves as a ground for initiating bankruptcy proceedings, and given an enterprise's low liquidity, the enterprise could easily become insolvent. Hence, the paper proposes conducting a study on the impact of profitability of operating activities on the number of bankruptcy cases completed with the approval of the liquidator's report. The aim is to identify potential areas for decreasing the probability of companies' bankruptcy and liquidation.

1. LITERATURE REVIEW

Financial difficulties of companies profoundly influence the risk of their bankruptcy. It has been found that profitability has a significant negative impact on financial distress (Dankiewicz, 2020; Oktari et al, 2023). Profitability refers to a company's operational efficiency, which is determined by its ability to generate profits (Susanto et al., 2022). Alongside other metrics like liquidity and solvency, profitability serves as a vital measure to assess a company's efficiency. This indicator is used to evaluate the likelihood of financial difficulties, including bankruptcy (Poliakov et al., 2023). The research conducted on the use of the profitability indicator (Albulescu, 2015), has confirmed its significant negative impact on financial difficulties, a conclusion supported by other scholars (Wibowo & Susetyo, 2020; Vu & Nwachukwu, 2021). Return on assets also has a negative impact on financial distress and stands as a crucial bankruptcy indicator (Putri & Sutrisno, 2023).

The causes of bankruptcy can stem from economic and financial factors, or a combination of both. The developed indicator, known as the bankruptcy index, which combines profitability and leverage of bankrupt firms, led to the conclusion that profitability influences the likelihood of bankruptcy. Consequently, this insight enables more effective management strategies. Viable firms can be reorganized to sustain profitability, while unviable ones can be liquidated (Aguiar-Díaz & Ruiz-Mallorquí, 2015). Revenue management is a crucial strategy for minimizing the risk of company bankruptcy. (Biddle, G. et al., 2020). The findings of the study have demonstrated that the likelihood of a company experiencing a financial crisis is contingent on various factors, including liquidity, profitability, asset productivity, market capitalization, and leverage. It is stressed that companies should carefully monitor their financial indicators, particularly operational profitability and market metrics, to mitigate the risk of bankruptcy. (Rachman, 2022). Based on the use of logistic regression, it is proved that financial indicators affect the prediction of financial difficulties, particularly bankruptcy of enterprises. Thus, the return on assets was found to have a positive impact on the financial distress of companies (Paramartha & Wiagustini, 2021; Kudej et al., 2021).

A study into the impact of profitability management on bankruptcy risk has shown that there is no connection, but if companies implement several business leadership strategies in their activities, this significantly reduces the risk of bankruptcy (Agustia et al., 2020). In addition, the risk of company bankruptcy significantly affects the decisions of all stakeholders (Lukason & Mifiano, 2019; Lesníková et al., 2022), especially through the use of models and financial ratios that allow it to be assessed. Thus, based on regression analysis, it was found that the profitability ratio has a negative impact on the financial difficulties faced by companies (Kalbuana et al, 2022). A study of the Indonesian Stock Exchange (when assessing the relevant statistical base for the period 2015-2017) based on correlation and regression analysis showed that return on assets has a significant negative effect on the financial difficulties of the analyzed companies (Moch, R. et al., 2019). Furthermore, conducted was a study employing correlation analysis, utilizing the banking sector of Iran as an illustrative case. Consequently, the study emphasizes the correlation between profitability, competition, and instances of bank failures (Badirkhani, 2019).

Using profitability as an intermediate variable, the impact of liquidity, operating capacity and leverage on financial distress, particularly bankruptcy, in manufacturing firms is determined (Kozlovskiy et al., 2020). Leverage and profitability have a significant impact on the financial difficulties of these companies. Profitability proved to be a partial mediator of the relationship between liquidity, leverage, and operational capacity to overcome financial difficulties. The study concluded that such indicators as return on equity, return on investment, and the debt-to-equity ratio of companies significantly affect financial challenges, especially bankruptcy. Promising recommendations were made for predicting bankruptcy, emphasizing that if operating costs are efficient, the profitability of operating activities will be higher and the risk of bankruptcy will be lower (Kadarningsih et al., 2021).

The correlation analysis of Malaysian companies in 2012-2014 proves that large companies with efficiently managed assets improve operating income and, therefore, ultimately improves operating profitability. It is concluded that there is no significant relationship between liquidity (current ratio and profitability), and a negative relationship between asset turnover and profitability (Alarussi & Alhaderi, 2018). When applying logistic regression, using the example of a study of companies listed on the stock exchange in Indonesia, we reached a conclusion that non-financial variables (corporate governance, market information, macro factors) do not have a direct impact on bankruptcy. However, they have a significant impact

on return on equity (Kozlovskiy et al., 2023), which in turn has an impact on company bankruptcy (Nuraini et al., 2021). On reviewing the above literature on the problem of financial difficulties, in particular bankruptcy, we deduced that the profitability of companies is an important factor (Kozlovskiy et al., 2021), which significantly affects the future prospects of their development and profitability. The analysis of the studies done by the above-mentioned scientists allowed us to formulate the hypothesis that the profitability of companies significantly affects financial difficulties and the risk of bankruptcy. While reviewing the literature on the problem under study, we did not happen to find scientific works analyzing the impact of operating profitability on the probability of bankruptcy. Therefore, the paper proposes to study the impact of operating profitability (as the ratio of the enterprises' operating income to their operating expenses) on the number of bankruptcy cases of Ukrainian enterprises closed with the approval of the liquidator's report.

2. METHODOLOGY

The study includes the following steps: to analyze the value of the Business registration and bankruptcy index for the period 2016-2022 for individual EU-27 countries (according to the data available in the Eurostat database). Analyze the Death rate of all enterprises in 2013-2020 for the countries that are members of the Organization for Economic Cooperation and Development (OECD) (according to the OECD statistical database and the data available). Analyze the value of the Death rate of all enterprises in 2013-2019 in Ukraine (according to the State Statistics Service of Ukraine (SSSU) database). Analyze the judicial statistics of the results of bankruptcy cases in Ukraine for the period 2014-2022 (according to the statistical database Judicial statistics of the Supreme Court of Ukraine). Analyze the dynamics of the level of profitability of the general and operating activities of Ukrainian enterprises, in particular by their size. Investigate the impact of operating profitability on the number of bankruptcy cases completed with the approval of the liquidator's report based on the statistical database of the State Statistics Service of Ukraine and Judicial statistics of the Supreme Court of Ukraine. Build a correlation and regression equation of the impact of operating profitability on the number of bankruptcy cases completed with the approval of the liquidator's report with justification of its statistical reliability (Ilyash et al., 2020; Shevchuk et al., 2023). Forecast the number of bankruptcy cases completed with the approval of the liquidator's report, taking into account the built correlation and regression equation.

According to the methodological guidelines for using enterprise financial statements for statistical purposes (State Statistics Service of Ukraine, 2014), the sources enabling statistical analysis of operational profitability include the following financial statement forms: "Balance Sheet" (Form Number One), "Income Statement" (Form Number Two), and "Notes to the Annual Financial Statements" (Form Number Five).

The study uses the profitability (loss) indicator of operating activities of enterprises (excluding those primarily engaged in "Wholesale and retail trade; repair of motor vehicles and motorcycles"). This indicator is calculated according to the formula (State Statistics Service of Ukraine, 2014):

$$R_{od} = FR_{od} / C_{od} \cdot 100\%, \quad (1)$$

where: R_{od} is the profitability (loss) of operating activities of enterprises; FR_{od} is the financial result from operating activities of enterprises; C_{od} is the expenses of operating activities of enterprises.

The impact of operating profitability (x) on the number of bankruptcy cases completed with the approval of the liquidator's report (Y) is determined by applying correlation and regression analysis. The correlation and regression analysis in assessing the impact of operating profitability on the number of bankruptcy cases (Halkiv et al., 2020) completed with the approval of the liquidator's report involves the construction of a correlation equation (formula 2): (Chatterjee et al, 2013):

$$Y_x = a_0 + a_1x, \quad (2)$$

where Y_x is a linear equation; a_0 , a_1 are the parameters (coefficients) of the equation; x is the influence factor.

The unknown parameters of the regression equation (a_0 , a_1) should be determined through the least squares method. To achieve this, a system of normal equations is established. The strength of the

relationship is assessed using the linear correlation coefficient. The portion of variance in the analyzed performance attribute (Y) attributable to the factors (x) included in regression equation 1 is ascertained using the coefficient of determination (D). It is suggested to assess the reliability of the multiple correlation coefficient (as well as the correlation equation as a whole) by calculating the F-criterion (F). In addition to the closeness of the relationship, the following indicators are used to assess the adequacy of the regression equation (1) to real processes: sample correlation coefficient (z), standard error (Se), lower limit of the confidence interval of the correlation coefficient (rL), upper limit of the confidence interval of the correlation coefficient (rU). Fig.1 shows the algorithm for identifying the impact of operating profitability on the number of bankruptcy cases closed with the approval of the liquidator's report.

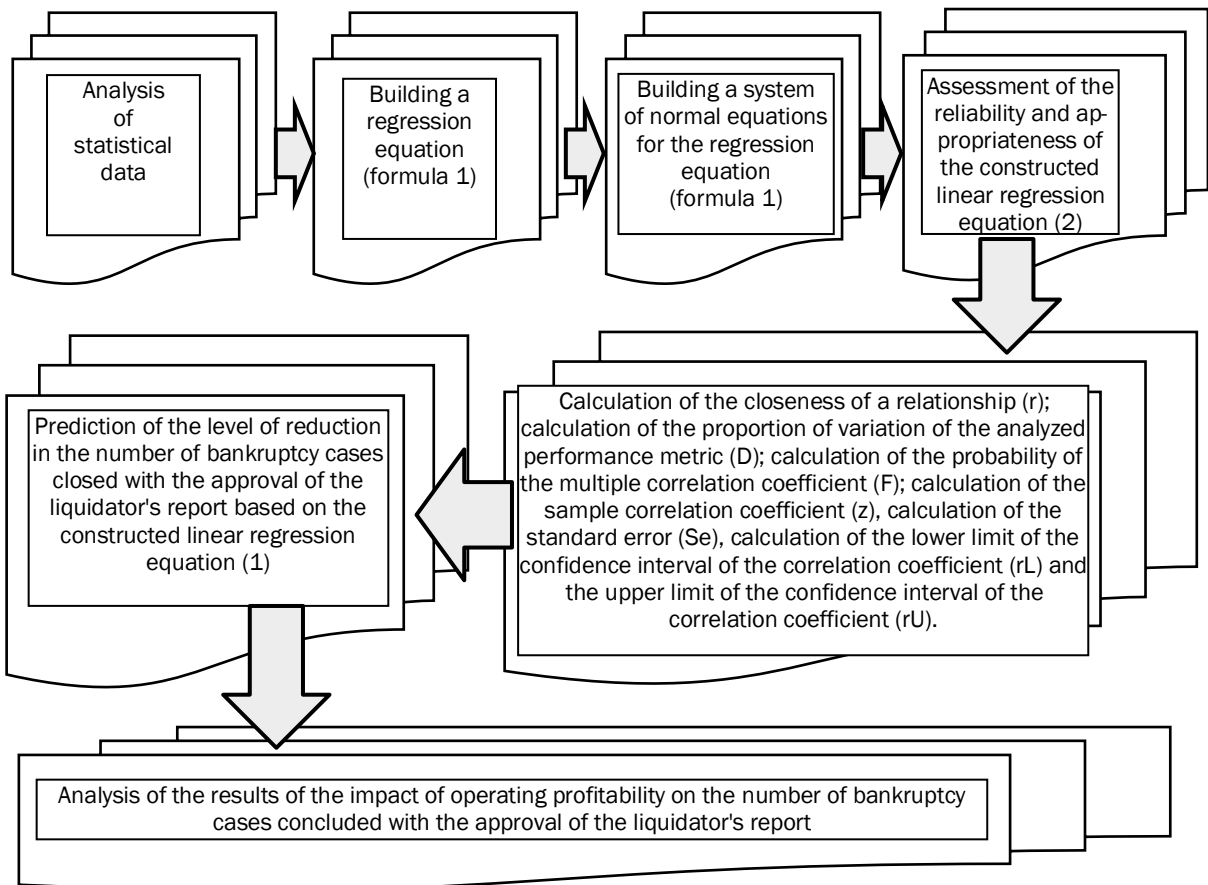


Figure 1. Algorithm for detecting the impact of operating profitability on the number of bankruptcy cases closed with the approval of the liquidator's report

The adequacy and reliability of the constructed correlation-regression equation (formula 1) to determine the impact of the profitability of operating activities (x) on the number of bankruptcy cases closed with the approval of the liquidator's report was assessed using MS Excel. The functions of the MS Excel statistical package were used to calculate the F-criterion and determine its tabular value.

3. RESULT

This section analyses the value of the business registration and bankruptcy index for the period 2016-2022 for the EU-27 countries as a whole, including countries such as Belgium, Bulgaria, Denmark, Germany, Estonia, Ireland, France, Italy, Spain, Latvia, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Iceland, Norway and Spain. The article analyses the death rate of all

enterprises in 2013-2020 in the countries that are members of the Organization for Economic Cooperation and Development (OECD) and in Ukraine for the period 2013-2019. The article examines the court statistics regarding the outcomes of bankruptcy case reviews in Ukraine from 2014 to 2022. Specifically, it focuses on various aspects, including the total number of cases completed; cases completed with the approval of the rehabilitation (restructuring) manager's report; cases completed with the approval of the composition agreement; cases completed with the approval of the liquidator's report; cases closed due to the fulfillment of all obligations to creditors. The dynamics of the level of profitability of general and operational activities of Ukrainian enterprises, in particular by their size (large, medium, small, micro) in 2010-2021 is considered. The influence of operating profitability on the number of bankruptcy cases closed with the approval of the liquidator's report is studied. A correlation-regression equation of the influence of profitability of business activity on the number of bankruptcy cases closed with the approval of the liquidator's report is constructed with the justification of its statistical reliability, and a forecast of the number of bankruptcy cases closed with the approval of the liquidator's report is made taking into account the constructed correlation-regression equation.

3.1 Analysis of business demography and bankruptcy statistics

The statistical basis for the analysis of the business registration and bankruptcy index is taken from the official Eurostat website (Eurostat, 2023). The base year is 2015. A summary of the business registration and bankruptcy index in the EU countries is presented in Table 1.

Table 1. Values Business registration and bankruptcy index (BRBI), % (2015 = 100%), %

Country	Year						
	2016	2017	2018	2019	2020	2021	2022
EU-27 countries	101.6	105.0	109.9	116.5	105.5	121.2	121.2
Belgium	105.0	97.7	112.3	126.3	123.4	138.5	123.1
Bulgaria	109.6	103.7	100.3	93.6	70.6	79.7	80.3
Denmark	113.3	125.9	142.8	147.7	123.3	119.4	100.9
Germany	94.2	93.1	90.0	88.5	77.5	79.0	78.1
Estonia	107.1	116.2	123.2	128.6	130.9	148.7	123.0
Ireland	107.1	112.4	117.0	118.7	93.1	102.3	93.7
Spain	107.6	100.5	100.9	99.7	83.8	107.6	106.2
France	106.9	116.4	132.7	153.1	159.4	186.0	188.1
Italy	94.7	91.7	90.8	94.7	77.7	89.0	84.0
Latvia	90.5	83.2	86.9	85.5	73.1	75.4	72.5
Lithuania	103.0	111.7	116.0	123.4	131.2	144.8	138.9
Luxembourg	101.5	106.9	109.3	111.2	99.7	103.1	97.7
Malta	1032.8	106.2	111.8	126.1	121.2	137.9	142.2
Netherlands	103.8	106.2	111.8	126.1	121.2	137.9	142.2
Poland	97.5	101.2	108.2	105.1	92.1	103.5	108.3
Portugal	100.6	110.0	125.6	137.2	104.4	115.5	134.2
Romania	95.7	141.8	130.0	147.7	122.4	161.1	182.5
Slovenia	98.4	99.4	103.5	105.4	95.1	108.2	115.4
Slovakia	108.0	136.6	139.2	143.3	135.6	143.1	128.1
Iceland	112.8	109.3	96.9	93.9	103.8	132.8	127.1
Norway	101.0	98.0	97.7	102.3	103.8	105.7	92.0

Source: (Eurostat, 2023).

According to the BRBI, more cases of negative values were recorded in such countries as France, Romania, Slovakia, Latvia and Estonia. For example, in the dynamics of France, the BRBI shows a steady upward trend from 106.9% in 2016 to 188.1% in 2022. In other words, in 2022 the BRBI value will increase by 88.1% compared to 2015, which is four times higher than the BRBI value for the 27 EU countries. In Romania, the BRBI value is 95.7% in 2016 and 182.5% in 2022. Estonia, an EU country, has a similar dynamic, with a BRBI of 107.1% in 2016 and 148.7% in 2021. In 2022, however, the BRBI drops significantly to 123%, which is as close as possible to the European average. The Netherlands also shows a similar trend, with a value of 103.8% in 2016 and this BRBI rising to 142.2% in 2022. Other countries show unstable dynamics in the development of the BRBI. The BRBI value deteriorates significantly in 2021-2022, mainly due to the impact of the COVID-19 pandemic in the EU and globally. The statistical data is derived from various sources including the Organisation for Economic Co-operation and Development (OECD) and the State Statistics Service of Ukraine (SSSU). It utilizes the business demography indicator for enterprises, specifically the "death rate of all enterprises" (DRE), and the corresponding values can be found in Table 2.

Table 2. Death rates of all enterprises, 2013-2020, % (data from 10.10.2023 for 2021-2022 are not available in the OECD and SSSU statistical databases)

Country	Year							
	2013	2014	2015	2016	2017	2018	2019	2020
<u>Austria</u>	6.00	5.50	5.40	5.70	4.90	4.30	5.20	4.10
<u>Belgium</u>	4.10	4.10	2.90	3.30	3.00	3.10	2.90	3.20
<u>Czech Republic</u>	8.30	7.90	7.60	8.00	7.30	7.10	8.20	..
<u>Denmark</u>	11.00	10.60	11.00	9.20	9.90	10.20	10.20	12.20
<u>Estonia</u>	9.00	7.90	7.10	7.80	9.80	10.70	10.30	9.90
<u>Finland</u>	7.30	7.20	7.10	6.80	6.70	6.60	7.30	10.40
<u>France</u>	5.30	5.60	5.30	4.70	4.90	4.70	4.60	3.90
<u>Germany</u>	8.30	8.30	7.80	7.90	7.80	8.70	11.70	9.50
<u>Greece</u>	..	..	6.50	6.90	..	2.90	3.00	..
<u>Hungary</u>	9.00	8.80	8.20	8.60	8.20	6.80	9.70	..
<u>Iceland</u>	9.80	10.20	9.90	10.10	9.90	10.20	11.50	8.70
<u>Ireland</u>	..	6.40	6.40	5.90	8.50	8.80	..	5.70
<u>Italy</u>	7.80	7.40	7.30	6.90	6.50	5.80	7.90	..
<u>Korea</u>	12.10	14.10	..	..	..	..	..	..
<u>Latvia</u>	13.00	9.00	5.90	14.20	9.80	10.30	9.60	..
<u>Lithuania</u>	14.20	15.70	14.30	16.70	15.60	14.90	18.00	..
<u>Luxembourg</u>	7.60	8.00	8.10	7.30	7.30	7.00	7.50	..
<u>Netherlands</u>	7.90	6.40	6.10	6.90	5.40	5.70	5.70	7.30
<u>Norway</u>	5.70	5.00	6.80	6.30	6.50	5.10	3.40	2.50
<u>Poland</u>	11.60	10.60	9.10	9.60	9.20	9.70	10.10	8.80
<u>Portugal</u>	13.90	13.30	12.90	12.40	12.50	12.80	13.50	..
<u>Slovak Republic</u>	12.70	10.40	9.20	8.80	8.70	8.60	10.40	..
<u>Slovenia</u>	9.00	8.20	8.90	9.60	8.00	7.80	8.10	6.10
<u>Spain</u>	9.50	8.20	8.50	9.00	7.90	8.00	8.60	..
<u>Sweden</u>	6.60	6.00	5.80	6.00	5.90	5.40	5.60	5.60
<u>Switzerland</u>	6.30	6.70	6.90	6.70	6.90	6.70	7.40	..
<u>Turkey</u>	12.00	11.40	11.40	11.20	12.10	11.50	..	..
<u>United Kingdom</u>	9.90	9.90	10.80	10.10	11.70	..	..	..
<u>Ukraine</u>	6.6	12	7.7	5.9	6.6	6.3	10.2	..

Source: OECD, 2020; SSSU, 2019.

The analysis of the DRE values shows that the highest death rate in the total number of enterprises was recorded in Lithuania. In 2019, the DRE was 18%, which means that almost every fifth enterprise is closed down. In OECD countries such as Denmark, Estonia, Finland, Germany, Hungary, Latvia, Poland, Slovakia, Slovenia, Spain, and the United Kingdom, the DRE is close to 10%, that is about 10% of enterprises are liquidated annually. Turkey has a much higher value, with the DRE of about 12%. The lowest DRE values are found in the following countries: Austria, Belgium, France, Greece, and Norway. For example, in 2020, Norway had the lowest number of liquidations, with only one in 40 companies being liquidated, while in Belgium and France, approximately one in 28 companies was closed down.

Comparing the dynamics of the DRE in Ukraine, it exhibited an unstable trend from 2013 to 2020. In 2020, the DRE in Ukraine stood at 10.2%, meaning that approximately 10 enterprises were liquidated, whereas in 2013, only about 15 enterprises were liquidated. In 2019, the DRE in Ukraine was considerably higher compared to the rates in other countries listed in Table 2. For instance, it is 1.96 times higher than in Austria, 3.5 times higher than in Belgium, and 1.24 times higher than in the Czech Republic. However, it is lower compared to countries such as: Estonia by 1.0098 times; Germany by 1.14 times; Iceland by 1.13 times; Lithuania by 1.76 times; Portugal by 1.32 times; Slovakia by 1.019 times.

By the number of employees, companies employing up to 9 people make up the largest share of the liquidated Ukrainian enterprises in a particular group (12.2% in 2012) (SSSU, 2019). It is noted that the larger the number of employees at the enterprises, the lower the DRE. Thus, according to the 2019 data, at enterprises employing from 10 to 49 people, the DRE was 1.8; similarly, for those with staff headcount from 50 to 249, it was 1; for those with 250 or more employees, it was 0.6. In other words, enterprises with more than 250 employees will have the DRE approximately 20.33 times lower compared to enterprises with fewer than 9 employees. Court statistics on the outcomes of bankruptcy (insolvency) cases in Ukraine are presented in Table 3.

Table 3. Court statistics on the outcomes of bankruptcy cases from 2014 to 2022

Indicators	Year									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	
The number of cases that have been successfully implemented, including:	3324	2406	2101	1691	1368	1184	745	2210	1894	
with the approval of the restructuring manager's report;	4	8	1	1	..	4	4	10	5	
with the approval of the settlement agreement;	70	53	48	32	65	68	14	8	6	
with approval of the liquidator's report;	2989	2159	1844	1546	1055	953	612	665	462	
in connection with the fulfilment of all obligations to the creditor.	29	6	18	14	8	2	10	26	24	

Source: Judicial statistics of the Supreme Court of Ukraine, 2023.

The number of cases that have been implemented in Ukraine is declining every year. Thus, in 2022, in comparison to 2014, they decreased by 43%, including 84.5% with the approval of the liquidator's report. Despite this trend, the number of cases completed with the approval of the restructuring report has shown instability, going from 4 cases in 2014 to 5 in 2020. In 2022, the number of cases completed with restructuring is 92.4 times fewer than liquidation and 77 times fewer than those approved with a settlement agreement. This trend can be attributed to the elimination of the institution (M. Draskovic et al., 2016) of a special amicable agreement as a judicial procedure with the entrance in force of the Code of

Ukraine on bankruptcy procedures in 2019. Therefore, it is likely that this statistical indicator will continue to stagnate in the future.

3.2 Analysis of profitability of the total and operating activities

Table 4 provides figures on profitability (loss) of operating and total activities of Ukrainian enterprises during the period of 2010-2021, in particular by their size (large, medium, small and micro businesses). Statistics as of 10.10.2023 for 2022 are not available in the SSSU.

Table 4. Profitability of the total and operating activities of Ukrainian enterprises by size from 2010 to 2021

Years	The level of profitability (loss) of operating activities of enterprises					The level of profitability (loss) of all activities of enterprises				
	total	including				total	including			
		large	medium	small	micro		large	medium	small	micro
2010	4.0	3.9	5.0	1.8	-3.5	0.5	0.2	2.3	-5.7	-13.9
2011	5.9	6.2	6.0	4.2	0.8	1.8	3.3	1.2	-2.5	-8.0
2012	5.0	5.2	5.0	4.1	-0.1	1.0	0.9	2.2	-3.3	-10.2
2013	3.9	5.0	3.2	2.2	-2.3	-0.7	0.6	-0.1	-6.2	-16.1
2014	-4.1	0.7	-3.6	-17.9	-30.1	-14.2	-11.1	-12.5	-26.5	-40.2
2015	1.0	4.0	0.0	-4.2	-8.2	-7.3	-7.0	-5.0	-13.6	-20.4
2016	7.4	8.8	6.9	5.2	-0.4	0.6	2.4	0.7	-3.6	-11.7
2017	8.8	11.2	7.3	6.5	2.4	3.0	5.2	3.1	-2.0	-8.0
2018	8.1	9.1	7.0	8.3	4.7	4.5	5.2	4.6	2.7	-1.8
2019	10.2	10.3	10.0	10.7	9.3	7.6	6.8	8.6	7.0	3.3
2020	6.2	8.3	5.4	3.9	1.0	0.9	1.0	2.1	-1.8	-5.5
2021	12.6	17.1	7.6	15.0	12.0	10.1	12.8	7.3	11.1	7.4

Source: SSSU, 2022.

The information presented in Table 4 gives reasons to draw conclusions that from 2010 to 2021, the profitability of operating activities exhibited unstable dynamics of development. The highest level of return on operating activities (ROA) was recorded in 2021 at 12.6%, and the lowest in 2013 at 3.9%. In 2014, the ROA was -4.1%. Analyzing the level of DER by enterprise size, we can see that the highest level is in large enterprises, with a rate of 17.1% in 2021. Micro-enterprises had a 5.1 percentage points lower DER in 2021 than large enterprises and 0.6 percentage points lower than the average.

The ROA level is higher compared to the level of total profitability of enterprises (TPE). In general, the ROA level is 2.5 p.p. higher than the TPE level in 2021. Comparing the ROA in 2021 with the TPR by size, the following features can be observed. The ROA levels by size (large, medium, small, and micro enterprises) are higher than the TPR levels by 4.3 p.p., 0.3 p.p., 3.9 p.p., and 4.6 p.p. in 2021, respectively. It is important to note that during the period of 2010-2020, small enterprises and microenterprises had a predominantly negative TPE, except for 2019.

3.3 The impact of operating profitability on the number of bankruptcy cases that have been completed with the approval of the liquidator's report

To examine the impact of operating profitability on the number of successfully completed bankruptcy cases with the approval of the liquidator's report, a correlation and regression analysis was employed to establish regression equations (Formula 1) and summarize the results in Table 5.

Table 5. Data on the impact of operating profitability (x) on the number of bankruptcy cases that have been completed with the approval of the liquidator's report (Y)

Year	x	Y	r	D	F	F _t	z	S _e	C_95%	rL	rU
2014	-4.1	2989	-0.86	0.74	4.11	2.45	-1.29	0.45	1.96	-0.97	-0.39
2015	1.0	2159									
2016	7.4	1844									
2017	8.8	1546									
2018	8.1	1055									
2019	10.2	953									
2020	6.2	612									
2021	12.6	665									

Source: compiled on the basis of Table 3 and Table 4 - SSSU, 2021; Judicial statistics of the Supreme Court of Ukraine, 2023

Based on the conducted correlation-regression analysis (using the data from Table 5), a correlation-regression equation was constructed:

$$Y = 2308.54 - 132.9x \quad (3)$$

The developed correlation-regression equation (Formula 2) is described by the following parameters: $r = -0.86$; $D = 0.74$; Fisher ratio ($F = 4.11$) exceeds the normative (tabular) value ($F_t = 2.45$), i.e., ($F > F_t$); $z = -1.29$; $S_e = 0.45$; $C_{95\%} = 1.96$; $rL = -0.97$; $rU = -0.39$.

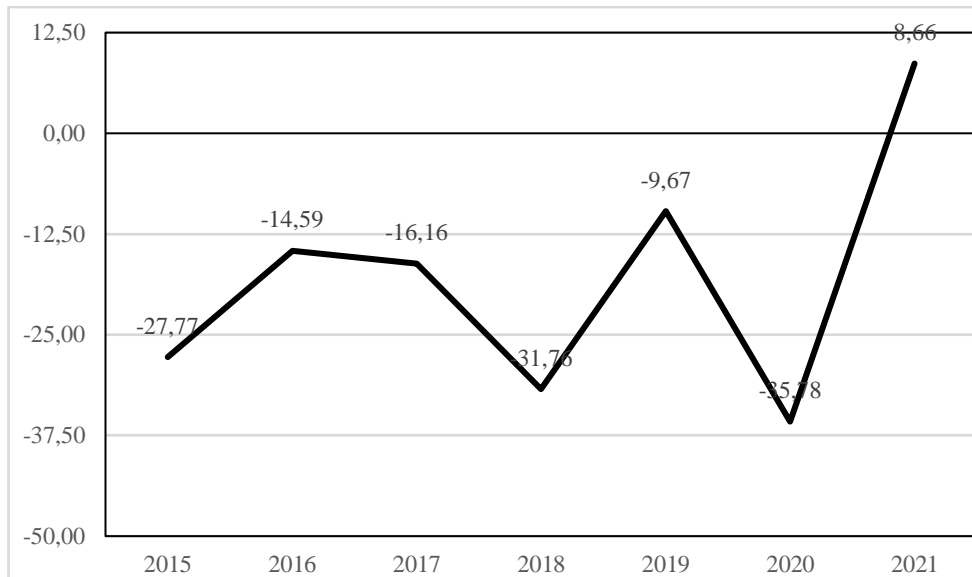


Figure 2. Decrease (increase) in the number of bankruptcy cases finalized with the liquidator's report (compared to the previous year), %

According to the correlation and regression equation (formula 2), operating activity of Ukrainian enterprises accounts for 74% of all factors affecting the number of bankruptcy cases completed with the

approval of the liquidator's report, with other factors constituting the remaining 26%. This equation demonstrates a negative and inversely proportional relationship. In other words, a 1% increase in operating profitability results in a decrease of 132.9 cases of bankruptcy finalized with the approval of the liquidator's report. The constructed correlation and regression equation allows us to predict the decrease in the number of bankruptcy cases completed with the approval of the liquidator's report. Figure 2 illustrates the calculation of the percentage by which the number of bankruptcy cases completed with the approval of the liquidator's report has decreased or increased compared to the previous year (data from Table 5).

Using the computed data on fluctuations (both increase and decrease) in the number of bankruptcy cases completed with approval from the liquidator's report compared to the previous year, as depicted in Figure 1, we determined an average value of -18.5% using the MS Excel software. Furthermore, we similarly established the average percentage growth in operating profitability for the period spanning 2014-2021, which equates to 6.03%. In a hypothetical scenario, we aim to project the extent to which the number of bankruptcy cases completed with the approval of the liquidator's report will decrease between 2023 and 2028. In 2023, we anticipate an increase in operating profitability at a rate mirroring the calculated average of 6.03%, taking into account the potential impacts of the COVID-19 pandemic and ongoing conflicts. Subsequently, our forecasts predict a subsequent 18.5% growth in operating profitability compared to the previous level. The forecasted data, based on the correlation and regression equation (Formula 2), is visualized in Figure 3.

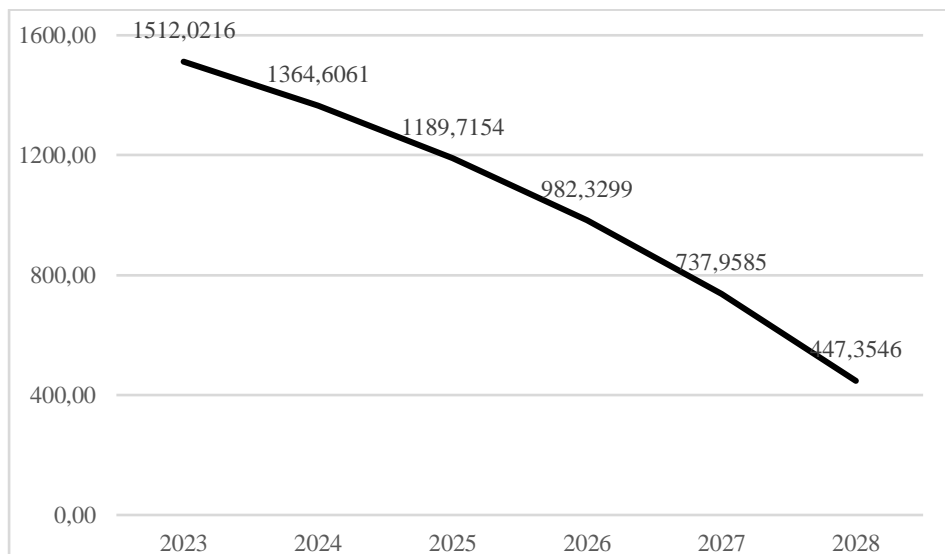


Figure 3. Forecast of the number of bankruptcy cases concluded with the approval of the liquidator's report for the period 2023-2028 (based on Formula 2)

The data show that at the operating profitability level of 6.03%, the number of bankruptcy cases completed with the approval of the liquidator's report will be 1512, and if the operating activity of Ukrainian enterprises grows to 14.09%, the number of bankruptcy cases completed with the approval of the liquidator's report will be 447.

4. DISCUSSION

The study showed that the situation in the field of business activity of companies in the vast majority of EU countries over the past few years has been unstable and worrying. This is evidenced by an increase in the Business registration and bankruptcy index (BRBI) in the vast majority of EU-27 countries compared to the corresponding value in 2015. The death rate of all enterprises (DRE) in the EU27 and Ukraine also has an unstable development trend. In Ukraine, almost every tenth enterprise out of the total number of enterprises is liquidated. In Ukraine, this value is about twice as high compared to such countries as

Austria, Belgium, France, and Norway. This circumstance demonstrates the necessity to return the institution of a special amicable agreement to the bankruptcy procedure in Ukraine. It is also possible to highlight the low efficiency of the rehabilitation procedures available in Ukraine – both the classic rehabilitation procedure in a bankruptcy case and the pre-bankruptcy rehabilitation. It is also worth noting the practical effectiveness of the triad of procedures in the French insolvency procedure, since providing the debtor with access to the judicial rehabilitation procedure before the moment of its insolvency, namely in the presence of its low liquidity, as can be seen from the statistical data, allows to "save the life" of the company.

Many factors influence the bankruptcy and liquidation of enterprises, with a particular emphasis on profitability and solvency indicators. Numerous studies have highlighted the significance of profitability and solvency alongside solvency and liquidity in contributing to financial difficulties, including bankruptcy and liquidation of companies (Lukason & Mifiano, 2019; Susanto et al., 2022; Poliakov & Zayukov, 2022, 2023; Aguiar-Díaz & Ruiz-Mallorquí, 2015; Biddle et al., 2020; Rachman, 2022; Agustia et al., 2020, and many others). The impact of profitability and solvency on the likelihood of bankruptcy has been extensively studied, highlighting that loss-making operations and negative or low profitability significantly increase the risk of bankruptcy and liquidation (Oktari et al., 2023; Wibowo & Susetyo, 2020; Putri & Sutrisno, 2023; Paramartha & Wiagustini, 2021; Kalbuana et al., 2022; Moch et al., 2019; Badirkhani, 2019; Kadarningsih et al., 2021; Alarussi & Alhaderi, 2018; Nuraini et al., 2021).

When assessing the likelihood of bankruptcy, various profitability indicators are considered, including return on assets (Paramartha & Wiagustini, 2021; Moch et al., 2019). However, the impact of operating profitability on the likelihood of bankruptcy has not been thoroughly investigated. Optimizing operating costs and increasing financial results from operational activities enable companies to generate sufficient net profit for maintaining regular operations (Kozlovskiy et al., 2019). This, in turn, reduces their reliance on borrowed capital, thus enhancing solvency and liquidity. Therefore, if operating costs are managed efficiently, operating profitability will be higher, and the risk of bankruptcy will be lower (Kadarningsih et al., 2021). This paper aims to examine the influence of operating profitability on the number of bankruptcy cases concluded with the liquidator's report approval.

Through calculations based on the statistical database (SSSU, 2022), a correlation and regression equation was formulated, enabling us to conclude that profitability of operating activity of Ukrainian enterprises accounts for 74% of all factors affecting the number of bankruptcy cases completed with the approval of the liquidator's report. The equation indicates that this influence is negative and inversely proportional. In other words, with a 1% increase in the profitability of operating activities, the number of bankruptcy cases completed with the approval of the liquidator's report is expected to decrease by 132.9 units. This constructed correlation and regression equation enables us to predict the decrease in the number of bankruptcy cases completed with the approval of the liquidator's report.

CONCLUSION

In line with the study's objective, the paper examines how the profitability of operational activities in Ukrainian enterprises affects the number of bankruptcy cases that are finalized with the approval of the liquidator's report. A negative correlation was found between the profitability of operating activities and the number of bankruptcy cases completed with the approval of the liquidator's report ($r = -0.86$; $D = 0.74$). This implies that in 74% of cases, operating activity of Ukrainian enterprises affects the number of bankruptcy cases completed with the approval of the liquidator's report; in the remaining 26% of cases, other factors dominate. The devised correlation and regression equation exhibits statistical reliability and adequacy to real economic processes, including a Fisher's coefficient ($F = 4.11$) exceeding the normative (tabular) value ($F_t = 2.45$), i.e., ($F > F_t$); $z = -1.29$; $Se = 0.45$; $C_{95\%} = 1.96$; $rL = -0.97$; $rU = -0.39$.

The findings of the study will help Ukrainian enterprises to improve their management practices, particularly, to reduce the likelihood of their bankruptcy and liquidation. The devised correlation-regression equation enables the author to predict how the number of bankruptcy cases completed with the approval of the liquidator's report will change with fluctuations in the operating profitability of Ukrainian enterprises. If the level of operating profitability for Ukrainian enterprises remains at 6.03%, the number of bankruptcy cases completed with the approval of the liquidator's report is estimated to be 1512. With the growth of

operating activities of Ukrainian enterprises to 14.09%, the number of bankruptcy cases completed with the approval of the liquidator's report will be 447.

Thus, the level of profitability in the operating activities of Ukrainian enterprises is an objective factor that affects the completion of bankruptcy cases with the approval of the liquidator's report. The management's primary objective is to prioritize the optimization of operating expenses (including material costs, labor costs, social contributions, depreciation of non-current assets, and other expenses), financial and investment costs, and to increase revenues from the company's core, financial, and investment activities. This strategy will lead to an increase in net profit and profitability, particularly in operating activities.

A sufficient amount of net profit will reduce Ukrainian enterprises' dependence on borrowed capital, thereby improving their solvency and liquidity. Effective management of operating profitability will lower the risk of bankruptcy and liquidation of enterprises, specifically reducing the number of completed bankruptcy cases with the approval of the liquidator's report. Furthermore, it will facilitate an increase in the number of cases related to the rehabilitation procedure and settlement agreements.

REFERENCES

- Aguar-Díaz, I., Ruiz-Mallorquí, M. (2015), "Causes and resolution of bankruptcy: The efficiency of the law", *The Spanish Review of Financial Economics*, Vol. 13, No. 2, pp. 71-80.
- Agustia, D., Pratama, Muhammad, N., Permatasari, Y. (2020), "Earnings management, business strategy, and bankruptcy risk: evidence from Indonesia", *Heliyon*, Vol. 6, No. 2, pp. e03317. <https://doi.org/10.1016/j.heliyon.2020.e03317> Get rights and content.
- Alarussi, A.S., Alhaderi, S.M. (2018), "Factors affecting profitability in Malaysia", *Journal of Economic Studies*, Vol. 45 No. 3, pp. 442-458.
- Albulescu, CT (2015), "Banks' profitability and financial soundness indicators: A macro-level investigation in emerging countries", *Procedia Economics and Finance*, Vol. 23, pp. 203–209.
- Badirkhani, R., Majed, V., Dizaji, S.F., Naji Esfahani, S.M. (2019), "Impact of Bankruptcy Risk and Competition on Profitability in the Iranian Banking System Using BOONE Indicator: Generalized Method of Moments", *Religación*, Vol. 4, No. 17, pp. 151-160.
- Biddle, G., Ma, M., Song F. (2020), "Accounting Conservatism and Bankruptcy Risk", *Journal of Accounting, Auditing & Finance*, Vol. 37, No. 2, pp. 295-323. <https://doi.org/10.1177/0148558X20934244>.
- Chatterjee, S. Simonoff, S. (2013), *Handbook of Regression Analysis Copyright*. <https://onlinelibrary.wiley.com/doi/book/10.1002/9781118532843/>.
- Civelek, M., Durda, L., Vincúrová, Z., Dudás, T., Brezina, I. (2022), "The differences in the impact of entrepreneurial abilities of various European SMEs on their financial risk perceptions", *Entrepreneurial Business and Economics Review*, Vol. 10, No. 4, 107-124. <https://doi.org/10.15678/EBER.2022.100407>.
- Code Of Ukraine on Bankruptcy Procedures (2019), *Law of Ukraine 2597-VIII*. <https://zakon.rada.gov.ua/laws/show/2597-19#Text>
- Dankiewicz, R. (2020). "Analysis of companies' bankruptcy in Poland as compared with the cost of protection under trade credit insurance", *Journal of International Studies*, Vol. 13, No. 4, pp. 197-212. doi:10.14254/2071-8330.2020/13-4/14
- Draskovic, M., Draskovic, V., Bilan, Y., Delibasic, M. (2016), "Quasi-neoliberalism as quasi institutional monisms and causes of the crisis in south-eastern Europe", *Transformations in Business and Economics*, Vol. 15, No. 2B, pp. 755-765.
- Eurstat (2023), *Business registration and bankruptcy index by NACE Rev.2 activity - annual data* https://ec.europa.eu/eurostat/databrowser/view/sts_rb_a/default/table?lang=en.
- French Commercial Code (2022), *Le Code de Commerce Français Traduit En Anglais*, TRO.
- Halkiv, L., Karyy, O., Kulyniak, I., Ohinok, S. (2020), "Modeling and forecasting of innovative, scientific and technical activity indicators under unstable economic situation in the country: Case of Ukraine", *Communications in Computer and Information Science*, Vol. 1158, pp. 79-97.
- Insolvency Act (1986), *UK Public General Acts*. <https://www.legislation.gov.uk/ukpga/1986/45/contents>
- Insolvenzordnung (1994), *German legislation*. <https://www.gesetze-im-internet.de/inso/index.html>

- Ilyash, O., Hrynkevych, S., Illich, L., Kozlovskiy, S., Buhaychuk, N. (2020), «Economic assessment of the relationship between housing and communal infrastructure development factors and population quality of life in Ukraine», *Montenegrin Journal of Economics*, Vol. 16, No. 3, pp. 93-108.
- Kadarningsih, A., Oktavia, V., Falah, T., Sari, Y. (2021), "Profitability As Determining Factor to Anticipate Company Bankruptcy", *Studies of Applied Economics*, Vol. 39, No. 12. <https://doi.org/10.25115/eea.v39i12.6171>.
- Kalbuana, N., Taqi, M., Uzliawati, L., Ramdhani, D. (2022), "The Effect of Profitability, Board Size, Woman on Boards, and Political Connection on Financial Distress Conditions", *Cogent Business & Management*, Vol. 9, No. 1, <https://doi.org/10.1080/23311975.2022.2142997>.
- Kislovska, A., Tamosiuniene, R. (2022), „Modelling Evaluation of Macroeconomic Outcomes Stimulated by Global Business Services Centers in Central and Eastern Europe Countries“, *Transformations in Business & Economics*, Vol. 21, No. 1, No. 55, pp. 149-168.
- Kozlovskiy, S., Butyrskiy, A., Poliakov, B., Bobkova, A., Lavrov R., Ivanyuta, N. (2019), «Management and comprehensive assessment of the probability of bankruptcy of Ukrainian enterprises based on the methods of fuzzy sets theory», *Problems and Perspectives in Management*, Vol. 17, No. 3, pp. 370-381.
- Kozlovskiy, S., Petrunenko, Ia., Baidala, V., Myronchuk, V., Kulinich, T. (2021), "Assessment of public welfare in Ukraine in the context of the COVID-19 pandemic and economy digitalization", *Problems and Perspectives in Management*, Vol. 19, No. 1, pp. 416-431.
- Kozlovskiy, S., Nikolenko, L., Peresada, O., Pokhyliuk, O., Yatchuk, O., Bolgarova, N., Kulhanik, O. (2020), "Estimation level of public welfare on the basis of methods of intellectual analysis", *Global Journal of Environmental Science and Management*, Vol. 6, No. 3, pp. 355-372.
- Kozlovskiy, S., Kulinich, T., Mazur, H., Varshavska, N., Lushchyk, M., Khadzhynov, I., Kozlovskiy, V. (2023), "Forecasting the competitiveness of the agrarian sector of Ukraine in the conditions of War and European integration", *Bulgarian Journal of Agricultural Science.*, Vol. 29, No. 5, pp. 774–783.
- Kudej, M., Gavurova, B., Rowland, Z. (2021), „Evaluation of the selected economic parameters of Czech companies and their potential for overcoming global crises during the Covid-19 pandemic“, *Journal of International Studies*, Vol. 14, No. 1, pp. 258-275. doi:10.14254/2071-8330.2021/14-1/18
- Lesníková, P., Schmidtová, J., Novotná, A. (2022), "Strategic orientation of companies: The several strategic issues in times of COVID-19 pandemic", *Economics and Sociology*, Vol. 15, No. 3, pp. 186-201. doi:10.14254/2071-789X.2022/15-3/11
- Lukason, O., Mifiano, M. (2019), "Bankruptcy risk, its financial determinants and reporting delays: do managers have anything to hide?", *Risks*, Vol. 7, No. 3, <https://doi.org/10.3390/risks7030077>.
- Moch, R., Prihatni, R., Buchdadi, A. (2019), "The effect of liquidity, profitability and solvability to the financial distress of manufactured companies listed on the Indonesia stock exchange (idx) period of year 2015-2017", *Academy of Accounting and Financial Studies Journal*. Vol. 23, No. 6, pp. 1-16.
- Nuraini, A., Leon, F., Usman, B. (2021), "The Role of Non-Financial Factors in Detecting Bankruptcy by Mediating Financial Performance", *Journal of Human University Natural Sciences*, Vol. 48(10), pp. 1054-1072. <http://jonuns.com/index.php/journal/article/view/821>.
- Oktari, S., Alfari, M., Rahim, R. (2023), "The Effect Of Cash Flow, Profitability, And Leverage on Financial Distress In Listed Consumption Goods Companies", *Journal Impresi Indonesia*, Vol. 2, No. 2, pp. 101-113. <https://doi.org/10.58344/jii.v2i2.2076>.
- Organisation for Economic Cooperation and Development. *Death rate of all enterprises* (2020), <https://stats.oecd.org/index.aspx?queryid=70734>.
- Paramartha, P., Wiagustini, N. (2021), "Determination of Financial Distress in Manufacturing Companies on the Indonesia Stock Exchange", *International Journal of Management Studies and Social Science Research*, Vol. 3, pp. 201-208.
- Pardal, P., Hurnyak, I., Kordonska, A. (2021), „Zombie business strategies: the case of Ukraine. Entrepreneurial Business and Economics Review“, Vol. 9, No. 1, pp. 47-59. <https://doi.org/10.15678/EBER.2021.090103>
- Poliakov, R., Zayukov, I. (2023), "Assessment of the relationship between liquidity and unprofitability of companies in preventing their bankruptcy", *Problems and Perspectives in Management*, Vol. 21, No. 1, pp. 141-153.

- Poliakov, R., Zayukov, I. (2022), "Model for preventing bankruptcy of Ukrainian enterprises in force majeure circumstances", *Problems and Perspectives in Management*, Vol. 20, No. 4, pp. 365-381.
- Prusak, B. (2018), "Review of Research into Enterprise Bankruptcy Prediction in Selected Central and Eastern European Countries", *International Journal of Financial Studies*. Vol. 6, No. 3, pp. 2-28. <https://doi.org/10.3390/ijfs6030060>.
- Roshchuk, I., Oliinyk, O., Mishchuk, H., Bilan, Y. (2022), „IT Products, E-Commerce, and Growth: Analysis of Links in Emerging Market“, *Transformations in Business & Economics*, Vol. 21, No. 1 (55), pp. 209-227.
- Susanto, H., Wicaksono, CA, Ramadani, AP (2022), "Implementation of PSAK 46 on Income Tax", *Indonesian Scientific Journal of Accounting and Finance Volume*, Vol. 5, No. 2 <https://doi.org/10.31629/jiafi.v5i2.4259>.
- Shevchuk, O., Ilyash, O., Kozlovskiy, S., Roshchyna, N., Hrynkevych, S., Butenko, V., Mazhara, G. (2023), "The Impact of the War in Ukraine on the Food Security of Low-Income Countries", *Problemy Ekonomiky – Problems of sustainable development*, Vol. 18, No. 2, pp. 26-41.
- Triliana, S. Sutrisno (2023), "Company Performance and Financial Distress in Automotive and Component Companies Listed on the Indonesia Stock Exchange", *International Journal of Multidisciplinary Research and Analysis*, Vol. 6, No. 2, pp. 699-708.
- URTEIL (2005), *German legislation IX ZR 123/04*. <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&nr=33452&pos=0&anz=1>
- URTEIL (2022), *German legislation II ZR 112/21* <http://juris.bundesgerichtshof.de/cgi-bin/rechtsprechung/document.py?Gericht=bgh&Art=en&nr=130746&pos=0&anz=1>
- Vu, M.H. Nwachukwu, C. (2021), „Entrepreneurial alertness and profitability of micro firms: the role of risk-taking“, *Economics and Sociology*, Vol. 14, No. 4, pp. 107-117. doi:10.14254/2071-789X.2021/14-4/6
- Website of the State Statistics Service of Ukraine (2014), *Methodological regulations on the use of financial statements of enterprises for the purposes of enterprise statistics*. <https://www.ukrstat.gov.ua/>.
- Website of the State Statistics Service of Ukraine (2023), *Profitability of operating and all activities of enterprises by types of economic activity with distribution into large, medium, small and micro enterprises (2010-2022)*. <https://www.ukrstat.gov.ua/>.
- Website of the State Statistics Service of Ukraine (2021), *The main indicators of enterprise demography statistics*. https://ukrstat.gov.ua/operativ/operativ2021/r_so/arh_demogr_pidpr_u.html.
- Website of the Supreme Court of Ukraine (2023), *Judicial statistics*. https://supreme.court.gov.ua/supreme/pokazniki-diyalnosti/sud_statistika/.
- Wibowo, A., Susetyo, A. (2020), "Analysis of the Effect of Profitability, Liquidity, Operating Capacity, Sales Growth on Financial Distress Conditions in Manufacturing Companies Listed on the Indonesia Stock Exchange in 2015-2018", *Scientific Journal of Management, Business and Accounting Students (JIMMBA)*, Vol. 2 (6), pp. 927-947.

