"Nexus between risk factors and financial performance: The case of Ukrainian advertising and marketing companies"

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NEXUS BETWEEN RISK FACTORS AND FINANCIAL PERFORMANCE: THE CASE OF UKRAINIAN ADVERTISING AND MARKETING COMPANIES

Abstract

The study aims to examine the impact of risk factors of Ukrainian advertising and marketing companies on their financial performance (ROA and ROE). The study was conducted using ordinary least squares regression analysis based on an examination of the activities of 435 companies in 2022. The total number of risk factors (Risk Total) and the ten most common risk factors (10 fixed risk factors) associated with the activities of Ukrainian advertising and marketing companies, calculated using the YouControl database, were selected as independent variables. 10 fixed risk factors were interpreted as dummy variables, which allowed incorporating qualitative information about risk factors of Ukrainian advertising and marketing companies into regression analysis models. Control variables (company age, company size, financial leverage, population at the place of company registration, and total solvency ratio) were added to enhance the determination level of the models. Of these, the statistically significant ones were Company size, which increases ROA and ROE; Financial leverage, which increases ROE; and Company age, which decreases ROE. Of the 11 independent variables that characterized companies' risk factors, only three were confirmed to significantly impact financial performance indicators (risk factor "Location in the housing stock" reduces ROA and ROE; risk factor "Frequent institutional changes" increases ROA; risk factor "Found match by full name with a politically exposed person" reduces ROE).

Keywords   risk factors, financial performance, advertising and
                      marketing companies, ROA, ROE, Ukraine

JEL Classification   G17, G32, L25

INTRODUCTION

The study of factors influencing the financial performance of companies in different sectors and different countries is in the spotlight of many researchers. One of these factors is risks, the analysis of which allows company management to make informed management decisions and conduct competitive intelligence to identify signals that can inform about the potential activities of competitors, partners, clients, etc. Due to the multidimensional nature of performance, the diversity of its determinants, the variety of methods, techniques and tools used for assessment, performance research has been and remains a topical issue (Tudose et al., 2022). Analyzing a company's performance over the years and how it can operate in a competitive environment has become a constant challenge for the company. Therefore, it is necessary to pay more attention to performance and risk analysis as a component necessary for management (Negru & Preda, 2019).

A company's management has a full range of information about its activities, and for competitor analysis, it is mainly limited to published

information and data from open sources. However, collecting, systematizing, comparing, and analyzing such information from various online services requires significant costs for performing such a function and is a rather labor-intensive process. This can be avoided by using ready-made, systematized, and structured information from online business analytics services that perform this function. One of these is the YouControl online service. Information from this database made it possible to identify the types of risk factors, which has an influence on the activities of Ukrainian companies, in particular, those that arose as a result of Russian military aggression. Thus, the YouControl database has adapted to the new realities of the business environment, expanding its analytical tools for more accurate risk assessment in conditions of increased uncertainty. Therefore, it is advisable to use it to identify and analyze risk factors that affect the financial performance of Ukrainian companies.

The advertising and marketing industry in Ukraine is undergoing transformations, which is due to the specifics of the Ukrainian market and the high level of uncertainty, as well as general global trends and the need for change in the context of accelerating digitalization, corresponding changes in consumer behavior, and increased competition. Given that advertising and marketing companies are the link for business processes of other companies, the choice of the marketing agency with which the company will interact will be made on the basis of preliminary analysis. Risk factors about a particular advertising and marketing company will directly affect the activities with existing and potential clients, which will be reflected in financial results. This determines the relevance of studying the problems of analyzing the influence of risk factors on the activities of Ukrainian advertising and marketing companies as a basis for improving their management in a dynamic external environment.

1. LITERATURE REVIEW

This study examines the influence of various factors on financial indicators and, based on regression models, confirms or refutes the cause-and-effect relationships between the selected variables. Thus, Liargovas and Skandalis (2010) study the specifics of the activity of Greek industrial firms (the sample consisted of 102 companies, period 1997–2004). They found that debt leverage, export activity, location, size, and managerial competence index are significantly correlated with firms' economic performance. According to Burja (2011), Net Income and Gross Margin Return on Inventory had the most statistically significant positive impact on the ROA of Romanian chemical companies (period 1999–2009), while Fixed Assets Ratio had a negative impact; moreover, the influence of variables such as Debt Ratio, Financial Leverage Ratio, Sales to Current Assets Ratio, Sales to Equity Ratio, the indicator Expenses Revenue Ratio was also investigated.

The results of the study by Pham et al. (2018) show that Vietnamese firms' financial performance (ROA and ROE) is positively affected by firm size, capital structure, capitalization expenditure, and accounts receivable management (the sample in-cluded 30 construction-material firms, period 2011–2015). The findings of the study by Barbuta-Misu et al. (2019) of the activities of 22,581 large non-financial companies from 28 European countries for the 2006–2015 period allowed establishing that liquidity, leverage, and productivity have a positive influence on company performance, while solvency and asset turnover are positive and statistically significant only in the case of return on equity.

Based on the study by Deitiana and Habibuw (2015), which analyzed 37 Indonesian companies (period 2007–2012), the impact of Leverage and Firm Age was confirmed and the impact of other variables such as Liquidity, Firm Size, Managerial Ownership, and Block Holder Ownership on financial performance (ROA) was refuted. In a study of 88 marketing agencies in Slovakia in 2020, Lehenchuk et al. (2022) confirmed that Total Asset Turnover and Company Size are statistically significant indicators of influence on ROA.

The list of factors whose influence on financial performance is studied by scientists is not limited to internal drivers (Pham et al., 2018), but also includes external environmental factors (Barbuta-Misu et al., 2019; Tudose et al., 2022).

Some authors classify such indicators for management purposes into financial drivers (leverage, liquidity, capitalization, investments), non-financial drivers (size, age, location, export), and firm performance (ROA, ROE, and ROS) (Liargovas & Skandalis, 2010).

Today, the practice of analyzing the impact of various types of factors on financial performance is quite common among scientists from different countries, and the list of such factors is constantly expanding. In the past decade, studies have emerged that examine the effect of non-financial factors, such as governance structure (Shyamanthi, 2021; Isaac & Ayodeji, 2024), sustainable development of a company (Shyamanthi, 2021; Kalash, 2024), environmental uncertainty (Ghazieh & Chebana, 2021), a company's political connections (Nadiyasu, 2020; Pang & Wang, 2021; Cheikh & Loukil, 2022; La Rocca et al., 2022), and the level of a company's involvement in digital transformation processes (Weber, 2024; Zhao et al., 2024), etc.

Scientists classify risks and factors of high probability as factors influencing companies' financial performance since they can also significantly impact financial performance measures. Thus, Negru and Preda (2019) partially confirm the significance of the influence of risk coefficients (operating leverage and financial leverage) on financial performance indicators (turnover, turnover index, operating profit, net profit, return on assets, return on equity, return on sales, and earnings per share).

Based on the study of the characteristics of Vietnamese construction-material firms, the significance of the impact of business risk (EBIDA) on ROA and ROE was established (Pham et al., 2018). Using the example of a Pakistani company from the food sector, the significance of the impact of risk (EBIT/Earnings after interest and tax) on ROI was determined (Bashir et al., 2013).

Opatska et al. (2024) analyzed the impact of continued military action in a large part of Ukraine on the financial performance of Ukrainian companies. They found a high probability of a negative impact because war is a type of crisis with an unknown ending. It consists of a series of military situations for which it is impossible to prepare properly and for which the endpoint is un-

known, which necessitates the use of emergency, adaptive capabilities, and other forms of resilience by company management, which requires a deep analysis and consideration of the impact of all possible risk factors. The level of influence of risk factors depends on both the geographical location (Yarmolenko, 2023) and the industry in which they work (Holomb & Ogloblina, 2023).

Some studies also examine the impact of the enterprise risk management department/service on financial performance (Li, 2018; Ali et al., 2019; Muslih, 2019; Ghazieh & Chebana, 2021; Quang et al., 2024). These risk management structural units must respond to changes in the external environment of their own companies and competitors by making appropriate management decisions or informing management.

The analysis of risk factors affecting the financial performance of enterprises has made it possible to establish that the strength and direction of their influence depend on the characteristics of the development of the external environment and the industry affiliation of the enterprise. In particular, Russia's invasion of Ukraine has caused cardinal changes in the activities of a significant number of Ukrainian enterprises and their external environment, disrupting traditional ways of interaction and functioning of economic institutions in conditions of uncertainty and instability. The lack of research devoted to establishing cause-and-effect (causal) relationships between risk factors of Ukrainian enterprises' activities and the most significant financial performance indicators (ROA and ROE) has necessitated the study of these parameters and probable cause-and-effect relationships between them.

The study aims to examine the impact of risk factors of Ukrainian advertising and marketing companies on their financial performance (ROA and ROE).

2. RESEARCH METHODOLOGY

The object of the study is the activities of 435 Ukrainian advertising and marketing companies. The condition for recognizing a company as an advertising and marketing one was information on the main type of activity, namely: 73.11

Advertising agencies, 73.12 Media representation, 73.20 Market research and public opinion polling, and 70.21 Public relations and communication activities (according to the Ukrainian Classifier of Economic Activities – KVED). Information on their financial performance for 2022 and information on risk factors recorded by the YouControl online service were used. The research sample included leading companies in terms of net income by region of Ukraine. It is worth noting that the companies included in this pool formed financial statements for 2022, even though a full-scale Russian-Ukrainian war began on February 24, 2022, which made the activities of some companies impossible or suspended. Regression analysis, in particular the ordinary least squares (OLS) method, was used to analyze the impact of risk factors of Ukrainian advertising and marketing companies on financial performance indicators.

The dependent variables were the financial performance indicators – Return on Assets (ROA) and Return on Equity (ROE), and the independent variables were the total number of risk factors (Total risk factors) and the most common risk factors recorded by the activities of Ukrainian advertising and marketing companies (10 fixed risk factors), which were interpreted as dummy variables. Two regression models (Model 1 (ROA) and Model 2 (ROE)) with the same set of independent variables were built based on the use of two dependent variables. The information base for calculating the ROA and ROE indicators was the financial statements of the studied enterprises, formed in accordance with Ukrainian Accounting Standards.

Using the YouControl database, this study analyzed and systematized the risk factors of Ukrainian advertising and marketing companies. The most common risk factors were identified, and their characteristics are given in Table 1.

To enhance the explanatory nature of the developed models, the following control variables were additionally used:

- Company Age (Age) as the number of full years since the company was founded;

- Company Size (l_Assets) as the logarithm of Total Assets;

- City of company registration with a large population (DPop_fict_1*). This independent variable was used through a dummy variable ("yes" – cities with a population of more than 500 thousand people, "no" – less than 500 thousand people);

Table 1. Description of the most common risk factors of advertising and marketing companies (10 fixed risk factors)

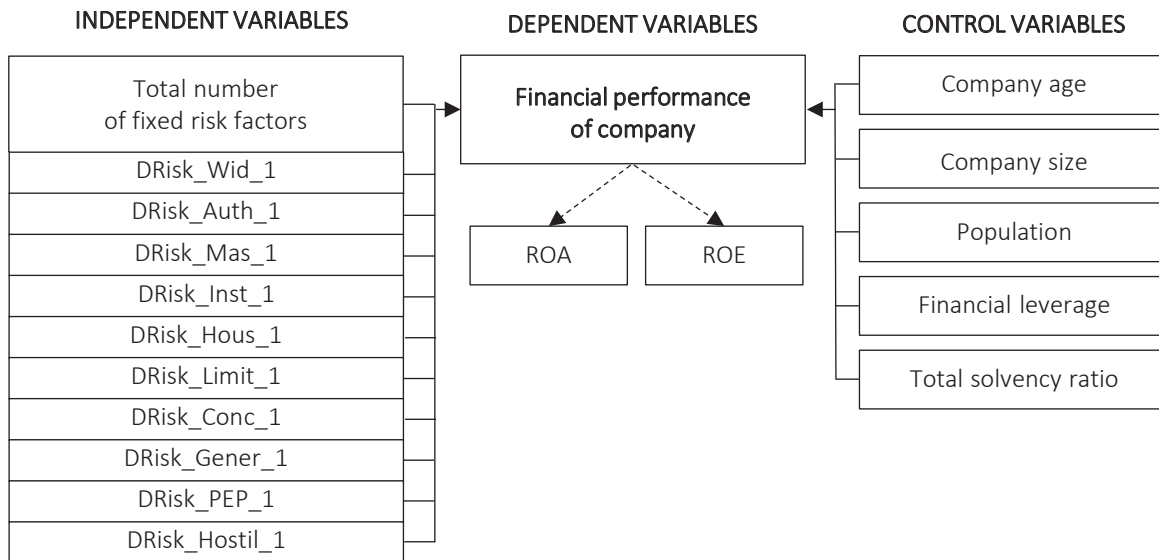| Risk factor	Abbreviation	Description
A wide range of registered activities	DRisk_Wid_1	Declaring only generic, non-industry-specific types of economic activities
Insufficient funding in accordance with the reported authorized capital	DRisk_Auth_1	The size of the authorized capital that is less than the statutory minimum
Mass registration address	DRisk_Mas_1	An address at which more than 50 legal entities, trusts or other organizations are registered in one premises (office, apartment, etc.)
Frequent institutional changes	DRisk_Inst_1	Frequent changes in constituent documents. in particular those related to changes in the company name, ownership structure, management and types of economic activity
Location in the housing stock	DRisk_Hous_1	Residential buildings and residential premises are intended exclusively for citizens' residence
Limited competence of officials	DRisk_Limit_1	Limitation of the powers of directors or signatories of a legal entity
Concentrated registration address	DRisk_Conc_1	Registration of a counterparty at a location where a significant number of other legal entities (from 10 to 50)
General business activities	DRisk_Gener_1	The presence of "general" unspecialized types of activities, despite the clear specificity of the enterprise's activities
Found match by full name with a politically exposed person	DRisk_PEP_1	The possibility of restrictions on the implementation of certain financial transactions depending on the nature and degree of connection with a public person
Location in the territory of potential hostilities	DRisk_Hostil_1	The existence of the probability of being objectively deprived of the opportunity to carry out any transactions (including settlements under concluded contracts), which may lead to financial losses and destabilization of the companies' activities

INDEPENDENT VARIABLES

Total number of fixed risk factors
DRisk_Wid_1
DRisk_Auth_1
DRisk_Mas_1
DRisk_Inst_1
DRisk_Hous_1
DRisk_Limit_1
DRisk_Conc_1
DRisk_Gener_1
DRisk_PEP_1
DRisk_Hostil_1

DEPENDENT VARIABLES

Financial performance of company

ROA   ROE

CONTROL VARIABLES

Company age
Company size
Population
Financial leverage
Total solvency ratio

Figure 1. Conceptual framework of the study

- Financial Leverage (FinLev) as a ratio of Total Liabilities to Own Equity;

- Total Solvency Ratio (TSR) as a Total Assets to Total Liabilities ratio.

Figure 1 shows the general structure of the study.

Table 2 provides the names, general calculation order, and abbreviations of all dependent and independent variables used in the article.

Table 2. Summary of all dependent, independent, and control variables, calculation methods, and abbreviations used in the study

Variable	Calculation Method	Abbreviation
Dependent Variables		
Return on Assets, %	Profit / Total Assets *x* 100%	ROA
Return on Equity, %	Profit / Own Equity *x* 100%	ROE
Independent Variables		
Total risk factors	Total number of fixed risk factors	Risk_Total
A wide range of registered activities	Dummy variable for the risk factor "A wide range of registered activities"	DRisk_Wid_1
Insufficient funding according to the reported authorized capital	Dummy variable for the risk factor "Insufficient funding according to the reported authorized capital"	DRisk_Auth_1
Mass registration address	Dummy variable for the risk factor "Mass registration address"	DRisk_Mas_1
Frequent institutional changes	Dummy variable for the risk factor "Frequent institutional changes"	DRisk_Inst_1
Location in the housing stock	Dummy variable for the risk factor "Location in the housing stock"	DRisk_Hous_1
Limited competence of officials	Dummy variable for the risk factor "Limited competence of officials"	DRisk_Limit_1
Concentrated registration address	Dummy variable for the risk factor "Concentrated registration address"	DRisk_Conc_1
General business activities	Dummy variable for the risk factor "General business activities"	DRisk_Gener_1
Found match by full name with a politically exposed person	Dummy variable for the risk factor "Found match by full name with a politically exposed person"	DRisk_PEP_1
Location on the territory of potential hostilities	Dummy variable for the risk factor "Location in the territory of potential hostilities"	DRisk_Hostil_1
Control Variables		
Company age	Number of full years from the date of company registration	Age
Company size	Logarithm of Total Assets	l_Size
Financial leverage	Liabilities / Own Equity	FinLev
Population	Dummy variable for the population of the company's place of registration (more or less than 500 thousand people)	DPopul_1
Total solvency ratio	Total assets/total liabilities	TSR

Conceptual research model:

$$
\begin{aligned}
DV_{it} = &\, \alpha + \beta_1 Risk\_Total_{it} \\
&+ \beta_2 DRisk\_Wid\_1_{it} + \beta_3 DRisk\_Auth\_1_{it} \\
&+ \beta_4 DRisk\_Mas\_1_{it} + \beta_5 DRisk\_Inst\_1_{it} \\
&+ \beta_6 DRisk\_Hous\_1_{it} + \beta_7 DRisk\_Limit\_1_{it} \\
&+ \beta_8 DRisk\_Conc\_1_{it} + \beta_9 DRisk\_Gener\_1_{it} \\
&+ \beta_{10} DRisk\_PEP\_1_{it} + \beta_{11} DRisk\_Hostil\_1_{it} \\
&+ \beta_{12} Age_{it} + \beta_{13} l\_Size_{it} + \beta_{14} FinLev_{it} \\
&+ \beta_{15} DPopul\_1_{it} + \beta_{16} TSR_{it} + \varepsilon_{it},
\end{aligned}
\tag{1}
$$

where DV – dependent variable (ROA, ROE), i – entity, and t – time; α – identifier; β_n – regression coefficients; $Risk\_Total$, $DRisk\_Wid\_1$, $DRisk\_Auth\_1$, $DRisk\_Mas\_1$, $DRisk\_Inst\_1$, $DRisk\_Hous\_1$, $DRisk\_Limit\_1$, $DRisk\_Conc\_1$, $DRisk\_Gener\_1$, $DRisk\_PEP\_1$, $DRisk\_Hostil\_1$ – independent variables, Age, l_Size, $FinLev$, $DPopul\_1$, TSR – control variables, where i – entity and t – time; ε_{it} – error term.

3. RESULTS AND DISCUSSIONS

At the initial stage of the regression analysis, descriptive statistics were calculated. This made it possible to obtain a general idea of the data under study, their distribution, and the relationships between variables (Table 3).

The large standard deviation for Size indicates a high degree of heterogeneity in the data, which subsequently led to the use of logarithmization to reduce the heterogeneity of this variable. The fact that the mean is greater than the median for Size indicates that there are more small and medium-sized companies in the sample than large ones. The closeness of the Mean and Median values for the control variable Age indicates a high level of

symmetry in the distribution of range values. The range from the minimum to the maximum value indicates the breadth of coverage: For example, for Age, the value ranges from 3 to 32 years, which covers a wide spectrum; on the other hand; for Size, the value ranges from 1.9 to 6.14e+006, which indicates the presence of both very small and very large companies in the sample.

Appropriate testing is necessary to avoid multicollinearity in regression analysis, which occurs when the selected independent variables are highly correlated with each other. Testing 16 variables (11 independent and 5 control variables) for the presence of the problem of multicollinearity allowed us to establish its absence.

The results (regression coefficient and p-value) calculated using the GRETL software application are presented in Table 4.

Independent variables such as 1_Size, $DRisk\_Inst\_1$, and $DRisk\_Hous\_1$ were found to be statistically significant in Model 1 (ROA). Moreover, 1_Size (***) is a significant independent variable at the one-percent level, $DRisk\_Inst\_1$ (**) at the five-percent level, and $DRisk\_Hous\_1$ (*) at the ten-percent level of significance.

Considering the values of the coefficients, we can say that 1_Size and $DRisk\_Inst\_1$ directly affect ROA, and $DRisk\_Hous\_1$ has a negative effect. Given that statistically significant fixed risk factors for companies were used through dummy variables (fixed – 1, non-fixed – 0), it is worth explaining how exactly they influence through the coefficients: if the risk factor "Location in the housing stock" is fixed for a company, then this reduces the ROA value by 88.88 (–88.88*1= –88.88). If the factor is not recorded, then the ROA value does not change (–88.88*0=0); if the risk factor "Frequent institutional changes" is recorded for the com-

Table 3. Descriptive statistics

Variables	Observations	Mean	Median	St. Dev.	Minimum	Maximum
ROA	435	−29.8	2.40	385.1	−7.69e+003	240.9
ROE	435	63.9	8.00	607.0	−2.58e+003	9.33e+003
Age	435	12.6	11.0	7.29	3.00	32.0
Size	435	3.97e+004	3.89e+003	3.05e+005	1.90	6.14e+006
FinLev	435	22.0	0.949	192.0	0.000482	3.58e+003
TSR	435	24.5	1.99	181.2	0.159	3.58e+003

Table 4. Results of the analysis of Model 1 (ROA) and Model 2 (ROE) (OLS, based on observations 1-435)

Variable	Model 1 (ROA)		Model 2 (ROE)	
	Coefficient	p-value	Coefficient	p-value
const	−345.324	0.0502*	346.116	0.1965
Risk_Total	−4.01902	0.7626	−16.2940	0.4210
DRisk_Wid_1	−10.4019	0.8027	−27.9003	0.6596
DRisk_Auth_1	27.2714	0.5078	39.7110	0.5262
DRisk_Mas_1	−12.5884	0.8006	−30.2533	0.6899
DRisk_Inst_1	136.345	0.0116**	75.8772	0.3545
DRisk_Hous_1	−88.8881	0.0976*	−145.619	0.0745*
DRisk_Limit_1	−7.57602	0.8834	104.038	0.1862
DRisk_Conc_1	−9.52053	0.8639	−10.0583	0.9053
DRisk_Gener_1	−6.53434	0.9044	−132.706	0.1092
DRisk_PEP_1	−51.5207	0.3960	−333.128	0.0003***
DRisk_Hostil_1	−64.2310	0.3088	−67.0243	0.4850
Age	−0.900791	0.7307	−7.37032	0.0647*
l_Size	53.8046	<0.0001***	39.4469	0.0162**
FinLev	−0.00494777	0.9589	0.925319	<0.0001***
DPopul_1	−59.1745	0.2067	−86.7754	0.2236
TSR	−0.0377814	0.7123	−0.0607050	0.6969

Note: * Significant at the 10 % level; ** Significant at the 5 % level; *** Significant at the 1 % level.

pany, then this increases the *ROA* value by 136.35 (136.35*1=136.35). If the factor is not recorded, the *ROA* value does not change (136.35*0=0). The impact of all other risk factors and the total number of risk factors recorded by the activities of Ukrainian advertising and marketing companies on the ROA indicator is statistically insignificant.

Independent variables such as *DRisk_PEP_1*, *FinLev*, *l_Size*, *DRisk_Hous_1*, and *Age* were found to be statistically significant in Model 2 (*ROE*). Moreover, *DRisk_PEP_1* and *FinLev* (***) are significant independent variables at the one-percent level, *l_Size* (**) at the five-percent level, and *DRisk_Hous_1* and *Age* (*) at the ten-percent level of significance.

Considering the coefficients' value, it was found that *1_Size* and *FinLev* have a positive and significant effect on *ROE*, while *DRisk_Hous_1*, *DRisk_PEP_1*, and *Age* have a negative effect. Given that statistically significant fixed risk factors for companies were used through dummy variables (fixed – 1, non-fixed – 0), it is worth explaining how exactly they influence through the coefficients: if the risk factor "Location in the housing stock" is fixed for a company, then this reduces the *ROE* value by 145.62 (−145.62*1=−145.62). If the factor is not recorded, the ROE value does not change

(−145.62*0=0); if the risk factor "Found match by full name with a politically exposed person" is recorded for the company, this reduces the *ROE* value by 333.13 (−333.13*1=−333.13). If the factor is not recorded, the ROE value does not change (−333.13*0=0). The impact of all other risk factors and the total number of risk factors recorded by the activities of Ukrainian advertising and marketing companies on *ROE* is statistically insignificant.

When comparing the results of Model 1 (*ROA*) and Model 2 (*ROE*), individual variables are statistically significant for both *ROA* and *ROE*. Thus, *DRisk_Hous_1* has a significant negative impact on both *ROA* and *ROE*: the presence of this risk factor reduces the company's *ROA* by 88.88 and reduces the *ROE* by 145.62.

The results obtained in the article are quite controversial since, on the one hand, they partially confirm, and on the other hand, they partially refute the results of other studies that analyzed the influence of risk factors on the financial performance of various types of companies. Thus, as a result of testing Model 1, the statistical significance of the positive influence of "Company size" and the risk factor "Frequent institutional changes" and the negative influence of the risk factor "Location in the housing stock" on *ROA* was confirmed. After

testing Model 2, statistical significance was established for the positive impact of "Company size" and "Financial leverage," as well as the negative impact of the risk factors "Found match by full name with a politically exposed person," "Location in the housing stock," and "Company age" on *ROE*.

The analysis of Model 1 revealed the insignificance of the influence of the Company age variable on *ROA*. On the other hand, based on the analysis of Model 2, the significance of this variable's influence on *ROE* was revealed; in particular, the influence in this case is negative. The results of the analyzed studies confirm the significance of the influence of "Company age" on financial performance indicators. In particular, for Indonesian firms, this variable decreases *ROA* (Deitiana & Habibuw, 2015), for Turkish and Japanese firms, it decreases *ROA* and *ROE* (Dogan, 2013; Akben-Selcuk, 2016; Arhinful & Radmehr, 2023), and for Ghanaian firms and Indonesian manufacturing companies, it increases *ROA* and *ROE* (Lee & Poku, 2022; Wibowo & Honggowati, 2022). It is typical for Ukrainian advertising and marketing companies that "Company age" reduces *ROE*; as a rule, as the company's age increases, its *ROE* decreases. Possible reasons for this may include accumulated depreciation of fixed assets, outdated technologies, bureaucratic management systems, and slow response to changes in market conditions.

Large company size means that a company can obtain high total assets. High assets can help the company optimize its productivity. Companies that improve productivity can also increase production levels. With increased production, the company can generate higher profits. High profits can increase the return on assets. Thus, the company's size can affect *ROA* (Shahfira & Hasanuh, 2021). There are many ways to measure "Company size" (total assets, number of company employees, total sales). In this study, Company size is measured by the logarithm of total assets. As part of the testing of Model 1, the statistical significance of the direct influence of "Company size" on such an indicator of financial efficiency as *ROA* was confirmed. The significance of the impact of this variable on *ROA* has been confirmed in some studies by authors (Abbas et al., 2013; Dogan, 2013; Akben-Selcuk, 2016; Pham et al., 2018; Sari, 2021; Shahfira & Hasanuh, 2021; Lee & Poku, 2022; Lehenchuk et al., 2022; Tudose et al., 2022; Arhinful & Radmehr 2023)

and has not been confirmed by others (Liargovas & Skandalis, 2010; Deitiana & Habibuw, 2015; Sari et al., 2021). Similarly, the results of testing Model 2 confirmed the statistical significance of the direct influence of "Company size" on *ROE*, which was also confirmed in a number of studies (Liargovas & Skandalis, 2010; Abbas et al., 2013; Akben-Selcuk, 2016; Pham et al., 2018; Lee & Poku, 2022; Arhinful & Radmehr, 2023). Ukrainian advertising and marketing companies are characterized by a cause-and-effect relationship, which implies an increase in *ROA* and *ROE* indicators with an increase in the "Company size" indicator, calculated based on total assets. That is, the larger the company, the higher the *ROA* and *ROE* indicators. This is due to the greater opportunities for large companies to use their resources more effectively to generate profit and invest in research and development, which subsequently leads to the capture of new market segments by offering new services.

The results of testing Model 1 and Model 2 confirmed the insignificance of the influence of "Financial leverage" on *ROA* and the significance of its influence on *ROE*. The significance of the influence of "Financial leverage" on *ROA* has also been confirmed (Liargovas & Skandalis, 2010; Burja, 2011; Dogan, 2013; Deitiana & Habibuw, 2015; Akben-Selcuk, 2016; Bărbuță-Mișu et al., 2019; Lee & Poku, 2022). Similarly, the significance of the impact of "Financial leverage" on ROE was confirmed by Liargovas and Skandalis (2010), Akben-Selcuk (2016), Bărbuță-Mișu et al. (2019), and Lee and Poku (2022). In general, based on the research results, the authors do not come to a consensus regarding the influence (positive or negative) of "Financial leverage" on financial performance indicators.

It is typical for Ukrainian advertising and marketing companies that "Financial leverage" increases *ROE*, possibly due to the higher efficiency of using borrowed (credit) funds to generate income. The context of doing business in Ukraine means that access to credit is difficult, which may result in the borrowed funds being spent with a greater degree of prudence and, ultimately, efficiency. To support this statement, it is worth saying that financial institutions provide credit funds to Ukrainian companies, whose activities are first thoroughly studied to understand whether the company will be able to repay the loans.

Testing Model 1 and Model 2 shows that the variable "Population" effect on ROA and ROE was insignificant. This characteristic was used as a qualitative parameter to describe the location of a company with a population of more or less than 500,000 people. Location in large cities opens up numerous opportunities. On the other hand, headquarters in large cities are more expensive to maintain than in less congested locations, and the potential for distractions is generally greater (Ruland, 2013). Ruland's research on large US firms shows that businesses headquartered in smaller locations tend to be more financially successful. For Ukrainian advertising and marketing companies, the significance of the influence of the "big city" factor on financial indicators was not confirmed. This may be because a large share of marketing services has moved to the digital space, which determines the independence of the results of activities from the geographical location of the company and the proximity of the location to customers.

After testing Model 1 and Model 2, the influence of the variable "Total solvency ratio" on ROA and ROE turned out to be insignificant, although Khidmat and Rehman (2014) and Aprilyani (2024) confirmed the presence of such a relationship. The presence of such a difference for Ukrainian advertising and marketing companies may be associated with the characteristics of the industry under study and the development level of the business environment in Ukraine.

The study has a number of limitations that should be considered by other scholars when using and interpreting the results obtained in this article. First, the study sample was limited to Ukrainian advertising and marketing companies, and financial reporting data for 2022 were used. Second, the YouControl service was used as a source of information on recorded risk factors, which summarizes and systematizes data from various sources based on its own assessment methodology. Third, the study does not consider the dynamics of fixed risk factors, as they may appear from time to time or be permanent from the moment a company is registered.

CONCLUSIONS

The study aims to examine the impact of risk factors of Ukrainian advertising and marketing companies on their financial performance (ROA and ROE). It was found that some risk factors significantly affect financial performance, while for other risk factors such an impact is partial or absent.

The analysis of Model 1 (ROA) revealed that there is a significant positive effect of "Company size" and the risk signal "Frequent institutional changes" on ROA and a significant negative effect of the risk signal "Location in the housing stock" on ROA. The presence of a positive influence of the "Company size" indicator means that larger companies provide advertising and marketing services at lower costs and are more competitive compared to small (in size) marketing companies. The growth of the ROA indicator due to the presence of the risk signal "Frequent institutional changes" confirms the advisability of regular restructuring of activities (change of the company name, ownership structure, management, and types of economic activities) in accordance with changes in the requirements of the external environment in order to find the optimal structure of the company, individual types of activities and business models. The growth of the ROA indicator due to the absence of the risk signal "Location in the housing stock" shows that Ukrainian advertising and marketing companies that are located in a residential building, which is a sign of financial inability to rent out premises of the corresponding functional purpose, are less financially effective than those registered in a non-residential building.

The analysis of Model 2 (ROE) revealed a statistically significant positive impact of "Company size" and "Financial leverage," as well as a negative impact of "Company age" and the risk signals "Found match by full name with a politically exposed person" and "Location in the housing stock" on ROE. A positive influence of "Financial leverage" means that companies using a larger share of borrowed funds are more financially efficient than those using a smaller share. A negative impact of "Company age" indi-

cates that younger marketing companies operate more effectively than older ones, which is explained by the obsolescence of the resources they use, business models, management approaches, and entrenched organizational bureaucracy. An increase in ROE due to the absence of the risk signal "Found match by full name with a politically exposed person" indicates that close ties between companies and politically exposed persons limit the company's ability to attract cheap financial resources and cause reputational risks. The obtained conclusions regarding the influence of the variables "Company size" and the risk signal "Location in the housing stock" on ROE coincide with the conclusions obtained from the results of the analysis of Model 1 (ROA).

The results of the study yielded practical recommendations for Ukrainian advertising and marketing companies: expanding the resource base and scale of companies' activities, attracting a larger volume of borrowed funds to finance their activities; regular monitoring of the external environment and analysis of the compliance of the business models used by the company with its changes; updating organizational resources, implementing the latest digital marketing models, and eliminating organizational bureaucracy in companies.

AUTHOR CONTRIBUTIONS

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