### FINANCIAL TRANSPARENCY AND TAX AVOIDANCE RISKS FOR MANUFACTURING COMPANIES: A STOCK MARKET ANALYSIS OF TAX COMPLIANCE IN ROMANIA

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#### Abstract

This study explores the phenomenon of tax avoidance and earnings management whereby companies intentionally adjust their financial reporting to minimize tax liabilities. An applied analysis of the financial performance of 60 companies listed on the Romanian Stock Exchange, using data collected from the balance sheet, profit and loss statement and cash flow statement over a two-year period. The research sheds light on the mechanisms through which companies resort to earnings management practices to disguise real revenues and reduce tax liabilities, thus affecting reporting transparency. The results provide a valuable framework for investors in which the manufacturing sector is emphasized, as the effects indicate a reduction in confidence and increased volatility in financial performance. These survey findings are relevant for investors as they highlight the risks associated with investing in companies that adopt such practices. The analysis also provides important insights into the identification of companies with high tax compliance, which is essential for the design of long-term stakeholder decisions. The paper emphasizes the need to improve tax and accounting regulations to reduce the risks of tax avoidance in the Romanian stock market environment.

#### Keywords

Earnings management, tax avoidance, tax shelter, insider transactions, earnings quality, real earnings, accrual earnings.

JEL Classification H26, M41

#### Introduction

In this paper we will focus on describing and unravelling the primary elements that accountants misrepresent to model the truth in financial reporting. It is relevant to determine the scores and discover the links between variables to understand how a company's image can be distorted and the repercussions felt in the economy through unfair distributions of the tax burden between taxpayers.

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Financial transparency and earnings management represent two interconnected yet contrasting concepts in the realm of corporate finance and accounting. According to Leuz and Wysocki (2016) financial transparency refers to the clear, accurate and timely disclosure of a company's financial information to provide stakeholders with an honest reflection of the company's financial health. Thus, our paper brings to users the possibility to undertake corporate governance mechanisms to keep capital allocation under control. On the other hand, earnings management involves the strategic manipulation of financial reports to present a more favourable image of a company's performance, often straying from economic reality. The relationship between these two practices is complex: while increased financial transparency can serve as a deterrent to earnings manipulation, opacity in financial reporting creates fertile ground for companies to engage in earnings management. Exploring these dynamic reveals critical insights into corporate governance, investor protection, and the integrity of financial markets. Underlying the motivation for choosing the topic is a personal ambition to increase transparency in financial statements and disclosure of non-compliant practices. In most cases, investors' judgments are often overturned because these techniques have a negative impact on how economic reality is perceived.

The two main forms of investigation are creative accounting and tax avoidance in the pandemic period. The research problem is the impact of creative accounting correlated with tax avoidance in the decision making and financial performance that companies publicly display. Using this intention, we have presented two research questions to understand the needs and directions of action. The first research question is: How can we identify creative accounting for listed companies in Romania; the other is: How can the risk of tax avoidance be measured? Therefore, the empirical study of this paper has two objectives: the first is geared towards an in-depth analysis of the quality of earnings reported by companies, to identify sudden variations and to reveal whether companies are practicing accounting techniques to model earnings during the pandemic period. The second objective is to examine the link between earnings quality and the risk of tax evasion, to create a map for investors of the firms with the highest accounting and tax risk. The research hypothesis of the study focuses on the existence of a positive correlation between the overall quality of a firm's earnings by reference to return on assets and the size of reported taxes; as a positive score is assumed to be associated with greater confidence in financial statements. On the other hand, it is assumed that loopholes, legislative ambiguities and the pandemic period facilitate tax evasion. The two influence each other. Thus, firms with low earnings quality are expected to have a higher risk of tax evasion compared to those with higher and more transparent earnings quality.

To achieve the proposed objectives, the study adopts a methodology based on the empirical analysis of financial and tax data reported by listed companies over two financial years. The tools used are a bibliometric analysis to support the idea that the subject is topical and has evolved over time, followed by the application of the EQM score to measure quality and retain only those firms with low quality and sharp variation over the time-period analysed. The ETR indicator is used to quantify the risk of tax avoidance in relation to the 16% tax rate and following the sample to contain only those firms with negative economic effects for both components.

The economic downturn has been triggered by two sources: administrative business shutdowns and restrictions on social contact. Thus, studies on this issue reinforce the idea that firms when experiencing financial difficulties tend to practice more approaches to reduce their tax base, providing distorted information to policy makers (Athira and Ramesh, 2023; Zhu et al., 2023). At the opposite pole, companies in America experience a decline in revenues during this critical period but this is not associated with tax avoidance actions, but with spillovers to economic health (Kobbi-Fakhfakh and Bougacha, 2023). Our research fills gaps in the literature on avoidance risks at the corporate level and places Romania in a European or global context to facilitate comparability of data and inform future measures that the tax administration is considering. Similar to the results recorded in this study, researchers have shown that companies listed on the stock exchange are much more likely to adopt manipulative techniques biased towards overstating future earnings during the SARS-CoV-2 pandemic and much more sensitive in reporting information.

The samples used in the literature target European Union member countries to present intra-EU area transparency (Comporek, 2023; Lizińska and Czapiewski, 2023). The study differs from other research by applying a sectoral analysis that divides companies according to their field of activity into three industries: production of goods, provision of services and trade, to show which industry shows sensitivity to tax pressures. Originality contributes to turning academic findings into targeted tools to support vulnerable tax regulation. According to the literature, this phenomenon is an economic shock that has urged companies to manage earnings through accounting manipulations to adapt to crisis situations like companies in China (Yan et al., 2022). The benefits are such research would not only enrich the academic literature but also provide valuable practical information for policy makers and tax authorities. Adaptation for different economic sectors, which could ultimately lead to more efficient and fair tax administrations in the context of technology acceptance. Institutions would have access to data and analysis to assist them in formulating comprehensive anti-avoidance policies.

The rest of the paper is organized as follows: the first part of the paper reviews concepts in the literature related to creative accounting and methods of financial manipulation. The second section details theoretical aspects of tax avoidance, and the third part presents the results of listed companies on financial reporting transparency, where manufacturing companies show high vulnerability and low profitability indicators.

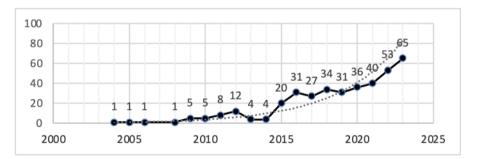
#### 1. Review of the scientific literature

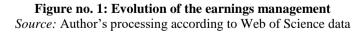
#### 1.1. Earnings management

From the point of view of the appearance and the criticisms associated with the definition of the notion of creative accounting, researchers in the field support the following arguments. Sharma Nishant (2020) argues that the technological transformations in the field of Human Resources and Accounting are remarkable and have generated an unprecedented expansion of creative accounting concepts. In any organization, HR departments are encouraged to be inventive, which may lead them to adopt ethical methods or, conversely, resort to less ethical tactics to achieve superior results for the company. In contrast to the study based on technological progress, Ruddy & Everingham (2008) and Norio Sawabe (2005) show how creative accounting develops in response to

pressures within a social context, involving the use of various management tactics to prompt users to reach certain conclusions or perceptions and the use of areas not covered in accounting rules by management to present a perfect picture of the company's financial performance.

In some cases, standard setters provide exceptions in application or alternatives in accounting treatment through rules to prevent conflicts and address stakeholder concerns. The focus is on publicly traded companies with a huge volume of activities and the chances of tax optimisation or corrosion are high. Dechow and Sloan (1991) presented evidence showing that executive managers tend to change concrete activities, such as reducing investment in research and development near retirement. Studies by Bens et al. (2002) and Cheng (2004) also found that managers are likely to select certain operational activities to maximize the value of their compensation, which is tied to stock or financial performance. The limitations of accounting concepts also appear in this category, as economic reality varies and regulations cannot capture all the complex issues to reflect a true picture. Romanian researchers Guinea F.A. (2016) and Malciu, L. (1999) provide some techniques that they have identified in practice and illustrated individually in their studies:(a) Reserve management: it allows the use of profits or covering losses to outline long-term objectives but also to adjust the timing for recording income or expenses through tax advantages; (b) Assessment of estimates: provides for the correct adjustment of subjective estimates which may include depreciation and provision policy impacting assets and profit;(c) Management of accounting periods: by extending them to influence financial reporting; Choi (2009) argues that highly leveraged companies tend to avoid using earnings management practices because they are subject to greater scrutiny from shareholders and creditors. Tsekrekos (2017) indicates that highly leveraged companies prefer to manipulate earnings using the real earnings management method rather than accrual earnings because this method is less visible to auditor and authority scrutiny.





Next, the focus is on the interest, which researchers, in grant for the measurement of tax evasion, when the legal limits that outline creative accounting are exceeded. Figure no. 1 shows an increase in interest in manipulation techniques applied in practice, but concomitant with an increase in caution for the risk of tax evasion. It increased from 1-5

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published articles per year in the period 2005-2010 to 53-65 scientific articles per year in the period 2022-2023.

#### 1.2. Tax avoidance

We identified four studies that discuss the link between the two economic phenomenon in positive and negative relationship, where Hope (2013), Jacob and Jorgensen (2007), found that the earnings distribution shows discontinuity around zero earnings, prior year earnings and financial analysts' earnings forecasts. This evidence suggests that publicly traded companies manage their earnings to meet earnings targets and being the most prone in applying manipulative techniques that guide investor decisions.

In addition, recent research has shown an inverse relationship. An example is the study by Guenther and colleagues (2017), which found a negative correlation between tax avoidance and creative accounting practices, but only when the ETR (effective income tax rate) indicator is used as a measure of tax aggressiveness and when attempts to reduce taxes are achieved through illegal means that directly affect financial reporting and legal implications related to criminal liability. The same appears to be true for studies conducted in China. Therefore, Richardson et al. (2016), for the period 2005-2010, found a positive relationship between tax avoidance and creative accounting when the ETR indicator was employed, but not when other tax avoidance measures were used instead. Finally, Guenther and Richardson found the opposite results.

On the other hand, social norms theory suggests that the social rules of the local community in which an organisation operates will influence how it is managed, as the local community is a crucial factor in the environment in which managers operate and are embedded according to research by Sunstein (1996), Cialdini and Goldstein, (2004), and McGuire et al. (2011). Some companies tend to resort to using creative accounting practices to improve their financial picture on the balance sheet, but at the same time can manipulate their tax position, unlike other companies that focus exclusively on one of these two aspects. This finding is supported by research by Frank and colleagues (2009) and Wilson (2009), who identify a positive link between tax havens and tax aggressiveness with aggressive financial reporting practices, respectively. In contrast, the study by Lennox and his team (2013) indicates that companies with an aggressive tax approach are less likely to engage in accounting fraud, suggesting a negative relationship between aggressive financial reporting and tax aggressiveness. But in a more practical view Desai (2009), Slemrod (2004) and Chen (2010) assume that there is always a positive link between tax avoidance opportunities and rent manipulation opportunities. However, the ability to manipulate rents is a key factor that counteracts and prevents unrestricted engagement in tax avoidance activities. Such a scenario highlights the fact that tax accounts are usually among the last accounts to be closed before income tax returns.

According to studies by Achim & Borlea (2019), Armstrong et al (2012) and Dyreng (2008), assessing the degree of tax evasion is also a difficult issue. Typically, indicators such as ETR and CETR are used to determine tax avoidance: (a) Effective tax rate (ETR), which is determined under US GAAP as the full tax expense (deferred and current), relative to gross profits for that fiscal year. It highlights practices that decrease tax

expense in financial statements. (b) The effective cash tax rate (CETR), calculated as the ratio of taxes paid to gross profits recorded during that year. It highlights approaches that reduce the actual cash taxes paid, in much more detail and correlation with the cash flow existing for that reporting period.

Comparing the two indicators by the values recorded with the tax rate used by law gives clues to assess the state of tax avoidance. Below the level of the tax rate, indicates tax evasion. In a similar vein, Martins Ribeiro (2015) analysed the key factors influencing the effective tax rate in companies in England over the time period from 2010 to 2013. The research used companies-specific characteristics and corporate governance issues as determinants of ETR. A sample of 704 companies listed on the London Stock Exchange was used for this investigation. The findings revealed a significant and positive association between ROA and ETR. Additionally, Jamei and Khedri (2016) confirmed this positive correlation between ROA and ETR. In contrast to their findings, the study by Yuniarwati et al. (2017) focused on the factors influencing tax avoidance for listed companies in Indonesia during 2013-2015. The results of this study revealed a significant and negative correlation between ROA and effective cash tax rate (CETR). This suggests that ROA is a determinant factor in adopting tax planning strategies.

#### 2. Research methodology

Throughout the paper we have used a quantitative research methodology because numerical data are analysed and the relationship between the two variables mentioned above is evaluated. To establish a diagnosis for the period 2021-2022, we selected 60 companies listed on the Bucharest Stock Exchange, which we classified into 3 categories according to their activity object: production of goods, provision of services and trading of goods. For this typology, we used the CAEN code on the first page of the balance sheet form, where the identification data of the company are found, and thus disregarded the secondary objects of activity. For the creative accounting part, we used the score developed by Putman where we interpreted a coefficient of the score for each of the 2 years, with a value equal to or greater than 1 that indicates a high quality of earnings, while a coefficient with a value less than 1 suggests the opposite, a low quality of earnings. Since some companies in the sample show sudden fluctuations from year to year, signs of creative accounting, we will rate average EQM scores below 5.00; as having low quality and underwriting deviations in earnings management. Scores between 5.00 and 9.99 suggest financial situations with above-average earnings quality, while scores of 10.00 or higher indicate higher earnings quality. For tax evasion, the STR and ETR indicators were distinguished.

STR - Statutory Tax Rate, which is the official corporate tax rate set by the government for companies - 16% in Romania.

ETR - Effective Tax Rate, which reflects the actual proportion of tax paid by a company or individual in relation to their pre-tax income. The ETR may differ from the STR because it considers tax deductions, exemptions and other tax adjustments that may reduce the effective tax paid.

In the process of data collection, we used the following pillars from the set of financial statements: cash flow from operations which we selected from the cash flow statement, turnover from operations actually predominantly carried out which was selected from the

profit and loss account, and the rest of the data such as interest expenses, net result were taken from the profit and loss account, while receivables from the balance sheet. In addition, for the tax evasion part we collected data on current and deferred income tax expenses, from which we subtracted the deferred tax income. The data were processed using Microsoft Excel and using some of the functions it offers to minimise the risk of error and without requiring the use of a special statistical interpretation program. The results of the quantitative research are presented in figures, tables, graphs and supplemented with concise interpretations of the effects. The limitations, consist in the difficulty of encompassing the hidden aspects of the information behind the accounting monographs, that have consequences in the formation of the comments. We have retained the score developed by Putman R.L., (2005), for the analysis applied to companies listed on the stock exchange and about which it can be stated that each component is weighted by 20%, having an equal "weight". This equal "weight" suggests that the ratios in the model have the same impact on the outcome. Calculate the difference between the ratio of sales and receivables for the current period and that for the previous period. If the ratio is unchanged from period to period, the value is zero; therefore, to keep the weight of each variable in the formula equal, 1.00 is added to the ratio. The multiplier 5 was used to correct the values shown, i.e. the cash flow margin indicates the profitability of the company and shows us how quickly sales are converted to cash and there should be as short a time frame as possible for companies and companies with leverage below 1.00 will take more than 5 years to repay all debts and the quality of earnings will deteriorate. The score is presented as follows: (1)

Scorul EQM = 
$$5\frac{\text{CFO}_{t}}{\text{S}_{t}} + \frac{\text{CFO}_{t}}{\text{EBIT}_{t}} + \frac{\text{COI}_{t}}{\text{NI}_{t}} + 5\frac{\text{CFO}_{t}}{\text{TL}_{t}} + \frac{\text{S}_{t} - \text{S}_{t-1}}{\text{AR}_{t} - \text{AR}_{t-1}} + 1$$

Where: CFO is cash flow from operations; S: net turnover, from group 70 of the chart of accounts; EBIT: gross profit for the year before tax and interest; COI: net turnover corresponding to the predominant activity actually carried out; NI: net profit for the year; TL: total liabilities (both short-term and long-term); AR: receivables; all indicators in reference year t.

#### 3. Results and discussions

#### 3.1. Assessing the quality of earnings

The practical approach to the phenomenon illustrated above is based on governmental and corporate decisions and actions that are reflected in the financial statements of companies. The premise of this study starts from the idea that the human universe described by profitability, risk and uncertainty, is witnessing the deterioration of the economy following the Covid-19 pandemic. Thus, we consider that imbalances in the economic market are likely to favour companies to apply creative accounting techniques, tax optimisation or even tax avoidance. If competitors foresee a rebound in demand after a difficult period, they will do their best to stay in that market, and if they are convinced that the drop in demand is permanent, their withdrawal implies less reporting bias. For this reason, we assessed earnings quality using the EQM score, developed by Putman, for detecting creative accounting. The data, which are shown in the table no.1 from appendix. The results indicate a low level of earnings quality for 11 companies that have been classified in this typology, of which 2 entities (Romcarbon, Shipyard Orşova) record

negative values of coefficients in both 2021 and 2022, i.e. well below the minimum accepted level of 1. Romcarbon's situation improves by 76.11% during the period under review, suggesting a smoothing of the recorded results, while the decline of Santierul Naval Orsova has improved by 78.80%, although cash flows and the decrease in indebtedness do not show significant variations. Next, we have identified 6 companies whose coefficients have marked average values, of which the company Rompetrol Rafinare registers such sudden variations that the score has improved twice during the period mentioned, as well as Prebet. The more a company's external environment is characterised by a broader combination of complexity and turbulence, the more the strategist strives to properly predict and assess the most likely impact of future changes in the environment on the company's performance. For the two companies, if we refer to the first calculated indicator, the ability of sales to generate cash from operations decreases for the first company by 23.75% and increases for the other by 13.80%. There are 20 companies with a high level of risk, of which 5 have been classified as high risk because they are experiencing sudden variations. Altur has 5 times higher score values in 2021 compared to 2022, Armatura 15 times, Conted 7 times, Iar 12 times and Promateris 6 times, all during the analysis period.

Contrary to expectations, for Altur, leverage is declining, which amplifies the existence of creative accounting techniques because negative indicator values suggest inefficient use of total debt to generate profit. The centralized results are shown in figure no. 2 below, where we have ranked the entities according to the associated risk for each level. Companies with a high risk are those whose EQM scores vary sharply over the analysis period under the influence of several factors, while companies with an accepted risk are those with no significant fluctuations.

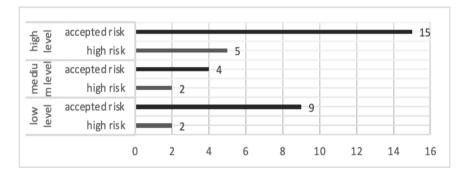
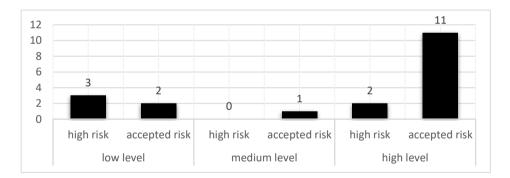


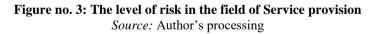
Figure no. 2: The level of risk in the field of Goods production Source: Author's processing

In the analysis applied to the entities providing services, we would like to highlight the importance of risk analysis, risk management and its economic perception through the indicators already presented, where we have identified 5 companies whose level is considered to be low. Energopetrol's score increased sharply by 76.02%, while the involvement of turnover in cash generation also increased by 86.23% during the analysis

period. Dafora's score also changed sharply, increasing by 80.16%; in line with the increase in expenses, which caused the ratio of turnover from continuing operations to net profit to decrease. The entity Energetica Electrica deteriorated its score by approximately 5 times in 2022 compared to 2021, under the influence of the change in receivables.

This means an increase in the time to collect them. Fine Mechanics is the only company with average score values, and at the same time it has no significant fluctuations for any of the indicators. In another vein, 13 companies have a high level of earnings quality (figure no. 3), of which Bittnet Systems' score increased 8 times and Transelectrica's score decreased by 87.27%, under the significant influence of the gross result which grew much faster compared to the cash flow from operations. For the other legal entities, the score was categorised as an accepted risk, there are 14 such companies. Therefore, it is a mistake to neglect the possibility that a contract may generate a dispute. The results are grouped in figure no. 3. Companies score less favourably, <sup>3</sup>/<sub>4</sub> score at a low level of quality, while only one company scores at a medium level. Entities do not experience sudden variations in indicators; therefore we will associate each company with an accepted level of risk. The low values of the cash flow margin in the period 2021-2022 indicate that there is a short timeframe for converting sales into cash, which is favourable even though the indicator has been multiplied by 5 and the score suggests low quality.





The sample shows us that 23% of companies are high risk, and the sector most prone to risk is manufacturing, where 15% of entities are high risk; a decline marked by the economic crisis during the pandemic period. To enhance our understanding of the indicators used in determining the EQM score, we have analysed at the aggregate level for the 60 companies, their financial influences for each.

Cash flow margin from operations shows high values for One United Properties S.A., Sphera Franchise Group S.A., Condmag S.A. and Ves S.A. in 2021, signifying an increased ability to sustain operating costs and produce positive cash flows from core activities. We counted 43 companies with positive values of this indicator, and it suggests

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that companies are converting more of their turnover into cash flows and can be interpreted as a sign of operational efficiency and good liquidity management. There are 17 companies with negative values, indicating poorer operational performance or difficulties in converting revenue into cash. In the following year, the number of companies with positive values increases to 45, while the values for Condmag S.A. increase 1.38 times: from 7.36 in 2021 to 17.58 in 2022, but surprisingly the values for One United Properties S.A. decrease 1.37 times.

The operating cash flow ratio is greater than 1 for 32 legal entities, i.e. a higher proportion of EBIT is converted into operating cash flow. This indicates that companies have good efficiency in converting early profits (before interest is applied) into free cash flow. On the other hand a ratio less than 1 was identified for 28 companies in 2021. This suggests the possible use of different accounting policies or possible discrepancies between profits recorded in the accounts and actual cash flows. One year later, the number of companies recording values above 1 fluctuates sharply, dropping substantially to 25, with the remaining 35 companies having values below this margin.

At the repeated earnings rate, the ratio for the two components is greater than 1 for 25 companies in 2021 and increases to 30 companies in 2022, which is interpreted as lower levels of extraordinary expenses or other items affecting net profit outside of activities conducted with some regularity, leading to greater stability of operations. Contrary to the rest of the companies that obtain values lower than 1, where a higher volatility or a higher dependence on financial, i.e. extraordinary income and expenses is noted.

For leverage, 25 companies have indicators > 1 in 2021, i.e. the cash flow generated from the company's operations is adequate to cover all long and short-term obligations. This is viewed in a positive light as it demonstrates that companies have sufficient cash generated from operations to meet all liabilities. The remaining 9 companies have values close to 1, with a balance between cash flows and liabilities. In 2022, the number of companies with favourable results has increased and the number of companies with values less than 1 has decreased, and possible difficulties in managing and paying debts in a financially risky situation in the COVID-19 pandemic are reduced.

Finally, we can state about the receivable's accrual ratio that the value of receivables increases faster than the turnover increases for 55 companies in 2021 and for 57 companies in 2022, and this shows a strategy of extending trade credit to partners, where companies allow customers to defer payment to encourage sales; positive values of the indicator are obtained. However, a rapid increase in receivables, increases the risk of non-payment and may affect the liquidity of the company.

#### 3.2. Measuring the risk of tax avoidance

The analysis will extend to all 60 companies on the risk of tax evasion, to compare whether the same entities for which we have identified a high level of risk in terms of creative accounting, also engage in the tendency to lighten the tax burden. To reach this target, we retained the ETR indicator, and further called it STR, the 16% tax rate used to calculate the profit tax. This acronym comes from "the statutory tax rate", as it is also used in international literature. Data from the portfolio of companies analysed are also influenced by other variables in the economic environment. The COVID-19 pandemic is the main factor justifying the economic crisis and the results recorded by them.

The accounting losses of the companies also attracted the appearance of tax losses, which lead to the reduction of taxes collected at the state budget. We found 12 entities in this situation in 2021, and in 2022 the number dropped to 6, disregarding the assumption that companies manipulate their information to reduce the taxable amount, and we considered that they were affected by the pandemic. The triggers of the manifestations addressed by the defendants expose their trust in the government, equality in the face of imposed rules and regulations, including tolerance towards other fellows. Energopetrol S.A. Company and UCM Resita S.A. they are found in the judicial reorganization procedure, the stage preceding the financial bankruptcy. This excludes them from the analysis because they reinforce the idea that they face financial difficulties and do not apply financial statement manipulation practices in the service and manufacturing sector and in addition, they could significantly influence the outcome of the study because they are an exception among the analysed companies.

Year		2021		2022		
		ETR			ETR	
Companies/indicators	ETR	- STR	ROA	ETR	- STR	ROA
OMV PETROM S.A.	13%	-3%	5,45%	14%	-2%	17,95%
NUCLEARELECTRIC A S.A.	14%	-2%	10,77%	13%	-3%	23,44%
ALRO S.A.	10%	-6%	1,34%	18%	2%	9,80%
ROMGAZ S.A.	11%	-5%	21,38%	19%	3%	13,53%
TRANSGAZ S.A.	22%	6%	2,42%	16%	0%	4,57%
TERAPLAST S.A.	3%	-13%	41,50%	6%	-10%	6,49%
CEMACON S.A.	7%	-9%	17,75%	8%	-8%	16,03%
ONE UNITED PROPERTIES S.A.	16%	0%	5,71%	2%	-14%	10,52%
TRANSELECTRICA S.A.	76%	60%	0,01%	12%	-4%	6,31%
SOCIETATEA ENERGETICA	0%	-16%	7,47%	-1%	-17%	0,65%
BITTNET SYSTEMS					258	
S.A.	9%	-7%	9,78%	-242%	%	0,52%
MED LIFE S.A.	16%	0%	6,76%	38%	22%	0,32%
TTS S.A.	10%	-6%	14,55%	12%	-4%	23,95%
CONPET S.A.	15%	-1%	6,73%	14%	-2%	7,64%
ELECTROARGES S.A.	5%	-11%	-9,05%	9%	-7%	-9,10%

Table no. 1: Calculation of indicators for tax avoidance, 2021,2022

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Year	2021				2022	
		ETR			ETR	
Companies/indicators	ETR	- STR	ROA	ETR	- STR	ROA
ALUMIL ROM	100/		0.000/	4 50/	4.07	0.500/
INDUSTRY	19%	3%	8,20%	15%	-1%	8,78%
SINTEZA S.A.	-3%	-19%	2,26%	-2%	-18%	-3,97%
OIL TERMINAL S.A. CHIMCOMPLEX	26%	10%	0,97%	13%	-3%	1,74%
BORZESTI	14%	-2%	15,33%	15%	-1%	9,29%
PROMATERIS S.A.	15%	-1%	8,81%	31%	15%	1,20%
ANTIBIOTICE S.A.	1%	-15%	3,34%	8%	-8%	4,50%
IAR S.A.	11%	-5%	5,74%	21%	5%	2,16%
FARMACEUTICA REMEDIA S.A.	0%	-16%	1,26%	12%	-4%	4,66%
AQUILA PART PROD COM	8%	-8%	7,72%	15%	-1%	9,20%
BIOFARM S.A.	13%	-3%	14,67%	12%	-4%	15,20%
TURBOMECANICA S.A.	17%	1%	6,63%	9%	-7%	6,51%
CONDMAG S.A.	0%	-16%	3,48%	0%	-16%	-7,80%
ROMCAB SA	-1%	-17%	7,40%	-5%	-21%	7,12%
COMPA S. A.	16%	0%	1,93%	35%	19%	0,33%
SPHERA FRANCHISE S.A.	0%	-16%	3,91%	1%	-15%	5,67%
ROMPETROL	<b>0</b> 4 6 4	<b>7</b> 00/	4 44 64	0.07	100/	
RAFINARE	-34%	-50%	-4,41%	-3%	-19%	6,44%
SOCEP S.A. ROMPETROL WELL	0%	-16%	2,41%	15%	-1%	8,35%
SERVICES S.A.	8%	-8%	1,06%	15%	-1%	1,99%
IMPACT DEVELOPER	150/	10/	6 0 <b>-</b> 0 (	1.50/	10/	1
& CONTRACTOR S.A.	17%	1%	6,07%	17%	1%	4,76%
ROPHARMA S.A.	8%	-8%	1,56%	14%	-2%	1,45%
		175				
ROMCARBON S.A.	-159%	%	-0,59%	2%	-14%	18,38%
AEROSTAR S.A.	14%	-2%	9,88%	9%	-7%	12,98%
VRANCART S.A.	14%	-2%	1,98%	10%	-6%	3,92%

JFS

## Financial transparency and tax avoidance risks for manufacturing companies:a stock market analysis of tax compliance in Romania

Year	2021			2022		
		ETR			ETR	
Companies/indicators	ETR	- STR	ROA	ETR	- STR	ROA
DAFORA S.A.	50%	34%	-4,32%	1%	-15%	-3,69%
ELECTROMAGNETIC	10/	1.00/	0.6104			<b>5</b> ( <b>2</b> ))
A S.A.	4%	-12%	-3,61%	7%	-9%	5,62%
PREBET S.A.	15%	-1%	7,07%	6%	-10%	7,07%
BERMAS S.A.	15%	-1%	4,93%	14%	-2%	3,71%
AAGES S.A.	14%	-2%	9,34%	11%	-5%	12,76%
ALTUR S.A.	1%	-15%	-6,63%	-2%	-18%	2,21%
UCM RESITA S.A.	0%	-16%	- 23,47%	7%	-9%	268,85 %
ZENTIVA S.A.	0%	-16%	10,08%	13%	-3%	8,25%
SANTIERUL NAVAL ORSOVA S.A.	127%	111 %	-0,15%	13%	-15%	-3,98%
COMELF S.A.	8%	-8%	2,74%	10%	-6%	2,47%
MECANICA FINA	070	-070	2,7470	1070	-070	2,4770
S.A.	13%	-3%	2,11%	11%	-5%	4,48%
CARBOCHIM S.A.	11%	-5%	1,50%	57%	41%	0,02%
ARTEGO S.A.	13%	-3%	8,78%	13%	-3%	9,00%
TURISM FELIX S.A.	4%	-12%	4,44%	4%	-12%	3,37%
PREFAB S.A.	14%	-2%	4,13%	14%	-2%	3,04%
UZTEL S.A.	0%	-16%	0,37%	0%	-16%	- 10,54%
COMPANIA ENERGOPETROL S.A.	0%	-16%	- 19,11%	0%	-16%	- 18,71%
MECANICA	0%	-10%	19,11%	0%	-10%	18,71%
CEAHLAU S.A.	28%	12%	2,75%	10%	-6%	2,70%
CONTED S.A.	0%	-16%	- 15,57%	0%	-16%	6,83%
ARMATURA S.A.	2%	-14%	125,55 %	-3%	-19%	-9,81%
UAMT S.A.	0%	-16%	-6,97%	0%	-16%	0,32%
VES S.A.	0%	-16%	20,72%	0%	-16%	- 21,83%

Source: Author's processing

We compared the effective tax rate with the one established according to the fiscal code regulated by law no. 227/2015, making the difference between ETR and STR. A year-on-year decrease in this operation signifies the tendency of companies to lighten the tax burden, while an increase shows the avoidance of this behaviour. To support the idea of tax evasion risk, we also analysed the ROA indicator, and thus observed whether there is a positive or negative relationship with ETR. The risk is exacerbated if the operation (ETR-STR) decreases during the analysis period, and at the same time the ROA increases. We collected the data for the effective tax rate using the profit and loss account from the financial statements, and the total assets by summing the fixed assets, current assets and advance expenses from the balance sheet form. We have centralized the information from the tabular form of the calculation mode, in the following graphic representation, to see an overview of the movement of companies. It is observed that 28 companies have a decrease for the ROA indicator, and 32 an increase; on the other hand, 31 companies mark a decrease for (ETR-STR) and 29 an increase also on this operation, according to table no. 1.

In the extreme parts of the study, we track companies that achieve a decrease (ETR-STR) and an increase for ROA, where we identified 19 legal entities. This phenomenon is explained by an involvement on the part of the companies in reducing the tax burden while the return on assets increases in the same fixed period. This means a proportion of 31% of the total number of companies included in the analysis sample. The main activity sector that stands out is the production of goods, where there are 10 companies that are in this situation, then there is the service provision sector with 8 companies, and finally the sector for the trade of goods with only one company that falls within these parameters. During the pandemic, there is a decrease in investment in the manufacturing industry, as an aspect of development and modernization due to the uncertain fiscal climate or due to the difficulty of competing with businesses that avoid taxation, so it is possible that this phenomenon will be extended and on other types of entities, classified according to the size criteria, but which are not part of the sample, and at the national level to be oversized so that the economic situation has stagnated.

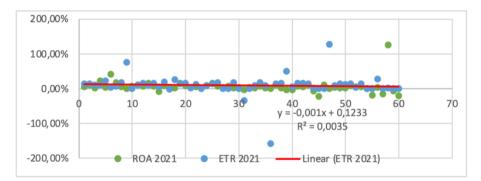
The Romanian government had to adopt fiscal measures to support businesses and people affected by the pandemic. Some of these measures, such as tax rebates, have increased the risk of fraud. For example, there is a risk on the bonus regulated by OUG no. 153/2020 and, on the other hand, on the tax on dividends for natural persons, which has increased from 5% to 8%. We have identified two scenarios for this purpose: the first in which the companies distribute the profit of the years 2022, 2021, 2020 in the year 2023 and pay a tax of 8% but the amount of the bonus is high because it is calculated using the accounting equity and the adjusted equity which is also is large because it includes the amounts from ledger account 1171.

The second scenario is the one in which the companies distribute the profit of the years 2021, 2020 also in the year 2022, and the tax is 5% and the subsequent bonus is reduced because the capital has decreased. In fact, the aggressive application of tax avoidance techniques leads to an increase in the risk of reducing taxes and diminishing the incentives granted by the state, making them even ineffective. The COVID-19 pandemic has had significant repercussions on tax avoidance, and its consequences may remain constant

over the long term, depending on how the government adjusts its tax policies and responds to the economic impact of the crisis.

#### 3.3. The link between creative accounting and tax avoidance

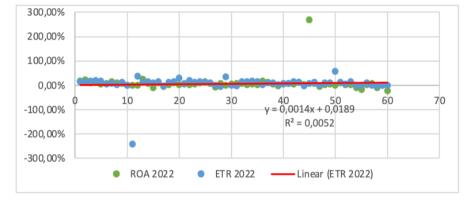
The objective of this sub-chapter is to join previously obtained data for creative accounting and tax evasion, with the aim of identifying a common point where the information intersects and to state to which sector of activity we can attribute uncertainty on financial reporting during the pandemic period. We noticed a positive connection between the indicators, where about ETR and ROA it is observed how the first variable increases, while the other variable tends to increase as well, and when one decreases, the other also decreases.



#### Figure no. 4: Link of ROA & ETR, 2021 Source: Author's processing

In graphical representation, this is illustrated by a line with slight variations but a constant trend (figure no. 4). This is explained because with an increase in the profitability of assets and the ability to generate profit, the tax burden felt by companies also increases, as well as in the opposite direction where a decrease in profitability is associated with a decrease in taxable sources. This positive relationship between the two indicators is similar to the studies carried out by Martins Ribeiro (2015) and Jamei and Khedri (2016) where the relationship is also positive, compared to the research of Yuniarwati et al. (2017) where the result was negative for Indonesian companies. Exceptions in the study applied to Romanian companies are some particular cases in which the values are at the extreme limits and leave the constant pattern.

Stakeholder decisions depending on the credibility offered. As can be seen in the adjacent graphs, we obtained a positive  $R^2$  in both years of analysis (figure no.4 & figure no.5), thus supporting the idea that there is a positive link between the two variables, but weak. The ROA indicator is used as a common point of intersection to identify the link between creative accounting and tax evasion, and therefore it can be stated that the research hypothesis is verified as the positive correlation between the return on assets and the amount of reported taxes was tested. An important observation is that  $R^2$  with a positive



result does not necessarily establish a causal relationship between the two areas of analysis and it is possible that both variables are influenced by a third unknown variable



If the most affected component was cash-flow manipulation, then we recommend introducing policies to increase transparency. Introduce explanatory notes linking payments to goods and services. I also consider tax ledgers to be relevant for publication, enabling investors to see the proportion in which expenses are deducted from profits and facilitating the actual running of the business. I believe that the introduction of digital systems such as encouraging online payments by reducing taxes helps to reduce financial crime, which has also been demonstrated in the literature (Immordino and Russo, 2018). The following table illustrates those companies whose financial situation is precarious following the analysed data, while the information has been centralized to reduce the analysed sample and present difficulties or affected parts of them, all in one representation.

Companies/conditions	ETR 2021-2022	ROA 2021-2022	Quality EQM	Risk associated with variation
NUCLEARELECTRICA				_
S.A.	decrease	increase	high	accepted
TRANSGAZ S.A.	decrease	increase	high	accepted
ONE UNITED				
PROPERTIES S.A.	decrease	increase	high	high
TRANSELECTRICA S.A.	decrease	increase	high	high

Table no. 2: Cumulative conditions for establishing market uncertainty

Companies/conditions	ETR 2021-2022	ROA 2021-2022	Quality EQM	Risk associated with variation
CONPET S.A.	decrease	increase	high	high
ALUMIL ROM INDUSTRY S.A	decrease	increase	low	accepted
AEROSTAR S.A.	decrease	increase	high	accepted
VRANCART S.A.	decrease	increase	low	accepted
DAFORA S.A.	decrease	increase	low	high
PREBET S.A.	decrease	increase	medium	high
AAGES S.A.	decrease	increase	high	high
ALTUR S.A.	decrease	increase	high	high
MECANICA FINA S.A.	decrease	increase	medium	accepted
ARTEGO S.A.	decrease	increase	high	accepted
COMPANIA ENERGOPETROL	decrease	increase	low	high
CONTED S.A.	decrease	increase	high	high
UAMT S.A.	decrease	increase	low	high

Source: Author's processing.

In the end, all the excessive amplifications of the liabilities lead to the decrease of the benefit if we refer to the debts towards the state budget. For the rest of the companies not found here, we identified only one affected component or sub-component, so their tiebreaking was clear, and the rest of the conditions were not met. Companies with the main field of activity trade in goods did not register negative results at all in terms of tax avoidance, compared to the EQM score where they occupy the last positions in the ranking. We retained from the EQM score those companies that obtain a low earnings quality because they suggest a high degree of manipulation, but from the same perspective whose variables fluctuate sharply from one year to the next to support the idea of smoothing the results that they report. For the recognition part of tax avoidance, we retained those companies that achieve a decrease in ETR to reduce the taxable mass, then those with an increased profitability to generate profits. Meeting all four conditions, we can state that the companies Dafora S.A., Compania Energopetrol S.A. and UAMT S.A. presents uncertainty in terms of financial performance and economic strategy planning decisions (table no. 2). Misdirecting the resources that belong to the state leads to its inability to fulfil it's duties and increases the competitive advantage in an incorrect way. In a general sense, the threat can be quantified as a percentage of 5% of the total number of companies examined, where the most targeted sector is the production sector relative to the total number of companies in the sample. For the separation of the goods production sector from the service provision sector, we used the company Energopetrol S.A. which was eliminated due to the seriousness of the situations due to the delicate financial conditions it faces during the judicial reorganization phase. For the other companies, the question of a high risk cannot be raised, since the economic decline is the main factor that could affect subcomponents of the data, and the variations are insignificant, but it is not entirely excluded; it just requires additional and much more particular analysis.

The importance of the study boils down to analysing the industry as a cause-and-effect novelty element, helping investors to remove uncertainty from their decision-making process. Conclusions can be drawn at the level of earnings quality, at the level of honouring obligations but also aggregated by specifics. If one component is affected, it does not suggest the existence of error in the other but requires further analysis. We find in this study that the source of quality is also rooted in tax avoidance intentions compared to researchers who liken it more to a business strategy (Karampinis et al., 2024). The results draw to the attention of investors, the high risk of earnings manipulation and tax minimization for the goods-producing industry: to be able to inform better capital allocation decisions and to understand that these companies are trying to regain financial power by using low reporting transparency. This phenomenon is demonstrated much more generally and in the literature at the microeconomic level, where authors choose as the main criterion for companies to be listed on the stock exchange and do not consider the activity they are engaged in (Athira and Ramesh, 2023; Comporek, 2023; Lizińska and Czapiewski, 2023). This study compared to other research, managed to highlight the weaknesses of an industry using data from financial statements according to the CAEN code, where other established studies suggest a direct approach on measuring the risk of tax evasion using questionnaires assigned to households or businesses (Medina and Schneider, 2018). Inevitably, to reduce the taxable amount, according to the results obtained, companies choose to hide their activities, which leads us to think of categorizing them as activities of the underground economy. Thus, the lack of a database on the proportion of this economy as a percentage of GDP has led researchers to consider it as a latent variable and its determination by estimates including abnormal energy consumption. Our work has demonstrated at the microeconomic level the existence of uncertainty in the taxes reported and paid during the pandemic period, which is also confirmed by macroeconomic approaches at the global level (Iacobuta-Mihaita et al., 2022; Sharma and Kumar, 2024). Studies that do not apply an industry analysis obtain a stronger link according to the results of Martins Ribeiro (2015) and Jamei and Khedri (2016). Even if in the present situation the link is weak and tends to be non-existent according to the intensity of R<sup>2</sup>. Other studies reinforce the idea that the score developed by Putman is not the most efficient in detection (Dichev et al., 2013; Ecker et al., 2013). Finally, different results are found from the point of view of the two branches if they are analysed separately. Fraudulent earnings management foregrounds a certain part of the studied companies, while the tax avoidance part foregrounds another part of their total. Thus, the number of companies is significantly reduced if we follow only those that meet the tie-breaking conditions used previously.

#### Conclusions

However, in light of the presented events, it is important to specify the gradual course of the work from an evolutionary perspective and the contribution to obtaining the desired finished product. Thus, the main objectives as well as the subsidiary ones associated with the theme are fully fulfilled as this study provides clear evidence regarding the financial performance of companies in Romania. From the point of view of the concern that researchers assign to the context of the emergence of creative accounting but at the same time consistent with tax evasion, we identified a progressive increase, with 96% of the level of involvement, in the 20 years analysed. Using a data set from the financial statements of companies listed on the stock exchange, we investigated the occurrence of the phenomenon of smoothing the results and identified 11 companies in the field of goods production, 5 companies that provide services and 3 companies for the trade side, all with a low level of income quality. The most affected element is the debt commitment rate, where the value of the debt increases more sharply compared to the turnover for 55 companies, raising suspicions about documents issued fictitiously, that is, without economic substance and then cancelled when needed. Two other affected elements are the financial leverage where the ability to honour the obligations is low, and the rate of repeated earnings shows a high dependence on income and occasional expenses, for 35 entities. These findings support the existence of creative accounting practices to maintain credibility during the pandemic period, but with repercussions on the financial market and the economy in general. In this regard, we have established two recommendations to combat this phenomenon: the promotion of an organizational culture, which encourages employees to report improper conduct and increasing the vigilance of independent financial auditors through detailed on-site checks. The results suggest that when companies show sudden fluctuations in earnings management, they need to be examined individually because their opportunistic behaviour might be different compared to the exposed reality.

The focus on measuring the risk of tax evasion reaches its target; the study contributes to the identification of 19 entities for which the tax burden is reduced but for which the return on assets increases at the same time. This reduces the persistence of taxable profits and makes future earnings much more volatile. At this stage of the research, we recommend investing in technological progress and advanced IT systems to manage and interpret tax data in real time to detect suspicious transactions. The initiative of the Romanian state to implement the e-Invoice system, for invoices issued between legal entities and facilitating cross-checks, is appreciated. Another recommendation is to periodically update the legislative framework to clarify regulations and reduce interpretations in favour of the taxpayer. In another vein, the study expanded and started in testing the research hypothesis and obtained a positive correlation between tax burden and return on assets, like studies in international literature. Implicitly, the close connection between creative accounting and tax evasion is also suggested, since we identified only 3 companies prone to a high level of risk in informing stakeholders.

The research shows that the most affected industry is the goods producing industry therefore the contributions to the literature are the sectoral approach and the promotion of incentives for voluntary compliance (bonuses for online payments and simplification of red tape regarding the required documentation); the government has already taken some measures and offered tax rebates under the law OUG no. 107/2024. Limitations also

include the relatively small sample and the specificity of the crisis context, which limit the generalizability of the results. One limitation in terms of data collection that hindered the study was the tendency of companies to present little information in the annual report on cash-flow and especially taxes paid. Another limitation was the identification of related company data and transfer pricing. To develop the arguments listed above, I consider it necessary to extend the analysis to the macroeconomic level by forming a regression model to show whether an increase in digitization leads to a decrease in the shadow economy and thus to a decrease in tax evasion. We can use as control variables the quality of regulation, the unemployment rate and the level of education. The Romanian State has taken a stance on increasing transparency through measures such as SAF-T, but it is essential to demonstrate the effectiveness of digitization in combating tax evasion. International studies have demonstrated this (Amzuică et al., 2023; Remeikiene et al., 2017; Yamen et al., 2023), but it is important to bring our input on Romania as well, to align the country with EU requirements and Directive 2016/1164/EU.

The sample of companies was significantly reduced because the other entities have a relatively linear course or only affected subcomponents. Since they carry out production activities and represent the companies with the most affected subcomponents, it is concluded that this activity sector presented the highest risk during the Covid-19 pandemic period. The variation in outcome manipulation practices by culture and region is a research topic we wish to delve into in the future, along with the psychological factors that underlie this behaviour.

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#### Appendix

Main field of activity: production of goods							
Companies	Indicators	Year: 2021	Year: 2022	Average years	Qualit y earnin gs		
	(CFO/S)*5	1,22	0,68	0,95			
	CFO/EBIT	1,31	0,64	0,98			
AEROSTAR	COI/NI	6,26	5,15	5,70			
S.A.	(CFO/TL)*5	9,37	4,71	7,04			
	[(St-St-1) / (ARt -ARt-1)]+1	1,26	1,22	1,24	high		
	EQM Score	19,43	12,40	15,91	level		
	(CFO/S)*5	-0,14	-0,23	-0,18			
ALRO S.A.	CFO/EBIT	-1,20	-0,30	-0,75			
	COI/NI	87,56	9,26	48,41	high		
	(CFO/TL)*5	-0,31	-0,39	-0,35	level		

#### Table no. 1: Quality of earnings in the field of Goods production, 2021,2022

	[(St-St-1) / (ARt -ARt-1)]+1	0,66	-3,56	-1,45	
	EQM Score	86,58	4,77	45,68	
	(CFO/S)*5	0,08	-0,29	-0,11	
	CFO/EBIT	-0,23	-1,70	-0,96	
ALTUR	COI/NI	- 13,33	54,56	20,62	
S.A.	(CFO/TL)*5	0,14	-0,68	-0,27	
	[(St-St-1) / (ARt -ARt-1)]+1	0,56	1,09	0,82	
	EQM Score	- 12,78	52,98	20,10	high level
	(CFO/S)*5	0,60	1,09	0,85	
	CFO/EBIT	1,31	2,32	1,82	
ANTIBIOTI CE S.A.	COI/NI	12,31	12,56	12,43	
	(CFO/TL)*5	0,78	2,56	1,67	high
	[(St-St-1) / (ARt -ARt-1)]+1	1,57	0,32	0,94	level
	EQM Score	16,57	18,85	17,71	
	(CFO/S)*5	-0,85	17,30	8,22	
	CFO/EBIT	-0,03	-8,60	-4,31	
ARMATUR	COI/NI	0,00	0,00	0,00	
A S.A.	(CFO/TL)*5	-0,50	54,10	26,80	
	[(St-St-1) / (ARt -ARt-1) ]+1	-4,07	17,81	6,87	high
	EQM Score	-5,45	80,61	37,58	level
	(CFO/S)*5	-0,01	0,05	0,02	
	CFO/EBIT	-0,03	0,14	0,05	
ARTEGO	COI/NI	13,74	15,62	14,68	
S.A.	(CFO/TL)*5	-0,04	0,24	0,10	
	[(St-St-1) / (ARt -ARt-1)]+1	1,18	1,01	1,09	high
	EQM Score	14,83	17,06	15,95	level
	(CFO/S)*5	0,37	-0,49	-0,06	
BERMAS	CFO/EBIT	1,02	-1,44	-0,21	
S.A.	COI/NI	17,00	20,54	18,77	high
	(CFO/TL)*5	1,12	-0,94	0,09	level

	[(St-St-1) / (ARt -ARt-1)]+1	0,60	1,95	1,28	
	EQM Score	20,12	19,63	19,88	
	(CFO/S)*5	1,45	0,52	0,99	
	CFO/EBIT	0,99	0,36	0,68	
BIOFARM	COI/NI	0,00	0,00	0,00	
S.A.	(CFO/TL)*5	7,09	2,49	4,79	
	[(St-St-1) / (ARt -ARt-1) ]+1	1,20	1,98	1,59	mediu
	EQM Score	10,73	5,35	8,04	m level
	(CFO/S)*5	0,34	0,09	0,22	
	CFO/EBIT	1,37	3,57	2,47	
CARBOCHI	COI/NI	22,45	12,33	17,39	
M S.A.	(CFO/TL)*5	0,77	0,09	0,43	
	[(St-St-1) / (ARt -ARt-1) ]+1	1,64	-0,41	0,62	high
	EQM Score	26,57	15,67	21,12	level
	(CFO/S)*5	2,14	1,21	1,68	
	CFO/EBIT	1,29	0,70	1,00	
CEMACON	COI/NI	0,00	0,00	0,00	
S.A.	(CFO/TL)*5	7,83	5,52	6,67	
	[(St-St-1) / (ARt -ARt-1) ]+1	0,79	1,37	1,08	high
	EQM Score	12,05	8,79	10,42	level
	(CFO/S)*5	1,09	0,37	0,73	
CHIMCOM	CFO/EBIT	0,98	0,52	0,75	
PLEX BORZESTI	COI/NI	5,04	6,24	5,64	
S.A.	(CFO/TL)*5	3,17	0,88	2,02	
ONESTI	[(St-St-1) / (ARt -ARt-1) ]+1	1,11	9,99	5,55	high
	EQM Score	11,40	17,99	14,69	level
	(CFO/S)*5	0,08	0,25	0,16	
COMELF	CFO/EBIT	0,41	1,67	1,04	
S.A.	COI/NI	30,94	41,82	36,38	
	(CFO/TL)*5	0,14	0,53	0,33	high
l	[(St-St-1) / (ARt -ARt-1)]+1	1,99	1,03	1,51	level

COMPA

EQM Score (CFO/S)\*5 CFO/EBIT COI/NI

				Jfd
	33,56	45,29	39,43	
	0,25	0,45	0,35	
	1,79	11,06	6,43	
	45,79	28,90	37,35	-
	0,69	1,40	1,05	
-ARt-1)]+1	1,03	1,35	1,19	high
	49,55	43,16	46,36	level
	-0,66	0,18	-0,24	
	0,59	0,96	0,77	
	-4,44	27,30	11,43	
	-1,70	0,79	-0,45	
-ARt-1)]+1	1,43	1,11	1,27	high
	-4,79	30,33	12,77	level
	0.24	-0.16	0.04	

S.A.	(CFO/TL)*5	0,69	1,40	1,05	
	[(St-St-1) / (ARt -ARt-1)]+1	1,03	1,35	1,19	high
	EQM Score	49,55	43,16	46,36	level
	(CFO/S)*5	-0,66	0,18	-0,24	
	CFO/EBIT	0,59	0,96	0,77	
CONTED	COI/NI	-4,44	27,30	11,43	
S.A.	(CFO/TL)*5	-1,70	0,79	-0,45	
	[(St-St-1) / (ARt -ARt-1) ]+1	1,43	1,11	1,27	high
	EQM Score	-4,79	30,33	12,77	level
	(CFO/S)*5	0,24	-0,16	0,04	
ELECTROA	CFO/EBIT	-1,19	0,23	-0,48	
RGES S.A.	COI/NI	0,00	0,00	0,00	
CURTEA DE ARGES	(CFO/TL)*5	0,85	-0,20	0,33	
DE AROES	[(St-St-1) / (ARt -ARt-1)]+1	0,83	1,07	0,95	low
	EQM Score	0,73	0,94	0,83	level
	(CFO/S)*5	-0,53	0,64	0,05	
	CFO/EBIT	2,22	1,07	1,65	
ELECTRO MAGNETIC	COI/NI	0,00	0,00	0,00	
A S.A.	(CFO/TL)*5	-2,26	2,58	0,16	
	[(St-St-1) / (ARt -ARt-1)]+1	1,16	1,00	1,08	low
	EQM Score	0,58	5,30	2,94	level
	(CFO/S)*5	0,07	4,18	2,13	
	CFO/EBIT	0,17	12,55	6,36	
IAR S.A. Brasov	COI/NI	0,00	0,00	0,00	
274000	(CFO/TL)*5	0,18	3,66	1,92	high
	[(St-St-1) / (ARt -ARt-1) ]+1	1,17	1,61	1,39	level

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Financial transparency and tax avoidance risks for manufacturing companies:a stock market analysis of tax compliance in Romania

	EQM Score	1,60	21,99	11,80	
	(CFO/S)*5	1,53	-0,53	0,50	
	CFO/EBIT	4,73	-2,50	1,11	
MECANIC A	COI/NI	12,22	16,38	14,30	
CEAHLAU	(CFO/TL)*5	5,02	-1,81	1,60	
	[(St-St-1) / (ARt -ARt-1) ]+1	0,92	1,36	1,14	high
	EQM Score	24,41	12,90	18,66	level
	(CFO/S)*5	1,48	1,01	1,25	
	CFO/EBIT	2,23	0,94	1,59	
OMV PETROM	COI/NI	0,02	0,01	0,01	
S.A.	(CFO/TL)*5	3,85	6,17	5,01	
	[(St-St-1) / (ARt -ARt-1) ]+1	1,63	1,11	1,37	mediu
	EQM Score	9,21	9,24	9,23	m level
	(CFO/S)*5	-0,15	1,87	0,86	
	CFO/EBIT	-0,22	3,44	1,61	
PREBET	COI/NI	0,00	0,00	0,00	
S.A. AIUD	(CFO/TL)*5	-0,64	5,56	2,46	
	[(St-St-1) / (ARt -ARt-1)]+1	0,46	0,36	0,41	mediu
	EQM Score	-0,54	11,23	5,35	m level
	(CFO/S)*5	1,12	0,15	0,63	
	CFO/EBIT	1,61	0,26	0,93	
PREFAB	COI/NI	0,00	0,00	0,00	
S.A.	(CFO/TL)*5	2,53	0,41	1,47	
	[(St-St-1) / (ARt -ARt-1) ]+1	1,12	1,66	1,39	low
	EQM Score	6,37	2,47	4,42	level
	(CFO/S)*5	0,00	0,05	0,03	
	CFO/EBIT	0,00	0,28	0,14	
PROMATE RIS S.A.	COI/NI	10,04	77,24	43,64	
	(CFO/TL)*5	-0,01	0,11	0,05	high
	[(St-St-1) / (ARt -ARt-1)]+1	1,11	1,60	1,36	level

	EQM Score	11,13	79,29	45,21	
	(CFO/S)*5	0,81	-0,07	0,37	
	CFO/EBIT	3,83	-0,31	1,76	
ROMCAB	COI/NI	30,97	26,32	28,64	
S.A.	(CFO/TL)*5	1,46	-0,14	0,66	
	[(St-St-1) / (ARt -ARt-1) ]+1	1,00	5,20	3,10	high
	EQM Score	38,07	31,01	34,54	level
	(CFO/S)*5	-0,03	-0,13	-0,08	
	CFO/EBIT	-4,51	-0,13	-2,32	
ROMCARB	COI/NI	89,72	2,55	-43,59	
ON S.A.	(CFO/TL)*5	-0,09	-0,31	-0,20	
	[(St-St-1) / (ARt -ARt-1)]+1	1,26	- 24,23	-11,49	
	EQM Score	- 93,10	- 22,24	-57,67	low level
	(CFO/S)*5	0,25	0,19	0,22	
	CFO/EBIT	-2,71	0,62	-1,05	
ROMPETR OL	COI/NI	- 24,55	33,03	4,24	
RAFINARE S.A.	(CFO/TL)*5	0,40	0,63	0,52	
5.A.	[(St-St-1) / (ARt -ARt-1)]+1	1,21	0,97	1,09	
	EQM Score	- 25,40	35,44	5,02	mediu m level
	(CFO/S)*5	0,95	-0,21	0,37	
	CFO/EBIT	1,45	-0,21	0,62	
S.C AAGES	COI/NI	9,26	5,97	7,62	
S.A.	(CFO/TL)*5	2,15	-0,46	0,84	
	[(St-St-1) / (ARt -ARt-1)]+1	1,30	0,51	0,91	1.4.1
	EQM Score	15,12	5,60	10,36	high level
S.N.	(CFO/S)*5	2,65	2,71	2,68	
NUCLEAR ELECTRIC	CFO/EBIT	1,37	1,08	1,23	high
A S.A.	COI/NI	3,01	2,30	2,65	level

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Financial transparency and tax avoidance risks for manufacturing companies:a stock market analysis of tax compliance in Romania

	(CFO/TL)*5	10,13	19,50	14,82	
	[(St-St-1) / (ARt -ARt-1) ]+1	1,09	1,08	1,09	
	EQM Score	18,26	26,66	22,46	
SANTIERU L NAVAL ORSOVA S.A.	(CFO/S)*5	-0,13	0,29	0,08	
	CFO/EBIT	-3,84	-0,78	-2,31	
	COI/NI	- 44,71	- 11,10	-27,91	
	(CFO/TL)*5	-0,71	0,63	-0,04	
	[(St-St-1) / (ARt -ARt-1) ]+1	7,59	2,10	4,84	
	EQM Score	- 41,81	-8,86	-25,34	low level
SINTEZA S.A.	(CFO/S)*5	0,27	0,14	0,20	
	CFO/EBIT	1,42	-0,62	0,40	
	COI/NI	0,00	0,00	0,00	
	(CFO/TL)*5	0,64	0,40	0,52	
	[(St-St-1) / (ARt -ARt-1)]+1	1,14	1,35	1,24	low
	EQM Score	3,46	1,27	2,37	level
	(CFO/S)*5	-0,31	0,41	0,05	
TERAPLAS T S.A.	CFO/EBIT	-0,10	1,05	0,48	
	COI/NI	1,68	16,11	8,89	
	(CFO/TL)*5	-0,96	1,21	0,12	
	[(St-St-1) / (ARt -ARt-1)]+1	3,32	-6,67	-1,67	mediu
	EQM Score	3,63	12,11	7,87	m level
	(CFO/S)*5	0,38	0,48	0,43	
TURBOME CANICA S.A.	CFO/EBIT	0,63	0,82	0,73	
	COI/NI	0,00	0,00	0,00	
	(CFO/TL)*5	1,00	1,12	1,06	
	[(St-St-1) / (ARt -ARt-1) ]+1	-0,90	2,16	0,63	low
	EQM Score	1,12	4,58	2,85	level
UAMT S.A.	(CFO/S)*5	-0,18	-1,14	-0,66	
UAMI S.A.	CFO/EBIT	0,31	- 18,87	-9,28	low level

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	COLAR	0.07			
	COI/NI	-8,27	24,73	8,23	
	(CFO/TL)*5	-0,30	-3,12	-1,71	
	[(St-St-1) / (ARt -ARt-1)]+1	1,11	0,40	0,75	
	EQM Score	-7,33	2,01	-2,66	
UCM RESITA S.A.	(CFO/S)*5	-0,50	29,84	14,67	
	CFO/EBIT	0,04	0,27	0,15	
	COI/NI	-0,37	0,05	-0,16	
	(CFO/TL)*5	-0,01	1,41	0,70	
	[(St-St-1) / (ARt -ARt-1)]+1	0,98	-0,23	0,37	high
	EQM Score	0,14	31,34	15,74	level
UZTEL S.A.	(CFO/S)*5	-1,00	-0,94	-0,97	
	CFO/EBIT	-8,49	1,02	-3,73	
	COI/NI	10,77	-4,82	2,97	
	(CFO/TL)*5	-0,92	-0,95	-0,93	
	[(St-St-1) / (ARt -ARt-1)]+1	10,54	1,06	5,80	1
	EQM Score	10,90	-4,63	3,13	low level
VES S.A.	(CFO/S)*5	6,23	-3,62	1,30	
	CFO/EBIT	-3,92	1,35	-1,29	
	COI/NI	0,00	0,00	0,00	
	(CFO/TL)*5	2,09	-0,71	0,69	
	[(St-St-1) / (ARt -ARt-1)]+1	3,57	-0,13	1,72	low
	EQM Score	7,96	-3,12	2,42	level
	(CFO/S)*5	0,37	0,42	0,40	
	(CFO/S)*5 CFO/EBIT	0,37 1,84	0,42 1,26	0,40 1,55	
VRANCAR				,	
VRANCAR T S.A.	CFO/EBIT	1,84	1,26	1,55	
	CFO/EBIT COI/NI	1,84 0,00	1,26 0,00	1,55 0,00	
	CFO/EBIT COI/NI (CFO/TL)*5	1,84 0,00 0,60	1,26 0,00 0,81	1,55 0,00 0,70	low level
	CFO/EBIT COI/NI (CFO/TL)*5 [(St-St-1) / (ARt -ARt-1)]+1	1,84 0,00 0,60 1,21	1,26 0,00 0,81 1,17	1,55 0,00 0,70 1,19	

COI/NI	0,00	0,00	0,00	
(CFO/TL)*5	6,37	0,53	3,45	
[(St-St-1) / (ARt -ARt-1)]+1	4,08	2,74	3,41	
EQM Score	13,43	3,58	8,51	

Source: Author's processing.