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STATISTICAL DEPENDENCIES BETWEEN NON-FINANCIAL DISCLOSURES AND EX-POST FINANCIAL PERFORMANCE IN THE BULGARIAN ROAD FREIGHT TRANSPORTATION INDUSTRY

Summary. In the Republic of Bulgaria, as a member of the EU, possessing a strategic geographical position through which five of the 10 Pan-European transport corridors pass, road freight transport occupies a leading place. It has a significant role in contributing to the country's GDP, but at the same time, it has a strong negative impact on society and the environment, given its serious climatic footprint. In the specialized literature, data on research conducted looking for the presence or rejection of dependence between non-financial disclosures and ex-post financial performance in the road freight transportation industry are highly limited or almost absent. The lack of a legal obligation for non-financial disclosure by enterprises in Bulgaria creates the necessity to research and confirm the relationship between non-financial disclosure and the ex-post financial performance of the companies in the short-term or medium-term future. In the course of the analysis carried out in this article, the two largest Bulgarian enterprises from the road freight transportation industry by default and a major environmental polluter are examined. By applying key environmental and social disclosure indicators in accordance with the Global Reporting Initiative standards calculated on the basis of real empirical data, a statistical analysis is performed. A multiple regression model is built based on a value analytical approach, which is focused on the economic value added of the enterprise, and the economic value added indicator is used as an efficiency measurement of the enterprises' activity. The results of the analysis establish a certain dependence between non-financial disclosure and financial performance.

1. INTRODUCTION

Until recently, actions in economic activity business were primarily motivated by the desire to maximize financial returns, and the main purpose of corporate reports was to present information regarding the cash flow and financial and property status, as well as the financial results of the enterprise. The development of the world economy and the resulting positive and negative influences on society are not fully covered by conventional accounting and the financial reporting system. The service sector in the Republic of Bulgaria generates over 70% of the country's gross added value, and the sector of "transport, warehousing, and posts" provides direct employment to approximately 203,000 people. Companies with an average of over 250 employees (such as the enterprises subject to the analysis) have a relative share of the total number of non-financial enterprises of less than 1%. These companies are of great importance to the Bulgarian economy because they generate income from activities with a relative share of about 27.6% of the total income for the sector and provide employment for about 37.2% of the sector workers [1]. Transport performance of road freight transport for 2021 is 30,115.8 million tkm,

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which is approximately a 78% share of the transport performance of the various mode of transport [1]. Simultaneously, carrying out road freight transport through the release of dust and harmful emissions as well as the resulting noise pollution have a negative impact on the biosphere and cause harm to human health, climate change, and the greenhouse effect.

Fig. 1 shows that, regardless of logistics chain problems during the COVID-19 crisis, 2020 and 2021 saw an increase in road freight transport in Bulgaria [2].
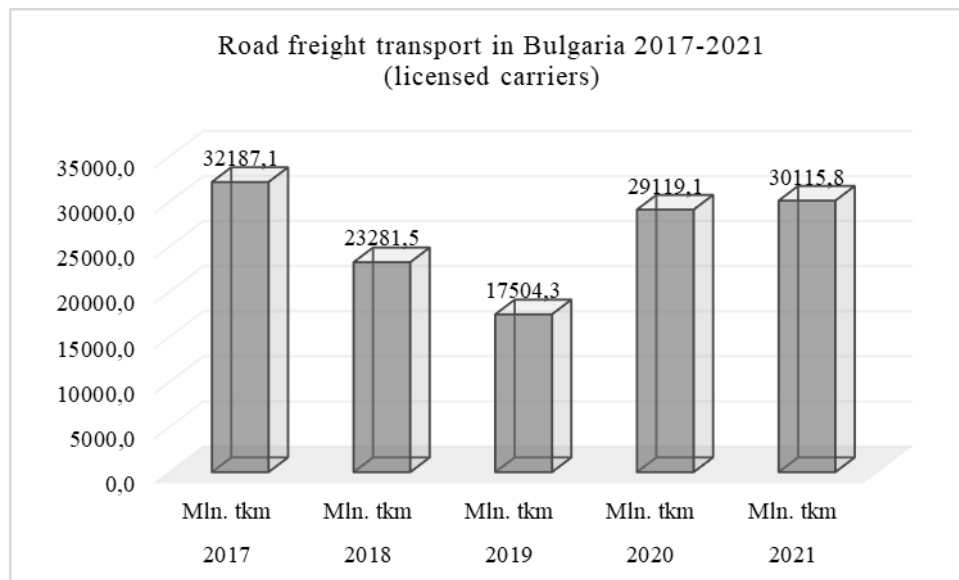

Fig. 1. Road freight transport in Bulgaria from 2017-2021 (million tkm)[3] *Source: National Statistical Institute*

Fig. 2 shows goods carried and transport performance by road freight transport, including cross-trade and cabotage. The data includes carriage "for hire and reward" and "on own account".
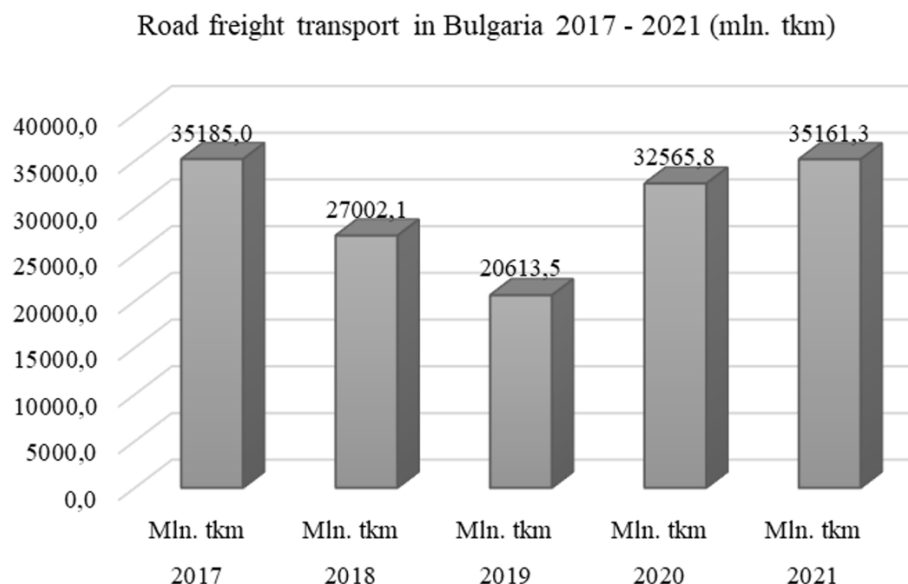

Fig. 2. Road freight transport in Bulgaria from 2017-2021 (mln. tkm) *Source: National Statistical Institute*

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[3] Performance of vehicles includes goods carried by freight road transport by type of journeys and type of carriage (annual data) only "for hire and reward" – without "on own account". Data are collected by a statistical survey in compliance with EU methodology.

The lack of non-financial disclosure does not meet the information needs of various stakeholders. As a result, their expectations and pressure on enterprises to accept both the positive and negative impact of their behavior in economic, social, and environmental aspects increase. In modern conditions, financial indicators are not enough to analyze the general state of the enterprise, prospects, problems, and possible solutions. Non-financial disclosures are increasingly regarded as the most important reporting tool for presenting the development of an enterprise [3]. All these prerequisites, alongside the capital constraint faced by enterprises, require an alteration in the direction of appropriately upgrading traditional corporate reporting with non-financial disclosure. It is ready to meet these challenges and resolve many of the problem areas of traditional financial reporting.

The object of this article is to analyze the two largest Bulgarian enterprises from the road freight transport sector for the five-year period from 2017 to 2021.

The subject of the article is the relations and interactions between non-financial disclosures and the financial performance of transport enterprises, expressed by economic value added (EVA) using a value analytical approach).

The aim of the research is to build a statistical model—more specifically, a multiple regression model—to analyze the statistical relationships and dependence of non-financial disclosures for a given reporting period on the financial performance of transport enterprises reflected in the AFR for the ex-post reporting period.

Explanation with respect to forming the sample from the researched group of companies from the Bulgarian road freight transportation industry.

In line with the aims of the analysis, the sample included two large Bulgarian enterprises from the road freight transportation industry. These companies meet the criteria for large-sized enterprises according to the Bulgarian Accounting Act and are among the largest road freight transport companies both in the territory of Bulgaria and among the companies possessing a license for international transport activity. Regardless, for the analyzed period, the European and Bulgarian legislation [4] *does not oblige them* but provides them with a *voluntary opportunity* to choose whether or not to prepare an integrated report/non-financial statement and, respectively, to select an existing international standardization base.

During the five-year time period of study from 2017 to 2021, the new European Corporate Sustainability Reporting Directive, which introduced substantial alterations and additional severity to mandatory reporting, had not yet been adopted [5].

In accordance with the formulated aim to establish possible ex-post effects (benefits or losses) from reporting of non-financial disclosures, a study should be carried out for the existence of an indirect connection and, accordingly, the relationship between the non-financial information for a relevant reporting period on the one hand and the financial and economic performance of the companies on the other hand during the next reporting period. Table 1 presents the two largest Bulgarian companies from the road freight transport sector, the object of this study.

Table 1

Companies included in the sample research [6, 7]

Bulgarian transport enterprises that are not obliged to disclose non-financial information (*do not prepare Integrated Report respectively Corporate Sustainable Report*)
1. PIMK Ltd
2. DISCORDIA JSCo

Source: prepared by the authors.

2. A BRIEF LITERATURE REVIEW OF EVA AND ITS APPLICATION IN DIFFERENT SECTORS OF THE ECONOMY

Enterprises, in economic reality, most often define profit as their short-term goal; in recent decades, as part of the strategy, the objective has become to create and increase the value of the enterprise itself in the long term.

Direct methods can be utilized to measure the value of the enterprise by determining the market value of its capital or by the method of the value added by this capital. The value added is an effective way to measure the results of the economic organization and to determine how stakeholders distribute the resources created.

Developed in 1982, the method of economic value added (EVA) by the company Stern Steward & Co. altered the perception of managers in large international enterprises to achieve economic profit and create value for owners. Stewart [8] defines economic value added as a residual income or an operating profit reduced by costs related to capital to achieve this profit, whereas operating profit represents the profit from the basic business activities of the enterprise. Young and O'Byrne characterize the indicator as a measure of an enterprise's operating income, which is reduced by the costs of capital [9].

According to D. Young, the EVA concept is focused on capturing and maximizing an enterprise's economic profit and helps managers make more effective management decisions. It reveals an enterprise's contribution to the alteration in the owner's value of wealth during the accounting period with the activities performed: a positive EVA indicates that value has been created for shareholders; a negative EVA indicates decreased value [10].

In the specialized literature related to company valuation, there is not an abundance of practical business cases at the level of specific enterprises and tracking their financial valuation from the perspective of key stakeholders.

For the purpose of the present study focused on the transport sector, a preliminary review of a specific practical application of EVA was carried out in several very different sectors of the economy worldwide, including looking for similarities between EVA and environmental contexts/impacts of different types of business *(from the production of building materials and components for the construction industry [11], through poultry production systems [12], electronics, electrical and precision engineering [13] to road transport [14])*.

Pauline Gleadle and Nelarine Cornelius, in their paper, examine the financialization and EVA of a large enterprise owning a factory for the production of building components which is part of a large multinational company. The authors reach reasoned conclusions that, irrespective of the significant improvement of the financial situation after the successful implementation of EVA in financial management, this is not the decisive factor for the higher financialization (financial valuation) of the company and *"panacea for struggling organizations"* [11].

M. Woods et al. investigate value based management in one of the largest electronics and electrical engineering companies on an international scale [13]. They identify significant difficulties in the feasibility of transferring the EVA concept as a performance measure from the firm to the product level. Moreover, difficulties are found in the compatibility of the performance management systems from the point of view of shareholders and customer satisfaction-oriented systems as key stakeholders of the company's activities. In this sense, they conclude that further research is needed on ways *to integrate* shareholder values, on the one hand, and customer values, on the other.

We should point out here that we fully share this point of view. In addition to customers, stakeholders ought to include employed staff (and increases in their well-being and social satisfaction) as well as third parties, mostly those who share the same external environment with businesses whose efficiency is measured.

In this sense, the study by Martinelli et al. is also of interest, as the authors apply the term eco-efficiency, introduced in the late 1980s by Schaltegger and Sturm, as a cross-relation between socio-economic rationality and ecological issues, associating environmental impacts with the production costs (cost) for the relevant products and services [12]. *Some of the main objectives of eco-efficiency are: i) the corporate environmental management enabling the maximization of the results of an economic resource; ii) increases in ecological efficiency interpreted from a purely environmental view; and iii)*

the intersection of the previous two objectives, which can be understood as economic-ecological efficiency [12]. In this context, they study the application of EVA in different poultry production systems.

The article by E. Malichova et al. is also of interest in order to get as close as possible to the objects of research in this article, which are Bulgarian road transport companies [14]. In their study, the authors present various economic value-added calculating models as a method for evaluating the efficient usage of invested resources and the creation of value by automotive companies. One of the presented approaches for determining EVA is to employ value spread, which represents economic profitability [14].

3. EXPLORING THE RELATIONSHIP BETWEEN KEY NON-FINANCIAL DISCLOSURE INDICATORS AND THE EX-POST FINANCIAL PERFORMANCE OF THE SAMPLED ENTERPRISES

3.1. Methods

The literature review provides information on a number of studies conducted on the possible benefits of disclosing non-financial information and its impact on the financial performance of enterprises from various economic sectors [15]. The accounting analytical model was utilized as the main approach in building the econometric methods and models by including profitability indicators as a dependent variable measuring financial performance and independent variables (non-financial indicators) [16].

This research was motivated by the limited research on transport companies based on the value analytical approach using EVA as a measure of financial performance. The scientific research methods of analysis, synthesis, induction, deduction, and modeling were used to design an econometric model with a view to proving a correlation dependence and a causal relationship between the disclosure of non-financial information and the financial results (measured by EVA) of road freight transport enterprises. Regression analysis is a statistical method for studying and modeling dependencies between individual processes and phenomena. Given the purpose of this article, this type of econometric study was conducted to confirm the existence of correlational dependence and to show that the relationship is quite suitable as an analytical toolkit. A multicollinearity test was conducted in order to rule out very strong dependencies between the variables that are part of the analytical model. The data included in this study was processed in Microsoft Excel.

3.2. Calculation of the economic value added (EVA) for the first large transport enterprise (PIMK Ltd.)

For most Bulgarian enterprises, the planning and analysis of indicators related to the value created in the enterprise, including added value, are not widely used in business management, and, at this stage, the management of most Bulgarian enterprises is focused on measuring their profitability as a classic performance indicator.

As indicated, along with various useful aspects of EVA in the strategic management of companies, a number of problem areas and criticisms related to its use have been identified. Possible significant difficulties in linking its theoretical justification and measurement with its direct application by financial management and strategic management accounting specialists in various aspects of business activities are noted [12].

In the present article, regardless of some established criticisms, given the useful informational value for management, the EVA concept is perceived as a relevant and appropriate operational measure to maximize the value of road transportation companies for their shareholders in accordance with Stern Stewart's evidence [17].

Accordingly, the financial and economic performance of the investigated Bulgarian road transportation enterprises was measured by EVA. At the same time, an attempt was made to upgrade the analytical value model with the construction of a multiple regression model by utilizing the tools of statistical research methods.

$$EVA = NOPAT - WACC \ x \ Ic \qquad (1)$$

The data used to calculate the EVA indicator were obtained mainly from the annual financial statements and the Annual Report on Activities of PIMK Ltd. published in the commercial register (Registry Agency of Bulgaria) and from the company's website [6].

Data for the calculation of the main structural elements in the EVA formula—net operating profit after taxes (NOPAT), weighted average cost of capital (WACC) [18], and invested capital (Ic) were consistently calculated and systematized in Tables 2 and 3.

The following formula is used to establish the amount of invested capital (Ic) [19]:

$$Ic = NcA + [(CA - BC) - (CL - CID)], \qquad (2)$$

where:

Ic – invested capital;

NcA – non-current assets at book value;

CA – current assets;

BC – bank/cash and cash equivalent;

CL – current liabilities;

CID – current interest debt.

The resulting values for all components until the WACC value[4] is reached are summarized in Table 2.

Table 2

Indicators used to calculate the WACC[5] of PIMK Ltd. from 2017-2021
(Thousand BGN)

No.	Indicators	2017	2018	2019	2020	2021
1	**Total equity**	**86 185**	**89 058**	**88 016**	**91 110**	**107 298**
2	**Long-term interest-bearing debt including:**	**37 548**	**40 779**	**47 306**	**42 043**	**36 174**
3	Liabilities for long-term loans received	37 548	40 779	47 306	42 043	36 174
4	**Short-term interest-bearing including:**	**47 403**	**54 026**	**47 622**	**48 773**	**52 484**
5	Liabilities for short-term loans received	47 403	54 026	47 622	48 773	52 484
6	**Invested capital $(p.1 + p.2 + p.4)$**	**171 136**	**183 863**	**182 944**	**181 926**	**195 956**
7	Invested capital's structure (%) including:	100.00%	100.00%	100.00%	100.00%	100.00%
8	Equity $(p.1 \div p.6) \ x \ 100$	50.36%	48.44%	48.11%	50.08%	54.76%
9	Long-term interest-bearing debt $(p.2 \div p.6) \ x \ 100$	21.94%	22.18%	25.86%	23.11%	18.46%

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[4] The weighted average cost of capital (WACC) can also be measured in terms of value, not just percentages, by calculating the weighted average of the company's various types of capital, multiplied by their cost or value, and then summing the resulting values.

The calculation of WACC in absolute monetary value will give the sum of all the values of costs and payments in accordance with equity financing, i.e. distribution of dividends or profit share and payments in relation to raised capital, i.e. for interest.

The purpose of the presented WACC in percentages is to show the payments as remuneration on average to all financing parties: to shareholders and to creditors (bond holders and banks)

[5] WACC – reflects the weighted average cost of capital or the required return on capital for the reporting period.

10	Short-term interest-bearing debt $(p.4 \div p.6)\, x\, 100$	27.70%	29.38%	26.03%	26.81%	26.78%
11	Risk-Free Rate of Return (Government Securities) $R_{f\,BG}$	1.74	-	0.37	0.27	0.29
12	Beta EU (unlevered) $\beta_{UI\,EU}$	0.86	0.52	0.56	0.55	0.66
13	Debt/Equity coefficient $(p.2 + p.4) \div p.1$	0.99	1.06	1.08	1.00	0.83
14	Beta (levered)β_{LBG}	1.62	1.02	1.10	1.04	1.15
15	Debt spread rating (in points)	195	215	159	168	136
16	Debt spread rating (%)	1.95%	2.15%	1.59%	1.68%	1.36%
17	Risk coefficient for developing markets	1.50	1.50	1.50	1.50	1.50
18	Country Risk Premium for Bulgaria (p.16 x p.17) RP_{BG}	2.93	3.23	2.39	2.52	2.04
19	Risk Premium for developed market EU RP_{EU}	6.01%	7.11%	6.01%	5.56%	5.07%
20	Premium market (total risk premium) for Bulgaria (%) $(p.18 + p.19)\, Re_{BG}$	8.94%	10.34%	8.40%	8.08%	7.11%
21	Cost of equity	16.22%	10.55%	9.61%	8.67%	8.47%
22	Cost of short-term interest-bearing debt	4.61%	5.28%	4.40%	3.18%	3.01%
23	Cost of long-term interest-bearing debt	3.93%	3.38%	3.23%	2.93%	2.77%
24	Tax rate (T)	10.00%	10.00%	10.00%	10.00%	10.00%
	$WACC = p.8\, x\, p.21 + p.9\, x\, p.23\, x(1 - p.24) + p.10\, x\, p.22\, x\, (1 - p.24)$	**10.09%**	**7.18%**	**6.41%**	**5.72%**	**5.82%**

Source: prepared by the authors.

The main elements in the EVA calculation formula (see Formula 1) [20] are built on the basis of data from annual financial statements, which are consistently adjusted to remove financial, tax, and technical deviations caused by the applied accounting (reporting) methods and principles and to include "invisible" capital.[6]

On this basis, it is possible to proceed to the calculation of the economic value added (EVA) of the first large Bulgarian road transport company under study, PIMK Ltd, for the period of 2017-2021.

3.3. Calculation of the economic value added (EVA) for the second large transport enterprise (DISCORDIA JSCo)

The data used to calculate the EVA of the second largest transport company, DISCORDIA JSCo, are summarized in Table 4 [7].

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[6] „Invisible" capital includes company reputation, brand, name and general image of the company, research and development costs, personnel training costs, quality management, etc.

Table 3

Indicators used to calculate the EVA of PIMK Ltd. from 2017-2021
(Thousand BGN)

Indicators	2017	2018	2019	2020	2021
1.NOPAT	5 600.70	3 494.70	521.10	9 230.40	18 224.10
2. WACC (%)	10.09%	7.18%	6.41%	5.72%	5.82%
3. Ic	177 491	197 651	195 562	191 471	205 802
EVA $= NOPAT - WACC \times Ic$	*-12 308.14*	*-10 696.64*	*-12 014.42*	*-1 721.74*	6 246.42

Source: prepared by the authors

Table 4

Indicators used to calculate the WACC of DISCORDIA JSCo from 2017-2021
(Thousand BGN)

№	Indicators	2017	2018	2019	2020	2021
1	**Total equity**	**9 443**	**14 873**	**17 536**	**23 047**	**38 367**
2	**Long-term interest-bearing debt including:**	**6 350**	**7 381**	**9 087**	**9 406**	**14 262**
3	Liabilities for long-term loans received	6 350	7 381	9 087	9 406	14 262
4	**Short-term interest-bearing including:**	**13 120**	**18 859**	**30 050**	**29 485**	**35 729**
5	Liabilities for short-term loans received	13 120	18 859	30 050	29 485	35 729
6	**Invested capital (p.1+p.2+p.4)**	**28 913**	**41 113**	**56 673**	**61 938**	**88 358**
7	Invested capital's structure (%) including:	100.00%	100.00%	100.00%	100.00%	100.00%
8	Equity $(p.1 \div p.6) \times 100$	32.66%	36.18%	30.94%	37.21%	43.42%
9	Long-term interest-bearing debt $(p.2 \div p.6) \times 100$	21.96%	17.95%	16.04%	15.19%	16.14%
10	Short-term interest-bearing debt $(p.4 \div p.6) \times 100$	45.38%	45.87%	53.02%	47.60%	40.44%
11	Risk-Free Rate of Return (Government Securities) $R_{f\,BG}$	1.74	-	0.37	0.27	0.29
12	Beta (unlevered) $\beta_{UI\,EU}$	0.86	0.52	0.56	0.55	0.66
13	Debt/Equity coefficient $(p.2 + p.4) \div p.1$	2.06	1.76	2.23	1.69	1.30
14	Beta (levered) β_{LBG}	2.46	1.35	1.69	1.39	1.43

15	Debt spread rating (in points)	195	215	159	168	136
16	Debt spread rating (%)	1.95%	2.15%	1.59%	1.68%	1.36%
17	Risk coefficient for developing markets	1.50	1.50	1.50	1.50	1.50
18	Country Risk Premium for Bulgaria (p.16 x p.17) RP $_{BG}$	2.93	3.23	2.39	2.52	2.04
19	Risk Premium for developed market EU RP $_{EU}$	6.01%	7.11%	6.01%	5.56%	5.07%
20	Premium market (total risk premium) for Bulgaria (%) $(p.18 + p.19)$ Re $_{BG}$	8.94%	10.34%	8.40%	8.08%	7.11%
21	Cost of equity	23.73%	13.96%	14.57%	11.50%	10.46%
22	Cost of short-term interest-bearing debt	4.61%	5.28%	4.40%	3.18%	3.01%
23	Cost of long-term interest-bearing debt	3.93%	3.38%	3.23%	2.93%	2.77%
24	Tax rate (T)	10.00%	10.00%	10.00%	10.00%	10.00%
$WACC = p.8 \, x \, p.21 + p.9 \, x \, p.23 \, x (1 - p.24) + p.10 \, x \, p.22 \, x \, (1 - p.24)$		10.41%	7.78%	7.07%	6.04%	6.04%

Source: prepared by the authors.

Table 5

Indicators used to calculate the EVA of DISCORDIA JSCo from 2017-2021
(Thousand BGN)

Indicators	2017	2018	2019	2020	2021
1.*NOPAT*	6 422.40	8 224.20	6102.00	8 519.40	19 135.80
2. WACC (%)	10.41%	7.78%	7.07%	6.04%	6.04%
3. Ic	28 382	40 729	56 124	59 923	86 040
$EVA = NOPAT - WACC \times Ic$	3 467.83	5 055.48	2 134.03	4 900.05	13 938.98

Source: prepared by the authors.

The results of the two investigated enterprises, presented in Tables 3 and 5, show that DISCORDIA JSCo creates economic added value for the entire analyzed period, while at PIMK Ltd., value was created only in 2021. One of the reasons for this is the high relative share of the more expensive capital resource- equity on the one hand and a decrease in sales revenue and resp. profit on the other hand.

4. EXPLORING THE RELATIONSHIP IN THE TWO LARGE TRANSPORT ENTERPRISES BY BUILDING A MULTIPLE REGRESSION MODEL

Based on the researched international transport enterprises listed on international stock exchanges and the obligation to use GRI standards as a framework for non-financial disclosures, key indicators of social and environmental performance were derived in accordance with the standards of sustainable reporting of the global reporting Initiative. The key environmental indicators included in the study are disclosure of information on energy consumption within the organization (GRI302) and direct emissions of greenhouse gases released into the atmosphere (GRI305). The social indicators are the average number of staff and employee turnover (GRI401) and information on organizing and conducting training programs in connection with increasing staff qualifications (GRI404) [21]. The key indicators defined above were applied to the two large Bulgarian enterprises from the road freight transportation industry.

On the basis of a correlation analysis performed to confirm or reject the dependence between non-financial disclosure and subsequent financial performance, contradictory results and inconsistencies were obtained, which showed a correlation difference in strength and direction for the two investigated enterprises (PIMK and DISCORDIA, see Fig. 3) [22].

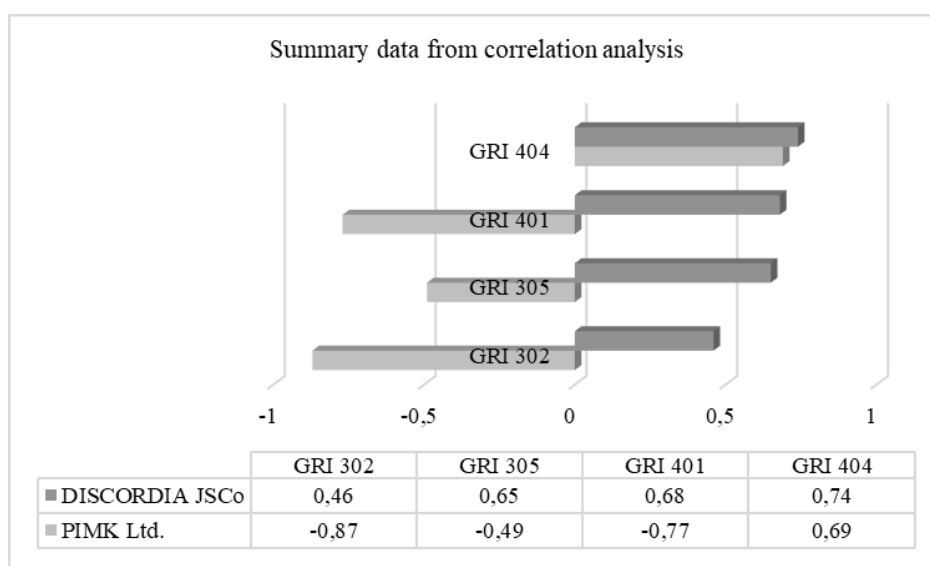|	GRI 302	GRI 305	GRI 401	GRI 404
▪ DISCORDIA JSCo	0,46	0,65	0,68	0,74
▪ PIMK Ltd.	-0,87	-0,49	-0,77	0,69

Fig. 3. Summary data from correlation analysis (Source: GRI Standards and a database available online [6, 7, 23-26])

For the analysis, based on the obtained data (see Fig. 3) for the two large Bulgarian enterprises from the road freight transport sector, a multiple regression model was built.

The non-financial information included in the model is summarized by the values of the key GRI indicators, and, in this respect, the multiple correlation coefficient reflects the complex influence of all the factors examined. The multiple regression equation should take the following form:

$$EVA\ (y) = a_0 + a_1 GRI_{302(it-1)} + a_2 GRI_{305(it-1)} + a_3 GRI_{401(it-1)} + a_4 GRI_{404(it-1)} + \varepsilon \qquad (3)$$

A correlation analysis was performed (see Table 6), which rejected the presence of multicollinearity. This is a basic multiple regression requirement to prove independence between the factor variables, and the absence of multicollinearity in the conducted analysis positively affects the reliability and significance of the econometric results [27]. The four variables of *energy consumption within the organization, direct GHG emissions, employee turnover,* and *staff development programs* can be retained in the regression analysis model proposed above since the obtained correlation coefficients do not exceed 0.7 [28].

In this research, EVA is the dependent variable (y), which measures financial performance. The factors in the regression model, or so-called independent variables, are represented by the key non-financial indicators of environmental and social performance identified in the research: the GRI_{302} (x_1), GRI_{305} (x_2), GRI_{401} (x_3) and GRI_{404} (x_4). The number of observations is 10.

In this case, the regression equation has the following form:

$$y = a_0 + a_1 x_1 + a_2 x_2 + a_3 x_3 + \varepsilon \qquad (4)$$

where:

y is the value of the outcome variable (the dependent variable);

x_i, i = 1, ..., are the measured values of the factorial features or independent variables;

a_i, i = 0, 1, ..., are the coefficients in the regression equation.

Table 6

Multicollinearity test

	GRI 302 (x_1)	GRI 305 (x_2)	GRI 401 (x_3)	GRI 404 (x_4)
GRI 302 (x_1)	1			
GRI 305 (x_2)	0.580205282	1		
GRI 401 (x_3)	0.642844245	0.578625031	1	
GRI 404 (x_4)	-0.33997642	-0.091527666	-0.467003386	1

Source: based on own calculations and Microsoft Excel.

Table 7

Summarizing the regression analysis results

Coefficient of correlation (Multiple R)	Coefficient of determination R^2 (R Square)	Adjusted R Square*	Standard Error (Std. Error)	Change Statistics				
				R Square	F	df1	df2	Sig. F**
0.955	0.913	0.843	35.267	0.43	13.073	4	5	0.0074

Source: based on own calculations and Microsoft Excel.

The model is adequate, as the empirical value of the F-criterion (Table 7) is 13.073 and exceeds its theoretical value of 3.52. When the significance level (Sig) is lower than the error $\alpha = 0.05$ (i.e., Sig. F $< \alpha$), it is a reason to accept that the correlation coefficient is statistically significant and reflects a real relationship in the general population under the relationship under study [22].

The calculated multiple correlation coefficient measuring the strength of the relationship between financial performance for a given reporting period on the one hand and the disclosure of information on direct energy consumption (GRI$_{302}$), direct GHG emissions, emissions to the atmosphere (GRI$_{305}$), the average number of personnel and employee turnover (GRI$_{401}$), and information on the organization and conduct of training programs related to staff development (GRI$_{404}$) on the other hand for the previous reporting period (t-1), is r = 0.955. The correlation has a coefficient above 0.7, suggesting a strong relationship between the variables [29].

Table 8

Analysis of variance to test the significance of the coefficient of determination

ANOVA					
Model	SS	Df	MS	F	Sig. F
Regression	0.000651	4	0.000163	13.07315	0.007384
Residual	0.000133	5	0.000027		
Total	0.000784	9			

Source: based on own calculations and Microsoft Excel.

Table 8 presents data from the analysis of variance conducted. The value of the coefficient of determination ($R^2 = 0.9127$) indicates that the selected factors GRI$_{302}$ (x_1), GRI$_{305}$ (x_2), GRI$_{401}$ (x_3), and GRI$_{404}$ (x_4) largely influence the performance indicator EVA (y).

It can be generalized that the equation is statistically significant since the value of F is 0.007 < 0.05.

The coefficients column presents the values of the coefficients **a_0, a_1, a_2, a_3**, and **a_4**. From the obtained P-value results, it follows that the regression coefficients in front of the factors X_1, X_3, and X_4 are

statistically significant, as their significance levels are lower than the α=0,05 error [30]. Therefore, three factors (intra-organizational energy consumption, employee turnover, and staff development programs) can be identified as having an impact on the ex-post financial performance of transport enterprises and should be included in the regression equation.

Table 9

Significance of the regression coefficients in the equation

	Coefficients	Std error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-14368.9	6442.25	-2.2305	0.0761	-30929	2191.393
GRI$_{302}$ X$_1$	-0.98442	0.24436	-4.0285	0.0100	-1.6126	-0.35626
GRI$_{305}$ X$_2$	-496458	164392	-3.0199	0.2942	-91904	-73874.6
GRI$_{401}$ X$_3$	40.54103	10.34873	3.9175	0.0112	13.9388	67.1433
GRI$_{404}$ X$_4$	0.806133	0.155402	5.1874	0.0035	0.40666	1.20561

Source: based on own calculations and Microsoft Excel.

The equation should take the following form:
$$y = -0.984x_1 + 40.54x_2 + 0.806x_3 + \varepsilon \tag{5}$$

In summary of the results obtained from the multiple regression analysis, the following conclusions can be drawn:

✓ This research confirms that a more detailed disclosure of non-financial information in a given reporting period has some impact on ex-post financial performance in a subsequent reporting period.

✓ Based on the results obtained, the three factor variables, including the immediate energy consumption in the organization, the hiring and selection of new employees (employee turnover), and the organization and implementation of training programs in relation to the improvement of staff qualifications, have a significant impact on the ex-post financial performance of the enterprises studied. A smaller percentage of the variation in EVA is based on other factor variables that remain outside the research model.

✓ Notwithstanding the results obtained and summarized in this article, it should be borne in mind that due to the relatively small sample size, it is advisable to re-run the analysis with a larger number of enterprises in the road freight transport sector. This is necessitated by the fact that the value of the standard error in the regression model is high due to the insufficient number of observations (i.e., 10). Although the standard error of the model cannot be interpreted independently, it is an important qualitative characteristic, and models with lower standard error values are defined as more reliable.

5. CONCLUSIONS

Financial information has always been a fundamental part of a company's reporting system. Nevertheless, the economic environment is undergoing dynamic changes mainly due to globalization, which requires companies to respond to the information needs of stakeholders.

Currently, non-financial information is gaining significance as reporting in companies builds on the creation of information reflecting financial indicators by compiling additional integrated reports/non-financial statements (the so-called corporate sustainability report from the end of 2022).

The main benefits of reporting non-financial disclosures are a consequence of companies' possibilities to communicate and implement a sustainable strategy that creates long-term shareholder value while contributing to a sustainable society and to climate neutrality.

Practices for non-financial disclosures in the largest Bulgarian road freight transport enterprises and their subsequent financial and economic results, in general, remain underdeveloped. This study made an attempt to partially fill these voids. The data used in the analysis are publicly available; they are published in the Republic of Bulgaria Registry Agency and on the websites of the two investigated enterprises for a five-year period.

The value-based analytical approach considers the increase of EVA as the main objective for the development of the company. Although it is based on events that have already taken place, it is also seen as a good estimate of the market value of the enterprise.

This study makes an additional contribution by addressing the lack of empirical studies looking for a relationship between the environmental and social performance of transport companies (in this case, expressed through specific environmental and social indicators introduced by the GRI) and their financial and economic efficiency (in this case, expressed by EVA). The results show a different relationship and dependence for the two investigated companies in terms of strength and direction; opposite results are to be investigated by the authors in subsequent scientific works.

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