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FOREWARD

It was with great pleasure that we host at the Bucharest University of Economic Studies, Romania, another edition of our traditional Accounting and Management Information Systems International Conference, on 30 September and 1 October 2020. This year's very unusual circumstances given by the COVID19 pandemic did not prevent participants from engaging in very fruitful conversations about research and teaching practices.

During the conference, we organized two plenary panels, animated by esteemed international colleagues from Canada, the Netherlands, the United Kingdom, and the USA. 8 parallel sessions completed the program, for a total of 36 papers that were scheduled. 116 participants from 16 countries registered and contributed to the debates in either panels or sessions.

Preceding the AMIS 2020 conference, IAAER and the Association of Chartered Certified Accountants (ACCA) have co-organized, on 28-29 September 2020, another edition of their traditional Early Career Researchers Workshop. 10 early career academics from Central and Eastern Europe have attended one day and a half of presentations and trainings by 10 recognized international faculty from all over the world. These early career academics have also presented their projects to these very accomplished faculty and received timely and constructive feedback on how to improve their work with a view to make it publishable by international journals.

In the end, I will also thank our team: Nadia Albu, Raluca Guşe and Dragoş Mangiuc. They have volunteered their time to this important event in Central and Eastern Europe. We are very much looking forward to hosting everybody again at our university!

Professor Cătălin Albu
Conference Chair

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Association of ESG Factors' Disclosure with the Value of Companies from Energy Industry

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Abstract: *This study investigates the association between environmental, social and governance (ESG) factors' disclosure and the value of companies from energy industry. The sample consists of 70 companies from different categories within energy industry (Oil and Gas, Oil and Gas Related Equipment and Services, Multiline Utilities, Renewable Energy and Uranium) and is based on Top 100 Global Energy Leaders established by the analysts from Thomson Reuters. To investigate the association between the combined and individual ESG factors disclosure and firm's value, two linear regression models have been designed. The outputs indicate positive associations between ESG factors disclosure and firm's value for the companies within energy industry. However, debates need to be considered, as the impact of ESG factors, either combined or individual are found to be significant only of the companies from North America.*

Keywords: *Environmental, social, and corporate governance (ESG), firm's value, corporate performance, Energy industry.*

1. Introduction

The disclosure of ESG factors provides a new and different insight into a company's activity as compared with the one offered by the financial information. The presentation of financial information discloses historical data and it is focused on the maximisation of shareholders' wealth seen as the major stakeholder of the company, which is achieved through the interaction between shareholders and the management of the company (Anning, 2018; Li et al., 2018). The increased pressure of the stock markets and investors encourages companies to provide additional non-financial information focusing on ESG factors disclosure.

Underlying on the increasing focus on the long-term goals of the business detrimental to short-term goals, the paper explores the possible association between ESG factors and firm's value. The long-term goals move the focus of the company from the profit maximisation to the performance measured through EGS factors. This research considers individual dimensions of ESG factors (environment, social, and corporate governance), along with the combined score. The environment factor describes the relation between the organisation, its activity and environment represented by natural resources (water, air, soil, vegetation, and fauna etc.). The impact produced by the business activities on the environment and the manner in which the company is managing to limit its negative effects on environment are considered. The social factor

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refers to the connection between the organization and its employees, customers, suppliers, and the communities in which the company is conducting its business activity. The corporate governance factor relates to the company's leadership system, the implemented controls systems, the relationship with the shareholders, and the connection between shareholders and executives. The investors and other stakeholders (clients, suppliers, banks, local communities, governments, employees, and others) consider ESG factors to improve the firm's financial performance (Zhao et al., 2018).

The aim of this research is to investigate possible associations between environmental, social and governance (ESG) factors' disclosure and the value of companies from energy industry. It contributes to a better understanding of the specific characteristics of energy industry in terms of ESG-related policies. Arguments for choosing energy industry start with the pioneering sustainability-oriented activities (Hughey and Sulkowski, 2012) and relay on the increasing importance conferred by researchers and scientific journals' editors, overtime (Soytas et al., 2017; Patari et al., 2014; Lu et al., 2014), as highlighted by Lungu et al. (2019).

Considering the last decades, numerous studies investigating the relationship between the ESG factors and the firm's value have been published. Regardless of the great number of papers on this association, the results are conflicting. Evidence is provided for the existence of a positive relation (Horváthová, 2010, Friede et al., 2015, Wong et al., 2020, Yoon et al., 2018, Yu et al., 2018), a negative one (Richardson and Welker, 2001, Brammer et al., 2006, Horváthová, 2010, Friede et al., 2015) or no significant connection at all (Friede et al., 2015) when various measures are used for ESG factors and firm's value.

The present paper is based on one main hypothesis in determining whether there is an association between ESG factors disclosure and the firm's value for the companies activating in energy sector.

> *H1: There is an association between ESG factors disclosure and the firm's value for the companies activating in energy sector.*

Several secondary assumptions result from the main hypothesis, such as:

> *H1.1: There is an association between environment disclosure and the firm's value for the companies activating in energy sector.*
> *H1.2: There is an association between social disclosure and the firm's value for the companies activating in energy sector.*
> *H1.3: There is an association between corporate governance disclosure and the firm's value for the companies activating in energy sector.*

In order to develop a research design to address the hypotheses, ESG scores available on Thomson Reuters Eikon platform were used to measure the disclosure of ESG factors, as for the firm's value, market value and Tobin's Q were considered. The initial sampling size consisted of the top 100 companies from energy industry classified by Thomson Reuters, while the final sample was diminished to 70 companies with data over a period of four years (2015-2018), because of unavailability of data.

The results obtained are similar with other studies that investigated the relationship between ESG factors disclosure and firm's value (Li et al., 2018, Fatemi et al., 2018) and they are providing additional evidence supporting a positive relationship for companies within Energy sector.

The remainder of this paper advances as follows: the second section reviews the prior research, while the third section presents the research design, referring to sample and data, variables, and research method. The fourth section is dedicated to the research results. Conclusions are provided in the fifth section.

2. Literature review

The literature has integrated countless studies regarding the relationship between ESG factors and the company's value in the last decades. Some of these studies present a positive impact of the ESG factors on the firm's value (Friede et al., 2015, Wong et al., 2020, Yoon et al., 2018, Yu et al., 2018), while others report a negative association (Richardson and Welker, 2001, Brammer et al., 2006, Horváthová, 2010, Friede et al., 2015) or even no influence at all (Friede et al., 2015). Considering the increased implication of environment organisations and climate activists, but also the interest manifested for ESG matters by different stakeholders, further studies on the relationship between ESG factors and company's value are expected to be generated, but not limited to this relation only.

Friede et al. (2015) reviewed more than 2200 individual studies concentrated on the relation between environmental, social and governance (ESG) and corporate financial performance, being one of the first investigations to gather aggregated evidence from a significant number of earlier studies. By applying vote-counting and meta-analysis techniques, their results showed that almost 90% of the studies demonstrates a non-negative relation between ESG and corporate financial performance along with the fact that the mainstream of the studies considered show positive findings related to studied association. The authors obtained supporting evidence that investing in ESG and long-term goals will bring added value to the company and additionally the positive impact of ESG on financial performance seems to be steady over time.

Li et al. (2018) has also investigated whether the disclosure of ESG factors may have an influence on the firm's value. They used a database of 350 FTSE listed companies and concluded based on two regression models used that there is a positive association between ESG disclosure and firm's value. Furthermore, the authors demonstrate that the firms with a CEO delegated with a higher level of power present an enhanced influence of ESG disclosure on company's value.

The study performed by Fatemi et al. (2018) is another example of research on the effect of environmental, social and governance activities and their related disclosure on firm's value. Their research concluded that ESG strengths increase firm's value while ESG weaknesses decrease it. The authors stated that the disclosure of ESG factors has a moderating role in diminishing the negative effects of weaknesses and reducing the positive effect of strengths.

Wong et al. (2020) conducted a research on the impact between ESG certification and firm's value for Malaysian listed companies from 11 sectors of economy in accordance with the Global Industry Certification Standard, over the period 2005 to 2018. Their results showed positive impact of ESG certification on firm's value (measured by

Tobin's Q) and benefits to shareholders. Thus, the authors encourage organisations to report aspects related with ESG factors.

The sustainability evaluated through ESG factors was found to have a positive and significant impact on market value for companies activating in an emerging market (Yoon et al., 2018). The study is based on a sample of 705 companies in South Korea, of which 190 firms from environmentally sensitive industries such as energy (equipment and services, oil and gas, consumable fuel industries), material (chemicals, construction materials, containers and packaging, metals and mining industries) and utility sector (producers of electricity, gas, water, renewable energy). Results show that the impact is influenced by the attributes of the firm. Thus, for environmentally sensitive industries the impact of ESG factors on firm's value is less significant as compared to the non-sensitive industries. Yoon et al. (2018) have also stated that the corporate governance has a negative impact on firm's value for those companies belonging to sensitive industries.

Positive association between ESG factors disclosure and firm's value was also found in Yu et al. (2018) research, for 1996 companies from 47 developed and emerging countries. Authors militate for the implementation of ESG disclosure in case of average listed companies in order to enhance the firm's value measured by Tobin's Q. The costs related to the implementation may be recovered in time, and the companies financially sound will achieve a better transparency in ESG disclosure.

Richardson and Welker (2001) have studied the relationship between ESG disclosure and market value for a sample of Canadian companies with year ends in 1990, 1991 and 1992. The results of their research suggest that the association between ESG disclosure and market value is a negative one. A negative association between social performance and stock returns was also found by Brammer et al. (2006) for UK companies. Moreover, the investigation of Horváthová (2010) shows a possible negative association between environmental and financial performance, enhanced by using correlation coefficients and portfolio studies, as opposed of using multiple regressions and panel data technique. The author suggested that the time framework plays a major role in determining the relationship between environment and financial performance, as it takes some time for the environmental regulations to have an influence in financial performance. Additionally, a positive association may be obtained more often in countries that apply common law rather than civil law.

3. Research design

3.1. Sample and data

To investigate the association between the ESG factors disclosure and firm's value for companies within energy industry, the latest top (2017) established by the analysts from Thomson Reuters (Top 100 Global Energy Leaders https://www.thomsonreuters.com/en/products-services/energy/top-100.html) was used. The analysts from Thomson Reuters have created the *Top 100 Global Energy Leaders* based on eight criteria (https://www.thomsonreuters.com/en/products-services/energy/top-100/methodology.html): *management & investor confidence; legal compliance; financial performance; innovation; risk and resilience; people and social responsibility; reputation; and environmental impact.*

Out of 100 companies from the Thomson Reuters classification, for 30 companies, no information at all (financial information or ESG related - 5 companies), no ESG scores data (24 companies), or only partial ESG scores (1 company) were found at the time of data collection. For the remaining 70 companies, with the required data available on Thomson Reuters site or in their annual reports, a total sample of 278 company-year observations, grouped on 4 years (2015 – 2018), were tested. The companies were also classified in 4 sub-categories of the Energy industry (Oil and Gas, Oil & Gas Related Equipment and Services, Multiline Utilities, Renewable Energy and Uranium), for six geographical regions (Table 1).

Table 1. **Description of the database**

Geographical region / **Industry sub-category**	**Africa**	**Asia**	**Australia**	**Europe**	**North America**	**South America**	**Total**
Panel A. Number of companies included in the analysis							
Multiline Utilities				6	4		10
Oil & Gas	1	19	2	17	4	2	45
Oil & Gas Related Equipment and Services				7	3		10
Renewable Energy				2	2		4
Uranium					1		1
Total countries	**1**	**19**	**2**	**32**	**14**	**2**	**70**
Panel B. Number of company-year observations included in the analysis							
Multiline Utilities				24	15		39
Oil & Gas	4	75	8	68	16	8	179
Oil & Gas Related Equipment and Services				28	12		40
Renewable Energy				8	8		16
Uranium					4		4
Total country-year observations	**4**	**75**	**8**	**128**	**55**	**8**	**278**

Thomson Reuters Eikon platform was used to collect the scores for the combined and individual ESG factors presented as numerical values for the period 2015 - 2018. The 4-year period was selected since most companies selected have the scores available for this period. The financial information measuring the firm’s value for the companies in the sample was also obtained from the Thomson Reuters Eikon platform, and, where the information was not available on the platform (total assets and cash and cash equivalents), it was collected from the company’s published annual reports. All the figures taken into consideration are presented in US dollars as it represents a main global currency.

3.2. Variables

Details related to the variables used in this research are summarised in Table 2. To have a holistic approach on the dependent variable measuring the firm’s value, two financial indicators were considered: the market value (also used by Fatemi et al., 2018 and Brammer et al., 2006) included in the regression model as natural logarithm (LNMV) and TOBIN’s Q (considered also in Li et al., 2018; Fatemi et al., 2018; and Yu et al., 2018 studies) computed as market value scaled by total assets.

The ESG score available on Thomson Reuters Eikon platform is considered to be the independent value agreed for the linear regression models. The scores vary from 0 to

100% and are computed based on data concerning corporate governance, economic, environmental, and social aspects. Thomson Reuters ESG scores were utilized because the information on the basis of which they are computed comes directly from the companies, hence, there is a high degree of reliability and originality for these scores. ESG scores are variable used in numerous studies which investigates the connection between the ESG factors disclosure and firm's value (Li et al., 2018; Fatemi et al., 2018; Yoon et al., 2018), regardless of the source from which they have been extracted (Bloomberg; Kinder, Lydenberg and Domini; Thomson Reuters). For the detailed scenarios analysed in the paper, the environment, social and corporate governance pillars were also considered.

Table 2. **Variables used in the linear regression model**

Variable	Type of variable	Description	Referenced studies/research
LNMV	dependent	Natural logarithm of market value available on Thomson Reuters platform	Fatemi et al. (2018), Li et al. (2018), Brammer et al. (2006)
Tobin's Q	dependent	Computed as the report between market value and total assets	Li et al. (2018), Fatemi et al. (2018), Yu et al. (2018)
ESG	independent	ESG scores available on Thomson Reuters	Li et al. (2018), Fatemi et al. (2018), Yoon et al. (2018)
ENV	independent	Environment score available on Thomson Reuters	Fatemi et al. (2018), Yoon et al. (2018)
SOC	independent	Social score available on Thomson Reuters	Fatemi et al. (2018), Yoon et al. (2018)
GOV	independent	Corporate Governance score available on Thomson Reuters	Fatemi et al. (2018), Yoon et al. (2018)
LNTA	control	Natural logarithm of total assets which are presented on Thomson Reuters	Li et al. (2018), Yu et al. (2018)
CASH_TA	control	Computed as the report between cash and cash equivalents value and total assets, both publish on Thomson Reuters	Li et al. (2018)
LNTR	control	Natural logarithm of total revenues related with the business activities of the company, available on Thomson Reuters	Fatemi et al. (2018)

Apart from ESG combined and individual scores, which is set as the independent variable in the linear regression models, data for the following control variables identified by the literature to be noteworthy in identifying the relationship between the ESG factors disclosure and firm's value: total assets (Li et al., 2018, Yu et al., 2018), total revenues from business activity (Fatemi et al., 2018), for which it was applied as well a natural logarithm function for comparability purposes (LNTA, respectively, LNTR), and CASH_TA ratio (Li et al., 2018) computed as the value of cash and cash equivalents scaled by total assets (CASH_TA).

To open the discussion for the research's sub-hypothesis, *Figure 1* shows the differences at the region level, for companies from Energy sector regarding the dependent and independent variables considered for this study. Asia and Europe are leading the top, being the regions with the greatest average of ESG combined and individual scores. However, North America and South America are following shortly behind. Australia and Africa are the regions occupying the last two positions. This may come as a surprise for Africa as it is mandatory for companies listed on Johannesburg Stock Exchange to prepare an integrated report through which aspects related to environment, social and corporate governance factors are presented. As for the Tobin's Q indicator, the highest value per region was recorded in South America and the lowest in Europe. Natural logarithm of market value is approximatively the same in all the above regions, the highest value been recorded in Asia and the lower in Europe.

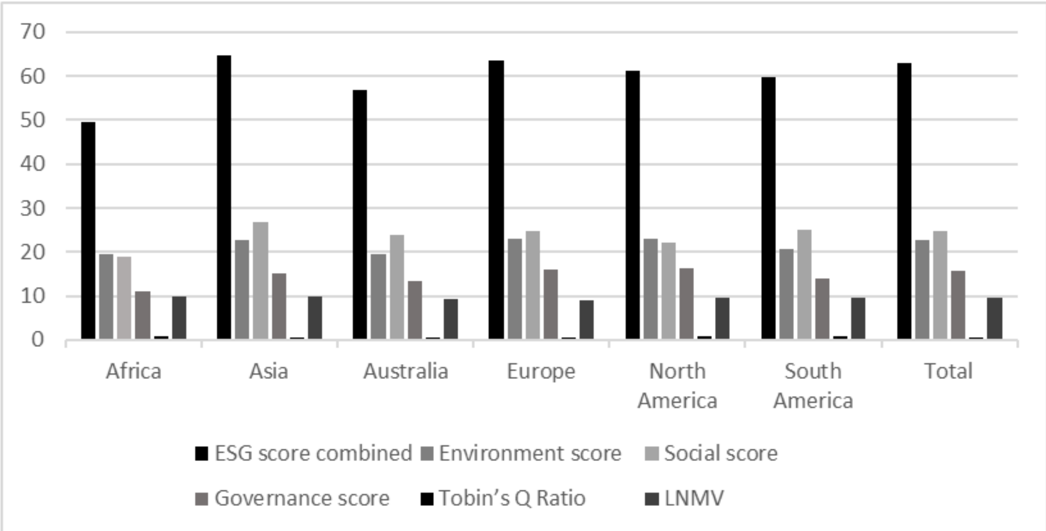

Figure 1. **ESG scores combined and individual, Tobin's Q and market value by geographical region**

The average values showed by the comparative graphic analysis highlighted the need for an in-depth testing, with details for the possible associations generated for each geographical region and a related interpretation.

3.3. Research method

The linear regression analysis was used to estimate the type of relationship between the dependent variable (firm's value) and the independent variable (ESG factors). Regression analysis was widely used in other research studies on a fixed dataset (Fatemi et al., 2018; Li et al., 2018) to infer on the casual relationship between the ESG factors disclosure and firm's value. The SPSS statistical program was used to run the regression models to the selected sample. The regression models were applied to the ESG combined score and to the score of each individual factor (environment, social and corporate governance) to better observe the impact of ESG factors disclosure to firm's value.

The primary research hypothesis on the association between ESG factors disclosure and the firm's value for international companies within Energy sector is tested within two main scenarios. Thus, two linear regression models were created, one using natural logarithm of market value to represent the dependent variable, and the other one using Tobin's Q for the dependent variable:

Scenario 1 $LNMV_t = \beta_0 + \beta_1 ESG + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$

Scenario 2 $\text{Tobin's } Q_t = \beta_0 + \beta_1 ESG_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$

Furthermore, each main scenario is disaggregated in three secondary scenarios which assesses the model for the three pillars of ESG factors: environment, social, and governance:

Scenario 1.1 $LNMV_t = \beta_0 + \beta_1 ENV_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$
Scenario 1.2 $LNMV_t = \beta_0 + \beta_1 SOC_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$
Scenario 1.3 $LNMV_t = \beta_0 + \beta_1 GOV_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$

Scenario 2.1 $Tobin's\ Q_t = \beta_0 + \beta_1 ENV_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$
Scenario 2.2 $Tobin's\ Q_t = \beta_0 + \beta_1 SOC_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$
Scenario 2.3 $Tobin's\ Q_t = \beta_0 + \beta_1 GOV_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$

The regression models have been created based on key dependent and independent variables identified in the specialized literature to reveal the type of association between ESG factors disclosure and firm's value. The subscript allocated to each variable within the model represents the company-year observation. The independent variable of the research model is exemplified by the combined, or individual ESG factors scores, a frequent choice in the prior literature. The numerical values for the scores were downloaded for Thomson Reuters platform, where the information was available. As for the dependent variable, representing the firm's value, two variables were used for a holistic understanding: market value and Tobin's Q, the data was also obtained from the Thomson Reuters platform, or when not available, company's annual reports. Additionally, the following controls variables, identified to be pertinent from previous studies were included: total assets, the cash and cash equivalents scaled by total assets, and total revenues from business activities.

4. Research results

4.1. Descriptive statistics and correlation analysis

Prior to analyse the coefficients of the two regression models which are based on estimates of scenarios resulting from different combinations of independent and dependent variables, the data used for the research has been assessed. Descriptive statistics are computed for the regression variables in SPSS software (Table 3) and addressed the assumption that the data is normally distributed, and the regression models based on these variables are valid. As a result of a high skewness, the variables, market value, total assets and total revenues were transformed using natural logarithms.

Assessing the Pearson correlation coefficient (Table 4, above the diagonal), it can be observed that corporate governance score (GOV) is positively correlated with Tobin's Q ratio, at a significance level of .01, while the social score (SOC) is positively correlated with natural logarithm of market value, at a significance level of .01, providing evidence for supporting the research hypotheses H1.2 and H1.3. Additionally, the results obtained for social score are also validated by the Spearman correlation (Table 4, below the diagonal), with a coefficient of 0.147 ($p<0.01$), which shows a lower, yet highly significant positive association between social score and market value.

Variables	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ESG	274	8.7900	90.8000	62.981204	13.2418405	175.346	-0.631	0.147	0.870	0.293
ENV	274	2.8568	34.2360	22.635632	5.0963782	25.973	-0.394	0.147	0.634	0.293
SOC	274	3.4808	37.3884	24.708615	5.9312085	35.179	-0.345	0.147	0.114	0.293
GOV	274	2.4524	27.0618	15.636957	3.9172781	15.345	0.240	0.147	0.808	0.293
Tobin's Q Ratio	278	0.0894	2.8367	0.609320	0.3964444	0.157	1.936	0.146	5.417	0.291
CASH_TA	278	0.0003	0.3305	0.079959	0.0709197	0.005	1.405	0.146	1.921	0.291
LNMV	278	6.5707	12.5432	9.478450	1.3164204	1.733	0.072	0.146	-0.615	0.291
LNTA	278	6.9061	12.9270	10.158213	1.3273193	1.762	0.179	0.146	-0.717	0.291
LNTR	278	6.2397	12.9171	9.745657	1.3576262	1.843	0.098	0.146	-0.290	0.291
Valid N (listwise)	274									

Notes: The variables listed are defined in Table 2.

Table 4. **Pearson/Spearman correlation matrix**

Variables	ESG	ENV	SOC	GOV	Tobin's Q Ratio	CASH_TA	LNMV	LNTA	LNTR
ESG	1	0.911**	0.872**	0.875**	0.083	0.074	0.080	0.037	0.074
ENV	0.908**	1	0.641**	0.807**	0.103	0.058	0.048	0.009	-0.022
SOC	0.845**	0.609**	1	0.600**	-0.008	-0.018	0.179**	0.157**	0.266**
GOV	0.902**	0.824**	0.651**	1	0.160**	0.203**	-0.062	-0.124*	-0.122*
Tobin's Q Ratio	0.026	0.016	-0.019	0.041	1	0.333**	0.123*	-0.300**	-0.186**
CASH_TA	0.067	0.033	0.013	0.160**	0.135*	1	-0.262**	-0.382**	-0.200**
LNMV	0.047	0.039	0.147*	-0.079	0.209**	-0.260**	1	0.890**	0.766**
LNTA	0.009	0.012	0.126*	-0.124*	-0.227**	-0.365**	0.884**	1	0.830**
LNTR	-0.014	-0.089	0.193**	-0.168**	-0.145*	-0.148*	0.720**	0.789**	1

*Notes: In the above table, Pearson (Spearman) correlations are presented above (below) the diagonal of the matrix. **Significance at the .01 level. *Significance at the .05 level.*

4.2. Discussion on the research hypotheses

When assessing the association between ESG factors disclosure and firm's value, the correlation has been analysed for the full sample considered, and for each of the five regions (Africa, Asia, Australia, Europe, North America, and South America). The significant econometric models in terms of sample size and F statistics were identified for the three regions presented in Table 5 and Table 6. Thus, the regions selected are North America, Europe and Asia, based on the outputs resulted from SPSS software.

The relationship between ESG combined scores and firm's value represented by market value, overall and per each of the three regions, is analysed for the first main scenario (Scenario 1), presented in Table 5. The regression model is the following: $LNMV_t = \beta_0 + \beta_1 ESG_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon_t$. Three sub-scenarios are disaggregated from Scenario 1 to assess the association between each of the ESG factors (environment, social and corporate governance) and firm's value, represented in this scenario by natural logarithm of market value.

Table 5. **The impact of market value on ESG factors' disclosure**

Dependent Variable: LNMV	**Overall sample**		**North America**		**Europe**		**Asia**	
Scenario 1	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
(constant)	-0.117	0.736	-0.961	0.135	-0.797	0.118	0.432	0.528
ESG	0.004	0.165	0.013	0.014	0.003	0.410	0.005	0.400
CASH_TA	1.282	0.022	0.490	0.614	0.946	0.250	2.773	0.015
LNTA	0.841	0.000	0.653	0.000	0.679	0.000	1.037	0.000
LNTR	0.075	0.123	0.348	0.002	0.305	0.000	-0.197	0.098
F statistic	279.089	0.000	95.323	0.000	145.612	0.000	91.382	0.000
Durbin-Watson	2.042		1.996		1.846		2.128	
Adjusted R-square	0.803		0.875		0.822		0.834	
Scenario 1.1	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
(constant)	-0.125	0.719	-1.254	0.101	-0.727	0.142	0.127	0.853
ENV	0.010	0.156	0.028	0.048	0.005	0.554	0.029	0.114
CASH_TA	1.280	0.022	0.771	0.445	0.956	0.246	2.204	0.064
LNTA	0.834	0.000	0.657	0.000	0.675	0.000	1.049	0.000
LNTR	0.084	0.085	0.395	0.001	0.309	0.000	-0.206	0.078
F statistic	279.190	0.000	90.836	0.000	145.133	0.000	94.299	0.000
Durbin-Watson	2.037		2.070		1.827		2.176	
Adjusted R-square	0.803		0.869		0.822		0.838	
Scenario 1.2	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
(constant)	-0.012	0.971	-0.088	0.881	-0.706	0.167	0.610	0.369
SOC	0.006	0.338	0.036	0.011	0.003	0.738	0.005	0.693
CASH_TA	1.351	0.015	0.694	0.476	1.006	0.223	2.970	0.008
LNTA	0.846	0.000	0.608	0.000	0.684	0.000	1.028	0.000
LNTR	0.067	0.179	0.303	0.007	0.301	0.000	-0.188	0.115
F statistic	277.788	0.000	96.422	0.000	144.787	0.000	90.497	0.000
Durbin-Watson	2.043		2.006		1.841		2.090	
Adjusted R-square	0.802		0.876		0.821		0.833	
Scenario 1.3	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
(constant)	-0.144	0.680	-1.095	0.116	-0.921	0.067	0.523	0.444
GOV	0.014	0.140	0.037	0.031	0.018	0.120	0.016	0.537
CASH_TA	1.192	0.035	-0.122	0.905	0.716	0.390	2.886	0.010
LNTA	0.837	0.000	0.697	0.000	0.663	0.000	1.033	0.000
LNTR	0.085	0.083	0.343	0.003	0.326	0.000	-0.193	0.106
F statistic	279.406	0.000	92.391	0.000	148.176	0.000	90.858	0.000
Durbin-Watson	2.043		1.991		1.871		2.110	
Adjusted R-square	0.803		0.871		0.825		0.833	

The regression analysis results for the first scenario indicate that more than 80% of the total variation in the market value of the companies activating in energy industry, both globally and per region, may be explained by combined and specific ESG factors' disclosure, when controlling for assets, revenues, and cash scaled by total assets.

The results presented in Table 5 supports the positive association between the combined and individual ESG factors disclosure and firm's value measured by market value. The findings are consistent with the main hypothesis developed in the research model, assuming that there is an association between ESG factors disclosure and the firm's value for international companies within Energy industry. Previous studies (Li et al., 2018, Fatemi et al., 2018, Yoon et al., 2018, Yu et al., 2018, Wong et al., 2020) found similar results in what concerns the positive relationship between ESG factors disclosure and firm's value.

Considering the significance of the influence, the impact of the independent variable on the market value become significant only for North America region. Moreover, the significance of the control variables included in the econometric model (CASH_TA, LNTA, LNTR) may be identified especially for the overall sample, while at regional level the results are different from one region to another. Disaggregating the coefficient analysis on regions and scenarios, it is observed that not all the variables are considered to have a significant impact on the correlation. Therefore, the coefficients CASH_TA and LNTA are positive and significant for the overall sample, for each scenario presented in Table 5, and are generating a significant impact on the dependent value, market value in this scenario. As in the case of North America and Europe, LNTA and LNTR are the coefficients which have a significant influence on the dependent value, in all the scenarios assessed. Considering the results obtained for Asia, it can be noticed that CASH_TA and LNTA are the coefficients with positive impact on market value for scenario 1 (ESG score combined as independent value), scenario 1.2 (Social score) and scenario 1.3 (Corporate Governance score), as for the scenario 1.1 (Environment score as the independent variable), only LNTA has a significant influence on the dependent variable. Hereafter, the main hypothesis of this study (H1) and the three secondary hypotheses are validated by the results of the linear regression model only for the North America region.

The association between ESG combined scores and firm's value represented by Tobin's Q on regions is assessed in the second main scenario (Scenario 2) presented in Table 6. The regression model is the following: $Tobin's\ Q_t = \beta_0 + \beta_1 ESG_t + \beta_2 LNTA_t + \beta_3 CASH\_TA_t + \beta_4 LNTR_t + \varepsilon t.$ Three sub-scenarios are disaggregated from Scenario 2, to evaluate the correlation between each of the ESG factor (environment, social and corporate governance) and firm's value, represented in this scenario by Tobin's Q. The regions selected are North America, Europe and Asia based on the outputs resulted from SPSS software.

For Asia, about 50% of the total variation in firm's value for companies activating in energy industry may be explained by combined and individual ESG factors' disclosure (considered as independent variable, ESG combined score – scenario 2, environment score – scenario 2.1, social score – scenario 2.2 and corporate governance score – scenario 2.3). For Europe and North America, but also for the overall sample, the values of Adjusted R Square are between 15% and 20%, therefore, explaining on a limited degree the total variation in firm's value.

Table 6. **The impact of Tobin's Q on ESG factors' disclosure**

Dependent Variable: Tobin's Q	**Overall sample**		**North America**		**Europe**		**Asia**	
Scenario 2	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
(constant)	1.029	0.000	1.244	0.034	0.509	0.072	1.527	0.000
ESG	0.002	0.216	0.011	0.022	0.001	0.444	-0.003	0.404
CASH_TA	1.219	0.001	-0.345	0.695	0.961	0.036	3.296	0.000
LNTA	-0.100	0.003	-0.393	0.000	-0.155	0.000	0.004	0.945
LNTR	0.038	0.130	0.306	0.003	0.145	0.001	-0.100	0.106
F statistic	12.542	0.000	5.475	0.001	8.669	0.000	19.516	0.000
Durbin-Watson	2.100		1.986		1.858		2.312	
Adjusted R-square	0.145		0.249		0.197		0.507	
Scenario 2.1	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
(constant)	0.982	0.000	1.052	0.128	0.526	0.055	1.334	0.000
ENV	0.008	0.085	0.022	0.085	0.004	0.431	0.001	0.895
CASH_TA	1.204	0.001	-0.128	0.889	0.959	0.037	3.118	0.000
LNTA	-0.105	0.002	-0.390	0.000	-0.158	0.000	0.014	0.799
LNTR	0.044	0.149	0.343	0.001	0.147	0.001	-0.110	0.077
F statistic	12.972	0.000	4.653	0.003	8.680	0.000	19.150	0.000
Durbin-Watson	2.093		2.079		1.843		2.370	
Adjusted R-square	0.149		.213		0.197		0.502	
Scenario 2.2	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
(constant)	1.126	0.000	1.979	0.000	0.601	0.035	1.625	0.000
SOC	0.001	0.228	0.031	0.017	-0.001	0.909	-0.010	0.162
CASH_TA	1.255	0.000	-0.174	0.843	0.980	0.033	3.296	0.000
LNTA	-0.099	0.003	-0.431	0.000	-0.155	0.000	-0.003	0.957
LNTR	0.039	0.222	0.268	0.009	0.147	0.001	-0.093	0.130
F statistic	12.103	0.000	5.619	0.001	8.484	0.000	20.201	0.000
Durbin-Watson	2.102		1.988		1.846		2.269	
Adjusted R-square	0.140		0.255		0.193		0.516	
Scenario 2.3	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**	**Coefficient**	**Sig.**
(constant)	0.982	0.000	1.077	0.085	0.417	0.133	1.578	0.000
GOV	0.010	0.101	0.034	0.028	0.011	0.083	-0.015	0.263
CASH_TA	1.147	0.001	-0.901	0.325	0.815	0.078	3.306	0.000
LNTA	-0.102	0.002	-0.354	0.001	-0.165	0.000	0.000	0.993
LNTR	0.044	0.149	0.299	0.003	0.158	0.000	-0.096	0.118
F statistic	12.887	0.000	5.317	0.001	9.458	0.000	19.816	0.000
Durbin-Watson	2.098		1.965		1.876		2.291	
Adjusted R-square	0.148		0.242		0.213		0.511	

The results presented in Table 6 show different impact of ESG factors' disclosure on the firm's value, when using Tobin's as the dependent variable as compared to the market value of the company. A low and insignificant impact of ESG factors on Tobin's Q may be observed for the companies activating in energy industry, at international level. Advancing the analysis on regions and secondary scenarios, findings show that not all the variables have a significant impact on the firm's value. Except for ENV variable, which is not significant (with a maximum significance level of 95%) in either presented region, all the other independent variables have a positive and significant impact for North America region (ESG 0.022; SOC 0.017; GOV 0.028, with $p<0.05$). The lack of significance resulted for the linear regression model related to the three sub-scenarios makes impossible for the hypotheses to be validated.

The impact of the control variable CASH_TA on the dependent variable, Tobin's Q is positive and significant for the overall sample, and for companies from Europe when considering both combined and individual ESG scores. Furthermore, LNTA and LNTR have a significant impact on the firm's value at regional level for Europe and North America, but only the impact of total assets remains significant at the global level. As for the trend, an increase of the firm's value measured by Tobin's Q, may be associated with an increase in total assets, but with a decrease in total revenues, both globally and regionally.

Conclusions

This research investigates the associations between ESG factors disclosure and firm's value for companies activating in energy sector. Previous empirical evidence supports mixed results when unidirectional linear relationships are tested. Based on the findings of this research, particular discussion is conducted for three geographical regions. Thus, the results support the hypothesis that there is a positive association between ESG factors disclosure and firm's value for companies from energy industry. The results are similar with other studies (Li et al., 2018; Fatemi et al., 2018) investigating this relationship.

The regression models were designed for the combined ESG factors and then extended by replicating them for each factor (environment, social and corporate governance). Findings confirm that both the individual and the combined ESG factors are positively connected with the value of the company measured in the first regression model by market value and in the second model by Tobin's Q. Using two different dependent variables has enhanced the certainty regarding the evidence obtained for the investigated association.

The main contribution of this investigation to the literature consists of the evidence obtained about the positive association between ESG factors disclosure and firm's value. The positive relationship may encourage executives to adopt an ESG disclosure policy in order to enhance the value of the company and thus, attract new investors and capital.

Future research may be extended into determining whether the association between ESG factors disclosure and firm's value remains positive for companies from other sensitive industries. A difference in difference analysis may also be conducted on a generalized sample including companies from all industries. Particularities of the companies from sensitive industries as compared to companies from non-sensitive industries may be identified.

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Some Thoughts About Substance of Gains/Losses

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Abstract: *The aim of the paper is to analyze the definitions and recording process of gains and losses. The authors use a normative accounting theory. This approach is illustrated by a case study where an in-depth study of definitions of gain and loss has been performed. The authors have developed recommendations for improving the reporting process, which consider the definitions of income, revenue, gain, loss and profit. Analyzing the inconsistency in two pairs of opposite terms (Profit and Loss; Gain and Loss) the authors conclude that the amount named Gain/Loss in the disposal of Property, Plant and Equipment should instead be considered a correction or adjustment of previous reporting of depreciation expense due to the formula. To make these adjustments and show them separately, a Contra depreciation expense account or Depreciation adjunct account is recommended.*

Keywords: *Income, gain, loss, profit, transaction approach.*

1. Introduction

Accounting is the systematic and comprehensive recording of financial transactions pertaining to a business. An accounting information system collects and processes transaction data and then disseminates the financial information to interested parties. Accounting information systems are designed to support accounting functions and related activities. Financial accounting focuses on the reporting of an organisation's financial information – including the preparation of financial statements – to external users of the information, such as investors, regulators and suppliers. For better results, it is important to have a common understanding of basic terms and ways to process transactions. We agree with Mourier (2004) that accounting is a challenging subject requiring a specialist's background knowledge, and that financial reporting is an area that demands distinct and unambiguous terminology.

At the heart of the IFRS Conceptual Framework for Financial Reporting (hereafter the IFRS Framework) are the elements of financial statements (IASB, 2018a: paras. 4.1–4.72), namely, *assets*, *liabilities*, *equity*, *income* and *expenses*. The IFRS Framework adopts a *balance sheet approach* in that the definitions of *liabilities*, *equity*, *income* and *expenses* all follow inexorably from the definition of *assets*: *liabilities* are defined to be the opposite of assets, *equity* is the residual interest in assets having deducted liabilities, and *income* and *expenses* are defined as, respectively, increases and decreases in net assets (other than from transactions with equity holders). This balance sheet approach can be viewed simply as an application of the logic of double-entry accounting, meaning that assets are sources of value that are necessarily equal to the claims on those sources, namely, equity and liabilities. The aim of the current paper is to analyze the definitions and recording process of *gains* and *losses*. The authors of the current paper

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have developed some recommendations for improving the reporting process considering the meanings of *income*, *revenue*, *gain* and *profit*.

2. Literature review

Income may have several meanings. First, *income* can be used interchangeably with *revenue*. Second, *income* may refer to a secondary type of *revenue* that comes from sources other than main operating activities; for example, interest income, rent income, or commission income. Third, net *income* (=*profit*) refers to the excess of *income* over *expenses*. There have been some research papers that analyse the main terms in accounting. Mostly the research papers focus on *income*, *expenses*, *revenue* and *profit*. In these research papers *gain* and *loss* are used superficially.

2.1 On the definitions of income, expenses and profit/loss

In 1920 the committee on terminology was constituted in the USA. The task was to compile a vocabulary of words and expressions used peculiarly in accounting and of gradually preparing definitions thereof. The terms *profit*, profit and loss account (or profit and loss statement) are older, and perhaps more inclusive and more informative, expressions to be applied to industrial and mercantile enterprises and their results than are the terms *income* and income account (or income statement). The terms *profit* and *loss* seem to have been in use before Paciolo's work was published in 1494. Clearly, an opportunity existed for distinctive uses of the terms *earnings*, *income*, and *profits*, and of the corresponding accounts or statements. Not too long ago, usage applied *earnings* to concerns rendering services, *profits* to manufacturing and mercantile concerns, and *income* to the compensation or *revenue* received by individual (Accounting Terminology Bulletins 1955a: 7, 14–15).

The terms *revenue, income, profit,* and *earnings* refer to closely related concepts. In general, they relate to the increase (or decrease if negative) in the owners' equity which results from operations of an enterprise. They are, therefore, to be distinguished from receipts such as collection of receivables, and from proceeds of a loan or bond issue, or the capital contributions by owners. *Revenue* results from the sale of goods and the rendering of services and is measured by the charge made to customers, clients, or tenants for goods and services furnished to them. It also includes *gains* from the sale or exchange of assets (other than stock in trade), interest and dividends earned on investments, and other increases in the owners' equity except those arising from capital contributions and capital adjustments. *Income* and *profit* involve net or partially net concepts and refer to amounts resulting from the deduction from *revenue*. Accounting Terminology Bulletins 1955b: 33–35).

Already in 2010 Richard Barker paid attention that *income* and *expenses* were incorrectly defined in the IASB's conceptual framework. He also noted that *profit* in IFRS has conflicting concepts. The first reason is that *profit* do not have clear definition in the Framework and the second reason is that *profit* has inconsistency and needless complexity in the concept of *profit* in IAS 1. Barker notes the importance of the Framework, and in particular its balance sheet approach. Barker (2010) has drawn attention to the basic problem that the definition of *income* refers incorrectly to an increase in assets (which is a debit) rather than an increase in equity (which is a credit). As Barker demonstrates, this is not merely a semantic point, but leads to real confusions, because *income* must be understood conceptually as one component of change *within equity*, and not as a change in assets. For example, it is essential that the definition of *income* should exclude capital maintenance adjustments (Barker *et al.*, 2014: 154). Nobes (2012) has noted that a similar problem arises in connection with the definition of *revenue* – which is not an increase in assets but an increase in equity. The Framework should also clarify that *revenue* is a gross amount, but not all gross amounts are *revenue* (for example, the receipt of cash for an account receivable is not '*revenue*'). Also '*revenue*' may arise where there is no net increase in net assets – as when inventory is sold to a customer for less than it's carrying amount. There is now no definition of 'ordinary activities' in the IFRS literature. Therefore, it seems inappropriate to use it as part of the definition of *revenue*. It is not clear to use what the IASB means by 'ordinary'.

2.2 Income, revenue and gain in the IFRS Framework 2018

According to the IFRS Framework 2018, paras. 4.2 and 4.68, *income* is defined as „increases in assets, or decreases in liabilities, that result in increases in equity, other than those relating to contributions from holders of equity claims." Para. 4.72 specifies that different transactions and other events generate *income* and *expenses* with different characteristics. Providing information separately about *income* and *expenses* with different characteristics can help users of financial statements to understand the entity's financial performance (see paras. 7.14–7.19). The differentiation is applied through classification. According to the para. 7.15 *income* and *expenses* are classified and included either: (a) in the statement of profit or loss; or (b) outside the statement of profit or loss, in other comprehensive income. Para. 7.18 states that *income* and *expenses* that arise on a historical cost measurement basis (see para. 6.42) are included in the statement of profit or loss. That is also the case when *income* and *expenses* of that type are separately identified as a component of a change in the current value of an asset or liability. „For example, if a financial asset is measured at current value and if interest income is identified separately from other changes in value, that interest income is included in the statement of profit or loss." (IASB, 2018: para. 7.18)

In March 2018, the IASB issued „Basis for Conclusions on the Conceptual Framework for Financial Reporting". The IASB explains why various types of *income* and *expenses* (for example *revenue*, *gain* and *losses*) were not included. „That material was not included in the 2018 Conceptual Framework. The material was originally included to emphasise that *income* includes *revenue* and *gains* and that *expenses* include *losses*. The Board decided that emphasis is now unnecessary and the implication that the Conceptual Framework defines subclasses of *income* and *expenses* is unhelpful. The Board does not expect the removal of that material to cause any changes in practice." (IASB, 2018b: BC4.96).

Comment: We do not agree with the IASB's opinion that the definition of subclasses of *income* and *expenses* is unhelpful. On the contrary, we believe that there is a serious problem that has not been addressed so far. The IFRS Framework 2018 does not pay any attention to the terms like *revenue* and *gain*. For example, *revenue* is mentioned only three times without any definition under para. 2.10: „for example, ***revenue*** **information** for the current year, which can be used as the basis for **predicting *revenues*** in future years, can also be compared with ***revenue*** **predictions** …." However, still according to the IFRS 15 (*Appendix A: Defined terms*) *revenue* is

„*income* arising in the course of an entity's ordinary activities" (IASB, 2015). Such modification is not in line with the framework.

The IFRS Framework 2018 does not apply term *gain*; this term is mentioned only five times without any definition. The effect of a change in prices is sometimes referred to as a *holding gain* or a *holding loss* (IASB, 2018a: 57, 59, 62, 71), but according to para. 8.7 increases in the prices of assets held over the period, conventionally referred to as *holding gains*, are, conceptually, profits. In this case, it is not clear why the terms a *holding gain* and a *holding loss* have been used.

Comment: The term *gain* is used in many standards (IAS 1, IAS 16, IAS 21, IAS 36, IAS 38, IFRS 5, IFRS 9), but it is not defined. If *gain* is a subclass of *income*, it should be clearly stated, if not, it should be defined. As the *gain/loss* are not defined or specified in the IFRS Framework 2018, to clarify the problem, let us look at how the IFRS Framework 2010 treated *gain/loss*.

2.3 Income, revenue and gain/loss in the IFRS Framework 2010

In accordance with the IFRS Framework 2010, the definition of *income* encompasses both *revenue* and *gains* (IASB, 2010: para. 4.29).

According to the IFRS Framework 2010, para. 4.29 „*Revenue* arises in the course of the **ordinary activities** of an entity and is referred to by a variety of different names including sales, fees, interest, dividends, royalties and rent".

Term *profit* is not defined in the IFRS Framework 2018. According to para. 8.4, *profit* is the residual amount that remains after *expenses* have been deducted from *income*. If *expenses* exceed *income*, the residual amount is a *loss*.

According to the IFRS Framework 2010, para. 4.25, *income* is increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants.

In accordance with the IFRS Framework 2010, para. 4.29:

The definition of income encompasses both revenue and gains.

According to the IFRS Framework 2010, para. 4.29, *revenue* arises in the course of the **ordinary activities** of an entity and is referred to by a variety of different names including sales, fees, interest, dividends, royalties and rent.

In the IAS 18 (IASB, 2012) para. 7 *revenue* was defined as „the gross inflow of economic benefits during the period arising in the course of ordinary activities of an entity when those inflows result in increases in equity, other than increases in relation to contributions from equity participants". After 1 January 2017, the IFRS 15 replaced the IAS 18. According to the IFRS 15 (*Appendix A: Defined terms*) *revenue* is „*income* arising in the course of an entity's ordinary activities" (IASB, 2015). Because the definition of *income* did not change, *revenue* can be defined as the gross amount of economic benefit flowing to an entity from its ordinary business activities that results in increases in equity other than from contributions made by equity holders (Burton and

Jermakowicz, 2015: 467). **Therefore, *revenue*** is understood to be that part of a company's *income* resulting from its main (= operating) activities. In pure accounting terms, *revenue* is an increase in assets or decrease in liabilities on the company's books.

Gain is defined in many dictionaries. Business dictionaries (Collin, 1997; Oxford Dictionary of the Business World, 1993; Collins, 2013, Friedman, 2007, 2012; Scott, 2009) emphasize the increase in profit, price or value, as well as the increase of wealth or amount of money that is made by a company when selling a non-inventory asset for more than its value. More specific and comprehensive are Banking and Finance Dictionaries (Collin, 1994; Collins, 2013; Downes and Goodman, 2014; Oldham, 1993; Briscoe and Fuller, 2007; Munn *et al*., 1993; Wuite, 2009; QFinance, 2013) where *gain* is defined as the increase in the value of an asset that had been bought. Special attention is paid on stocks and shares. The most exhaustive approach is taken by Munn *et al.* (1993) who have defined *gains* as „increases in equity (net assets) from peripheral or incidental transactions of an entity and from all other transactions, events, and circumstances affecting the entity during a period except those that result from revenues or investments by owners. *Gains* often arise from events and circumstances that may be beyond the control of an enterprise or its managements. *Gains* can result from such activities as sale of investments in marketable securities, dispositions of used equipment, the settlement of liabilities at other than their carrying amounts, or the winning of a lawsuit". In accounting dictionaries (Nobes, 2002; Mooney, 2008; Siegel and Shim, 2005, 2010; French, 1994), the authors have pointed out the difference between *gains* and *revenues*. French (1994) has emphasized that „*gains* are usually contrasted with *revenues*. Gains and *revenues* together are called '*income*'".

In accordance with the IFRS Framework 2010, para. 4.30, *gains* represent other items that meet the definition of *income* and may, or may not, arise in the course of the ordinary activities of an entity. *Gains* represent increases in economic benefits and as such are no different in nature from *revenue*. Hence, they are not regarded as constituting a separate element in the IFRS Framework 2010, para. 4.30. We agree with J. M. Flood that „*Gains* are increases in equity resulting from transactions and economic events other than those that generate *revenues* or are investments from owners. *Gains* often result from transactions and other events that involve no earnings process. In terms of recognition, it is more significant that the gain be realized or realizable than earned." (Flood, 2015: 74)

Gains are commonly distinguished from *revenues* for three reasons (see Table 1).

Table 1. **Gains vs. revenues**

Differences	Revenues	Gains
Connection with entity's activities	Usually result from an entity's central operations	Result from incidental or peripheral activities of the entity.
Earning process	Are usually earned.	Often result from nonreciprocal transactions (such as winning a lawsuit or receiving a gift) or other economic events for which there is no earnings process.
Reporting	Are reported gross.	Are reported net.

(*Source*: Flood, 2015: 73)

Comments to the Table 1. ***Gains*** are a secondary type of *income*, referring to incidental and nonrecurring transactions. According to the IFRS Framework 2010, para. 4.31, *gains* include, for example, those arising from the disposal of non-current assets. The disposal of fixed assets is called a *gain* because the sale of fixed assets does not take place regularly. The definition of *income* also includes unrealized gains. When *gains* are recognized in the income statement, they are usually displayed separately because knowledge of them is useful for making business decisions. The distinction between *revenues* and *gains* was once a subject of considerable controversy. One school of thought believed that only revenues should be reported on income statements. The secondary or peripheral nature of *gains* means that they did not represent recurring *income* from the entity's main area of income-producing activities and therefore should be excluded from the income statement. This school of thought has been called the *current operating income concept* (Wolk *et al*., 2001: 393). The competing position was called *all-inclusive income concept*. Its proponents believed that all revenues and gains, regardless of source, should be included in the income statement (Wolk *et al*., 2001: 393). There has been an evolution away from the current operating income concept to the all-inclusive concept.

In accordance with the IFRS Framework 2010, para. 4.33:

The definition of expenses encompasses losses as well as those expenses that arise in the course of the ordinary activities of the entity.

According to the IFRS Framework 2010, para. 4.34, *losses* represent other items that meet the definition of *expenses* and may, or may not, arise in the course of the ordinary activities of the entity. *Losses* represent decreases in economic benefits and as such they are no different in nature from other expenses. Hence, they are not regarded as constituting a separate element in the IFRS Framework 2010 (para. 4.34).

Losses are commonly distinguished from other *expenses* for three reasons (see Table 2):

Table 2. **Losses vs other expenses**

Differences	Other expenses	Losses
Connection with entity's activities	Usually result from an entity's central operations.	Result from incidental or peripheral activities of the entity.
Earning process	Often incurred during earnings process.	Often result from nonreciprocal transactions (such as thefts or fines) or other economic events unrelated to an earnings process.
Reporting	Are reported *gross*.	Are reported *net*.

(*Source*: Flood, 2015: 73)

Comments to the Table 2. *Losses* are a secondary type of *expenses*, referring to incidental and nonrecurring transactions. The definition of *expenses* also includes unrealised losses. When *losses* are recognised in the income statement, they are usually displayed separately because knowledge of them is useful for making business decisions. To the user of the IASs/IFRSs (written in English), it seems that authors of the individual standards have applied whichever English terminology they are used to, and this terminology then becomes the IASs/IFRSs English terminology. For example, North American accountants frequently talk about *net income* or *earnings* instead of *profit*. Although named the income statement, the format shown in the appendix to the IAS 1 employs the term *profit* rather than *income* to individual items. In some countries (for example, in Germany, Russia, Finland, Estonia) in local language, the same word is used for *profit/gain* as well as for their two counterparts – *losses*. For example, in the IFRSs, the concept of *income* encompasses both *revenues* and *gains* whereas, in Finnish, the language does not differentiate between *income* and *revenues*, or likewise between *revenues* and *gains*.

3. Research design and interpretations

To achieve the goal of the current paper, the authors use a normative accounting theory. The normative accounting theory seeks to prescribe some basis of accounting measurement particular accounting procedures, and the content of financial reports (Ijiri, 1975). The authors use a case study where an in-depth study of definitions of *gain* and *loss* will be performed.

3.1. Postulates

According to the IFRS Framework 2010, para. 4.60, *profit* is the residual amount that remains after *expenses* have been deducted from *income*. If *expenses* exceed *income* the residual amount is *loss*.
Based on this axiom we can formulate following postulates:

1. **Profit/loss is not defined in the IFRSs.** Instead of a definition, a calculation formula is indicated: Profit/Loss is the residual amount that remains after *expenses* have been deducted from *income*.

2. **Profit/loss is the difference between income and expenses.** Since the Profit/Loss cannot be measured directly (as are income and expenses), they must be calculated mathematically as difference between income and *expenses*. Consequently, we cannot find Profit/Loss from transactions, from accounting entries; they are only subtotals or total in the income statement.

NB! Income and expenses have definitions. As Profit/Loss is calculated as the difference between income *and expenses, it is not necessary to define Profit/Loss. Therefore, Profit/Loss are only technical terms.*

3. **Profit cannot arise without income(s), loss without expense(s).** *Revenues* and *expenses* are primary (measurable) indicators for *profit/loss* calculations. **Profit/loss is the secondary indicator, not measurable directly but computable**, derived from *income(s)* and *expense(s).* **It is a reason-consequence relation, where income(s) and expense(s) are reasons and Profit/Loss is a consequence**.

4. In addition to being affected by *income(s)* and *expense(s),* the final amount of *Profit/Loss* can also be affected by several corrections and adjustments. These can be caused, for example, by revaluations, the usage of different formulas (for example, in the calculation of depreciation, amortization), etc. Finally, all these affect *Profit/Loss* through special form of *Income/Expense* called *Gain/Loss*.

NB! As *profit* and *gain* are not identical (have different content), their opposite terms, *loss* and *loss*, must also not be identical (have different content). We consider this a major shortcoming in terminology because it results in the fact that many countries use the terms *Profit/Loss* instead of *Gain/Loss*.

5. **Because Profit/Loss do not appear in journal entries, it is not possible to correct or adjust them directly.** Instead, corrections and adjustments will be calculated through the use of corresponding entries by using gain(s) and loss(es).

In the following, the authors present an example of how one may understand, identify and record *Gains/Losses* from the sale of Property, Plant and Equipment (PPE).

3.2. Example

A piece of equipment was bought in the beginning of the year (January 2, 20X1) for 20,000 €. The estimated usage life is 5 years. The expected residual value (terminal value) is 0.

On July 1, 20X2, the piece of equipment was sold for 11,900 €. For simplicity, assume that net proceeds received are 11,900 €.

The journal entry for recording the purchase of equipment is thus:

Dr: Equipment	20,000 €	
Cr: Bank account		20,000 €

The depreciation is computed by using
1) straight-line method;
2) 150% declining balance (diminishing balance, reducing balance) method (depreciation rate is 30%);
3) double declining (double diminishing) balance method.

Version 1: Journal entries when using straight-line method for depreciation (depreciation rate 20%)

Depreciation for the year 20X1

Dr: Depreciation expense	4,000 €	
Cr: Accumulated depreciation		4,000 €

Depreciation for the half year

Dr: Depreciation expense	2000 €	
Cr: Accumulated depreciation		2000 €

Net book value of the equipment on June 30, 20X2

Equipment	20,000 €
Accumulated depreciation	(6,000 €)
Net book value (depreciated cost)	14,000 €

Sale of equipment (July 01, 20X2):

Journal entry			Explanation
Dr: Accounts Receivable	11,900 €		Invoice to the buyer. This is not sales revenue!
Dr: Accumulated depreciation	6,000 €		Accumulated depreciation is eliminated.
Dr: *LOSS*	2,100 €		According to the formula used in this example, the depreciation expense is computed at only 6,000 €, thus, the resulting book value is 14,000 €. Therefore, it is necessary to adjust expenses by 2,100 €. Here *LOSS* is the opposite of *GAIN*.
Cr: Equipment		20,000 €	The equipment is written off.

Comment: The steps in composing compound journal entry are the following:

1. Invoicing the buyer (Dr: Accounts Receivable 11,900 €).

2–3. Derecognition of a piece of equipment from the balance sheet (Dr: Accumulated depreciation 6,000 € and Cr: Equipment 20,000 €).

4. Balancing of debits and credits (Dr: *LOSS* 2,100 €).

The term *LOSS* is not the same as it is in the interconnection *Profit/Loss* because **it is not computed as difference – income minus expense(s)**.

Version 2: Journal entries using of 150% declining balance method for depreciation depreciation rate 30%)

Depreciation for the year 20X1		
Dr: Depreciation expense	6,000 €	
Cr: Accumulated depreciation		6,000 €
Depreciation for the half year		
Dr: Depreciation expense	2100 €	
Cr: Accumulated depreciation		2100 €

Net book value of the equipment on June 30, 20X2	
Equipment	20,000 €
Accumulated depreciation	(8,100 €)
Net book value (depreciated cost)	11,900 €

Sale of equipment (July 01, 20X1):

Journal entry			Explanation
Dr: Accounts Receivable	11,900 €		Invoice to the buyer. This is not sales revenue!
Dr: Accumulated depreciation	8,100 €		Accumulated depreciation is eliminated.
Cr: Equipment		20,000 €	The equipment is written off.

Comment: The steps in composing compound journal entry are the following:

1. Invoicing the buyer (Dr: Accounts Receivable 11,900 €).
2–3. Derecognition of a piece of equipment from the balance sheet (Dr: Accumulated depreciation 8,100 € and Cr: Equipment 20,000 €).

The book value of equipment **is equal to the sales price**. This means that **there is no need for adjustment**.

Version 3: Journal entries using the double-declining balance method for depreciation (depreciation rate 40%)

Depreciation for the year 20X1			
Dr:	Depreciation expense	8,000 €	
	Cr: Accumulated depreciation		8,000 €
Depreciation for the half year			
Dr:	Depreciation expense	2,400 €	
	Cr: Accumulated depreciation		2,400 €

Net book value of the equipment on June 30, 20X2	
Equipment	20,000 €
Accumulated depreciation	(10,400 €)
Net book value (depreciated cost)	9,600 €

Sale of equipment:

Journal entry			Explanation
Dr: Accounts Receivable	11,900 €		Invoice to the buyer. This is not sales revenue!
Dr: Accumulated depreciation	10,400 €		Accumulated depreciation is eliminated.
Cr: Equipment		20,000 €	The equipment is written off.
Cr: *GAIN*		2,300 €	According to this formula, the depreciation expense is computed at 10,400 € (more than is needed), thus, the result is a book value of 9,600 €. Therefore, it is necessary to make an adjustment of 2,300 €.

Comment: The steps in composing the compound journal entry are the following:

1. Invoicing the buyer (Dr: Accounts Receivable 11,900).
2–3. Derecognition of a piece of equipment from the balance sheet (Dr: Accumulated depreciation 10,400 and Cr: Equipment 20,000).
4. Balancing of debits and credits (Cr: *GAIN* 2,300).

Gain that appeared in the compound journal entry is not profit **because it is not a difference between income(s) and expense(s)**.

3.3. General comments concerning this example

The same initial numerical data were applied for all three versions:

- The same piece of equipment was acquired.
- The piece of equipment was bought for 20,000 €.
- The estimated usage life of piece of equipment was 5 years.
- The expected residual value (terminal value) was 0.
- A year and a half after purchase the piece of equipment was sold for 11,900 €.
- All data above relate to the same company.

Conclusion: If one does not think in terms of accounting, all versions will be identical. The only difference is in the formulas used.

Ideally, the depreciation, which is accumulated up to the time of disposal, reduces the book value down to the disposal value. Usually, however, this does not occur, and the company must recognize a *gain* or *loss* on the disposal.

In Version 1 (which used the straight-line method) depreciation was computed as less than needed. Instead of balancing debits and credits by the correction of depreciation expense, another expense (*LOSS*) was indicated.
In Version 2 (which used the 150% declining balance method), the formula used guaranteed the exact amount of depreciation and no correction/adjustment was needed.
In Version 3 (which used the double-declining balance method) depreciation was computed as more than needed. Instead of balancing debits and credits by the correction of depreciation expense, additional income (*GAIN*) was indicated.

As we can see, imprecisions in the formulas used in Versions 1 and 3 were improperly corrected with two additional errors.

In comparison with Version 2, in Version 1 the structure of expenses has been changed (*LOSS* is added) and depreciation expense is understated. In comparison with Version 2, in Version 3 income is overstated (*GAIN* is added) and depreciation expense is overstated. Although the amount of profit is exactly the same in the three income statements, their different formulas result in differences in the income statements' structure and items as well as in the grand totals of incomes and expenses. It is necessary to emphasize that although the income statement items used for balancing debits and credits have been identified as *LOSS* (in Version 1) and *GAIN* (in Version 3), their functions are in fact alike: they are items balancing debits and credits in compound journal entries.

We agree with Jaana Kettunen that „The interrelationship between the terms corresponding to *gains* and *profit* … might to be based on the idea that in accordance with the flow-based approach it may be argued that *gains* are in nature to a certain extent similar to profit because *gain* is a *net concept* of positive value (otherwise it would be a loss) while *revenue* is gross." (Kettunen, 2011: 14) Because of this similarity, *gains* and *profits* are often equated. For example, Collins notes that „Among other things, *gains* often include *profits* arising on the disposal of non-current assets." (Collins, 2013: 52) Here it is appropriate to note that *gain* is explicitly defined (as some kind of income) yet *profit* is not. The concept or approach of *gross versus net* is quite popular and has been used by many researchers (e.g., Barker, 2010; Nobes, 2012 and others). For example, Barker points out that „*Revenue* is a gross concept. That is, it does not involve the deduction of an *expense* or of the carrying value of a disposed asset. By contrast, the standards that deal with gains require net measurements, that is, a gain is calculated as the difference between two values." (Barker, 2010) According to the *net concept method*, *GAIN/LOSS* on the disposal of PPE should be calculated by the following formula:

GAIN (LOSS) = Net proceeds received – PPE's net book value

The positive amount is determined as *GAIN* and negative amount as *LOSS*. Thereafter the journal entry will be made.

According to the IAS 16, para. 71 the derecognition of an item of Property, Plant and Equipment is also based on *net concept*. „The *gain* or *loss* arising from the derecognition of an item property, plant and equipment shall be determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item." (IASB 2014b) The **illogicality of this requirement lies in the need to make a calculation. If calculation as a secondary method of measurement is acceptable in case of profit[3], it is not acceptable in case of *Gain/Loss*. Recall that** the definition of *income* encompasses both *revenue* and *gains* and, according to the IFRS Framework 2010, para. 4.30, *gains* represent other items that meet the definition of *income*. Therefore, *gain* should correspond to the definition of *income*. Similarly, the definition of *expenses* encompasses *losses* as well as those *expenses* that arise in the course of the ordinary activities of the entity, and, according to the IFRS Framework 2010, para. 4.34, *losses* represent other items that meet the definition of *expenses*. Therefore, *loss* should correspond to the definition of *expense*. Unfortunately, there is nothing stated in the IAS 16 as well as in the other IFRSs how to test compliance of *Gain/Loss* with the definition of *Income/Expenses*.

According to the *transaction approach* used by the authors of this paper, there is no need to make calculations. The apparent need for balancing items in journal entries is caused by the erroneous categorization of depreciation expense, whether it be understated (as in Version 1) or overstated (as in Version 3). **Therefore, items balancing debits and credits in a** compound journal entry should be treated as adjustments rather than GAINS/LOSSES. To make the aforementioned adjustments and show them separately, a *Contra depreciation expense* account or *Depreciation adjunct account* should be used.

Version 1		
Dr: Accounts Receivable	11, 900 €	
Dr: Accumulated Depreciation	6,000 €	
Dr: Disposal balancing	2,100 €	
Cr: Equipment		20,000 €
Version 2		

[3] Profit is not defined in the IFRSs. Instead of definition, calculation formula is indicated: profit is the difference between total income and total expenses.

Dr: Accounts Receivable	11, 900 €	
Dr: Accumulated Depreciation	8,100 €	
Cr: Equipment		20,000 €
Version 3		
Dr: Accounts Receivable	11,900 €	
Dr: Accumulated Depreciation	10,400 €	
Cr: Equipment		20,000 €
Cr: Disposal balancing		2,300 €

The approach recommended by the authors of this paper guarantees that all three final income statements will be identical.

4. Conclusions

Through the process of analyzing the definitions and the recordings of *revenues, expenses, gains,* and *losses,* the authors of the current paper have developed recommendations for improving the reporting process. The paper identifies inconsistency in two pairs of opposite terms: 1) *profit*/*loss,* and 2) *gain*/*loss*. As *profit* and *gain* are not identical (having different content), it is inevitable that their opposite terms, *loss* and *loss,* must also not be identical (having different content). In this paper, five postulates about *profit* and *loss* have been formulated. These postulates are illustrated by the transaction approach, where the different examples presented involve understanding, identifying, and recording *gains*/*losses*. According to the IFRS Framework, *gain* should meet the definition of *income* just as *loss* should meet the definition of *expense*. Unfortunately, there is nothing stated in the IAS 16 or in the other IASB documents how to test compliance of *gain*/*loss* with the definition of *income*/*expense*. With further examples, the authors of the current paper conclude that the amount frequently identified as *gain*/*loss* in disposal of PPE should instead be treated as the correction or adjustment of previous reporting of depreciation expense due to the formula. To make such adjustments and show them separately, the use of the *Contra depreciation expense account* or *Depreciation adjunct account* should be considered.

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The Reality of Corporate Social Responsibility under the Corporate Governance Procedures Followed in Jordan

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Abstract: *After a dramatic increase in financial crises, and because of Globalization, the managers and investors demand more guarantee of the efficacy of financial statements issued by companies, especially after the bankruptcy of many companies as a result of changing of accounting and financial policies by business managers, which led to adopting corporate governance in both developed and developing countries as a way for establishing a relationships between all stakeholders of the business and how to prepare financial statements by International Financial Reporting Standards (IFRS). In this article, we aimed to understand the current legislative environment and institutional framework of Corporate Social Responsibility Disclosure in Jordan, to develop knowledge about assessing accounting and financial policies which practice corporate governance, accordance with the fundamental principles adopted by Organization Economic Co-operation and Development (OECD), and how accounting policies impact on Corporate Social Responsibility Disclosure, and effect of board formation variables, ownership structure variables on the level of disclosure of corporate social responsibility. Jordan had some characteristics of the best corporate governance practices, but it still needs more progress in directors' independence, shareholder rights, and requires more independence of internal and external auditors. The problems of the Jordanian business environment which impact corporate governance are:*

1 - There is a need to raise awareness about Corporate Social Responsibility, its importance, and its implementation mechanisms.

2 - Some managers need more care of Corporate Social Responsibility Disclosure and know how it affects companies' financial results in the future.

3 - Some companies still owned and managed by families, and limited liability companies didn't apply Corporate Social Responsibility Disclosure.

4 - Adequate disclosure of Corporate Social Responsibility instructions is required only from companies listed on the Amman Stock Exchange.

Keywords: *Corporate Culture, Accounting, Auditing.*

1. Introduction

After a dramatic increase in financial crises, these financial crises led to bankruptcy for many companies in both developed and under-developing countries, and the dramatic collapse of the global financial markets, many countries, experts, and researchers were forced to look into the causes of these financial crises. Since the investment had become in the open market worldwide and financial investments will not be limited within a specific region, but beyond continents.

The experts and researchers assumed that the main reason is the lack of governance in these companies. This helped administrators switch and adjust the financial statements as a result of adoption by developing some accounting policies to reflect companies' financial statements, which will significantly affect shareholders and might lead to wrong decisions that affect the fate of their financial investments. Financial scandals, the collapse of the largest companies, and the global financial crisis have highlighted the need for good corporate governance.

The failures of some of the world's largest companies, such as Commerce Bank (1991) Enron (2001), Adelphia (2002), and World Com (2002), affected potential investor confidence in the accounting reporting procedures (Becht *et al.*, 2003).

According to the IFRS conceptual framework, the objective of financial reporting is: “To provide financial information about the reporting entity that is useful to investors and current and potential lenders, and other lenders and creditors in making decisions about providing resources to the entity.” Critical for financial stakeholders “To assess the prospects of any entity for net future cash flows, existing and potential investors, lenders and other creditors need information about the entity’s resources” (IFRS Conceptual Framework, 2010).

The standard theoretical framework of accounting for companies interprets the company's strategies into accounting. It divides this information into financial terms (balance sheet and profit and loss account) and non-financial terms (the balance sheet appendix, which defines accounting policies).

The adoption of International Financial Reporting Standards (IFRS) to the preparation of financial statements, will circumscribe accounting and financial policies that managers use when they prepare financial statements.

Corporate governance has become a national concern following developments in the corporate environment and administrative complexity of multinationals and globalization that have led to a need for governance standards, guidelines, and regulations, so the company, as a collective entity, bears responsibilities and obligations towards critical stakeholders, with shareholders considered only one group of stakeholders.

Corporate governance in emerging economies is mainly concerned with corporate transparency and disclosure. However, some companies in emerging markets suffer from a lack of transparency and a low level of information disclosure**.** (Rachagan, 2010; Chen *et al.*, 2011). Therefore, the mechanisms of corporate governance and the effectiveness of management control play essential roles in enhancing the reliability of the financial reporting process. It was found that corporate social responsibility is relatively low in developing countries, including Jordan (Abu Bakr and Nasser, 2000).

Corporate governance in Jordan is linked with the legislative environment and institutional framework adopted by the Jordan government, so Jordan took management based on the principles of management approved by the Organization for Economic Cooperation and Development (OECD). That affected the accounting policies adopted by companies.

The organizational governance structure of companies helps them respond to social pressures through corporate social responsibility, and Governance mechanisms are positively linked to the quality and quantity of corporate social responsibility, which indicates the importance of regulatory aspects of the disclosure and that regulation, can be an essential factor in influencing firms in corporate social responsibility, but Corporate social responsibility is not the primary goal for companies in Jordan, as this goal is second to profit, which is the primary goal for every company.

Corporate governance is defined as “rules and practices governing the relationship between managers, shareholders, and stakeholders of companies such as employees and creditors who contribute to the growth and financial durability by enhancing confidence and soundness of financial market and economic efficiency” (OECD, 2004), which means that company who have good governance will have more disclosure and transparency, especially on Social Responsibility Disclosure.

The report of the Cadbury Commission recognized Governance as “the system through which companies are directed and controlled” (Dunne and Morris 2008). Corporate Governance consists of three elements: the Board of Directors, Shareholders, and the Senior Management Team (Brenes et al., 2009). The World Business Council for Sustainable Development define corporate social responsibility as “an ongoing ethical commitment to the business, this contribution made to company employees in addition to their families and the local community as a whole, this commitment will be by providing them with appropriate economic developments to improve the various aspects of their lives.” (WBCSD, 1999).

Corporate social responsibility extends from corporate obligations, ethical behavior, community participation, employee relations, and charitable gestures by companies in the societies in which they work. (Aaron and Patrick, 2008). Many studies talk about the Disclosure of corporate social responsibility as positive indicators in enhancing the financial performance of corporations. It was noted that corporate social responsibility positively pays companies, but at the same time, other researchers remarked a negative or miscellaneous relationship. Still, the increasing demand from stakeholders in most companies requires more exploration of voluntary social activities and improved financial performance. (Brammer and Millington, 2008) found two theories in this context: stakeholder theory and legitimacy theory (Gray et al., 1995; Milne, 2002; De Villiers and Van Staden, 2006; Jamali, 2008).

Through the adoption of stakeholder theory that focuses on the expectations of special interest groups. The theory of legitimacy focuses on society’s expectations in general to explain corporate social responsibility, The Legitimacy theory (as a form of social dynamics) is better for disclosure practices of corporate social responsibility.

The basic concept of the Legitimacy theory is a “social contract” between the company and the community in which it operates and asks it to perform various desired social procedures. That is why companies disclose information to legitimize their existence (Guthrie and Parker, 1989). Consequently, companies are seen as a complex political system, consisting of alliances and sub-alliances of the various stakeholders involved in ongoing political negotiations with different goals and preferences. The legitimacy theory tries to explain why the company discloses corporate social responsibility. Thus, it becomes a resource that the company can create, influence, or manipulate through various strategies related to Disclosure to obtain and manage legitimacy. (Lindblom, 1994; Woodward et al., 2001; Deegan, 2009, 2014).

In Jordan, Abu Bakr and Nasser (2000) examined the results that corporations had achieved a kind of corporate social disclosure. He found it appears that companies' social exposure has received modest attention from most companies in Jordan, human resources, and community participation have generally been revealed and that environmental disclosure did not receive much attention. There were significant differences between different sectors regarding the quantities, methods, and locations of corporate social responsibility disclosure in the annual reports.

Al- Jahamani (2003) found that Jordan and the United Arab Emirates are in their early stages in environmental accounting and that corporate decision-makers understand the importance of environmental protection. Their awareness of their participation and reporting is not reflected in environmental issues, which turned out to be less than expected and less than ambitious.

The majority of research conducted in Jordan to date has focused on studying the impact of corporate characteristics on corporate social responsibility (Al- Khadash, 2003; Suwaidan and others, 2004; Ismail and Ibrahim, 2009; Al-Farah and Al-Hindawi, 2011).

We expand the scope of the research to examine the potential impact of the formation of the Board of Directors and the ownership structure on the disclosure of corporate social responsibility concerning the practice and exposure of corporate social responsibility and to build the index of disclosure of corporate social responsibility.

Generally, corporate governance determines the framework of rules, relationships, regulations, and processes through which power is exercised and controlled, for promoting, achieving justice and transparency in public shareholding companies.

2. Corporate Social Responsibility disclosure and business environment

In recent years, the topic of corporate social responsibility has attracted increasing attention from researchers and practitioners around the world, so Companies should not be judged solely based on their economic success and financial performance because they must act in a socially responsible manner.

The company seeking profit must expand the scope of its objectives where it can maximize shareholder wealth is what corporate social responsibility revolves around, so Companies need to balance their financial and non-financial goals to work in the interests of their community, the natural environment, employees, and customers, so CSR reports are used as a mechanism by which companies provide information to stakeholders about environmental issues, society, employee, and consumer.

An active attitude towards social and environmental issues leads to a higher level of social disclosure, which mean companies that have best practice disclosure practices in CSR matters are those that have identified a clear CSR policy or strategy that requires sustainable and indivisible behavior, and this includes meeting international standards in environmental and social issues as well as full transparency in their work that this strategy is strongly supported by the support of the principal shareholders of the company.

Companies have recognized the impact of social pressure on their activities and operations and have accepted that they have become more accountable to a broader audience of stakeholders and are subject to intense scrutiny from the public rather than just shareholders and creditors, so reporting CSR activities is increasingly vital for companies to demonstrate their commitment to environmental and social issues. (Adams, 2004; Brammer and Pavelin, 2008), and this requires companies to provide information covering their economic, social, and environmental activities (Deegan, 2014; Cormier et al., 2011).

The Board of Directors is responsible for achieving the objectives of the community. It includes the development of accounting policies, financial control systems, financial planning, auditing its financial statements annually, so Board is trying to improve corporate governance through improved accounting policies, the Board has full responsibility for its approval, follow-up, and one of these principles is Corporate Social Responsibility Disclosure.

The Good Corporate Governance practice contains useful public disclosure of data, financial status, performance, partnership, events, requests, and commitments that are likely to have a material impact on the financial condition or operating performance and that need follow up on these policies, or take those decisions, or follow these desired lines of action in terms of the goals and values of our society. but the level of corporate social responsibility, is higher in developed countries than in developing countries (De Villiers and Marques, 2016; Jamali and Karam, 2016), and most Arab countries have a low corporate social responsibility, (Kamala, 2007), this may be the result of recent economic development, weak legal systems, and corporate governance as a new concept or reduced demand from stakeholders. According to Gray et al. (2001), Social and environmental disclosure includes information related to the company's activities, aspirations, and general image regarding environmental issues, employees, consumers, equal opportunities, energy use, fair trade, and corporate governance.

Social and environmental disclosure occurs through various media such as annual reports, employee boards, advertisements, focus groups, school education, and brochures.

The increasing value that society places on the socially responsible behavior of organizations in economic, social, and environmental terms, and the legal requirements for this type of behavior and communicating it to society, have become fundamental factors that drive companies to begin to disclose information about valid and socially comparable corporate social responsibility.

There is a growing global concern about the role of companies in society, and this increased concern is linked to the state of corporate social responsibility (Darus et al., 2009). As a reason for that, the disclosure of corporate social responsibility has become an essential issue among companies due to the increased demand for this information by stakeholders, especially investors (Saleh et al., 2009), so investors want to invest in companies that participate in CSR activities because they work to improve financial performance, access to capital, reduce operating costs, enhance corporate reputation, and increase customer loyalty (Said et al., 2009).

The presence of shareholders whose personal image and social reputation are strictly related to the development of the company particularly fosters the development of disclosure practices. Investors with a reduced stake in the company's capital show only limited interest in this area. A Corporate Social Responsibility disclosure can also be used as a source to attract institutional investors to invest heavily in companies with reliable platforms for corporate social responsibility practices.

Most empirical studies were conducted on corporate social responsibility in developed countries (Jo and Harjoto, 2011; Feijoo et al., 2012; Zhang et al., 2013). With little on this topic in developing countries, especially the Arab world (Khan, 2010; Handajani et al., 2014). Jordan provides a model for studying the issue of diversity of the Board of Directors and disclosure of corporate social responsibility, due to cultural factors and the unique ownership structure that is mainly characterized by a high concentration of family and government ownership (Haddad et al., 2015).

3. Corporate Governance in Jordan

Jordan adopting International Financial Reporting Standards (IFRS) to support corporate governance, this assists in accessing international capital markets; ensuring higher transparency and comparability of financial data between companies. Corporate governance in Jordan can be categorized into six groups:

1) The legal framework and government oversight

The legal environment in Jordan is the basis for developing proper corporate governance procedures (Al-Bashir, 2003). Through laws such as Corporate Law, Securities Law, Banking Law, Insurance Law, Commercial Law, Competition and Monopoly Law, Investment Promotion Law and Privatization Law. (Al-Jazi, 2007).
All last points are related to the Companies Law of 1997 and Securities Law of 2002. We must know that the Jordanian Company Controller also plays a vital role in the implementation of corporate governance under the Companies Law (World Bank 2004).

2) The institutional framework and capital market
The existence of corporate governance practices the basis for building an institutional framework, so in Jordan, corporate governance is carried out through three bodies:
1 -Jordanian Securities Commission (JSC)
2 - Amman Stock Exchange (ASE), and
3 - Securities Depository Center (SDC)
All of them are monitor the stock market.

The Securities Law is responsible for providing the way to enforce governance rules, by defined market regulations, issuance of shares or bonds, and trade procedures, responsibility and obligations of securities issuers, brokers, auditors, listing requirements in the stock market, and protection measures for minority rights, disclosure, and transparency requirements.

3) The disclosure and accounting standards

Clear accounting standards and full disclosure are essential for strong corporate governance (Jiang et al., 2008). Jordanian laws require companies to follow international financial accounting standards, Jordan started fully adopted by International Accounting Standards, now called International Financial Reporting Standards in 1994, (Word Bank 2004).

4) The transparency in privatization

The Jordanian government worked through the privatization of some government companies and institutions to increase the private sector's participation in the economy (Shanikat 2007), which improved the level of services, provided, and raised the efficiency of privatized companies.

5) The adequate supervision of the Board of Directors

The Board of Directors is responsible for advising, reviewing, and evaluating management performance. (Gallego, 2006). In Jordan, the Board of Directors sets the policies and planning for the management of the Company, appointing Chief Executive Officer, maintaining internal control systems for financial and administrative accountability, and inviting shareholders of the Company to Ordinary General Meeting, which is their duty defined by Companies Law.

6) The exercise control over comprehensive audit and Protection of minority rights

The Corporate Governance Code has been issued contains a definition of critical terms of the Board's structure and responsibilities; public shareholder meetings; shareholders' rights, guidelines for financial disclosures; and a conceptual framework for accountability and auditing.

Managers must review the external and internal audit reports, plans, procedures, reports, and review financial statements before submitting them to the Board of Directors to ensure the accuracy of accounting and regulatory processes, and the "Shareholders who own at least 15% of the company can audit and seek compensation for any violations committed by the Company's Board, General Director and Auditors" (World Bank 2004).

"Administrative performance is enhanced reflect on the national economy's performance and enhance investment climate" (Jordan Securities Commission 2008). Companies Law protected their property rights, so the Jordanian government encouraged local companies to expand issue securities to the public after establishing the Amman Stock Exchange.

4. The Corporate Social Responsibility of Jordan

Jordan, a country with limited natural resources, so corporate social responsibility activities have received much attention from the government. The Jordanian government has taken necessary steps to improve corporate social responsibility, which includes enacting legislation and regulations that require Jordanian organizations to disclose social and environmental information in their annual reports, to ensure the quality and reliability of the annual report as a way to attract foreign investment (Naser et al., 2006; Ismail and Ibrahim, 2008). But, there is still a low level of corporate social responsibility disclosure from listed Jordanian companies on the Amman Stock Exchange, (Abu Bakr and Nasser, 2000; Al-Khudhsh, 2003; Swaidan et al., 2004; Ismail and Ibrahim, 2008; Al Hammadin and Badran, 2014).

In Jordan unemployment around 14.2% and poverty about 18 % of the country's population (European Economy, 2006) have become significant issues that challenge Jordan, the government has not been able to resolve these issues, so the role of the private sector in advancing the Jordanian economy to reduce poverty and unemployment as the Jordanian private sector has a responsibility to solve Sustainability issues related of poverty, unemployment, and other social concerns are achieved through the adoption and implementation of corporate social responsibility practices.

The attention of corporate social CSR responsibility has become an essential issue among companies due to the increased demand for this information by stakeholders, especially investors (Saleh et al., 2011), so investors have invested in companies that are involved in CSR activities because CSR improves financial performance, access to capital, reduced operating costs, enhanced corporate reputation and increased customer loyalty (Said et al., 2009).

Most companies in Jordan have demonstrated CSR interests as one of the most important alternatives to enhance their business reputation to become more committed and responsible to their shareholders.

In general, corporate social responsibility is interpreted as the conscious efforts made by commercial companies to maximize their positive impact and reduce their negative impact on the local community. But more strategic focus and friendly technologies are needed for long-term sustainability. A few large companies, such as the Arab Potash Company and Jordan Phosphate Mines Company, are trying to demonstrate that they have a positive impact on the environment. The two companies have undertaken some projects in the local community, such as health centers, water projects, cities, internal concrete roads, electricity and cold rooms, and places of worship, and they have been used. These companies also grant scholarships to educational institutions and university students annually (Namrouqa, 2009) as part of the image-building process in Jordan, the private sector must work alongside the government to meet society's needs. The scarcity of natural resources in Jordan and the high level of poverty and unemployment create severe problems for the Jordanian government. Therefore, banks and other companies should launch initiatives that contribute to the development of the local community. Also, the private sector is responsible for sustainable development operations in the country. And bear part of the burden in Jordan; Companies must contribute to the social field, whether by launching social projects or adding to some projects that target low-income people. Providing job opportunities that can help solve my problem; Poverty and unemployment.

The banking sector can play an essential role in reducing unemployment by providing some loans to support small companies. This enhances the image of banks and supports small businesses in the country.

Mandate Jordanian organizations to disclose social and environmental reports in Annual reports. An example of this law is the Environmental Protection Act (1996)

Issued to ensure companies comply with environmental control standards. It also enacted the Securities and Exchange Commission Act of 1998, requiring listed companies to disclose social and environmental issues in their annual reports, so in 2004, the JSC issued "Instructions for Issuing Company Disclosure, Accounting, and Auditing Standards for the Company."

This means that the Board of Directors' report must include information about the company's contribution to environmental protection and community services, The JSC also issued a guide for preparing annual reports for companies clarifying (in detail) the company's contribution in the local area Community services and environmental protection (if any), listing all the services provided by the company. If the company does not contribute to local community services and environmental protection, this should be clearly stated, as follows: "The Company does not contribute to community service and environmental protection."(JSC, 2009).

In 2009, the Jordan Securities Commission issued the Corporate Governance Law for companies listed on the Amman Stock Exchange. This requires companies to disclose social and environmental information in their annual reports. This is included in Chapter 5 (Disclosure and Transparency), Article (5), which states the following: "The company will disclose its policy regarding the local community and the environment" (JSC, 2009)

Environmental disclosure needs more attention from Jordanian companies (Abu Baker and Nasser, 2000).

Ararat (2006) study revealed that CSR in Jordan is generally driven by increased domestic and international competition due to liberalization and efficiency and productivity concerns. Still, CSR in Jordan has received little attention in its annual reports for listed companies. The most frequently disclosed items are those related to human resources and social community participation, while the environmental issue was low. Also, the level of disclosure of corporate social responsibility is still relatively small. (Suwaidan et al. (2004)

A study by Abu Baker and Nasser (2000) examined the level of social responsibility for listed companies in Jordan and found reporting on products, the environment, and Energy so we need more attention and focuses from Jordanian companies; in a study by Jahamani (2003), it found that only 9 out of 86 Jordanian companies issued environmental reports, also Ismail and Ibrahim (2008) found that 15 percent of the companies in the sample did not disclose any information related to CSR activities.

There are a limited number of investigations in Jordan that interrogate the relationship between corporate governance and the disclosure of information in general (Al-Swalqa, 2014; Haddad et al., 2015). Al-Swalqa (2014) studied the extent of voluntary disclosure and the level of compliance with the Corporate Governance Law in the annual reports of 13 Jordanian banks listed on the Amman Stock Exchange in 2012. It was found that the level of corporate governance compliance was 90.9%, but Al-Swalqa (2014) stated that Jordanian banks tend to hide some information due to the intense competition between Jordanian banks where some information is more sensitive.

There are many primary sources express the requirements of legal and regulatory reports for companies listed on the stock exchange on the Amman Stock Exchange: The Newer Companies Law No. 57 of 2006 and securities Law No. 76 of 2002 and its amendments until 2010. According to the Companies Act, "any company listed on the stock exchange must prepare and publish its annual report that includes financial statements prepared by International Financial Reporting Standards and reviewed by an independent qualified auditor." Still, there is no mention in the Companies Law to disclose the social responsibility information that companies must provide in their annual reports or explanatory notes accompanying the financial statements. According to the Securities Law, the Board of Commissioners of the Securities Commission issued: Disclosure instructions for listed companies, accounting, and auditing Standards, "Guide to preparing the annual report of listed companies," and "Corporate Governance Law for Companies Listed on the Amman Stock Exchange for 2008." A company listed on the stock exchange must include its annual report disclosures of some of the information that falls within the scope of social responsibility. These include the company's policy and its contribution to protecting the natural environment, the company's strategy and its contribution to serving the local community, charitable donations, and grants provided by the company, and the company's policy towards its human resources, training, and development programs that are held for employees and the number of employees who participated in them. Although the requirements for the disclosure of social responsibility information are important, they are still generally limited (Suwaidan et al., 2004).

5. The elements which affect Corporate Social Responsibility

5.1. Company size

The size of the company is positively associated with CSR, so corporate social responsibility is more comprehensive in large corporations, It is a tool to protect or improve a company's image and reputation (Hooghiemstra, 2000)., and this means that large companies reveal more information about the social environment, because they have more resources than small companies, so large corporations are more involved in socially responsible activities, and they reveal more information about the social environment due to accountability and clarity (Cormier and Gordon, 2001). Therefore, the annual reports of large companies provide information related to corporate social responsibility.

Large companies are expected to participate more in socially responsible activities, that means there is a positive and important relationship between company size and corporate social responsibility (such as Hanifa and Cook, 2005; Ghazali, 2007; Said et al., 2009; Jo and Harjoto, 2012; Oh and others., 2011; Sharif and Rashid, 2013)

Big companies are more likely to disclose CSR information than small businesses because they receive more attention from the public and are diverse in the geographical and product market. These companies have more significant and more varied groups of stakeholders (Brammer and Pavelin, 2008).

However, some research does not confirm a significant relationship between entity size and corporate social responsibility disclosures, (Van Staden and Hawks, 2007), But the majority of previous research has had a significant positive impact on the size of the entity around CSR disclosures. (Branco and Rodrigues, 2008; Khan, 2010; Monteiro and Aibar-Guzman, 2010).

5.2. Board size

The size of the board of directors refers to the number of directors of the company working on the board, the size of the board can affect the process of monitoring, decision-making, and disclosure, and affect the control, monitoring, and disclosure of information but the size of the company is influential in the size of the board as large and complex companies need more members Their boards because they need more advice requirements (Coles et al. 2008). This indicates that complex corporations need larger boards, which improves corporate transparency, thereby maximizing voluntary disclosure and CSR practices and disclosure, so the large board may improve corporate transparency, look at shareholder groups during board meetings, and maximize voluntary disclosure and corporate social responsibility practices and disclosure.

There are positive and non-linear relationships between the board’s size and the extent of disclosure of corporate social responsibility. Large board’s can monitor business operations better than smaller ones, but a huge board makes the observation process ineffective. Siregar and Bachtiar (2010) Said et al. (2009) suggested a negative relationship between the size of the board of directors and the extent of disclosure of corporate social responsibility, as the size of the large board leads to ineffective coordination in communications and decision-making. The Board of Directors is an important component of the corporate governance mechanism that oversees business conduct and ensures that the company is well managed by agents (managers). The board's size may have a significant impact on the level of disclosure in the annual report, including the exposure of corporate social responsibility. In Jordan, the Corporate Governance Law stipulates the upper and lower limits for the board's size, that the Board of Directors includes several members from 5 to 13 for industrial and service companies (JSC, 2008).

5.3. Independent directors

Independent directors are defined as members of the Board of directors who do not hold any executive positions in the companies in which they work.

Fama and Jensen (1983) argue that having independent board members on the company’s Board of directors is expected to lead to more effective monitoring of management behavior and reduction of administrative opportunism, so Independent managers are defined as board members who do not work for or are affiliated with the company, they are more effective than non-independent directors because they can perform their duties on behalf of the shareholders. Therefore, independent directors will improve voluntary disclosure, this means that a higher proportion of external managers will improve the comprehensiveness and quality of disclosures and improve corporate social responsibility, reflecting the company's reputation.

In Jordan, the Corporate Governance Law for listed companies requires that at least one-third of the Board of directors should consist of independent directors. That indicates a positive relationship between independent managers and the level of corporate social responsibility in previous studies. (JSC, 2008)

The presence of independent directors on the Board of Directors enhances the role of the Board as an agent for shareholders, so according to the agency's theory that a high percentage of independent directors on the Board can be an important component that helps solve agency problems and advance the interests of other stakeholders, such as employees and local communities (Amran et al. 2009; Chen and Roberts, 2010).

According to the dependency theory of resources indicates that external managers provide their companies with more information, resources, and legitimacy, which may lead to ensuring proper management decisions and thus improving the company's performance. (Hillman, Cannella, and Paetzold, 2000).

More independent directors on the Board of Directors are supposed to improve corporate transparency and social performance, so external managers will motivate senior management to consider social strategy and enhance disclosure of Social activities. Hence, the independence of the Board of Directors has a positive impact on corporate social responsibility (Webb, 2004; Zhang et al., 2013; Sharif and Rashid, 2013).

Khan (2013) showed that non-executives have a significant impact on clarifying the level of corporate social responsibility disclosure in commercial banks. However, a negative relationship has been found between the proportion of non-executives and the extent of corporate social responsibility disclosure, and Independent managers protect the interests of stakeholders and challenge the CEO because they do not have the same benefits as Board members regarding employment or advancement (Khan et al., 2013)

Many Experimental studies found a positive correlation between the percentage of independent managers on Board and the level of corporate social responsibility disclosure (Zhang et al., 2013, Khan et al., 2013)

5.4. Gender diversity

The representation of women in the Board was an important issue related to the diversity of the Board of Directors, which means the presence of women managers on the boards of companies. The presence of women increases the Board's attention to corporate social responsibility, which enhances the company's reputation through corporate social responsibility and corporate philanthropy as a reference to stakeholders. The participation of women in all activities increased around the world, and the presence of women in the meeting room has become an important issue, so agency theory suggested that the Board of directors' diversity enhances the council (Carter et al., 2007)

The companies have a more significant proportion of females on their boards of directors will be better, because the presence of women in the councils is a sign of awareness among companies about issues related to minorities and women, and thus guarantees corporate citizenship (Soares, et al. 2009)

Women are more inclined towards charitable activities, while men are directed toward profitable businesses (Williams, 2003; Ibrahim and Angelides, 2011).

In some developed countries that have introduced the minimum shares required to represent outputs on the boards of companies traded on the stock exchange (European Commission, 2015), But the Jordanian authorities haven’t any legislation that requires a minimum share to female the outputs on the boards until now.

5.5. Nationality diversity:

Governance supports the appointment of different nationalities to the Board of Directors to reflect the diversity of citizenship of its clients, employees, and stakeholders. Hence, Companies with foreign managers tend to disclose more CSR information because the appointment of international directors improves the quality of decision-making on the Board. The knowledge that foreign directors bring helps to develop corporate strategy decisions and support CSR reporting.

Many companies in developing countries have been affected mainly by western-style management practices, including corporate social responsibility practices. Also, these investors are more aware of the growing expectations of companies to be socially responsible. (Muttakin and Subramaniam, 2015). Several empirical studies provided a crucial positive relationship between foreign ownership and disclosure of corporate social responsibility (Oh and Chang, 2011). Multinationals face more significant social pressure from host communities on multinationals, about their social responsibilities, and the higher the number of foreign countries in which the company operates, the higher the company's pressure. Therefore, the company will increase the level of corporate social responsibility as a way to reduce this pressure and legitimize its activities (Voorhes et al., 2012, Muttakin and Subramaniam (2015).

Rogrock et al. (2007) claimed that the knowledge that foreign managers bring in helps improve company strategy decisions, such as supporting CSR reporting strategies. A high level of disclosure and transparency occurs, as it has a wide range of international network connections with stakeholders (Ayusu and Arjanduna, 2007), but other studies found no association between foreign board directors and corporate social responsibility reports (Barraco and Brown, 2008).

5.6. Age diversity

Age diversity is “another important characteristic of board diversity and is part of human capital because age can reflect the experience and risk tolerance.” The age is one of the council's assets and is part of human capital because age can reflect the experience and take risks, still, most board members are older, and the representation of young managers is minimal. However, the appointment of young managers may bring different perspectives and ideas. Innovative and can work new ideas that will improve the performance of the Board and make decisions (Ness et al., 2010) because young managers are paying more attention to stakeholders and CSR issues.

The younger board members are more innovative and have a higher ability to tackle new ideas. Which is positively linked to strategic change and more willingness to participate in the monitoring process (Darmadi, 2011).

Post et al. (2011) found that social and environmental disclosure was higher on boards containing young managers. That is, socially responsible companies have more young managers than companies, not social.

Few studies are concerned with the influence of the Board of directors' age on the practice and disclosure of corporate social responsibility, although older managers may benefit from more experience, they tend to be less willing to embrace change and implement new innovative strategies. Young managers are more suitable to work in rapidly growing and rapidly changing environments. They may have a higher capacity to absorb and address new ideas and learn new behaviors such as CSR.

In Jordan, according to the Jordanian Companies Law, a board member must be at least 21 years old.

5.7.Leverage

Agency costs in corporations are tied to the debt ratio, and the possibility of transferring wealth from bondholders to shareholders becomes greater. Rising debt levels result in higher control costs for corporations. Hence, leveraged companies tend to be more involved in socially responsible activities and have a higher level of Corporate Social Responsibility.

Corporate Social Responsibility to ensure creditors and investors that their business is sustainable and credible and companies with high leverage level reveal participate more in socially responsible activities. (Nasser et al., 2006; Esa and Ghazali, 2012).

Agency theory also suggests that companies with a high level of leverage disclose more information. (Cormier and Magnan, 1999).

Ho and Taylor (2007) concluded that the extent of corporate social responsibility is more considerable for low-liquidity companies. Still, Andrikopoulos and Kriklani (2012) Discover that Companies with high levels of leverage tend to limit the extent of disclosures because preparing for voluntary disclosure is expensive.

Many studies about the effect of leverage on CSRD have inconsistent results.

Some previous studies have found that leverage is closely and negatively related to the extent of corporate social responsibility. (Barnea and Robin, 2010; Li and Chang, 2010; Oh et al., 2011), while some other studies have found little relationship between leverage and corporate social responsibility (Haniffa and Cooke, 2005).

5.8.Profitability

Profitability is the company's ability to produce a profit that will maintain its growth in the short and long term. Previous studies have shown an inconclusive relationship between profitability and corporate social responsibility, so profitable company management may have more freedom and flexibility to participate more in corporate social responsibility activities, to explain their contribution to society. (Haniffa and Cooke, 2005).

There are three theories to justify the positive relationship between profitability and disclosure of corporate social responsibility:
1 - Agency theory suggested that profitable companies provide more detailed information to support their functions and compensation arrangements.
2 - Signaling theory upheld that owners provided good news to avoid underestimating the value of their shareholders,
3 - Political process theory stated that profitable companies provide more information in disclosures to justify their profits. (Haniffa and Cooke, 2005).

The positive relationship between profitability and the extent of corporate social responsibility disclosure is due to the freedom and flexibility of management to publishing more CSR initiatives to shareholders (Gamerschlag et al., 2010; Hong and Andersen, 2011).

Yasuda (2004) found that bank risk is negatively related to the estimated accumulation in the banking industry in Japan. That is, investors misunderstand high-quality earnings as favorable information about the bank's financial health, but the negative relationship was influential in the years of the crisis.

5.9.The Corporate Social Responsibility Committee

The presence of the Corporate Responsibility Committee such as the Board Committee is a sign of the company's interest in social responsibility; this committee reflects the company's desire to perform its activities in line with the guidelines and rules of social responsibility, that the presence of the Corporate Responsibility Committee, as one of the Board Committees, is one of the factors that may lead companies to respond positively to social pressure regarding the corporate social responsibility

Composition and duties of the committee
A committee of at least three or more members, at least one of whom is an independent director, it Drafting and Recommendation Committee to the Board of Directors of the Corporate Social Responsibility Policy, which will recommend disclosing the contents of the corporate social responsibility activities that the company will undertake and disclosing the number of expenses that are incurred on the activities referred to in the corporate social responsibility policy.

The committee aims to monitor the corporate social responsibility policy and Preparing a transparent monitoring mechanism to ensure the implementation of the projects /programs /activities proposed by the company, so if the company fails to spend this amount, he will ask the Board of directors to specify the reasons for not paying the amount as explained in the report of the Board of directors. (Deloitte, 2014).

5.10. Family ownership

Family businesses are more concerned with social responsibility and more open to looking at social responsibility issues. (Block and Wagner, 2014).

The ownership structure is characterized by a strong presence of financial institutions and the physical person as the dominant shareholder, according to Holdness, Sheehan

(1988), Pound (1992), Solomon et al. (2004)stockholders who have a keen interest in the financial performance of the companies that invest in them, but also about the social and environmental strategies and activities of these companies, and this type of shareholder is unable to move quickly in and out of funds without affecting the share price

Shareholder strength: it has two hypotheses
Stakeholder power is the resource function they control, and that is necessary for the company (Ullman, 1985).

The resource dependency theory indicates that power accumulates among those parties that control the resources that the organization requires, which creates differences in strength between stakeholders (Pfeffer, 1981).

This type of shareholder differs from other shareholders in two ways:

1. Attention to the long-term survival of the company, and
2. The importance of maintaining its reputation, which is closely related to the company. (Anderson et al., 2003)

5.11. CEO duality

Duplication of the CEO and Chairman occurs when the same person occupies two positions at the same time. When the CEO is also the Chairman of the Board, the board of directors' effectiveness in performing the governance function may be jeopardized by the concentration of decision-making and oversight powers in the hands of the same person. (Haniffa and Cooke, 2005).

This duplication provides greater decision-making authority that enables the CEO to make decisions that may not take into account the more significant interests of a full group of stakeholders, and duplication may weaken the role of board governance about corporate initiatives and disclosure policy, including CSR initiatives and statements. (Li et al., 2008).

The separation of the CEO and Chairman’s functions promotes the independence of the Board of Directors, where the President can review the CEO’s performance and can exert pressure on the CEO and other managers to reveal more information about the Company, including CSR information. (Huafang and Jianguo, 2007).

The separation of the head of the board of directors and CEO leads to an improvement in the quality of voluntary disclosure, including corporate social responsibility disclosure. (Haniffa and Cooke, 2005; Said et al., 2009).

Some studies have indicated a negative relationship between the CEO's duplication and the Chairman positions and the level of disclosure of corporate social responsibility (Muttakin and Subramaniam, 2015; Sundarasen et al., 2016).

In Jordan, the Corporate Governance Law recommends separating the Chairman's position and any other executive administrative position within the same Company (JSC, 2008)

5.12. Spreading company ownership

The concentration of Board Ownership indicates the degree to which the ownership of company shares is concentrated in the hands of a few members of the Board of Directors and their close family members. It is proposed to focus Board ownership on influencing the Company's disclosure policy, including corporate social responsibility disclosure.

Agency theory supports the propagation of ownership (i.e., split shareholders) positively linked to corporate disclosure. This means that the more widespread ownership, the more corporate disclosure because this helps owners monitor management behavior. Still, Previous studies have proven that there is a negative relationship between ownership spread and corporate social responsibility, meaning a smaller number of large investors owns the majority of shares (Kelton and Yang, 2008; Kolsi, 2017).

It was also found that the effect of voluntary governance and compliance on agency costs is independent of the Company's ownership structure; And the correlation between levels of ownership shares of managers and the performance of corporate social responsibility, administrative ownership has a negative relationship with 1- employee relations; 2- a negative correlation with the dimensions of diversity; 3- minimal impact on society dimensions, 4- environment, and 5- product (Paek et al., 2013).

There is a presence of a significant positive relationship between the disclosure of corporate social responsibility and corporate social responsibility through the percentage of shares held by the five major shareholders and assumes that the concentration of ownership may have an impact on corporate social responsibility reports.

In the case of Jordan, many of the companies traded on the stock exchange are heavily controlled by families or governments, which makes the primary agency conflict less severe between school principals (shareholders) and agents (principals) (Type I agency dispute), and more severe among the controlling shareholders and minorities (Haddad et al., 2015).

Managers who own corporate stocks are usually less willing to over-invest in departmental social responsibility procedures because they have to bear a portion of the costs as shareholders (Barnea and Rubin, 2010).

The manager who owns the shares of companies can obtain information through means other than the annual report, thus reducing the need for a formal disclosure of corporate social responsibility in the annual reports (Aaron, 2008). But the study of) Ghazali (2007), Prameer and Pavelin (2008) has a negative relationship between the concentration of council ownership and the level of disclosure of corporate social responsibility.

6. Corporate Social Responsibility and Disclosure in Jordan

Disclosure plays a crucial role in addressing the asymmetry of information between managers and investors in an organization that means management provides information about past events and expectations regarding future growth opportunities for current and prospective investors, so this information included in the financial report should be prepared well and have a high level of disclosure, inside and outside financial statements, whether commercial or non-financial, because non-financial information outside financial news may have significant current and future impact for stakeholders, so when the quality of disclosure is high that reduces the uncertainty associated with all parties that have contracts with Company, and affects of liquidity plus attracts future shareholder investments, so it’s mainly related with corporate governance.

Governance helps investors make their investment decisions efficiently because they provide a part of their money to invest, which moves the economy. Therefore, management chooses a policy of accounting policies that may affect accounting disclosure of the Company's profits and financial position, where disclosure is one of the main requirements of securities markets, provides high-quality information to investors, lenders, analysts, and researchers interested in the financial situation of the Company.

Financial disclosure is a broad subject and consists of all the accounting data and information needed to make profits for users, particularly in making the right decisions, since exposure is a relative term. Still, it has become important not to consider financial statements as a goal but as a means to help parties make different decisions, and provides essential information to investors and other beneficiaries in a way that enables them to predict the project's success in making profits and covering its future obligations (Anagnostopoulos and Gkemitzis, 2013)).

In November 2005, a cooperation agreement was signed in Jordan between International Finance Corporation (IFC), which is a part of the World Bank, to rehabilitate the private sector in Jordan to improve corporate governance regulations; the agreement includes providing technical support for the development of corporate governance principles in Jordanian banks, thus enhancing national and international confidence.

Securities Commission made an Instruction Manual for Governance of Listed Joint Stock Companies based on the Securities Law and Regulations, Companies Law, and International Principles of Corporate Governance established by Organization for Economic Co-operation and Development (OECD) (JSC, 2005).

Good corporate governance reduces losses that may occur as a result of weak internal control systems due to increased risk and that the existence of these excellent systems includes independent monitoring that minimizes risks, and Corporate Social Responsibility (CSR) help companies by is a voluntary disclosure of employees, social, market and environmental activities. Hence, the primary purpose of this disclosure is to hold companies accountable to their community and encourage companies' positive effects on all relevant parties.

Therefore, disclosure of corporate social responsibility plays an essential role in the development of the Company's future status and future profits through non-financial information expressed in the annual financial reports of companies.

Conclusions

Corporate governance in Jordan is mainly related to the legislative environment and institutional framework adopted by Jordan, so Jordan took management based on the principles of governance approved by the Organization for Economic Cooperation and Development (OECD), which affected accounting policies adopted by companies.

Corporate governance is the way that Companies are managed through approved accounting and financial policies which helped companies enhance their ability to achieve the objectives and increase efficiency and effectiveness with the best use of available resources, which means that company who has good governance will have more disclosure and transparency and reaching its goals.

We focus on the elements that affect the level of corporate social responsibility in Jordan, we have seen by a review of previous studies that CSR is low.

The element effect on Corporate Social Responsibility: Company size, Board Size, Independent directors, Gender diversity, Nationality diversity, Age diversity, Leverage, and other factors.

In general, Jordan has some features of the best corporate governance practices. However, he still needs more progress in the independence of directors, shareholder rights, and entitlement, and requires more freedom for internal and external auditing.
It is clear from the application of the disclosure index to the annual reports of Jordanian companies that the level of social responsibility information in these reports is relatively low; therefore, the Jordan government must try to develop the strategy of corporate social responsibility by:

First, if the information should be more disclosed, policymakers and regulators can improve the extent of corporate social responsibility disclosure by extending the minimum regulatory requirements related to reporting corporate social responsibility in Jordan, and create an official CSR indicator that can be used to assess and compare practices and expose CSR among Jordanian firms.

Second, it can be seen that CSR disclosures are mostly narrative disclosures and lack numerical details, which means if companies have participated in material recycling or installed solar panels to reduce energy consumption and save the environment. Therefore, Jordanian companies should incorporate more numerical information when disclosing CSR activities in their annual reports.

Third, many studies showed that the size of the board of directors and the age of the manager have a significant impact on the level of disclosure of corporate social responsibility. Larger panels are associated with higher levels of CSR disclosure. And larger councils are likely to include members with more diversity in education and experience, in Jordan, the average of the board of directors is about eight members. The Corporate Governance Law allows for companies listed in Jordan with up to 13 members on the Board of Directors (JSC, 2008). Younger board members in the board are associated with higher levels of disclosure of corporate social responsibility, because of their high ability to absorb and address new ideas and learn new behaviors such as corporate social responsibility, which improve disclosure levels of corporate social responsibility, so Jordanian government encouraged Jordanian companies to have larger councils and smaller directors on those boards.

The study contributes to understanding and revealing corporate social responsibility in different ways.

First, it shows the extent to which listed companies in developing countries are taking corporate social responsibility. Second, the study adds to the existing literature on the potential impact of board formation and ownership structure on the disclosure of corporate social responsibility Jordanian data. Third, the study provides notes to the Securities and Exchange Commission's Jordanian regulators regarding the adequacy of the current regulations relating to disclosure requirements in Jordan.

The problems of the Jordanian business environment which impact corporate governance are:
1 - There is a need to raise awareness about Corporate Social Responsibility, its importance, and the mechanisms for its implementation.
2 - Some managers didn't care about Corporate Social Responsibility Disclosure and how it affects on financial results of companies in the future.
3 - Some companies still owned and managed families and some limited liability companies and not listed on the Amman Stock Exchange, so they didn't apply Corporate Social Responsibility Disclosure in the financial statement.
4 - Adequate disclosure of Corporate Social Responsibility instructions is required only from companies listed on the Amman Stock Exchange.

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Section 2

The Correlation Study Between the Economic and Financial Performance and Risks at the Level of the Companies Listed on the Bucharest Stock Exchange

Olimpia Livia Preda Buzgurescu

Silviu Cârstina

The Impact of Management Quality on the Value of the Company in the EU Transport

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The Correlation Study Between the Economic and Financial Performance and Risks at the Level of the Companies Listed on the Bucharest Stock Exchange

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Abstract. *The article presents a sample of 17 Romanian companies listed on the Bucharest Stock Exchange, which are part of four fields of activity such as aluminium metallurgy, petroleum extraction, aeronautical and petroleum industries in order to identify the economic and financial performance of the companies and also the risks assumed by the shareholders. The study is conducted over a three-year period (2015-2017). This topic is of major importance to investors in the capital market, irrespective of the field of activity of the companies listed on the Bucharest Stock Exchange, because the economic and financial performance indicators and implicit risks are relevant for substantiating the decisions regarding the financial investments.*

Keywords: *Performance, risks, Bucharest Stock Exchange, turnover, operating profit, ROA, ROE, ROS.*

1. Introduction

This paper highlights the existing relationship between the economic and financial performance and the related risks at the 17 companies listed on the Bucharest Stock Exchange through the linear regression model as well as between the economic and financial performance and the stock market indices and the stock market indicators and the risks to which the enterprises are exposed. In order to analyse the correlation between performance, stock indices and risks using econometric modelling at the selected firms belonging to different fields of activity, the following synthetic indicators were proposed for analysis for the period of time between the years 2015-2017: turnover index, turnover, operating result, net profit, return on assets, return on sales and return on equity.

Thus, in this paper, we could answer questions such as: Which field of activity has the lowest risks? Which industry is the most profitable?

With regard to the article's structure, it consists of four parts, the first part presents the current state of knowledge, which consists of the concepts and terms used to define the performance indicators in order to analyse the correlation between economic and financial performance and implicit risks undertaken by investors and an analysis of other articles based on the topic between performance and risks, the second part consists of the research methodology used for the case study, the third part is the case study and the final part consists of the conclusions deduced from the econometric modelling of

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the correlation referred to above between the sectors of activity and the firms within the same field.

The assumptions we have made for the realization of the article refer to the link between the profitability indicators and the level of the risks for the companies listed on the Bucharest Stock Exchange.

H_1: There is a direct and significant correlation between the economic and financial performance indicators (economic rate of return, operating profit, turnover index) and operating leverage.

H_2: There is a direct and strong link between the economic and financial performance indicators (financial rate of return, net profit) and the financial leverage.

H_3: There is a direct and strong link between the economic and financial performance indicators (financial profitability rate, net profit) and stock market indices.

H_4: There is a direct and strong link between stock market indices and risk indicators.

These hypotheses are verified and analysed on the basis of a survey of 17 companies listed on the Bucharest Stock Exchange (BSE).

2. Current state of knowledge

The performance of an enterprise has become an objective for most managers in our country, and not only. The performance of an enterprise is measured both through the concept of efficiency and the concept of effectiveness. In addition to performance, companies attach great importance to the level of risk by analysing any negative influence on the business.

On the one hand, Bușe et al. (2007) consider the performance as "a function of two variables, efficiency and effectiveness, the combination of them reflecting the level of performance".

On the other hand, the authors Achim and Borlea (2012) analyse the concept of performance from the perspective of the existing connections between the company and the stakeholders. Thus, from their point of view, "performance is considered to be the capacity of an enterprise to create added value for shareholders, to meet the needs of consumers and employees, and last but not least to protect the environment".

Another definition is supported by the author Niculescu (2003) who considers that "an enterprise is theoretically performing if it is both productive and effective at the same time".

The authors Tannenbaum and Schimdt (2009) state that performance is "the extent to which an organization, as a social system, with certain resources and means, achieves its goals.", thus the performance is analysed in relation to the objectives pursued by the enterprise.

So over time, several performance measurement objectives have been identified by the stakeholders involved. First, the performance was assessed based on the size of the company, reflected by the turnover and the total asset, then it was analysed on the basis of profit after deduction of expenses. Other indicators of performance measurement are the degree of liquidity and value creation of the firm for its shareholders. At present, the emphasis is on sustainable development and on the concept of social responsibility, which is reflected by the relationship of companies with the environment, employees and meeting the needs of civil society.

Regarding the definition of the operational risk, it is represented by: "any inadequate event that could adversely affect the operational activity, regardless of where it occurred, the quantity and the type of damage caused" (Cîrciumaru, 2013).

Therefore, on the basis of previous definitions, we can deduce that the operating risk is closely related to the financial risk, which can be defined as: "the part referring to the variability of the equity efficiency ratio due to the degree of indebtedness" (Brezeanu, 2003).

The theme of the correlation between financial performance and risks was also analysed by other authors in various articles, such as:

In the paper entitled Data Mining Used for Analysing the Bankruptcy Risk of the Romanian SMEs, the authors Vasilescu, Siminica et al. have developed a new bankruptcy risk analysis model for SMEs, considering the given imminent factors such as increasing competition in the markets, the lack of financial resources and the insufficient adaptation of many companies to the requirements of the European market that could trigger their Romanian bankruptcy. The model was based on the combination of two main categories of indicators: financial and non-financial indicators. The analysis was based on data extraction techniques (CHAID) to identify company categories according to the bankruptcy risk level, this being an early sign on the risk of bankruptcy.

In the article Return versus Risk. Evidence from Romania, the authors Cîrciumaru analysed the strong correlation between profitability and risk. The study was carried out on a sample of nine Romanian companies listed on the Bucharest Stock Exchange. In order to assess the bankruptcy risk, three scoring methods (Altman 1968, Conan and Holder, Anghel) and three profitability ratios (return on sales, return on assets, return on equity) over the period 2007-2013 were used. The conclusion reached by the authors was that the three models did not similarly assess the risk of bankruptcy for the companies analysed because none of the models had been able to reflect the real situation of the companies under review. Scoring functions, being a tool for assessing bankruptcy risk, are more likely to trigger a warning about the unfavourable financial situation that precedes bankruptcy a few years earlier.

The authors Bărbuţă-Mişu and Codreanu analysed in the article Analysis and Prediction of the Bankruptcy, the risk of bankruptcy of the companies operating in the construction sector in Romania. Based on financial data for the period 2008-2012, they performed a comparative analysis of bankruptcy risk and found out that the same company could be classified differently from the Conan & Holder and Altman models. The conclusion of the study was that the Conan & Holder model was more relevant to determine the risk of bankruptcy of companies. It retained the initial classification of the companies and identified a greater bankruptcy predisposition for the companies analysed in 2008-2012.

Another study titled The Correlation between the Return on Assets and Measures of Financial Balance for Romanian Companies by M. Siminica analysed the statistical correlation between asset returns and financial equilibrium measures, assuming that financial indicators influence indicators of the company's performance and was realized for 40 Romanian companies listed on the Bucharest Stock Exchange in the period between 2007-2010, years that can be classified in years of economic growth for Romania (2007-2008) and years of economic regression due to the global economic crisis (2009-2010). The conclusion of the study was that the profitability of Romanian companies had fallen due to the economic crisis. Thus, some financial indicators of the companies were influenced by the crisis (profit margin, profitability rates) as opposed to other stagnant indicators (liquidity and solvency ratios).

Another author Ojo (2012) analysed the effect of financial leverage on some performance indicators for some Nigerian companies. Its econometric findings have shown that leverage shocks (debt/equity ratio) have had a major impact on corporate performance, especially when net assets per share have been used as instruments for measuring corporate performance (Ojo, 2012).

Gill & Mathur (2011) studied the factors that influence the financial leverage of companies. For this study, a sample of 166 Canadian companies listed on the Toronto Stock Exchange for a 3-year period (2008-2010) was selected, applying co-relational and non-experimental research design. The results showed that the guaranteed assets, profitability, effective tax rate, company size, growth opportunities, number of subsidiaries and type of industry exerted an influence on the financial leverage of Canadian firms (Gill & Mathur, 2011).

Other authors analysed the relationship between financial leverage and financial performance. The results highlighted both the positive relationship of the equity ratio with the return on assets and sales growth as well as the negative relationship between debt and earnings per share, net profit margin and return on equity. The study also pointed out that the variation from the average was quite high in the debt ratio, which means that the use of debt may have a positive or negative impact on financial performance (Shah Fasih Ur Rehman, 2013).

Obradovich and Gill (2012) analysed The impact of corporate governance and financial leverage on the value of US firms. For this purpose, a sample of 333 companies listed on the New York Stock Exchange (NYSE) was selected for the years 2009-2011. The findings of this research showed that on the one hand the larger size of the board negatively influenced the value of the American firms and on the other hand the duality of the CEO, the financial leverage, the size of the firm and the return on assets had a positive influence on the value of the companies US (Obradovich and Gill, 2012).

In order to carry out the performance- risk analysis, we used several indicators, grouped into two categories:

A. Indicators of economic and financial performance:

Turnover index $I_{CA} = \frac{CA_1}{CA_0}$ x100 (1)

The turnover index indicates how many times the turnover of the previous period is in the current comparison period, indicating the growth or decrease of the current year's turnover over a previous period.

Return on Assets (ROA) = Operating profit / Total Assets *100 (2)

The rate of return on assets is used to measure the degree of efficiency of the management in order to use the invested capital regardless of its origin.

Return on equity (ROE) = Net profit / Equity *100 (3)

The return on equity is one of the most relevant criteria for evaluating the performance of the company, with a high level of stakeholder interest, as this indicator measures the efficiency of using their capital, while showing the company's ability to pay the related dividends, respectively profit for investments made within the firm.

The indicator shown is influenced by company-level policies such as payment policy, trade regulations (sales and purchases), financial investment and corporate tax.

Return on sales (ROS) = Operating profit / Turnover * 100 (4)

The rate of return on sales estimates the degree of efficiency of the company's marketing activity as a result of the promotional campaigns undertaken and the pricing policy applied throughout the company. This rate is influenced by the following factors: the economic and competitive environment and the degree of risk of the field of activity.

Also, the rate of return on sales reflects the strategy adopted to attract new customers through quality products offered on demand and controlling production costs. Thus, there are relations of interdependence between ROS and production costs (their reduction as much as possible without affecting the quality of the products), sales prices (covering the costs taking into account the prices of the competition) and last but not least the sales structure market to assess demand trends over the next period).

B. Risk Measurement Indicators:

Operating risk (CLE) = $\frac{\frac{\Delta Re}{Re}}{\frac{\Delta CA}{CA}}$ (5)

where, Re – operating result

ΔRe – the absolute variation of the operating result

ΔCA – the absolute variation in turnover

The operating risk specific to the production and marketing of a company is explained by its degree of inability to adapt in time, with the lowest cost to fluctuations in the environmental conditions in which it operates. Among the consequences that may arise are the reduction of operating profit or even the loss of income.

The operating activity of the company in an economically active and competitive environment can influence the activity by: increasing the prices of acquisition of the raw materials, increasing the salaries, reducing the sales due to the decrease of the demand on the market, increasing the competition as a consequence of the reduction of the selling prices and technical / technological investments.

All of the above influences may result in a decrease in the firm's business volume and the risk that the company becomes unprofitable in a shorter or longer time period is greater as it is more sensitive to interacting with its environment.

In the article, we chose the calculation of this risk by the elasticity of the operating result (operating leverage).

This method highlights the marginal result of the operating resulting from the increase or decrease of the volume of activity.

The coefficient of elasticity assesses the sensitivity of the operating result to the variation in activity level.

This results in the following cases:
1. A high level of the elasticity coefficient e > 11 shows a high sensitivity to the change in activity volume - there is a higher risk of losing under the action of environmental factors;

2. A low coefficient of e <6 – it means low operating risk.

Financial risk CLF= $\frac{\frac{\Delta Pn}{Pn0}}{\frac{\Delta Pe}{Pe0}}$ (6)

The financial risk of a company results from its indebtedness, influencing profit and is found in the risk of solvency and liquidity.

The characteristics of financial risk are: the instability of obtaining a sufficient return to cover interest expenses, arising from the capital borrowed within the capital structure, it affects only the company's shareholders, the reduction of the shareholder's dividends.

C. Stock Market Indices

Price earnings ratio (PER) can be calculated as the ratio between the share price and the net profit of the share, and the result shows the period of time the investor can recover its dividend investment if the company would fully distribute the net profit on dividends.

If the indices indicate a lower value, then the recovery time of the investment is lower and the action becomes more attractive.

Generally, when the PER indicates the value of an action below 5, this is a highly underestimated action, if it has values between 5-10, the action is relatively underestimated, the values between 10-15 indicate an action correctly rated on the market, and if the action records values above 20, then it is overstated. Comparisons between the values of this indicator should be made between companies that have a similar business sector.

The Price to Book Value (P/BV) is the ratio between the share price and its book value (Bv), calculated as a ratio between equity and the total number of shares issued by the company. This indicator shows the value of the company's capital on the market.

If the P/BV indicator has a value below 1, it means that the action is underestimated, values 1 and 2 show an action that is correctly rated on the market, and values above 2 or 3 indicate an overrated action.

Generally, this indicator is used to compare the actions between companies together with other indicators, with greater efficiency, taking into account the business domain of firms as it may influence the value of the indicator.

Dividend yield (DIVY) is the dividend earnings of an investor and is calculated as the ratio between the net dividend and the share price.

This indicator can be used both to compare returns from various actions and other investment offers to determine which offer has most benefits.

3. Methodology

The analysis carried out within the research work is retrospective in terms of the analysed period of time and the dynamics having the reference period of years 2015-2017.

Considering the way in which the indicators are quantified and analysed, another type of analysis is highlighted, namely quantitative analysis.

To analyse the correlation between profitability and risk, we have chosen four industries at BVB level: aluminium metallurgy, petroleum extraction, aerospace industry and petroleum industry. We have selected a total of 17 companies, for each firm has been calculated a number of indicators such as: turnover (CA), turnover index (ICA), operating profit (Pe), net profit (Pn), ROA, ROE, ROS and risk indicators, the operating leverage ratio for operating risk and the leverage ratio for financial risk.

In the case of the analysis of the correlation between profitability and stock market indices as well as between stock market and risk indicators we used as stock indices: PER, P/BV and DIVY.

From the bvb.ro site, we downloaded the balance sheet and the profit and loss account for all the 17 companies, where we calculated for the 2015-2017 the aforementioned indicators presented in the Annex.

To analyse the correlation between profitability and risk we used the Pearson correlation coefficient calculated with SPSS program, the analysis being continued with a simple linear regression model.

The regression model was validated only after it was tested using the F-test and the ANOVA test generated by the out-of-SPSS window.

4. Case study

In the present research paper, we aimed to highlight both the most profitable sectors of activity and the firms that registered a maximum profit for the time period between 2015-2017 at the level of the selected sample.

According to the annex, 17 Romanian companies listed on the Bucharest Stock Exchange were selected for the analysis, which include the following fields of activity: aluminium metallurgy (TMK Artrom, Alro SA, Alum Tulcea, Alumil Rom Industry), petroleum extraction (Rompetrol Well Services, Dafora, Craiova Drilling Company, Videle Drilling Company), aeronautical industry (Romaero Bucharest, IAR SA Braşov, Aerostar SA, Turbomecanica) and the petroleum industry (Rompetrol Refinery, Petrolexportimport SA, Romgaz SA, Omv Petrom SA, Transgaz SA).

In 2015, in the aluminum metallurgy sector, the company with the highest net profit in the selected sample was Alum Tulcea, unlike Alumil Rom Industry, which had the lowest profit. In the following year, Alum Tulcea had a huge profit fall, also reflected in economic, financial and resource returns, which indicated the inefficiency of asset use and probably a very high degree of indebtedness in relation to its own resources financial. Otherwise, Alro SA had a net profit of 67.22 million lei, maintaining a spectacular evolutionary trend in 2017, reaching a net profit of 317 million lei, and economic profitability rates (15%), financial profitability (23%) and consumption (15.4%) expressed the efficiency of the use of financial resources and capital invested by shareholders.

As far as the analysis of the selected companies in the oil extraction industry is concerned, in 2015 the highest loss was registered by Dafora (-100.65 million lei), and the company with a maximum profit was Craiova Drilling Company (8.66 million lei.) Also, these data are also illustrated in the economic, financial, and resource efficiency ratios. In 2016, Dafora retained its threshold in the previous year and next year had a profit of 253.95 million lei due to the correct policies applied at the management level and the efficient use of the invested capital.

Regarding the aerospace industry, the companies surveyed showed that the most profitable company in 2015 was Aerostar, while Roamero recorded the lowest profit. Next, it can be noticed that these companies maintained the same trend in the following years, Aerostar being the most profitable company in this sector of activity.
The last analysed sector of activity is the oil industry, where we can observe that from the chosen companies Romgaz SA was the most profitable in the period 2015-2016, then it was overtaken by OMV Petrom SA, which had policies consistent in terms of prices and use of stakeholder capital.

Of all selected sectors of activity, the oil industry is emerging as the most profitable field over the three years under review.

The case study examines the hypotheses presented in the first part of the study that represent the starting point for this research. So, after collecting and processing the data, we imported them into the SPSS statistical program and with the correlation function we tracked the level and type of correlation between the performance indicators and the level of the operating and financial leverage coefficients.

The level of correlation between indicators is reflected in the following table:

Table 1. Level of correlation between performance and risk indicators

Correlations							
		CA	Ica	Pe	Pn	ROA	ROE
CA	Pearson Correlation	1	.094	.423**	.481**	.020	.061
	Sig. (2-tailed)		.595	.002	.000	.889	.669
Ica	Pearson Correlation	.094	1	.169	.185	.440**	-.283
	Sig. (2-tailed)	.595		.341	.296	.009	.105
Pe	Pearson Correlation	.423**	.169	1	.987**	.152	-.742
	Sig. (2-tailed)	.002	.341		.000	.288	.958
Pn	Pearson Correlation	.481**	.185	.987**	1	.161	-.020
	Sig. (2-tailed)	.000	.296	.000		.258	.892
ROA	Pearson Correlation	.020	.440**	.152	.161	1	-.762**
	Sig. (2-tailed)	.889	.009	.288	.258		.000
ROE	Pearson Correlation	.061	-.283	-.742	-.020	-.762**	1
	Sig. (2-tailed)	.669	.105	.958	.892	.000	
ROS	Pearson Correlation	.108	.552**	.103	.106	.430**	-.089
	Sig. (2-tailed)	.451	.001	.472	.459	.002	.534
CLE	Pearson Correlation	.547	.568	.748	.200	.671	.137
	Sig. (2-tailed)	.137	.192	.207	.160	.707	.337
CLF	Pearson Correlation	-.168	.057	.016	.742	.013	-.821
	Sig. (2-tailed)	.238	.751	.913	.960	.926	.851

(*Source*: Own authorship processing with SPSS)

The previous table shows a significant correlation between turnover, turnover index, operating profit and rate of return on assets as economic-financial performance indicators and coefficient of operating leverage, indicator used to estimate the operating risk.

There is also a significant correlation between net profit, return on equity rate and coefficient of financial leverage, with which financial risk is estimated.

After checking the correlation level, given the fact that significant correlations were confirmed at the level of the studied indicators, we made a simple linear regression model having as dependent variable the rate of return on assets (ROA) and as the independent variable the coefficient of financial leverage (CLF).

In order for the regression model to be significant, we performed a series of tests, one of which was even the summary model, reflected in the following table:

Table 2. **Summary Model**

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.671[a]	.003	-.017	40.5385%

(*Source*: Own authorship processing with SPSS)

It can be observed in the summary model a satisfactory level of significance R, according to this model, the regression equation has an important significance. Generally, as R is closer to 1, the more significant the analysis is, the regression equation expressing the mathematical link between the independent and dependent variables used.

Another important test for regression validation is the ANOVA test, a significance in this test having a variable F. The ANOVA test is reflected in the following table:

Table 3. **ANOVA Test**

ANOVA[b]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	234.436	1	234.436	.143	.707[a]
	Residual	80524.992	49	1643.367		
	Total	80759.428	50			
a. Predictors: (Constant), CLE b. Dependent Variable: ROA						

(*Source*: Own authorship processing with SPSS)

In the ANOVA test we can say that the level of the F indicator is a significant one validating as in the case of the summary the regression model we want to achieve. We consider a significant level of F when it is accompanied by a significance threshold sig below 5%, in this situation being 0.707% and the F indicator is above the 5% threshold, in the given situation being 14.3 %.

The last step in achieving the regression equation is to determine the coefficients of regression, which are presented in the following table:

Table 4. **Coefficients of the regression equation**

Coefficients							
Model		Standardized Coefficients			Correlations		
		Beta	T	Sig.	Zero-order	Partial	Part
1	(Constant)		.641	.525			
	CLE	.671	.378	.707	.671	.671	.671

(*Source*: Own authorship processing with SPSS)

According to the coefficients presented in the previous table we can say that the form of the regression equation is:

*ROA = 0.671 * CLE + error (7)*

Following these studies, it is emphasized that: the hypothesis H_1 *is valid* because it shows the existence of a direct and significant correlation between the *economic-financial performance indicators* (economic profitability rate, operating profit, turnover index) and the *operating leverage coefficient* and also the hypothesis H_2 *is confirmed* due to the presence of a direct and prominent relationship between the *economic-*

financial performance indicators (financial profitability rate, net profit) and the *financial leverage coefficient*.

In order to verify and validate the hypotheses 3 and 4, we also conducted a correlation analysis using the Pearson index between stock indices and economic and financial performance indicators and also between stock indices and the risks to which enterprises are exposed.

The correlation between stock market indices and economic and financial performance indicators is reflected in the following table:

Table 5. **The level of correlation between stock indices and economic and financial performance indicators**

		Ica	Pe	Pn	ROA	ROE	ROS	PER	P/Bv	DIVY
PER	Pearson Correlation	,238	-,037	-,034	,010	,784	,052	1	,060	-,099
	Sig. (2-tailed)	,176	,798	,815	,945	,035	,717		,693	,529
	N	34	51	51	51	51	51	51	46	43
P/Bv	Pearson Correlation	,295	,080	,065	,155	,176	,246	,060	1	-,065
	Sig. (2-tailed)	,114	,599	,667	,303	,242	,099	,693		,680
	N	30	46	46	46	46	46	46	46	43
DIVY	Pearson Correlation	,081	,132	,117	,051	,070	,116	-,099	-,065	1
	Sig. (2-tailed)	,682	,400	,456	,746	,655	,458	,529	,680	
	N	28	43	43	43	43	43	43	43	43

(*Source*: Own authorship processing with SPSS)

At the level of the stock-market indicators in correlation with the economic and financial performance indicators, there is a direct, significant relationship between PER and ROE, the Pearson index being 0.784 with a sig below 0.05. For other indicators, correlations are weak, insignificant.

The hypothesis number 3 is therefore partially validated, the significant correlation being encountered in only two of the analysed situations.

The correlation between stock indices and risk indicators is reflected in the following table:

Table 6. **Level of correlation between stock indices and risk indicators**

		PER	P/Bv	DIVY	CLE	CLF
PER	Pearson Correlation	1	,060	-,099	,681	,292
	Sig. (2-tailed)		,693	,529	,028	,093
	N	51	46	43	34	34
P/Bv	Pearson Correlation	,060	1	-,065	,124	-,012
	Sig. (2-tailed)	,693		,680	,515	,948

	N	46	46	43	30	30
DIVY	Pearson Correlation	-,099	-,065	1	,234	-,513(**)
	Sig. (2-tailed)	,529	,680		,230	,005
	N	43	43	43	28	28
CLE	Pearson Correlation	,681	,124	,234	1	,117
	Sig. (2-tailed)	,028	,515	,230		,508
	N	34	30	28	34	34
CLF	Pearson Correlation	,292	-,012	-,513(**)	,117	1
	Sig. (2-tailed)	,093	,948	,005	,508	
	N	34	30	28	34	34

(*Source*: Own authorship processing with SPSS)

From the correlations shown in the previous table, there is a significant direct correlation between PER and the operating risk (CLE) and a significant reverse correlation between DIVY and financial risk (CLF).

Considering these correlations, we can say that the fourth hypothesis is partially validated, the Pearson index being significant in only 2 of the 6 correlations analysed.

5. Conclusions

The analysis at the level of the companies listed on the Bucharest Stock Exchange specific to the four activity sectors has shown us that there is a close link between the economic-financial performance and the risks. Thus, using the Pearson index calculated with SPSS, we determined the type of link and its intensity between the indicators: turnover, the turnover index, the operating profit, the net profit, the economic profitability rate, the financial rate of return, the rate of return sales profitability and risk coefficients. It found out that there are significant direct links.

At the level of economic profitability, a significant relationship was demonstrated in relation to the operating leverage ratio, which is used for the estimation of the operating risk.

At the level of financial profitability, a significant correlation was established with respect to the leverage ratio, the indicator used in the bankruptcy risk assessment.

Thus, due to the existence of these significant links, a simple linear regression model consisting of the Economic Return Rate (ROA), the dependent variable and the CLF, independent variable, and the tests performed using the summary model and the ANOVA test validated regression model applied.

Therefore, the hypotheses H_1 and H_2, according to which there are strong correlations between the performance and risk indicators, are confirmed, the case study being decisive in their validation.

At the level of the stock indices in correlation with the economic and financial performance indicators, there is a direct, significant relationship between PER and ROE, with hypothesis H_3 being therefore partially validated.

There was a significant direct correlation between PER and the operating risk (CLE) and a significant backward correlation between the DIVY and the financial risk (CLF), in which case the fourth hypothesis (H_4) was partially validated.

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The impact of Management Quality on the Value of the Company in the EU Transport

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Abstract: *The viability of the investment decision, inscribed at least from a theoretical point of view in the sphere of rationality, is affected by the asymmetry of information. Mitigation of its incidence involves the analysis of economic and financial indicators, as signals with an impact on investors' perception towards the degree of success of a company, materialized in a certain value that they attribute to it. This study examines the effect of quality of management on firm value on a sample that includes all the companies from EU firms operating in the transport industry, with available data for the 2010 - 2018 (a number of forty-one). The mean value of Tobin's q calculated at the sample level is subunit. As a result, it has been found out by panel data analysis that there is a significant and positive relationship between ROA and firm value. We studied how different ways of calculating ROA influence value. Companies in the transport industry have high debt rates, which are perceived favorably on the market. No significant relationship has been detected between q ratio and the liquidity, and also size of company. We mention the inconsistency of the communication policy, the signals issued by the companies in the transport industry, as attributes of the management quality, arousing the interest with priority for the takeover by the competitors than for purely financial reasons for the investment.*

Keywords: *Value, profitability, liquidity, leverage.*

1. Introduction

The decision-making process in a broad sense, circumscribed by the complexity of the issue and the contextual dynamics, involves information. The efficiency of the decision depends on the quality of the information, which ensures an increase in the expected utility. Asymmetric information generates the risk of adverse selection processes and the risk of moral hazard in substantiating the decision. The application of the perceptions of the signal theory ensures the diminution of the information asymmetry between the parts. Included in the company's financial communication, this strategy aims to attract or retain capital investors. The main relevant signals on the economic and financial performance of a company include profitability, liquidity and financial policy.

The basic financial assumption in modern corporate finance is value creation. From a traditional financial perspective, the value of the company is related to shareholders 'value. Firm valuation is a major objective in substantiating the capital investment

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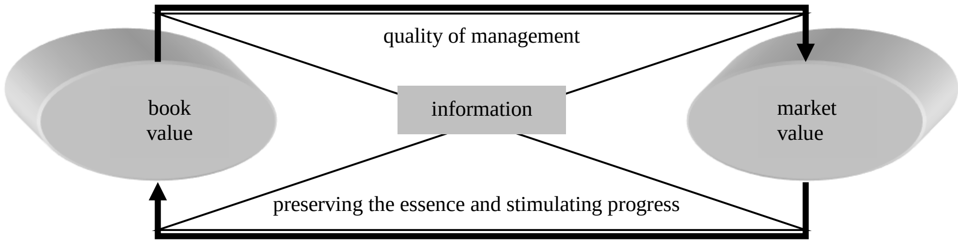
process and in assessing the efficiency and the opportunity of capital investment, representing their perception towards the degree of success of a company.

Value is an abstract, subjective concept, customized at the individual level. The evaluation of a company is a complex process, which takes into account a series of quantifiable and non-quantifiable variables, with fluctuating evolutions, given that "a random evolution has no memory beyond where it is now" (Wilmott, 2002: 78). The value of the company can be determined based on the data reported in the financial statements, as book value, affected by historical costs, by the accounting policies adopted by the company regarding the recognition and valuation of patrimonial elements, by the degree of prudence, as a value based on discounted cash flows, as market value, resulting from the ability to generate sustainable profit, the market mechanisms but also from the image of the company, as value in special cases (liquidation, division, etc.). "Value has been viewed from the perspective of analysis and evaluation, but not necessarily in the context of managerial decisions and strategies that underpin any business" (Helfert, 2006: 377).

The researches highlight the major role of management, which must impose a set of values and constantly adapt operational strategies and practices. Transforming a good company into an excellent one supposes the pre-eminence of leadership even in relation to technology, which can accelerate transformation but cannot determine it (Collins, 2017). The quality of management must materialize in an added value adequately distributed to all stakeholders: investors, customers, employees, communities. Reconsidering the way of assessing corporate performance in the context of assuming social responsibility involves including the perspective of stakeholders in defining value creation. Social pressure and the need to be involved in environmental protection impose new dimensions in the strategic management of companies. Assuming the desideratum of sustainable development materializes in addition to value for companies, validated by market value, generating gain to shareholders (figure 1).

Figure 1. **The quality of management in the evaluation of the company**



The correlative analysis of the values determined from the two perspectives reveals the existence of the following situations: the book value higher than the market value, if the financial market values the company below its value reported in the financial statements (the company's shares are sold at a discount), can be both a signal of losing the investor confidence in its ability to generate profits and cash flows in the future, and a reference for investors who want to take over the company; the book value equal to the market value, if the market perception of the company is similar to that reflected by the financial statements; the book value less than the market value, if the market assigns a higher value to the company, the reasoning including estimated future of performance and of goodwill.

The motivation of our research lies in the need to identify the correlation between value creation, evaluated based on Tobins'Q, and the quality of company management, as a signal that reduces information asymmetry, in order to establish the level of attractiveness of investors for companies in the sector and the determinant signals. A high value of the company, materialized in a stronger stock market price, highlights the ability of managers to generate prosperity to shareholders. The purpose of this approach is to analyze the relationship between the value of the company and profitability, liquidity, financial policy, in correlation with the size of the company. The analysis method that we used is the regressive method. As a result, it has been found out a significant and positive relation between ROA, debt ratio and firm value. No significant relation has been detected between q ratio and the liquidity, and also size of company.

2. The value of the company and the quality of management

2.1. Literature review

One of the most used tools to measure value is Tobin's Q, as an expression of the relationship between market valuation and intrinsic value. A company create value if the return of the investment is greater than the cost of investment. Consider alternate firm value measure, Q ratio is a relevant reference for investment opportunities. "If, at the margin, q exceeded unity, firms would have an incentive to invest, since the value of their new capital investment would exceed its cost. It is clear that if all such investment opportunities were exploited, the marginal value of q should tend toward unity" (Lindenberg and Ross, 1981: 2).

The method of determining this indicator has been deepened in the literature with several references in this regard: considering the book value of the total assets of the firm as replacement value of the assets, subject to the evaluation of intangible assets, the L-R algorithm **(**Lindenberg and Ross, 1981), the approximate Q established by Chung and Pruitt (1994).

Numerous studies have focused on Q ratio and its importance at the managerial level: corporate governance and firm value, detailing the impact of corporate social responsibility (Jo and Harjto, 2011), the significance of board diversity (Carter et al., 2003), and board size (Mak and Kusnadi, 2005), a ownership structure (Lins, 2003; Wei, Xie and Zhang, 2005), with the introspection of the extent to which family ownership, control and management affect firm value (Villalonga and Amit 2006) or a single large blockholder or a set of dispersed smaller blockholders is better for firm value (Konijn et al., 2010); corporate diversification and firm value (Lang, and Stulz, 1994); the value of enterprise risk management (Hoyt and Liebenberg, 2011). Also, the Tobins'Q is an alternative solution to measure the firm performance, being determined as an investment gain validated by the market in relation to the investment effort (Wernerfelt and Montgomery, 1988; Lang et al., 1989; Bharadwaj et al., 1999; Cheng, 2008; Servaes, 1991).

Our contribution consists in identifying the correlation between value creation, evaluated on the basis of Tobins'Q and the quality of the company's management, as a signal that diminishes the information asymmetry. The viability of managerial decisions is assessed in this study by profitability, liquidity, and financial structure, correlated with company size.

The profitability of a company is a relevant signal of its performance and the ability to remunerate the capital investment made by shareholders. The concretization of the potential of this gain depends on the dividend policy adopted, under the incidence of ownership structure. Companies with high and growing profits are perceived as being able to use resources efficiently, arousing the interest of capital investors, generating an increase in stock prices, of the value of the company. Empirical studies have emphasized the existence of a significant positive relationship between profitability, assessed on the basis of ROA or ROE, and the value of the company (Hermuningsih, 2014), measured with q ratio (Sucuahi and Cambarihan, 2016; Bidhari, 2013). Also, the magnitude of the effect on Tobin's Q on ROA of 14.6% is highlighted (Alghifari et al., 2013). According to Wang (2002), firms with $q > 1$ have significantly higher ROA and ROE than firms with $q \leqslant 1$.

The concept of liquidity is approached differently in economic theory. Thus, in the accounting framework, liquidity refers to the ability of assets to be converted into cash. In financial theory, liquidity refers to the company's ability to pay its current debts. High liquidity is a signal of the company's ability to pay its due debts in the short term, providing potential investors with information on managerial performance. Companies that can pay their short-term debts at maturity are considered by potential investors as not presenting financial problems, as a possible investment alternative, and by creditors as solvent partners. The relationship between liquidity and Tobin's Q was studied by Lang and Maffett, 2011. Firms with $q > 1$ have significantly lower cash conversion cycle than firms with $q < 1$ (Wang, 2002).

The financial structure reveals the extent to which a company uses debt or equity to finance its assets, with impacts on the value of the company. The optimal financing structure aims at the ratio between debt and equity that minimizes its cost of capital and maximizes a company’s market value. The impact of indebtedness on the value of the company is an important and controversial issue in the theory of financial decision. Complementarily, the empirical studies highlight the existence of positive or negative relations between indebtedness and the value of the company, significant or insignificant statistically, in different countries, sectors of activity, under the incidence of certain hypotheses, etc. The various researches in the field of financing highlight the orientation towards certain categories of sources, mentioning the specific advantages and disadvantages, capitalized, respectively attenuated depending on their accessibility. The trade-off theory of leverage establishes the financing structure, which ensures the balance between the benefits of debt financing (tax advantages) with higher cost (interest rates and bankruptcy), and is based on the Modigliani-Miller theory. The pecking order theory does not imply the existence of an optimal financing structure, but of a preference in the order of appealing to various sources of financing. This theory considers the information asymmetry between different investors that affects the choice between internal and external financing and between debt and equity (Myers, 1984). Reducing the asymmetry of information implies the priority use of internal sources, generated by the company (reinvested profit), and in the case of recourse to external sources, use with priority debts and then equity. Leverage, the ratio used to measure the level at which the company's assets are financed by debt, reveals the company's ability to manage its debts in order to finance its assets, constituting a signal of the performance and of the confidence of various creditors in the company's solvency. In addition, high leverage overhang companies diminish the ability of managers to invest in net present value generating projects.

Thus, the highly levered company exploits to a lesser extent the growth opportunities compared to the companies with low leverage, affecting its development potential. Jensen (1986) studied the problem of over-investments, resorting to indebtedness under conditions of sufficient self-financing creating pressure on managers to invest in less successful projects. Lang et al. (1996) highlighted the existence of a negative relationship between leverage and growth for low "q" companies. The consideration of taxation implies a negative relationship between dividends and the value of the company, and a positive relationship in terms of indebtedness. Fama and French (1998) demonstrated that dividends and indebtedness are signals of firm performance, which obscures any tax effects of financing decisions.

Large companies benefit from portfolios of activities structured on strategic segments generating resources that can be allocated in order to increase profitability at the company level.

2.2. Research methodology

2.2.1. Sample and data

The data was collected from the ORBIS Database and covers the period between 2010 and 2018, with annual frequency. The sample includes all the companies from UE (a number of forty-one) publicly listed companies and formerly publicly listed companies, with available data for the entire period, in the land transport and transport via pipelines, water transport and air transport.

Table 1 shows the distribution of these companies according to the specific sector, based on the declared NACE Rev. 2 code, and their origin countries. The number of companies from each sector is variable, from nine (51 - Air transport) to 16 (49 - Land transport and transport via pipelines and 50 - Water transport). Our research investigates these companies from the EU countries: Belgium (BE), Cyprus (CY), Germany (DE), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Finland (FI), Great Britain (GB), Greece (GR), Croatia (HR), Ireland (IE), Italy (IT), Lithuania (LT), Luxembourg (LU) and Sweden (SE) (table 1).

Table 1. **Selected sector, number of companies and origin countries**

NACE Rev. 2	Sector	Number of companies	Origin countries
49	Land transport and transport via pipelines	16	BE, CY, DE, FR, GB, IT, LT
50	Water transport	16	BE, DE, DK, EE, FI, FR, GB, GR, HR, LU, SE
51	Air transport	9	DE, FI, FR, GB, GR,HR, IE, SE

(*Source:* Elaborated by the authors)

2.2.2. Measurement and Research Model

The analysis method that we used is the regressive method. The general form of a regression equation can be presented in the following way:

$$y_{it} = \alpha + \beta \cdot x_{it} + \delta_{it} + \gamma_{it} + \varepsilon_{it}, \quad (1)$$

where:
y_{it} – the endogenous variable
α – intercept
β – the coefficients of the equation
x_{it} – the exogenous variables
δ_{it}, γ_{it} – the cross-section or the period specific fixed or random effects
ε_{it} –the residue,
for i=1,2,…..m (cross-sectional units) and t=1,2,…n (period)

In the elaboration of the multifactorial model, for identifying the influence of the factors on changing the value of the resulting indicator, we examined the following endogenous characteristic: y – Tobin Q ratio (%).

We included in the model those factors which have a significant influence on Tobin Q ratio, respectively:
x1– Total debt ratio (%);
x2 – Current ratio (%);
x3 – Size of company;
x4 – Return on assets (%).

The efficiency of the capital investment is assessed on the basis of the generated gain, respectively of the net profit, as a potential source of dividends, calculating the financial rate of return (ROE). In order to evaluate the profitability, in this paper it was chosen to use ROA, as it was included in the model the debt rate to determine the impact of financing on value. This allows the correlative assessment of the two determinants of ROE, eliminating the redundancy of the impact of indebtedness on the value of the company. Also, the results of our previous research pointed out the lack of a strategically significant correlation between q ratio and ROE in the EU transport industry.

Regarding the calculation of ROA, we will analyze the differences that appear in the size of the indicator, as well as in relation to the q ratio. In the literature it is recommended to calculate the ROA as a ratio between net profit and assets. This rate highlights the performance of using the capital invested in the company's activity. To ensure information content relevant to this rate, we will eliminate the impact of taxation as a variable exogenous to management, and we will provide a similar treatment to the cost of capital, treating interest and dividends similarly. This ensures the neutrality of financial policy in assessing the efficiency of the use of assets, this rate being independent of the method of financing. Although the elimination of taxation, necessary in assessing investor earnings, with effect on the share price and value of the company, can be considered a limitation of the approach in the context of studying the impact of profitability on investor behavior, we consider this option relevant to address the impact of management decision quality.

The abbreviations used in the model for these variables and their calculation are described in table 2.

Table 2. **The abbreviations of the variables used to apply the correlational-regressive method and their calculation**

Variables	Abbreviations	Calculation
Tobin Q ratio	TQ	Market value/Total assets
Total debt ratio	TDR	Total debt/Total assets
Current ratio	CR	Current assets/Current liabilities
Total assets	LNTA	Natural logarithm of total assets
Return on assets	ROA1	Net income/Total assets
	ROA2	EBIT/Total assets

(*Source:* Elaborated by the authors)

2.3. Empirical findings

The analysis of the transport industry reveals an undervalued of companies in the EU, the mean value of q ratio being subunit (0.705). A first objective of the empirical study is to determine the correlations between the selected variables. Table 3 highlights the results of the analysis.

Table 3. **Covariance Analysis**

Covariance Analysis: Ordinary
Included observations: 368
Balanced sample (listwise missing value deletion)

Correlation	TQ	TDR	CR	LNTA	ROA1	ROA2
TQ	1.000000					
Probability	-----					
TDR	-0.110470	1.000000				
Probability	0.0341	-----				
CR	0.043600	-0.473483	1.000000			
Probability	0.4043	0.0000	-----			
LNTA	-0.082427	0.108753	-0.279624	1.000000		
Probability	0.1144	0.0370	0.0000	-----		
ROA1	0.194192	-0.194882	0.192528	0.184651	1.000000	
Probability	0.0002	0.0002	0.0002	0.0004	-----	
ROA2	0.256052	-0.100072	0.120030	0.157253	-----	1.000000
Probability	0.0000	0.0551	0.0213	0.0025		-----

(*Source:* Elaborated by the authors)

In the transport industry, high values of q ratio are associated with high values of economic profitability and liquidity rate, as well as low values of indebtedness and company size. From the point of view of the degree of association, we found the existence of a weak connection between the variables. Statistically significant correlations ($p < 0.05$) are identified between q ratio and total debt ratio, return on assets, between total debt ratio and liquidity, size of company, return on assets, between liquidity and company size, return on assets, and between the size of company and return on assets. According to pecking order theory, companies with low liquidity have a high debt ratio. Contrary to this theory, large companies (which should generate significant internal sources and have negative correlations with the debt ratio and positive with liquidity), present an atypical situation in the transport industry. On the other hand, large companies generate high returns. There is an inverse correlation between operational and financial performance, low ROAs being associated with high borrowing rates.

In order to determine the regression equation, the collected data were processed by using the EViews programme, the Ordinary Least Square (OLS) regressive analysis method with corrections for the fixed effects of panel data. This method indicates the way in which an endogenous variable evolves based on changes in one or more exogenous variables, being relevant for our analysis. Quantitative variable was normalized by logarithmation.

The first stage in the elaboration of a panel consists in establishing if the regression is a regular or a panel one. For this purpose we used the Redundant Fixed Effects test (table 4 and table 5). The probabilities associated to these two tests that evaluate the common significance of the effects of the transversal section (Cross-section F and Cross-section Chi-square) are 0.0000, which suggests that a null hypothesis, according to which individual effects are redundant, must be rejected, which means individual effects can be included.

Table 4. **Results of Redundant Fixed Effects Tests – model 1**

Effects Test	Statistic	d.f.	Prob.
Cross-section F	15.993293	(40,323)	0.0000
Cross-section Chi-square	401.901066	40	0.0000

(*Source*: Elaborated by the authors in the Eviews programme)

Table 5. **Results of Redundant Fixed Effects Tests – model 2**

Effects Test	Statistic	d.f.	Prob.
Cross-section F	15.675656	(40,323)	0.0000
Cross-section Chi-square	397.012113	40	0.0000

(*Source*: Elaborated by the authors in the Eviews programme)

The next stage consists in making a selection between fixed and random effects. For this purpose, we used the Hausman test. This test (table 6 and table 7) highlights a probability associated to the chi-square lower than 0.05 (0.01548 – model 1 and 0.01452 – model 2). Consequently, the null hypothesis according to which the random effects model is preferred in the detriment of the fixed effects model is rejected, which means that the most appropriate method is the OLS method, with corrections for the fixed effects of the panel data.

Table 6. **Results of the Hausman test of the model 1**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.663088	4	0.01548

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var (Diff.)	Prob.
TDR	0.347365	0.204251	0.004490	0.0327
CR	-0.017942	-0.018932	0.000024	0.8393
LNTA	-0.023886	-0.028197	0.001309	0.9052
ROA1	0.748069	0.737495	0.001348	0.7733

(*Source*: Elaborated by the authors in the Eviews programme)

Table 7. **Results of the Hausman test of the model 2**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.829552	4	0.01452

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var (Diff.)	Prob.
TDR	0.311250	0.172507	0.004223	0.0328
CR	-0.023787	-0.023858	0.000025	0.9888
LNTA	-0.031300	-0.031090	0.001297	0.9953
ROA2	1.019105	1.025366	0.002640	0.9030

(*Source*: Elaborated by the authors in the Eviews programme)

To validate the correctness of the model we carried out the following cointegration tests: Pedroni Residual Cointegration Test (table 8 and table 9) and Kao Residual Cointegration Test (table 10 and table 11).

Table 8: **Pedroni Residual Cointegration Test – model 1**

Pedroni Residual Cointegration Test

Series: TQ, TDR, CR, LNTA, ROA1
Sample: 2010 2018
Included observations: 369
Null Hypothesis: No cointegration
Trend assumption: No deterministic intercept or trend
Automatic lag length selection based on SIC with a max lag of 0
Newey-West automatic bandwidth selection and Bartlett kernel
Alternative hypothesis: common AR coefs. (within-dimension)

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-332.6127	1.0000	-1.453360	0.9269
Panel rho-Statistic	3.038136	0.9988	2.688463	0.9964
Panel PP-Statistic	-2.053026	0.0200	-2.587916	0.0048
Panel ADF-Statistic	-1.658826	0.0486	-2.187490	0.0144

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	4.577159	1.0000
Group PP-Statistic	-4.321343	0.0000
Group ADF-Statistic	-2.634976	0.0042

(*Source*: Elaborated by the authors in the Eviews programme)

Table 9: **Pedroni Residual Cointegration Test – model 2**

Pedroni Residual Cointegration Test

Series: TQ, TDR, CR, LNTA, ROA2
Sample: 2010 2018
Included observations: 369
Null Hypothesis: No cointegration
Trend assumption: No deterministic intercept or trend
Automatic lag length selection based on SIC with a max lag of 0
Newey-West automatic bandwidth selection and Bartlett kernel
Alternative hypothesis: common AR coefs. (within-dimension)

	Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic	-381.4429	1.0000	-1.964910	0.9753
Panel rho-Statistic	3.627227	0.9999	2.998511	0.9986
Panel PP-Statistic	-2.646240	0.0041	-6.903844	0.0000
Panel ADF-Statistic	-1.935922	0.0264	-5.139135	0.0000

Alternative hypothesis: individual AR coefs. (between-dimension)

	Statistic	Prob.
Group rho-Statistic	4.931262	1.0000
Group PP-Statistic	-11.51473	0.0000
Group ADF-Statistic	-5.847732	0.0000

(*Source*: Elaborated by the authors in the Eviews programme)

Table 10. **Kao Residual Cointegration Test – model 1**

Kao Residual Cointegration Test

Series: TQ, TDR, CR, LNTA, ROA1
Sample: 2010 2018
Included observations: 369
Null Hypothesis: No cointegration
Trend assumption: No deterministic trend
Automatic lag length selection based on SIC with a max lag of 1
Newey-West automatic bandwidth selection and Bartlett kernel

	t-Statistic	Prob.
ADF	-3.599256	0.0002
Residual variance	0.032583	
HAC variance	0.027254	

(*Source*: Elaborated by the authors in the Eviews programme)

Table 11. **Kao Residual Cointegration Test – model 2**

Kao Residual Cointegration Test

Series: TQ, TDR, CR, LNTA, ROA2
Sample: 2010 2018
Included observations: 369
Null Hypothesis: No cointegration
Trend assumption: No deterministic trend
Automatic lag length selection based on SIC with a max lag of 1
Newey-West automatic bandwidth selection and Bartlett kernel

	t-Statistic	Prob.
ADF	-3.240366	0.0006
Residual variance	0.031974	
HAC variance	0.026689	

(*Source*: Elaborated by the authors in the Eviews programme)

Since the values of p (Prob.) are lower than 0.05 in most of the tests that were carried out (Panel PP-Statistic, Panel ADF-Statistic, Group PP-Statistic, Group ADF-Statistic, ADF), the null hypothesis, according to which there is no cointegration, can be rejected and as a result the series are cointegrated.

The results of the estimates for the regression equation are presented in table 12 and table 13.

Table 12. **Results of the regression- model 1**

Dependent Variable: TQ				
Method: Panel Least Squares				
Sample: 2010 2018				
Periods included: 9				
Cross-sections included: 41				
Total panel (unbalanced) observations: 368				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.648827	0.333935	1.942976	0.0529
TDR	0.347365	0.140856	2.466103	0.0142
CR	-0.017942	0.014915	-1.202894	0.2299
LNTA	-0.023886	0.042953	-0.556098	0.5785
ROA1	0.748069	0.192856	3.878897	0.0001
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.684539	Mean dependent var		0.684159
Adjusted R-squared	0.641566	S.D. dependent var		0.333645
S.E. of regression	0.199751	Akaike info criterion		-0.269353
Sum squared resid	12.88789	Schwarz criterion		0.208538
Log likelihood	94.56087	Hannan-Quinn criter.		-0.079491
F-statistic	15.92950	Durbin-Watson stat		1.006881
Prob(F-statistic)	0.000000			

(*Source*: Elaborated by the authors in the Eviews programme)

Table 13. **Results of the regression- model 2**

Dependent Variable: TQ				
Method: Panel Least Squares				
Sample: 2010 2018				
Periods included: 9				
Cross-sections included: 41				
Total panel (unbalanced) observations: 368				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.701535	0.330776	2.120873	0.0347
TDR	0.311250	0.137031	2.271383	0.0238
CR	-0.023787	0.014919	-1.594471	0.1118
LNTA	-0.031300	0.042622	-0.734357	0.4633
ROA2	1.019105	0.218630	4.661329	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.690654	Mean dependent var		0.684159
djusted R-squared	0.648514	S.D. dependent var		0.333645
S.E. of regression	0.197806	Akaike info criterion		-0.288927
Sum squared resid	12.63807	Schwarz criterion		0.188964
Log likelihood	98.16252	Hannan-Quinn criter.		-0.099066
F-statistic	16.38949	Durbin-Watson stat		0.994098
Prob(F-statistic)	0.000000			

(*Source*: Elaborated by the authors in the Eviews programme)

From the obtained results we can see that R-squared is of approximately 68% - model 1 and 69% - model 2, which indicates a high correlation between the Tobin Q ratio and the independent variables included in the models.

Return on assets has a significant positive effect on the q ratio, regardless of the calculation method, finding an increase in impact in the second model which considered exclusively the efficiency of the use of assets independent of their financing method and incidence of taxation. Interest and taxation similarly affect all the capital investments in a given market. The differences between the interest and taxation in the countries of origin of the analyzed companies, considered to be advantageous, can be counteracted by additional risks or by the asymmetry of inherent information. An efficient asset management ensures a higher profit for the shareholders, with a concretization in the increase of the share price and of the company's value. Thus, the correlation between accountancy-based measures of performance (return on assets) and measures of company value is studied, the operational efficiency being a favorable signal on the capital market, which can increase the Tobin Q ratio, amplifying the attractiveness for investors.

The results also show that for the full sample of firms leverage increase firm value, identifying a statistically significant effect. Firms with a high debt ratio are perceived as having a capacity to manage their debts, as well as a high credibility in relation to various categories of creditors. The fact that banks as important participant on the capital market grant loans to these companies is a strong signal for other investors. However, the analysis reveals a reluctance to invest in the shares of transport companies, with sub-unit values of the Tobin Q ratio, which signals the low interest of investors. The ratio between profitability and cost of capital does not support risk-taking compared to other investment opportunities.

We did not identify a statistically significant effect of company size and liquidity on company value. The size of the company is inversely related to firm value, which reveals that the decision to invest in various projects did not lead to an increase in shareholder value.

3. Conclusions

In this study we analyzed the relationship between the quality of management, evaluated by indicators such as return on asset, liquidity, debt ratio, correlated with the size of companies, and the value of the company. The EU transport industry is characterized by an undervaluation of companies, with average values of q ration subunit. Tobin's q is the proxy for growth opportunities in most existing studies, including this paper, with subunit value being a favorable signal for investors, especially competing companies for takeover. The efficiency of the use of assets is the variable with the greatest influence, an increase with a unit of it generating an increase of q ratio with 0.75, respectively 1.02, under the conditions of a $p<0.05$. According to the agency theory, leverage influences firm value, which is closely related to Tobin's q. The companies in the transport industry present high indebtedness rates, perceived favorably on the market, an increase with one unit of it determining increases with 0.35, respectively 0.31 a q ratio. For managers and investors this rate must be high. Also, the growth opportunities are determinants of leverage. Liquidity rates are on average below the level considered as insurer, without being a relevant signal on the market ($p > 0.05$). In general, the size of the company influences the investor's expectation of dividend from the company. In this study, the size of the company, estimated based on the value of total assets, does not statistically significantly influence the market perception of the company.

The quality of management is perceived by creating synergies between different decisional variables, by managing the risks related to the activities carried out, the operational and functional parameters.

The development of the research aims at analyzing the impact of accounting methods on the performance determined on the basis of accounting data and its impact on the market value of the company.

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Section 3

The Influence of Culture and Institutional Environment on Financial Decision-Making

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The Influence of Culture and Institutional Environment on Financial Decision-Making

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Abstract:

Idea: *Cultural and institutional background impacts on decision making of business corporations. In this paper we investigate difference s in opinions of managerial role and importance of accounting information between the regions whilst reflecting their traditions and cultural backgrounds.*
Data and Tools: *We employ questionnaire research on a sample of 97 young adults (students) from three regions to assess differences and similarities in their opinions.*
What's new: *In this paper we focus on cultural specifics as a factor influencing the process of solution of managerial tasks and understanding of accounting information*
So what: *We have found, that cultural differences are important factor that influences managerial decision-making.*
Contribution: *Our empirical research has confirmed that there are many differences in the perception of the managerial functions and financial decision-making embedded in different cultures impacting the managerial decision-making and solutions of business questions. Taking in account the differences in opinions we claim that the power of implicit (tacit) cultural influences needs to be taken into consideration.*

Keywords: *Decision making, cultural and institutional background, cultural differences, financial information, capital markets.*

1. Introduction and motivation

In this paper we concentrate on cultural specifics as a factor influencing the process of solution of different managerial tasks (Mamukwa, 2020). The process of financial reporting harmonization as a part and a base of the economic integration, using a set of international financial reporting standards (IFRS), has to face many obstacles. The original intention of IFRS was intended to become transnational rules which would produce unified, transparent, comparable and reliable information useful for economic decisions of investors around the world. In fact, being implemented into national environments, the originally supranational standards acquired the national elements and specifics and the resulting information is far away to meets these requirements. Our contribution tries to contribute to a broad discussion concerning the reasons of this problem and possible solutions (Alexander and Nobes, 2001, Tsakumis, 2007, Daske et al., 2013, Strouhal et al., 2014, Jindřichovská and Kubíčková (2017), Kubíčková (2019), Roman et al., 2019, El-Helaly et al., 2020 and others.

The theoretical framework of this paper is based on agency theory and institutional theory as well as on theory of developmental psychology. Great importance in

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decision-making in today's globalized world is played by cultural differences between regions and different managerial decision-making styles determined by particular cultures and ethnics. In our research we have tried to expand the recent researches using the knowledge and the attitudes of the social psychology and developmental psychology.

The ways of solution of economic and financial tasks on the various level of management do not depend only on the personal prerequisites in the form of knowledge and experiences, acquired during the school study. These approaches are affected by personal views, assessments, values, approaches and evaluations acquired during the process of personal and social development. This development takes place in the immediate surroundings, i.e. in the family circle and its ties to wider or closer social and cultural environment. These statements are based on the findings of social psychology (Ashmore at al., 2001). Social psychology considers the process of acquiring social identity as an integral part of the process of adolescence of each individual. During this process, the adolescent adopts the values, opinions, norms of behavior that form the basis for his integration into society. In this context, social identity is perceived as the granting of social identity, as a way and condition of accepting a newcomer into a group. According to social psychologists and anthropologists, this is a universal motif common to all cultures (Jenkins, 2014; Malina, 2011, Vágnerová, 2010, Jensen, 2003; Jensen, Arnett, and McKenzie, 2011). Jensen goes on to say that shaping adolescents' cultural identities intersects with religion and morality in many ways, because religious beliefs and behaviors are often key elements in understanding their cultural identity. Detailed and well structured analysis of development of social and cultural identity during young adulthood is provided by Heluz, 2018, who speaks about the inner acceptance of norms and values and acquisition of social roles. Heluz (2018, pp 250-255). He explains the concepts of acceptance of norms and values, development and education. Similarly, detailed characteristic has been provided also Smekal (2004, pp. 402-405).

Important elements of cultural identity are family and communal duties or observance of spiritual rules or the concept of autonomy and independence, cultural identity is the center of shaping the identity of adolescents (Kroger, 2004, Erikson, 2007, Yampolsky, Amiot and de la Sablonnière 2016).

To disclose the differences in the views and in the ways of solution of typical managerial tasks became an incentive of our research. In line with the social psychology we supposed the differences are rooted in different cultural environments as a part of everyday life of persons, families and their members. As respondents of our questionnaire we have chosen students of the first year of university study. We want to reveal the differences in their views on the importance of financial information and in the ways of solution of typical managerial tasks.

We expected that the approaches of the students groups coming out from different cultural backgrounds will differ due to influence of their cultural backgrounds. We posit that cultural specifics permeate the managerial decision-making process and influence accepted solutions (Gatley, Lessem and Altman, 1996; Carr and Tomkins, 1998 and Aggarwal and Goodell, 2014, and Lam, 2000).

The role of culture in financial decision-making was investigated by Karolyi (2016) and Aggarwal and Goodell (2014), Bedendo, Garcia-Appendini and Siming (2020). The research highlights that the decisions are amended according to the cultural background of the investment manager from the role played by other country-specific factors. Authors Frost, Moore, Louis, Lundberg and Martin (1985) investigated in their broad enquiry into organizational culture the point whether culture has anything to do with the meaning of life in the workplace and/or with organizational effectiveness and how is an organizational culture influenced by and has an impact on the immediate environment within which organizations operate. Cultural differences and their impact on financial reporting harmonization process e.g. Alexander and Nobes, 2001, and their followers.

This paper aims to prove that the perception of selected areas of company´s management differs in different regions and that there are many differences both in the perceived status of managerial positions, the importance of financial data and its manipulation in different national environments. These differences in perception serve as confirmation of the above-mentioned cultural conditioning of the managers´ and companies' behavior. This research is based on the selected results of recent research executed by Kubíčková, Jindřichovská, Lörinczová and Nulíček (2020) and prior research by Jindřichovská and Kubíčková (2016), Kubíčková and Nulíček (2019), and Kubickova (2019).

2. Method

The investigation was performed in the Fall semester of the academic year 2019/2020 at the Faculty of Economics and Management of the Czech University of Life Sciences in Prague (Czech Republic). It was performed with the use of the questionnaire. The respondents were the students at the beginning of their studies who have just recently arrived to the Czech Republic. The respondents were divided in the three groups representing diverse cultural environments.

We have chosen the first-year students, because at the beginning of their studies. These students are not yet influenced in their views and attitudes by their new university environment nor are they influenced by economic practice of the new country where they have recently arrived. Therefore, we we claim that they bring in opinions from their own original cultural background. From the point of view of social and developmental psychology the process of development of their social identity has been largely completed Helus, 2018; Smekal 2004; Jenkins, 2014; Malina, 2011; Jensen et al., 2011; Vágnerová, 2010.

The new arriving students do not have any practical experience yet. This we consider to be an advantage. In this vein their views and attitudes reflect broader social experience and opinion than their individual and they represent broader social surroundings.
Furthermore, we consider the fact that the students do not have any individual practical experience to be an advantage. In this way, their experience reflects a broader experience than just their individual.

2.1 The structure of respondents

The sample of respondents consists of the 97 students, out of which 46 % were males and 54 % females. The age of the respondents was mainly between 21-23 (47 %) and 17-20 (43 %). All students were high school graduates, coming from bigger cities and living in the Czech Republic, mostly for one or two years. It was therefore plausible to assume that their views have been formed in their home countries and reflect the economic attitudes of members of their family and wider society.

Countries of origin represent three relatively homogenous groups representing different parts of the world. The first group was formed by students from the East and Central Asia (Chinese, Indians, Nepal, Pakistani, Kazakh), the second group was formed by students from Continental Europe (German, French, Spanish) and the third group was formed by students from Russia and Ukraine.

Structure of our respondents is presented in Table 1.

Table 1 **Structure of respondents**

	1st group	2nd group	3rd group
	Eastern and Central Asia *(Afghanistan, Indian, Nepal, Pakistan, Kazakh, Chinese, Uzbek, Nepal, Indonesia, Georgian Tajikistan)*	Continental Europe *(German, Spanish, Portuguese, French, Romanian, Czech)*	Russia and Ukraine *(Russia, Ukraine)*
Number of students	36	28	32
Male	20	12	12
Female	16	16	20

Source: own investigation

2.2. Experimental questions and model situations

The questionnaire contained four parts. The first part included the questions concerning the description of the respondent (their age, education, including their economic and financial experience).

In the second part, we investigated the perception of managerial positions in companies and possible financial sources together with the role of financial information in business management. We have concentrated on differences in perception of the place and role of the capital market and banks in the economic system as the intermediaries of capital flows and also of the financial information.

In the third part, we tested the approach to the solution of selected situations in financial reporting.

In the fourth part, we have investigated the attitude to the elements of earnings management and tax optimization. We consider these attitudes as a representation of subjective perception of the relationship of the economic entity to the whole economic system. In the construction and formulation of questions and model situations, we used the findings of the researches presented in the articles of Tsakumis (2007), Procházka (2006), Strouhal and Bonaci (2014), Białek-Jaworska and Wójtowicz (2018) and Drábková and Pech (2019).

The questions and selected situations were designed in line with the aim of our investigation: to find out the opinions of the young respondents and to assess the differences in their views, attitudes and perceptions.

The answers obtained in the questions were processed within individual groups using statistical methods. The average value or share of individual answers to the total number of respondents was determined based on design of questions or model situation. F-test was used to check the similarity of components of the answer, an always determined for a pair of components (the values of the F-test) expressing the similarity of distribution of the answer in the groups.

3. Selected results of enquiry

The questions and selected situations were designed in line with the aim of our investigation: to find out the opinions of the young respondents and to assess the differences in their views, attitudes and perceptions. More precisely: we find out the views on the various managerial positions in business, on the perception of the role of financial information, on the perception of the social character of accounting data and on the earnings management.

3.1.Managerial position

In the first question we examined the views on the managerial position in business. We used the direct question with the answer based on marking the weight (the importance) of the options offered. The options included different managerial positions:

„What is, according to your opinion, the level of significance of the top managerial positions for the successful operation of the company?
[Classify the importance of the following positions using the scale from 1 to 7, where 1 is the most important and 7 is the least important (one position=one classification).]“

The responses in the three groups can be seen in table 2.

Table 2 **Managerial position in the business management**

		1st group Eastern and Central Asia	2nd group Continental Europe	3rd group Russia and Ukraine
		Average	*Average*	*Average*
a	*Company´s director*	**1,47**	**1,43**	**1,54**
b	*Chief financial officer (CFO)*	1,94	1,68	2,04
c	*Business director*	2,69	2,11	***3,32***
d	*Marketing director*	2,08	2,25	2,79
e	*Personnel director*	1,83	***3,00***	1,64
f	*Chief accountant*	***2,75***	2,54	2,39
g	*Production director*	1,94	2,04	2,50
F-test	Comparison of groups	1st and 2nd	2nd and 3rd	3rd and 1st
		0,779	0,651	0,465

Source: own investigation

The results were the same in all three groups as it concerns the most important position. However, when the last important position is assessed the results differ significantly.

The company director was assessed as the most critical managerial position in all three groups. However, the assessment of the other managerial positions differed. The least important position in the group of Eastern and Central Asia was the chief accountant, while in the Continental Europe, it was the personnel director, and in the Russia and Ukraine group, it was the business director. It can be understood as a reflection of the specifics of the past development of the economic system and the prevailing cultural specifics.

3.2. Role of financial information

In the second question, we have investigated the perception of the role of financial information in the economic system. The response to this question consisted in assessment of seven proposed assertions based on the Lickert scale, where number 1 means the highest importance and number 5 means no importance.

"What is - according to your view - the main importance of accounting and financial statements"?

The proposed answers and the average values reached in the three groups of respondents are presented in Table 3.

Table 3 **The main goal of information included in financial statements**

		1st group Eastern and Central Asia	2nd group Continental Europe	3rd group Russia and Ukraine
a	*Providing information on the processes in the company for its management and administration.*	**1,61**	1,50	1,96
b	*Providing information on the company financial situation and its performance for the stock exchange transactions and other activities by investors.*	1,75	**1,36**	**1,86**
c	*Providing information for determination of the amount of tax liability.*	1,69	2,25	2,18
d	*Providing information for staff evaluation and remuneration.*	2,42	2,79	2,71
e	*Providing information for managers´ evaluation.*	2,31	2,50	2.36
f	*Providing information for banks and other creditors for the purpose of assessing the borrowers´ creditworthiness.*	1,97	2,11	2,00
g	*Providing information to increase the effectiveness of the internal operations of the company.*	1,83	1,79	1,89
F-test	Comparison of groups	1st and 2nd	2nd and 3rd	3rd and 1st
		0,230	0,224	0,987

Source: own investigation

For the first group, the highest importance of performing accounting books and preparation of financial statements was providing information for business management. In the second and third group, it was providing information on the company and its performance for the stock market and other activities of investors. The answer represents the role of capital market and banks in given economies. We found the differences of the positions in West-European countries compared to the East-Asian countries and we find different reflection of the nature of managerial decisions.

3.3. Character of financial information

In the next question, we investigated the perception of the social character of accounting data and their possible misuse. We want to disclose whether and how is the position of financial data in the economic system reflected in the mind of people. The respondents should choose one of five suggested statements.

"The information encompassed in financial statements is in your opinion" [Please, select the most suitable answer from a) to e).].

The offered responses a) - e) and results reached in the three groups are presented in Table 4.

Table 4 **The character of financial information**

		1st group Eastern and Central Asia	2nd group Continental Europe	3rd group Russia and Ukraine
		%	%	%
a	*It is strongly private and should be used only for the owners and managers.*	38,9	35,70	56,20
b	*It is public, available for everyone who wants to collaborate with the company.*	0,0	7,10	28,10
c	*It is sensitive and its publishing exposes the company to danger.*	**55,6**	**46,40**	**65,70**
d	*It presents a picture of the of company´s performance and should be publicly available.*	5,6	7,10	15,60
e	*It presents the information important for public authorities and national economic statistics and should only be provided to these institutions.*	13,9	3,60	6,20
F-test	Comparison of groups	1st and 2nd	2nd and 3rd	3rd and 1st
		0,731	0,616	0,873

Source: own investigation

The results show the same assessment of the financial data in all three groups of respondents. All respondents, regardless of their domicile assessed the financial information as sensitive, and they have indicated that publication of this information exposes the company to risk. This result is a little surprising. It expresses, that there is relatively the same importance of financial information in individual regions.

3.4. Earnings management of financial information

The following model situation was presented to find out the differences in the assessment and attitudes to the possibility to manage the earning together with the reason which could justify this manipulation. The reason should reflect the perception of the role of accounting data in the economic system and an overall tendency to accept unethical solutions. In this enquiry, the respondents should solve the model situation (as follows). The response consisted in the choice of one out of five offered solutions:

"The chief accountant of the company has decided to use all available opportunities given within the accounting rules to report the lowest possible earnings. You consider his efforts to report the lowest profit as: ... (Please mark the most appropriate suggestions in table below)".

The results/answers in all three groups are presented in table 6.

Table 6 **Earnings management and its justification**

		1st group Eastern and Central Asia	2nd group Continental Europe	3rd group Russia and Ukraine
		%	%	%
a	*Reasonable, because the company will not need to pay large dividends,*	12,1	3,6	9,4
b	*Reasonable, because he company will not have to pay high taxes*	21,2	14,3	**34,4**
c	*Unwise, because it decreases the share price of the company on the stock exchange,*	21,2	17,9	21,9
d	*Unwise, because it will worsen the company´s credibility in the eyes of banks and lower availability of future borrowings,*	**36,4**	25,0	9,4
e	*Unwise, because it will worsen the company's reputation in the eyes of all stakeholders.*	9,1	**28,6**	6,3
F-test	Comparison of groups	1st and 2nd	2nd and 3rd	3rd and 1st
		0,873	0,728	0,850

Source: own investigation

The responses of the groups are entirely different. It can be explained by the different cultural paradigm following each group. In the first, Eastern and Central Asian group, the most frequent proposition was that earnings management is perceived as irresponsible leading to lowering credibility in the eyes of banks. In the second, group of Continental Europe the most frequent suggestion was the one where the earnings management is assessed as unwise, concerning lowering the company´s reputation in the eyes of stakeholders. And in the third, group of Russia and Ukraine, the most frequent option was the one where the earning management can be accepted as reasonable. The justification was that the company would avoid paying high taxes. Here, the different propositions can be understood as capturing the reflection of overall economic and social conditions in specific regions represented by each investigated group.

4. Conclusion and implications

The results confirmed the managerial decision making and the perception of the role of managers reflect features of the original cultural environment of respondents coming from different cultures. For this reason, we have explored the opinion of young adults coming from different cultural background. Social norms and cultural opinions of these respondents was formed in their original countries during the time of adolescence and early adulthood (Smékal, 2004, Helus, 2018). We found that there are differences in opinions on the role of financial reporting in general, on its purpose and through it also on the role of individual sources of financing (Aggarwal and Goodell, 2014; Karolyi, 2016, Mamukwa, 2020).

The key differences were detected in the perceived levels of significance of the top managers, furthermore in the main goal and character of information provided by financial statements and also in the perception of possible earnings management. In a broader view, it has been confirmed that there are differences in the view on the operation of businesses, on the financing of business activities and different perception of the role and place of corporate managers in specific positions as perceived by young adults. Their opinion may obviously develop in further years (Heckhausen et al., 1989).

The general approach to decision-making and solution of specific situations can be considered cannot to be a result as a result of the purposeful influence of school education or the impact of economic practice. Financial decision-making and assessment of different situation is based on shared values and experiences, which are formed in everyday life of individuals in the specific social and cultural environments. These values and experiences are a part of the patterns of thinking of members of a given cultural background. This often has the character of tacit (implicit) knowledge (Gatle et al., 1996, Mládková, 2007) and is a part of the process of acquiring social identity in a group as an integral part of the process of adolescence of each individual (Kroger, 2004, Jensen, 2003, Jensen, et al., 2011). When assessing changes in the performance of managerial functions, and their decision-making, the power of implicit cultural influences need to be taken into consideration.

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Section 4

The role-person fit performance assessment strategy - implementation ERP versus RPA in the production area - risks, difficulties and benefits. A case study

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Abstract: *This case study will highlight the importance of adapting the solutions offered using artificial intelligence (AI) - machine learning (ML) and RPA (Robotic process automation) - to existing solutions, implemented using the integrated ERP system - Enterprise Resource Planning. These solutions have been beneficial for the company, bringing added value and helping the business environment, facilitated the solution of different issues that existed for a long time, because a solution could not be found. The case study, from this paper, is the subject of a web-based questionnaire research, which the authors conducted in a company from Romania. Since 2019 the company has implemented RPA - type solutions in several areas within the company - here we will refer to finance, sales and distribution and production. Our intention is to highlight and split the risks on concerning types, the difficulties in implementation as well as the benefits brought by such a decision. There are several levels, which the authors will analyze, throughout this scientific paper, from involvement in the project, from changing some jobs to the detriment of others, to staff restructuring, where the activity was mostly automated part.*

Keywords: *RPA – Robotic Process Automation, AI – Artificial Intelligence, ML - Machine Learning, ERP - Enterprise Resource Planning, global*

1. Introduction

More and more companies in Romania are adopting an integrated ERP system. Initially, the basic modules are installed, such as FI (Financial Accounting), CO (Controlling), MM (Materials management), SD (Sales and Distribution), PP (Production Planning) and then other existing functionalities in the system are adapted. The areas with the highest share in adopting such solutions are very focused on the country's capital, but other counties are not far away either. This case study was conducted in a company based in the middle of the country which are mainly manufacturing the production of components needed in the automotive industry for car manufacturers. One thing that the authors considered during the research was to bring in the same article a series of factors, necessary for the present research, such as the impact of the implementation of such an IT solution, as it had among employees. Who is going to use it, what was the rate of absorption of the knowledge necessary to use the system in optimal conditions, what were the repercussions such an implementation had on the number of existing people / employees?

In the last years there were articles and conferences presenting facts about the new technologies (AI, RPA, ML) and how is the impact on the impact on the business

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environment, whether these helps or not. The authors of this article also witnessed the implementation of automated solutions - RPA - which gave them a different vision of the existing solutions in the company, how they, in various areas of expertise, have changed and how a "little robot" began to perform repetitive tasks in a fairly short time, and the rate of making mistakes has reached the minimum possible. Perhaps there is much to discuss here, such as:

- How employees have adapted to these new technologies?
- Such a choice of technology was beneficial after a specific period?
- What would be the medium and long-term amortization of this investment - knowing that such a solution is quite expensive?
- What was the degree of education of employees in terms of such technology? At the beginning of the project implementation there was a given number of employees: did they remain until the end of the implementation? Has the number of employees increased/decreased? What is the average age after these technologies appeared? Was it possible to hire - with qualified staff - knowing that these technologies have recently appeared on the Romanian market? How is it more beneficial - to retrain employees or to hire from the market? Many aspects were found in the company and presented by the authors where the case study in this article was done.

A series of web-based questionnaires were creating and distributed in which respondents were asked to provide an opinion upon all those questions from above in order to gather data for a qualitative analysis The answers of the questionnaires were anonymous, the desire of the authors of this article being to make an analysis by activity segments and to know the functions of each employee. It was important to know if they have higher education or not. What is noteworthy is the fact that most of those who responded, 79% were those who worked on the implementation project and who later found themselves in the teams that continued the maintenance of the system, technical and functional.

In the following section we review the relevant literature on global ERP systems' implementation in Romania, but not only, in context of integration with RPA and of the new approach 4 Hana. Next, we present the case study and analyze data extracted from the results of the ERP together with the RPA and AI implementation process, list the risks, difficulties and benefits generated from the process and present the results of the questionnaire's analysis. We end our paper with conclusions, limitations and future perspectives.

2. ERP overview - literature review

From the specialized literature we have synthesized some of the articles that provide information on how ERP systems have been implemented in Romania and in other countries, their specificity varying from one business environment to another. Thus, we can say that, according to the American Production and Inventory Control Society (2001), these systems are defined as methods necessary for planning and controlling economic processes within a company, to be able to realize, account, sell, and transport everything a commercial company produces / sells / trades goods. It's also noted that such integration of existing functions and processes can be done with adapted software - such as ERP - so that there is a record of all data that is transferred from one department to another, from human resources, to sales, to supply and transportation, to the factory, where everything that is subsequently sold is produced. The integration of such an information system of ERP type, comes bundled with a different business solution, which is customer-oriented, to what it wants, so that the resulting products cover a wide range of requirements, necessary for living day by day.

Most existing, specialized articles from various areas of activity provide a series of definitions and problems of ERPs, a series of ERP adaptation forms, a series of case studies on what happened in industry (production, sales, sales, transportation), recent trends in ERP and surveys in the specialty literature related to the ERP area. One thing that has been discussed frequently is related to the reengineering of business processes and a wide range of issues related to all that involves organizational change, these being in tandem, and which bring into question the implementation of ERPs (Addo-Tenkorang Richard et al ., 2011). A big step forward was seen at the time of registration of documents, it has a considerable improvement, so that activities such as recording depreciation, or settlement of expenses and income in advance, moreover, the part of financial leasing, financial revaluation, have had transformations spectacular. Most of the articles refer to these criteria - time, as well as the growing volume of data collected, recorded and stored in the database of the ERP system.

The present research aimed to compare how to work with the ERP type system, what processes are performed in the production area, how the application of RPA type solutions has improved the production times of various products for consumption. These things had a major impact on the organization, the results being seen in a very short time. The management of the organization has highlighted the organization's performance, which is also found in the investments made, as well as in the results found shortly after the adoption of ERP and RPA. According to Nwankpa, J. K. (2015), an advanced ERP computer system improves working time and increases the added value of human capital (employees).

In the literature there is a correlation between human resources and internal systems, and through this article we demonstrated the influence of the integrated system on employees, moreover the adoption of automated solutions facilitated an increase in performance. Another thing that wanted to be implemented was how it can be done, with the help of RPA of a complex financial audit, based on certain previously thought scenarios. Another visibly improved thing was the way of reporting, this becoming one of the pro criteria, which helped a lot in making certain business decisions.

With the introduction by SAP of S / 4 Hana solutions, from the database (HANA) to the new S/4 Hana application, the implementation of AI - Artificial intelligence, ML - Machine learning or RPA - Robotic Process Automation solutions could be adapted to business environments, processes such as auditing or accounting, and can be remodeled and readapted to new trends in integrated systems. It will be a great challenge in the coming years to adapt these standard processes to new software technologies. The "robots" created to do step by step what man achieves daily, and which becomes more and more tiring, in a globalized and technological world, will appear and will be part of our daily activities.

3. Production environment in SAP – adoption RPA solutions

3.1. Short description about company decision to implement ERP system - SAP - and RPA solutions adoption – facts and details

A lot of companies in Romania were privatized after the fall of the communist regime in 1989. Some failed, others did not, now they are successful companies. The company we will discuss in this case study is a company from Brasov and operating in the production and sales area. He has business with the largest companies in the automotive area, making various components for them, from car upholstery, door handles, car windows, etc. All this is done on request, the headquarters being in Germany, in Munich.

The company has about 350 employees, most of whom work as factory workers. A series of 72 employees work in SAP, performing all the part of Financial / Controlling, Logistics (supply + sales), Production, Project Systems, HR. They are divided as follows Service managers (SM) - 7, consultants FI - 10, consultants CO - 3, consultants Production (PP) - 18, Sales and Distribution (SD) - 12, Material Management (MM) - 12, Quality Management (QM) - 8, Project Systems (PS) - 2.

They were sent 3 questionnaires, one to analyze the satisfaction of implementing ERP solutions, the second to see how the SAP solution was adapted (knowing that the main servers were headquartered in Germany), the third questionnaire was intended to be an analysis of the implementation of RPA solutions, how they were integrated into the existing way of working in the company and how it was to satisfy the wishes of those who use such solutions.

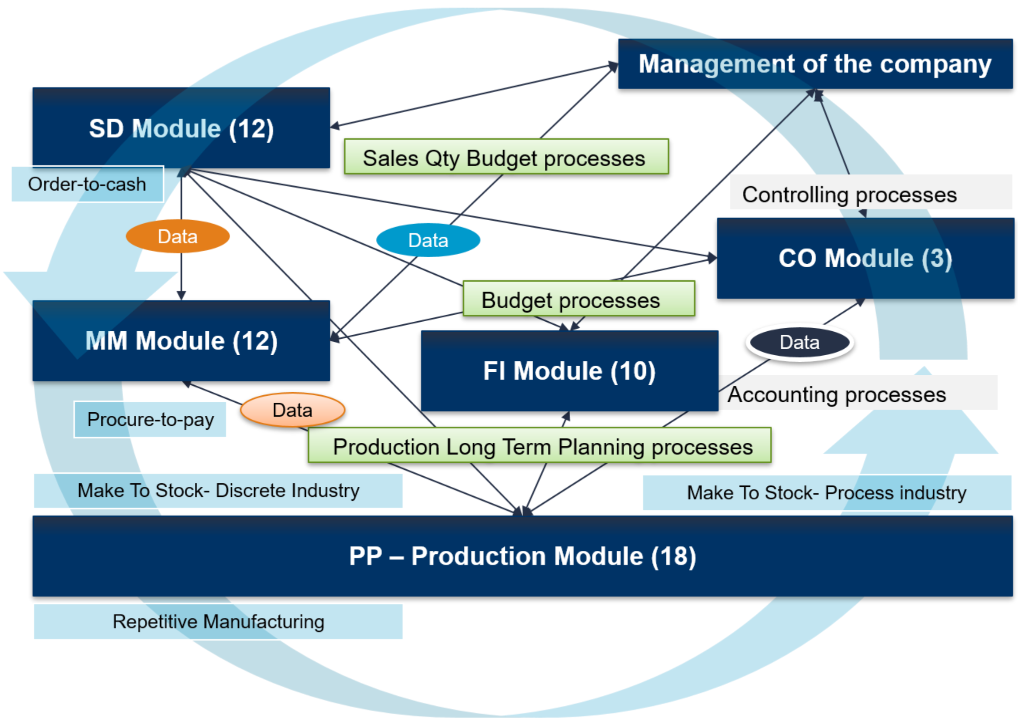
The way in which the responders were answered to the questionnaire, sent by e-mail, is presented in the following table (table 1):

Table 1. **The structure of answers to the questionnaire**

Total SAP consultants' number				72			
SAP Module	Module / consultants	Q1 (1)	Q2 (2)	Q3 (3)	1	2	3
FI	10	9	6	10	90.00%	60.00%	100.00%
CO	3	1	2	1	33.33%	66.67%	33.33%
MM	12	10	10	9	83.33%	83.33%	75.00%
SD	12	11	12	9	91.67%	100.00%	75.00%
PP	18	16	17	17	88.89%	94.44%	94.44%
QM	8	5	4	5	62.50%	50.00%	62.50%
PS	2	2	2	2	100.00%	100.00%	100.00%
SM	7	7	7	7	100.00%	100.00%	100.00%

Below is described the structure of the company, in terms of the number of existing SAP consultants and the relationships between them (depending on the existing economic processes):

Figure 1 – **The SAP Modules implemented – relation between departments**



The structure presented in the Figure 1 is related to the business model implemented by the company from Brașov. It is a business model that relies largely on demand, producing materials that are later used in mass production of cars. One thing to keep in mind here is that demands can be changed even when production has begun to translate them into reality. This causes losses, but by contract, the company that requested those products bears the costs. From the data that the authors collected on the spot, it resulted that in a proportion of 92% of the requests, there was no intervention at all, it what was requested, it also happened.

3.2. The ways to approach difficulties, problems - how were solved - mitigation proposals - implications for the future

During the process of implementing the ERP - SAP IT solution, a series of issues were encountered, which, step by step, were solved. Always, the desire of the company's management was to implement - adapt the ERP - SAP solution as well as attract all solutions based on AI, ML and RPA. A series of meetings were organized on the project, following which certain decisions were taken. As the system was adapted, a series of corrections followed, until it was live. A series of cases were collected (problems, solutions, discussions, benefits), during the implementation project, in the following, the most significant 20 problems appeared are presented:

Table 2. **List of most significant 20 issues identified after implementation**

Id	Stream raising the concern	Risk/concern description	Risk / concern type	Priority	Mitigation strategy	
					What	***Who***
1	IT	Bringing a new Service Delivery manager - free position - impact on the project	Strategic	1	1. Consultant prepares Role Description 2. CM management agrees on the profile and nominates the Delivery Manager	1. Project leadership / X-functions (consultant) 2. Top Management

Id	Stream raising the concern	Risk/concern description	Risk / concern type	Priority	Mitigation strategy	
2	IT	Increase incoming payments automation rate to 30% at the end of the project	Operational	1	1.RPA consultant togheter with CM SL 2.IT+Finance collaboration + AI+ML 3.RPA consulytnat involved	1.RPA developer (int.+ext.) 2.Finance colleagues + IT 3.RPA Developer
3	IT	Increase customers with direct debit from 2.8% to 5% at the end of the RPA implementation project with support from Business	Operational	1	1. Conduct workshops with IT staff as part of process design / RACI and testing of operating model, during which Operating Model is described and discussed to facilitate understanding 2. Examples of other companies having implemented similar operating models can be provided, if case	1. Consultant Team + RPA developer 2. Consultant Team + RPA Developer + FI Business 3. CM strategic company + consultancy company
4	IT	Increase the number of invoices sent by e-mail from 59% to 65% at the end of RPA implementation project, end of the year, with support from Business	Operational	1	1.The target will be achieved by sending all FI invoices for card customers via e-mail. 2.The project is ongoing. 3.Technical Solutions found, alignment with card Department and CMDM Dept. realised	1. Consultant Team + RPA developer 2. Consultant Team + RPA Developer + FI Business 3. CM strategic company + consultancy company
5	IT	Increase internal controls for bank statement process in order to keep the no.of retransmitted reports to 0	Operational	1	Target was reached – from 11 reports submitted to HQ for HFM, 0 reports were requested to be reworked. All the reports are checked by TL before submission	1.Target was reached – from 11 reports submitted to HQ for statutory and HFM , 0 reports were requested to be reworked. All the reports were verified before they were submitted by consistently applying the four eyes principle. – RPA developers + Business team
6	Legal & Compliance	Defining the matrix through which those who represent the company will be authorized to do so	Operational	3	The current lawyers will have to certify regarding the representation of the new company	1. Consultant SL + CM SL
7	Legal & Compliance	The assignment of lawyers hired with ILA in SSC will trigger the prohibition to provide legal assistance to other companies than SSC	Operational	3	1. No modification to existing lawyers' contracts hired w/ ILA (those who act as legal counsels) - Reinforcement from Consultant Team, and validation with CM SL	1. Consultant SL + CM SL
8	Finance	Computation of FTEs per process: you presented a first proposal on Thursday and you mentioned that additional 1-2 methods will be made available. Can you	Operational	1	1. Alternative methods preparation 2. Decide on method to be used 3. Conduct exercise: collect data	"1. Consultant project leadership 2. KMGR Finance

Id	Stream raising the concern	Risk/concern description	Risk / concern type	Priority	Mitigation strategy	
		mention to us when this will be presented and by what deadline we should analyze the proposals?			4. Derive sizing	3. KMGR Finance 4. KMGR Finance jointly w/ Consultant Finance SL"
9	Finance	Savings are overestimated as some incremental costs are not considered (eg. Brasov vs Pitesti salaries, new jobs required by company, document management system costs not included etc)	Operational	2	1.Prepare revised version of the BC following Process Design Stage as per overall project plan (Phase I Business Case endorsed by CM top mgmt and SLs was based on information available)	1. Consultant x-functions
10	Finance	Dilution of Accountability and potential Confusion in future non standard situation, as current CFO responsibilities are to be spread to CoE (process owner), SSC (execution) and Retained;	Operational	1	1. Complete RACI Matrices as these will serve the purpose of ensuring correct and complete responsibility spread between CoE, SSC and retained organization per each process 2. Finalize new roles description (as per RACIs), understand impact on current roles "	"1. CM Stream Leads jointly w/ Consultant 2. Consultant stream leads jointly w/ CM Stream Leads"
11	Finance	The profile of Finance Resource may switch from multi-skilled resources able to exercise overview into 'silo' operators with lack of 'big picture' understanding;	Operational	1	1. SSC resources will be focused on delivering high quality, standardized processes to several customers of the group in line w/ the strategy and policies defined by the CoE. Focusing the key resources on "less" rather than "more" processes will bring about efficiency gains	N/A
12	Finance	Potential breach of important deadlines (eg. reporting to KMG) during transition period	Operational	1	1. Prepare resource planning and effort is to be invested during Ramp-up stage to minimize such losses in performance	1. CM Stream Leads 2. Consultants' Team to provide guidance"
13	Finance	Improper Document Management solution (origination different than booking location) may lead to poor management decision or fiscal risks	Operational	1	1. Consultants Team to prepare document flow approach in order to ensure appropriate document flow (not only Finance) 2. CM stream leads to collect types of documents, volumes and location 3. Check legal provisions regarding necessity to have documents stored locally	1. Consultants Team / X-functions Stream to centralize and present results 2. CM SLs 3. CM Legal team"
14	Finance	Risk to deliver poorer quality service to business due to lack of resources (both quality and quantity)	People/HR X-functions	1	1. Prepare resource planning and effort to be invested during Ramp-up stage to	1. CM Stream Leads

Id	Stream raising the concern	Risk/concern description	Risk / concern type	Priority	Mitigation strategy	
					minimize such losses in performance - number of resources during Ramp-up and immediately following go-live to be adjusted with a 10-15% increase vs. sizing calculation.	
15	Procurement	A reward system should be designed by consultants according to best practices as it is important in building a strong shared service resource pool that is committed to customer services and continuous improvement. The employees moved from corporate departments to a SSC must be aware continuously of this.	People/HR X-functions	1	1. Prepare proposed approach towards team nomination/ structure during week 16 (such a strategy will address also retention bonuses topics). 2. Agree w/ Project leadership and Top Management 3. Communicate w/ CM streams and implement (with regard to later stage rewards system, this task should be accomplished by CM HR Dept according to established carreer model / planning)"	1. Consultant project leadership + xfunctions 2. CM project leadership and Top Mnmgt. 3. CM project leadership and CM stream leads
16	Procurement	The transition project management is not detailed and presented by consultants (related to human resources changes, training etc)	Operational	1	1. Prepare transition plan and checklist 2. Agree w/ Project leadership and Top Management 3. Communicated w/ CM streams and start implementation"	"1. Consultant project leadership + xfunctions 2. CM project leadership and Top Mnmgt. 3. CM project leadership and CM stream leads"
17	Production	Communication might shortfall among SSC and corporate. SSC manager must excel in people management and in forging relationship with operation managers and other stakeholders	Strategic	1	1. Nominate key roles in the Shared Services (e.g. delivery manager) 2. Detail (fine-tune) interaction between SSC and Corporate (governance principles)"	1.CM project leadership and Top Management 2. Consultant X-funct., streams and CM project leadership and streams"
18	Procurement	Process must be designed by consultants so that SSC connects frequently with both corporate headquarters and customers that they serve. Key stakeholders, including business units served must enthusiastically support the model.	Operational	1	1. Finalize processes mapping 2. Identify and agree on cut-off points / interaction between AEL, Corporate HQ and Business were deemed necessary	1. Consultants and CM SL 2. Consultants and CM SL
19	HR	New challenges: how to readjust employees to the new trend, digitization, refurbishment, adaptation to new applications	People/HR X-functions	1	1.Achieving a situation with employees' knowledge 2. A new strategy for new job transformations 3. Discussions with the company's CM management and finding the best solutions	1. Consultancy company + CM SL 2. Consultancy company + CM SL 3. Consultancy company + CM SL

Id	Stream raising the concern	Risk/concern description	Risk / concern type	Priority	Mitigation strategy	
20	HR	Labor Law and Legal Strategy for the company - Implementation of the restructuring will have many legal implications (e.g. Severance payments ,1 months' notice period,Suspended contracts and protected categories, Union / CLA related implications)	People/HR X-functions	1	1. Analysis of a factual situation, retrieval of normative acts, discussions with business management. 2. The packages remunerated by the management will be analyzed 3. The Project managemnt team will contact the teams, analyze the shortcomings produced, analyze how to fill the positions with staff	1. Consultancy company + CM SL 2. Consultancy company + CM SL 3. Consultancy company + CM SL

(*Note:* CM – Company management – Brașov; SL – Service Lead)

Based on what was gathered from the project, one thing is clear: the implementation of such an integrated system clearly brings changes in most companies that adopt such a strategy - implementation. Whether this brings about changes in opinion and strategy may or may not be beneficial. From the experience of those who wrote this scientific article, one thing is clear, it was found in almost all projects, organizational changes took place, either in the middle of the project or during maintenance. Not all employees found themselves in the new strategies, not all of them faced the new changes, technological and design of future development lines. All in all, the implementation of an ERP system, in addition to which, more recently, artificial intelligence or machine learning solutions have appeared, corroborated with RPA type solutions, have led to major changes in optics, by companies in our country. The processes have been changed, a series of steps have been added (to solve new problems - with globalization), all this being found in the new customization of the implemented solution. Many problems, difficulties of work, ways of solving, innumerable discussions were collected, all these highlighting that the team that worked on the implementation of the project, collaborated a lot with the business environment found in the factory from Brașov. This is beneficial, the implemented solution being a successful one. For future researchers in the field of ERPs, this case study highlights the fact that, in order to implement an ERP system, you must have people able to understand how new technologies work, to accept the changes that have taken place, to adapt to new ones' requirements arising from software changes made by the company. The more you know that, the more a language of international circulation is mandatory.

4. Conclusions, limitations and future research

The present case study has several aspects that the authors wanted to highlight, such as: the integration of an ERP system in a company - is it beneficial for the company? If so, at what price did it come? Was the adaptation of those who work in the company, to the new technologies, easy? According to the content of this article, some employees, although good, left the company, not adapting to new technologies. Is this beneficial for the business environment discussed? Is the knowledge gained over time an unimportant thing in the face of technology? Can new technology help the business to meet this new challenge, namely - artificial intelligence, machine learning or RPA? During this project a series of conversions took place, among the employees, people who knew how to do one thing - replaced by robots - learned how to do other things within the company. Those who understood how the new software works and adapted quickly, remained in the same position, moreover, were promoted and even increased their salaries. Another aspect that the authors saw throughout the analysis of questionnaires: the dropout rate of employees over 50 was lower compared to other projects, here it was seen that employees were receptive to learning. Indeed, not knowing a foreign language was a big minus. The insertion of youth in the company, after the implementation of ERP has increased significantly. The desire to learn, the speed with which they did it (young employees), the knowledge of a foreign language, even two (English and German), were strong assets for them to be employed. One thing the authors noticed was that of promoting young people, without experience, to positions that gave them leadership power. This has caused frustration among employees. Some of the employees resisted, others resigned. This implementation project was a successful one, in the end, this being a joyful one, for the future implementations of ERP solutions. Future research will focus on a deeper and detailed analysis of risks arise from the AI and RPA implementations process and their impact on the business, grouping and analyzing the risk responses received using a Likert scale, issuing some descriptive charts and generating in the end a risk assessment matrix. The paper has some limitations from the point of view of the literature review regarding management and cultural issue, language and people related issue and also about people-tool-reactions – how to manage the relation with new tool implemented and how to react to stressful situation for part of them. A future paper will analyze in detail these aspects mentioned above.

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The Impact of the Covid 19 Pandemic on the Demand for Integrated ERP Systems and Human Capital

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Abstract: *This paper shows the impact of an integrated ERP system during the Covid 19 pandemic on the good development of the company's activities that operate on the Romanian market. Moreover, we follow the impact that an ERP system can have on human capital and working time. At the same time, the influence that the final customer had on the maintenance of the activity was measured, for a good development of the ordering process through the ERP system. During the pandemic, there were significant changes on the workplace, on the device and on the -internal processes, and the efficient, correct and effective implementation of the ERP system was tried. Based on the quantitative research, the questionnaire, we analyzed statistically the results obtained from Romanian respondents. The main objectives of this research were the efficiency degree of information systems during the pandemic, and the relationship between the information system-effective working time. Other objectives were the human capital involvement in the use of the integrated system (tasks contribution, access to all ERP modules, involvement in related activities) and the impact of relational capital on the integrated system through online orders. Thus, the demand for the integrated system increased during the analyzed period. This situation due to all the changes that occurred on the analyzed companies. The response to the internal and external needs was a test for the ERP system in a short time. The relationship between the ERP system-human capital-relational capital also had an impact on the total performance of companies.*

Keywords: *Covid-19 pandemic, ERP systems, human capital, company performance.*

1. Introduction

In this article, we followed the most important elements from the analysed companies that did not suspend their activity during the pandemic. At the same time, through the impact on the total performance, the integrated system and the human capital represent the investments of a company in its own development.

During the Covid 19 pandemic, the reaction of Romanian companies had to adapt to new changes (imposed by the government) in a very short time. The imposed directives were, work restrictions and moving the activity in the online environment as much as possible. The investments made in information systems for their optimal use and the

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preparation of human capital in the field in which they operate, were felt during this difficult period.

The case study examines how companies have adapted to the changes caused by this pandemic. It sought to identify the factor that supported the economic activity maintenance of companies that did not suspend their work. During this research, the disadvantages faced by the companies were also identified (on the side of computer systems, employee training, customer relations).

Given the fact that the ERP system is an advanced software that meets internal and external requirements, we want to highlight the big picture of its use in a critical period, on different devices. We consider that the basis for maintaining economic activity is formed by the internally established and developed relationship between advanced information system - human capital - final customer.

The consequences of a good development of this relationship were reflected on the performance and profitability of the companies. The changes of the actual workplace, the working norm, the requests of the informational systems, the requirements from the clients and the reaction of the human capital were followed and analysed from the perspective of the Romanian respondents who work on the private and public domain.

2. Literature review

The Enterprise Resource Planning (ERP) system is an information system designed to integrate and optimize business processes and transactions in a corporation / company. This integrated system can also be considered a conception of systems based on the needs of an organization and is universally accepted by industry as a practical solution for achieving integrated situations (Young B. Moon, 2007).

Often these ERP systems are perceived by people as management systems. These, often considered to be complex and difficult to implement. (Liang *et al.*, 2007; Xue *et al.*, 2005).

The ERP system integrates all core business processes to improve efficiency and maintain a competitive position for a company. In its basic definition, ERP is an information system that integrates and controls all business processes throughout the organization. It can also be considered an informational system, designed to integrate and optimize business processes and transactions in a company.

ERP systems are usually developed as individual monolithic applications or separable modular tools assembled into a single database for all the individual needs of a company. Most systems in this category have a client-server or similar architecture built around a central database server (Tarantilis *et al.*, 2008).

ERP is considered a modular system, in which any module accepts the appropriate business processes performed within the functionality of a company (Koh *et al.*, 2011). The functionality of ERP systems is used to create information visibility (Jenatabadi *et al.*, 2013). Sustainable resource planning involves the integration of business processes and sustainability activities carried out within a company (Patalas-Maliszewska and Klos, 2019). Sustainable production can be treated accordingly numerous definitions such as: a connection between the integral elements of a company, between its products, processes and systems (Koren *et al*.,2018).

Moreover, ERP is a concept and at the same time an industry-based system and is universally accepted by companies and organizational industries as a practical solution to achieve an integrated situation. ERP systems have become vital strategic tools in today's competitive business environment. The system facilitates the large flow of information, and it's using common functional practices throughout the organization. In addition, it improves supply chain performance and reduces cycle times. However, without the support of top management, or without a proper business plan or a strength vision, business process redesign, effective project management, user involvement, and employee education and training, organizations cannot manage the full benefits of such a complex system. In this case the risk of failure should be high. (Addo-Tenkorang Richard *et al.*, 2011).

Implementing an ERP system is a major project that requires a significant level of resources, commitment and change throughout the organization. Often, implementing of this system can be the highest project that an organization has ever launched. As a result, its implementation issues have been one of the major concerns in today's industry. One of the popular topics in ERP implementation is the identification or development of critical success factors. The idea is that some important factors determine the success or failure of an ERP implementation (Young B. Moon, 2007).

To implement the concept of sustainability in a company, managers must integrate all processes and sustainable business functions in an ERP system (Chofreh *et al*., 2018). The ERP system helps employees collect data and information in sustainable databases. Then the system proves useful to managers looking for information to improve durability in production (Chofreh *et al*., 2014). Sustainability indicators should correspond to the manufacturing dynamics of processes in that time period (Fantini *et al.*, 2015).

Implementing an ERP system is a challenging and costly task, which not only requires rigorous effort, but also requires a detailed analysis of the critical factors that are essential for adoption or implementation. The challenges of implementing ERP systems can be viewed from four different perspectives, such as: technology selection; change management, knowledge management, emerging technologies. By taking these perspectives into account in ERP implementation projects, organizations can achieve several benefits, such as saving time or extra effort (Shree Ranjan, 2016).

Some articles focus on generating the list of critical success factors while others perform data analysis on these factors. Implementing an ERP system inevitably involves a large part of the organization and often accompanies major efforts to reengineer business processes. Therefore, the change management process becomes a critical issue in ERP implementation. Once the company successfully implements ERP, the focus is on the most efficient use of the system. Some articles address this process from a quantitative point of view, measuring the risks and benefits, while others focus on studying the ERP system on the company performance. Because several companies have implemented ERP systems, there is more known about implementation processes and questions about the value of ERP systems. They seem to be investigated often and more rigorously. This is an indication that the practice and understanding of the field has matured enough to justify some serious reflections on the fundamental questions (Young B. Moon, 2007).

The role of using ERP is more critical when moderating ERP capabilities and ERP value, as well as when adding to ERP capabilities, than when mediating between ERP capabilities and ERP value. Certain extensive capabilities of ERP systems can positively influence the value of the investment and, together with its use, provide value to the business (Ruivo *et al*., 2020).

Initially, ERP systems were developed only on a manufacturing framework, but later evolved into a platform that can support all commercial and industrial operations. Often, these systems contain several advanced modules, depending on the user's needs (Chang Man-Kit *et al.*, 2008).

Indeed, the value of an ERP system is based on its effective and efficient use. The company's majority focus on the transactional capacity of the ERP system. The functions of the ERP system are manufacturing, marketing, accounting, production, strategic management, operations and data archiving. Companies that have implemented ERP systems and are relatively satisfied with their operations are now considering expanding the functionality offered by the original ERP systems. Some companies implement ERP systems, even if the ultimate goals are additional extended systems (Young B. Moon, 2007).

Nevertheless, ERP systems are also considered software packages composed of several modules, such as human resources, sales, finance and production, which ensure the inter-organizational integration of information through integrated processes. These software packages can be customized to meet the specific needs of an organization. In the 1990s, ERP systems were considered a standard factor for replacing legacy systems in large and especially multinational companies. Regarding the significant impact of ERP systems in the company, the success of the company increasingly depends on the fact that information (internal and external) is available to the right person at the right time for making crucial managerial decisions (Eslam Nazemi *et al*., 2012).

Human capital is known in the literature as individual capital (Sveiby, 1997) or human capital (Edvinsson and Sullivan, 1996) (Oliveira D. *et al.*, 2018). Human capital is certainly the medal that a company has, and it is always owned by the employee, but never by the employer (Sean R., 2015). As opinions are divided on human capital, it is stated that this capital acted only as a signal of one's talent and ability, with real productivity coming later through training, motivation and equipment. This type of capital it should not be considered as a factor of production (Sean R., 2015).

The analysis of the behaviour of intellectual capital, regardless of the actions in the economic environment, was a targeted element in the literature. Thus, Sveiby proposes an analysis model that includes the external structure (satisfied customers, growth in the economic market), internal structure (IT development), and the competence of employees, analysis that shows the most important factors of a company (Bontis N., 2001). The connection between human capital-structural capital-relational capital is closely related to the competitive environment. However, the competitive environment is guided by the degree of innovation and responsibility in a very short time. Innovative work behaviour, which results from the actions of human capital, together with the structural contribution, lead to a positive influence on relational capital, and mutual effectiveness contributes to performance as a result of development (Ornek, A. *et al.*, 2015).

At the same time, the survival of companies in the competitive market depends on the management of intellectual capital and innovative behaviour, and their harmonization leads to a high-performing entity, ensuring the sustainability of competitive advantage. Thus, an innovative work behaviour, resulting from the actions of human capital, together with the structural contribution, lead to a positive influence on relational capital, and mutual effectiveness contributes to performance as a result of development. (Ornek, A. *et al.*, 2015).

The tasks optimization in a company determines two trajectories, namely the approach to tasks and innovation (Fonsecaa T *et al.,* 2019). Thus, innovation is certainly brought by human capital, and the accomplishment of tasks by structural capital (Fonsecaa T *et al*., 2019). We can present the company competence, where human capital, structural capital, and organization performance act, given the fact that the components of intellectual capital are human capital, structural capital and relational capital. Relational capital acts together with the knowledge of human capital (Mavridis, D., G., 2012).

Compared to human capital and structural capital, relational capital (customers) is one of the intellectual capital components which bring added value and gradually becomes a vital factor (Taghieh M.B. *et al.*, 2013).

3. Problem statement

We conducted this research based on the impact and effects that the global pandemic had - the Covid 19 virus infestation over the population. This pandemic has major effects on the national and international economy. Many companies operating in the economic field, had to reduce/ restrict or close their activity due to this virus. Also, the employees ware affected, registering at local level, a very large number of resignations or suspensions of contracts, or a favourable option for them - technical unemployment (a support provided by the Romanian state with the payment of 75% of the value the current salary of the employee).

Both locally and globally, most companies have had to find innovative solutions in order to survive on the market even in a critical period. Mostly, on the Romanian market, multinationals as well as companies operating in the medical / pharmaceutical field, or those who deals with the supply and distribution of goods (especially food, and usual hygiene, classic consumables) to the current Key-Accounts on the market, that had their activity maintained.

In the case of employees working in the office (referring to the administrative part), they had to adapt to new changes and move their own office at home. From here, the real challenges for informational systems came.

Any employee has had to access the system in which he worked at work, on his personal computer / laptop, from home, and to have access to all the information necessary to carry out the activity. At the same time, these systems would have helped employees to be able to keep their current job and to be able to continue their activity from any place, or any computer/laptop even if there was a crisis situation. The systems were also effective for the managers, who were able to have remote control over employees (systems provide intelligent solutions for verifying them). The investment made by managers in such an intelligent system was most fruitful in a critical situation like this, the Covid pandemic 19.

The systems that adapted the best to this situation were integrated ERP systems. These systems have adapted most quickly in a practical way to new changes. The system can be used by many users on different devices, from different locations. Another important factor was the correct implementation of this system. As we have presented in the literature review, the implementation has an essential role to be able to reap the full benefits of such an integrated software. In order to be able to bring profitability at company level even in a period of global pandemic, it is necessary to have a strong relationship between employees - computer system - demand for goods/services offered for the market (even in a criticism situation).

Also, the demand for the goods / services offered by the company was another decisive factor for maintaining the activity. Depending on the field of activity, and the population need for the goods or services offered, during the pandemic many companies interrupted or closed their activity. On the other hand, even in this pandemic there were companies that increased their activity, registering very high incomes (there was a very high demand for certain goods or services).

Those who suffered the most were the companies operating in the Horeca industry (restaurants and hotels), the textile industry and companies that provide tourism services. Even in these fields of activity, certain companies have shown ingenuity, promoting their activity in the online environment. This method would ensure their existence on the market, even if they did not register the same income, as in previous years. In order to face the demands and at the same time to be able to continue to operate on the market, the computer systems supported and represented a significant part of the work activity.

4. Research Questions/Aims of the Research

A first question on which the case study focused was whether "Is the ERP system an advantageous solution for maintaining activity during a global pandemic?". The research also looked at whether “Is the ERP system adaptable to the needs of companies following quickly changes in a short term? ". Then a final question that the study focused on was to determine “What are the elements on which the changes caused by a crisis occur?”.

5. Research Methods

As research methods we used a case study based on quantitative research, using the questionnaire as a measuring tool. To achieve this, we utilized a free platform (Survio). The questionnaire focused on the current issue, namely, job maintaining (with the help of a computer system) during the Covid 19 pandemic.

Thus, based on the answers obtained after it, we were able to conduct a statistical research to meet the objectives. The questions concerned the respondents from all the departments of the existing companies on the Romanian market, without any limits in this regard. The total number of respondents who completed this questionnaire was 77 people. The profile of the respondents is represented by people with higher education, most of them working in the economic field. They are between 18 and 60 years old, so, the perceptions on the proposed questions are different and include their opinion on current events. The people who complete our questionnaire are Romanian, Chinese, Greek, French and they work on the Romanian territory. The questionnaire was sent to respondents from April 2020 until the end of June 2020. With different experiences in the field in which they work, the respondents come from both the public and the private environment, mainly the private one. Thus, with the help of the Survio research platform, we obtained for statistical analysis, answers to 19 questions. Also, in order to know the respondents, 3 general questions were assigned. These general questions were intended to outline exactly the profile of information users.

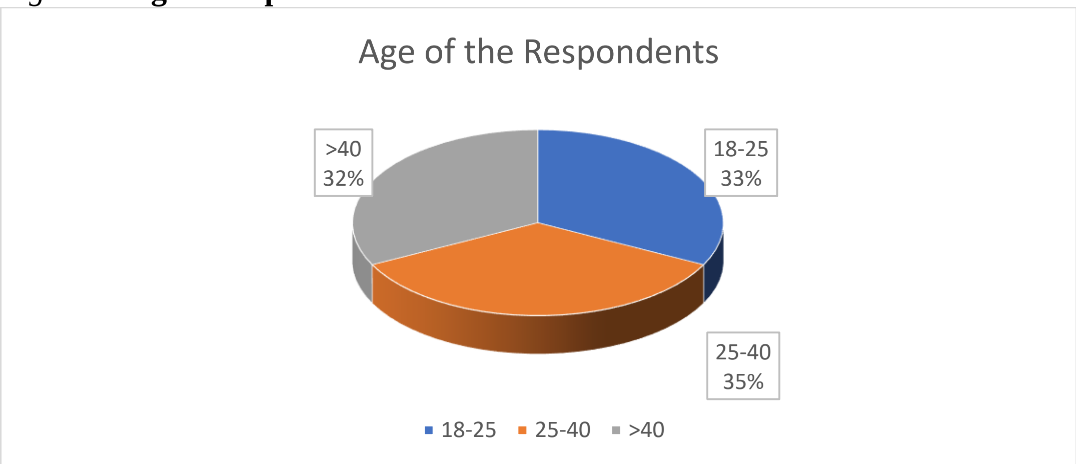
6. Findings

Based on the answers received, we were able to carry out the statistical research, but we also outlined the profile of the respondents. The questions were chosen strategically in order to analyze the population's perception of the current problem. They also achieved all the mentioned objectives. In the first part of the study we outlined the profile of the respondents with 3 graphs showing the preponderance of identities, and then we analyzed the variety of questions and the most frequent answers.

In order to present these aspects as accurately as possible, we highlighted on the chart, most of the questions choosing the minimum and maximum options selected by them.

According to the data obtained from the respondents, a large majority of them are represented by the population between 25-40 years old, with a percentage of 35%. (Please see Fig. 1).

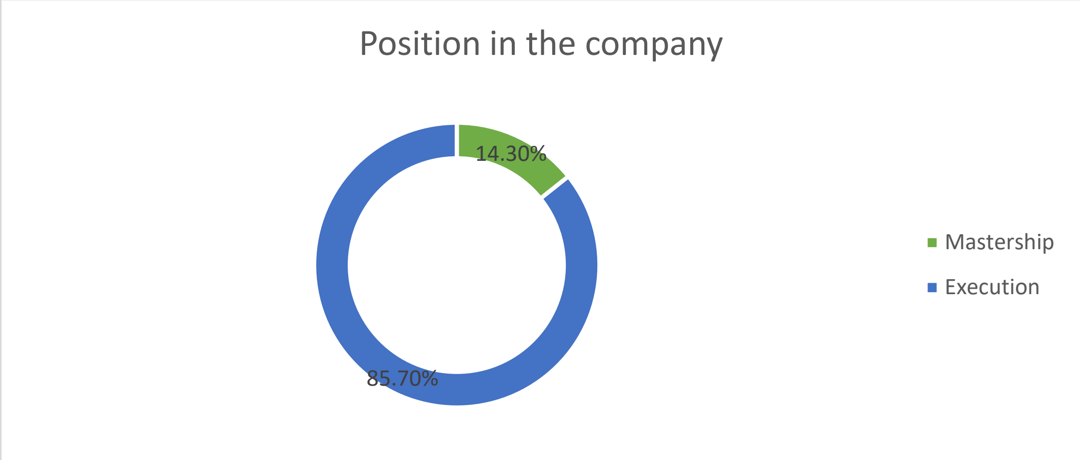
Figure 1. **Age of respondents**



(*Source:* own processing - questionnaire results)

In order to better outline the profile of employees, we wanted to make an analysis of the position they hold in the field in which they work. As expected, the share of those who have an executive position is higher, thus totalling a proportion of 85.7%. Of course, we also looked for those respondents who have a leadership position, because they had to make the most important decisions in the current situation (their share being 14.3%).

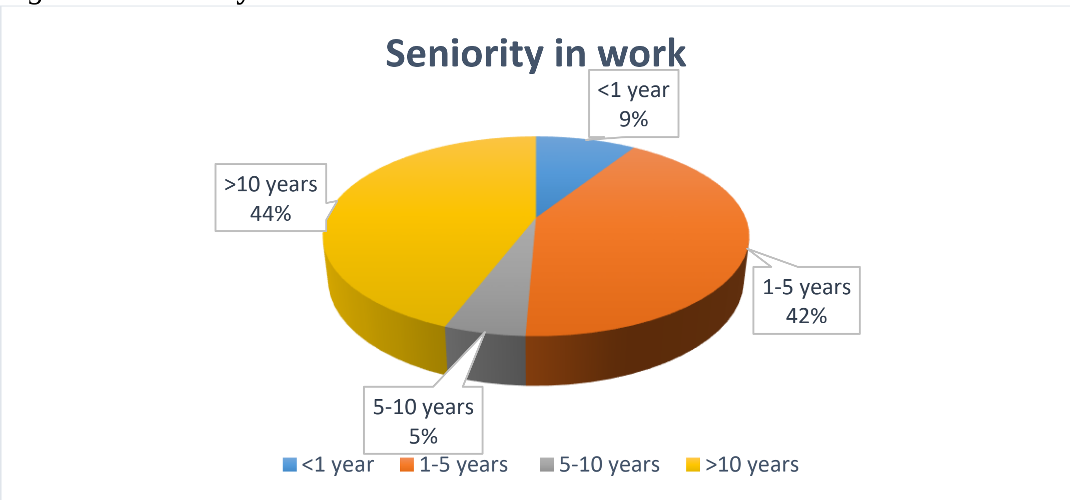
Figure 2. **Employees position in the company**



(*Source:* own processing - questionnaire results)

One last question was related to the experience that these people have in the field in which they carry out their activity. Experience being an important factor. The more experience they have in the field, the more meaningful and relevant the answers are to the current problem, and in case to the research conducted. According to the graph, people who have more than 10 years of experience in the field represent the largest share in the current case study. Of course, those respondents who have 1-5 years of experience also had a significant share (please see Figure 3).

Figure 3. **Seniority in work**



(*Source:* own processing - questionnaire results)

In order to generate an overall idea as detailed as possible, we presented at the table level the answers to the 19 questions that were submitted after the statistical analysis. These questions were numerical with answers from 1 to 5. If they chose 1- it means that it represents the lowest value, and 5 means the highest value (please see Table 1).

Table 1. **All of the questions**

Pandemic of Covid 19 and ERP system over the: Questions	**The least**	**Little bit**	**Medium**	**More**	**The most**
Working from home	2	0	5	10	60
IT department support	0	2	6	12	57
Implication of the IT department	0	2	6	17	52
Using several types of systems in the same time	3	12	13	29	20
Using the informatic system on another device	1	1	18	26	31
Implementing an ERP system for working from home	1	1	13	12	50
ERP system usefulness	1	3	19	13	41
Frequency of difficulties of using an ERP from home	1	9	18	27	22
Managing the working time using an ERP /accounting system	2	4	24	19	28
Using the ERP system in real time	2	1	16	20	38
Involved of human capital in using an ERP system	1	2	21	20	33
Using ERP system from many devices in different places	0	1	3	13	50
Human capital contribution to the tasks in ERP system	11	8	23	15	20
Diminished use of ERP modules	18	10	33	10	6
Customer importance in maintaining the job	1	0	9	7	60
ERP system and maintaining the customers through online orders	0	0	15	12	50
ERP/ accounting system and maintaining the job	5	5	14	16	37
Involvement in related activities in the system use	6	4	21	22	24
Changing of working time for usual tasks	12	10	14	24	17

(*Source:* own processing - questionnaire results)

Table 2. **Presentation of the received answers that scored the variant „The Least” (in percentage)**

Questions	**The least**
Working from home	2.60%
IT department support	0.00%
Implication of the IT department	0.00%
Using several types of systems in the same time	3.90%
Using the informatic system on another device	1.30%
Implementing an ERP system for working from home	1.30%
ERP system usefulness	1.30%
Frequency of difficulties of using an ERP from home	1.30%
Managing the working time using an ERP /accounting system	2.60%

Questions	The least
Using the ERP system in real time	2.60%
Involved of human capital in using an ERP system	1.30%
Using ERP system from many devices in different places	0.00%
Human capital contribution to the tasks in ERP system	14.30%
Diminished use of ERP modules	23.40%
Customer importance in maintaining the job	1.30%
ERP system and maintaining the customers by online orders	0.00%
ERP/ accounting system and maintaining the job	6.50%
Involvement in related activities in the system use	7.80%
Changing of working time for usual tasks	15.60%

(*Source:* own processing - questionnaire results- answers – "The Least")

Table 3. **Presentation of the received answers that scored the variant "The Most" (in percentage)**

Questions	The most
Working from home	77.90%
IT department support	74.00%
Implication of the IT department	67.50%
Using several types of systems in the same time	26.00%
Using the informatic system on another device	40.30%
Implementing an ERP system for working from home	64.90%
ERP system usefulness	53.20%
Frequency of difficulties of using an ERP from home	28.60%
Managing the working time using an ERP /accounting system	36.40%
Using the ERP system in real time	49.40%
Involved of human capital in using an ERP system	42.90%
Using ERP system from many devices in different places	64.90%
Human capital contribution to the tasks in ERP system	26.00%
Diminished use of ERP modules	7.80%
Customer importance in maintaining the job	77.90%
ERP system and maintaining the customers by online orders	64.90%
ERP/ accounting system and maintaining the job	48.10%
Involvement in related activities in the system use	31.20%
Changing of working time for usual tasks	22.10%

(*Source:* own processing - questionnaire results- answers – "The Most")

According to these tables, we can say that there were more answers which totalling value 5 (the highest), compared to the cases in which variant 1 was chosen (the smallest).

Of course, there were many respondents who chose to be neuter, choosing the middle option 3.

A good part of the respondents appreciated the questions that referred to the work from home, and also to the importance of the final client for maintaining the activity. These questions reached those maximum levels of the questionnaire.
In order to be able to analyse the answers received more detail, we also used statistical research based on regression. The research aimed at a multifactorial model. The questions were represented by the variable X, and the answers by the variable Y. In the current case Y was the dependent variable (the answer depends only by the question), and X was the independent variable (the question asked). The analysed population is represented by the received response variants, materialized in percentages. Being a multifactorial model, it includes the 5 types of answers received, in total of 19 numerical questions from the questionnaire, which could be subjected to statistical analysis. The statistical sample was represented by the range of questions asked. The results obtained present a statistical linear model.

Table 4. **Summary output**

Regression Statistics	
Multiple R	0.9999
R Square	0.9999
Adjusted R Square	0.9285
Standard Error	0.0002
Observations	19

(*Source:* own processing using questionnaire results)

Multiple R is the method whereby a chosen variable can be predicted taking into account a linear function. This one is formed of a several variables set. This is determined by the relationship between the variable values and the most favorable predictions.

These predictions are linearly calculated from the predictive variables. Statistically, the direct and strong relation is given by the coefficient correlation - "Multiple R"-, which, in our case, has a value that is close to the maximum value. The value in our case is 0.99. The variation of y is determined by the influence of the other variables. The value of Multiple R represents how much was the answer influenced by the question. Therefore, the value of 0.99 confirms the strong impact that the question has over the respondents.

The variation is known as R Square and it measures the approximation of the regression line data. The result obtained shows the proportion in which the answers received are influenced by the dynamics of the questions. Therefore, the chosen dependent variable is strongly influenced by the independent variable.

Adjusted R square shows the influence between the variables y and x, and it is in a proportion of 93%. A proportion of 93 of the population fully agreed with the issues mentioned through the questionnaire. The remaining 7% is represented by respondents who did not feel a strong impact over the questions posed to them, and did not agree with the issues raised. The rest up to 100% is caused by the residual elements. That precents represent, the respondents who did not agree with the issue of questions.

The population is statistically represented by the Standard Error. This represents the dispersion of a statistical sample. The value obtained in the current study is 0.02%.

According to the resulting percentage, 0.02% of the respondents do not agree with the proposed statistical sample. The standard error measures the accuracy with which the population is represented. The population number is significant, the standard error having an invalidation value of 0.02%.

The independent variable (the questions) influences all variables in a significant way. Therefore, the model is representative.

Table 5. **Statistical evaluation of the questionnaire results using ANOVA**

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	19	3.8	70702428	7.6869
Residual	14	7.5244	5.3746		
Total	19	19			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
The least	0.9973	0.0015	634.4455	1.2894	0.9939	1.0007	0.9939	1.0007
Little bit	1.0027	0.0021	476.2558	7.1463	0.9981	1.0072	0.9981	1.0072
Medium	0.9990	0.0007	1388.386	2.2328	0.9974	1.0006	0.9974	1.0005
Much	0.9963	0.0008	1226.914	1.2606	0.9946	0.9981	0.9946	0.9980
The most	1.0008	0.0002	4955.141	4.1042	1.0004	1.0013	1.0004	1.0013

(*Source:* own processing using questionnaire results)

The sum of the variation is determined by the value of the regression, and in our case is up to 5 and the residual value is 14. These are based on a sample of 19 questions. The sum of the regression squares is 19, and of the residual value is 7.52. The corrected R Square ("Ms") sums up the values of 3.8 for regression. This has a release degree "k" up to 5.37. For the residual value has a release degree "n-k-1", and the total release degree is n-1. The F Test for ANOVA is concretized in Significance F, known as the null hypothesis test. The variable x is a significant factor, and its validity is given by the value of 7.69 which is higher than 0.05. In the case of the proposed model, the questions were a significant factor for the respondents. The test statistic validated the model with a value of 7.69 which is above the minimum allowed of 0.05. Thus, in the chosen model, the questions asked explain the variation of the answers, these being interdependent. This statistical value represents the probability that the equation proposed does not explain the variation of y. From the value determined by our statistical model, it appears that the proposed regression model is valid, and statistically is a significant one.

Table 6. **Residual Output**

Observation	*Predicted Questions*	*Residuals*	*Standard Residuals*
1	1.0001	-7.1690	-0.3602
2	1.0001	-6.987	-0.3486
3	0.9997	0.0002	1.1293
4	1.0000	-2.6821	-0.0134
5	0.9998	0.0001	0.5581
6	0.9998	0.0002	0.8459
7	0.9997	0.0003	1.6260

Observation	*Predicted Questions*	*Residuals*	*Standard Residuals*
8	1.0000	-2.0593	-0.1034
9	1.0002	-0.0002	-0.9157
10	1.0002	-0.0002	-1.2262
11	1.0002	-0.0001	-0.9731
12	0.9998	0.0002	0.9111
13	1.0001	-0.0001	-0.6231
14	0.9999	9.5375	0.4792
15	1.0002	-0.0002	-0.9949
16	0.9998	0.0002	0.9763
17	1.0004	-0.0005	-2.4371
18	0.9999	0.0001	0.5311
19	0.9998	0.0002	0.9428

(*Source:* own processing using questionnaire results own)

In this study case, the free term is represented by the 19 questions which are analyzed and interpreted according to the received answers of the chosen variable. The values of x-the proposed variable, are 0.9973, 1.0027, 0.99903, 0.99634, 1.0009. The statistical test is significant for the current parameters. Due to the fact that H1 is 99%> 95%, the alpha parameter is significant. Moreover, the beta parameter has the higher values, which are over than 99%. Therefore, this parameter is another significant one.

The result of the alpha parameter indicates that all the hypotheses of the statistical test are validated. Therefore, the issue addressed by the questions ware validated by the statistical test. The result of the beta parameter shows that 99% of the answers received vary depending on the questions asked in the questionnaire.

7. Conclusions

This research validated the existence importance of integrated ERP systems adaptable to the needs and requirements of existing companies on the market even in a critical period. Regardless of whether these companies are from the private or state environment, in order to be able to continue the activity in any situation, it is necessary to have adaptable systems and well-trained human capital to be able to use these systems. Starting from our goal of determining the openness, accessibility and efficiency of an integrated information system during a global pandemic, we conducted a statistical test. Its results validated our goal.

Thus, the influence of the ERP system on human capital was pursued through efficiency and effectiveness due to the change of the actual workplace. Through the variable proposed by us, namely the Covid-19 Pandemic, we established the elements on which it had the greatest and most important influences.

We also determined how useful was the integrated system for the employees and managers, and how important was the human factor in order to carry out the economic activity in any situation. The use of an integrated system was beneficial due to the possibility of accessing it on several devices, at any places. Another result obtained was that the Covid-19 pandemic totally influenced the key elements of the companies, namely: computer system, customer-market demand for goods or services offered by society, human capital and their performance.

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The Relationship Between Human, Relational and Structural Capital during the Pandemic of Covid-19

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Abstract: *The purpose of this research is to identify the importance of intellectual capital, during the pandemic with Covid-19 in Romanian companies. The management of human, structural and relational capital was crucial in order to retain customers, and to maintain the job of the employees. During the Covid-19 pandemic, the most companies have suspended their activity and so, the clients had a considerable influence for the continuity of the activity. They had the greatest impact on the human capital, in order to maintain the current job, and on structural capital to fulfil the tasks. Nevertheless, the main objective is to identify the impact of Covid-19 Pandemic over the companies that still continued their activity. The main changes of the organizational procedures (working norm, working environment, changes regarding the communication of hierarchical levels) and the changes that occurred on the relational capital (communication and frequency, receipts recorded, dissolution and ending of the new contracts) were also analysed. Based on them, the importance of relational capital for maintaining the activity was materialized. Also, the impact over the structural capital (accessibility, efficiency) and changes on the human capital structure (resignations, new employment and work efficiency) were followed. To obtain these results, was applied quantitative method, the questionnaire. We statistically analysed the results from respondents that work in the private or public environment in Romania. Based on this questionnaire, we are able to conclude that there is a significant impact and a close relationship between human, structural and relational capital during the Covid-19 pandemic.*

Keywords: *Human capital, structural capital, relational capital, Enterprise Resource Planning (ERP), organisational performance.*

1. Introduction

The relevant published literature identified the intellectual capital components in different models. On the whole, intellectual capital model represents the intellectual assets that are more connected with the collectivity that constitutes the organization (Oliveira et al., 2018). In the structure of intellectual capital, it seems to be unanimity regarding its component elements: human capital, organizational capital and relational capital (Puiu , 2010). The intellectual capital structure can be divided into intellectual property (structural capital), intellectual assets (human capital), and relational capital which is the result of the actions of structural and human capital (Băcilă, 2019).

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The emphasis was on the attributions of human capital and what it represents in the structure of a company, regardless of its activity field. Human capital is one of the most important resources for a company, owing to added value it can bring in a production process or in a provide services (Dumitrana et al., 2012). It is known that in this knowledge economy, intellectual capital is an important element in supporting the company's activity and bringing added value, being also the only asset that can easily adapt to new market requirements. In Romania, during the pandemic that affected the world economy, the companies which continued their activity were in the medical, providing services and commercial fields. Through the study case, we wanted to stand out the fact that during a crisis, regardless of its type, the components of intellectual capital represent the continuity motor of companies activity. Therefore, we followed up the changes that can appear on the intellectual capital during a health crisis. We aimed to measure the changes felt by human capital in the context of the current pandemic. Through the major changes, in a short and alarming time, we followed up from human capital perspective the changes of working norm, actual working time, and if there were changes regarding to maintaining the organizational culture. From the relational capital point of view, we followed up how much relate and communication accessibility between human and relational capital has changed. Also, we analysed the changes in maintaining the probability to pay for orders and services. We followed up the importance of its existence in order to maintain the human capital’s job. All these elements were concluded on the company's profitability. In this sense, we followed up the pandemic effect on dissolution and ending of new contracts. From the structural capital point of view, we analysed the accessibility of the accounting and integrated systems, regarding the accessibility and availability of financial documents, from all the hierarchical levels of company. We sought to recognize the importance of improvement the human capital work with the help of structural capital through the automation of financial-accounting documents.

2. Literature review

Intangible assets represent, the highest organizational value which a company can have (Osinski et al., 2017). Intellectual capital is considered a strategic instrument for management (Matos and Vairinhos Valter Martins, 2017) and its efficient use should be one of the objectives of companies during critical economic periods and beyond. Companies reaction to crises is given by the degree of organizational and strategic adaptation (Osiyevskyy Oleksiy et al., 2020), but we believe that these measures should be analysed from intellectual capital’s point of view. Taking into account that the most important strategic elements of a company coincide with the components of intellectual capital, it is considered the capital of the organization (Băcilă, 2019) and it must be analyzed in any situation.

We think that during a health crisis, the well-prepared human capital and existence of high-performance information systems support the demand from relational capital. Studies showed that during the crisis period in 2008-2009, many companies reduced the number of employees (Shakina and Barajas, 2014). One approach that is validated in this economic context is based on the idea that not the latest machinery, expensive buildings or the multitude of land in the company's assets give value, but knowledge of human capital. It is also validated that “an organization is triumphant because it has the best human capital” (Oseni Abubakar and Igbinosa, 2015). Human capital it is considered to have a positive effect on profitability and long-term growth (Beltramino et al., 2020). We believe that human capital is the most important asset, specified in studies achieved during the 2008-2009 crisis (Shakina and Barajas, 2014), even if the findings reveal that physical capital is a driver that creates better value in an unstable economic environment (Kehelwalatenna Sampath, 2016). Human intelligence becomes the primary factor on the organizations wealth, and recognition the value of intangible assets importance, are features of the new economy (Holt and Holt, 2010). Nevertheless, investment which the company makes in its employees is amortized through happier, more productive employees, satisfied with the positive work environment and corporate culture (Natter, 2018). As a factor that influences the human capital actions, it is social capital through organizational culture, which directs it through the quality, diversity and pluralism of the workplace (Chatterji Niti and Ravi Kiran, 2017). Therefore, social capital is an influence element of human capital through organizational culture. Nevertheless, the culture of any organization is an important factor in determining the success during crises (Kurt Wise, 2003).

Another interesting statement found in the specialised literature is that during a crisis, development of companies is influenced by human and structural capital (Sumedrea, 2013). As a part of intellectual capital, structural capital contributes to the company's performance. To reach the required market level and to improve the efficiency of human capital, structural capital should be constantly updated and improved (Gogajeh Habib Hosseinzadeh et al., 2015). We consider that the performance of structural capital can be measured by human capital's working time. Therefore, an efficient structural capital responds to the company's requirements, and improves the effective working time of human capital. Using an updated and efficient structural capital, increases the degree of new ideas and human capital innovation. An advanced computer system offers the possibility to access in real time all the financial-accounting information and improves the operational situation of companies. According to Jacobs and Bendoly (2004), Enterprise Resource Planning (ERP) can be defined as a concept and as an IT system. Its conceptual definition involves integration and management of business processes within an organization. The integrated system improves order control, accurate and current inventory information, improves workflow and combats business standards through existing best practices. By defining the integrated system as an IT system, is about the technological infrastructure designed to provide the functional capacity needed to transform the ERP concept into a reality. The system can be considered a basic platform designed to support and combine the capabilities of the tools and processes used by an organization. Akkermans et al. (2003) also state that an integrated system can be defined from different perspectives, such as functionally, technically, or from a business perspective that provides strategic value and spans the entire organization. Most existing articles mainly provide definitions and issues of ERP, different perspectives of ERP, case studies on industry experiences, recent trends in ERP and surveys in the ERP literature, but the company need during a crisis is not evidenced. The focus seems to be on the relation between business process reengineering and wide range of organizational change issues that include ERP implementation (Addo-Tenkorang et al., 2011).

Given the fact that relational capital is a crucial element of a company, studies show that relational capital is an invaluable capital and a resource difficult to imitate, transfer or replace and which has a long life expectancy (Lopes-Costa and Munoz-Canavate, 2015). However, we believe that this long life expectancy can be affected by events that cannot be controlled, with repercussions on the entire economic activity. Innovation makes the difference between market competition and attracting the new clients (Ornek Ali Sahin and Ayas Siyret, 2015). This is revealed during a crisis because through innovation, the company responds to new changes. New requirements can be identified by changes in the demands of relational capital and on structural capital. We consider that if there is no customer, the company can no longer survive on the market. The so-called "sustainable competitive advantage", relational capital positively influences the level of competitiveness of the organization (Gogan et al., 2014).

During crises, regardless of their type or margin of countries coverage, human capital is one of the main elements that help the return of economic activity (Lin Carol Yeh-Yun and Edvinsson Leif, 2013). Regarding to the Sars-Cov-2 virus pandemic, it is known that it had a significant influence on the national and global economic environment. New internal and external policies have been adopted, policies with which companies never faced before. One of the policies adopted was that of working from home, also called teleworking. The attitude and according to the employees regarding to the work from home is susceptible in such periods. Adherence to teleworking may or may not work. However, studies from this period have shown that if people had the resource to stay at home and did not perceive significant barriers to doing so, people would be more likely to adhere to the "Stay at Home" policy (Sumaedi Sik et al., 2020). The policies established by the countries already affected by this health crisis could not be implemented by all economic sectors, for example those in the secondary sector, manufacturing industry. Thus, for several roles in some manufacturing companies, "Working from home" is not a viable option (Nicola et al., 2020). Research over the time has shown that during an economic crisis, the potential of human capital to create added value has diminished (Bontis et al., 2015).

Regarding to the impact of the Covid-19 pandemic on the global socio-economic status, Abodunrin Oyinlola et al. (2020) state that it resulted in the loss of skilled and experienced workers; reducing labor supply; loss of key personnel and activists, which can lead to poor organization and defects in support of accession; causes poverty by losing the life of the bread winner; reduced productivity and the negative impact on economic growth. The global pandemic has led to staff shortages, which have become key concerns for companies due to self-isolation policies (Nicola et al., 2020).

The situation of Romanian clients during the pandemic established on March 14th 2020, outlined a significant decrease (Butu et al., 2020). At the same time, the Romanian economic agents, during the pandemic, in order to be able to continue their economic activity had to implement innovative solutions and improve communication with customers (Butu et al., 2020). The employees were the ones who had to adapt to all the changes that come from the IT systems, from the clients, but also from the actual work environment. The impact that these factors had on employees materialized in their manner, time and adaptability. A study conducted in Indonesia shows that this new reality pushes employers to accept the pandemic and that it tries more to adapt to the new changes that occur in the companies in which it works (Novitasari Dewiana et al., 2020). Regarding to the local context, the Romanian National Institute of Statistics (INSSE) carried out in March-April 2020 ad-hoc surveys on the situation and estimating the continuity of the economic agents activity included in the studies. A study conducted by INSSE (2020) -"Trends in the evolution of economic activity in March-April 2020" wanted to identify the estimate of the activity evolution and the number of employees for the periods 17 / 19-31 March and 1-30 April 2020. The results showed that 1 from 5 managers mentioned that by the end of March the activity could decrease by up to 25%, and those who mentioned that the activity could increase are those in the retail sector. Regarding to the evolution and changes of the employees number, the results showed that the uncertainty for April increases, so the share of respondents who mentioned that they cannot estimate the evolution of the number of employees was 43% of the total respondents. Another study conducted by INSSE (2020) -"Assessment of Covid-19 impact on the economic environment in March and April 2020" identified the situation of enterprises from the manufacturing, construction, retail and services field. Thus, the most important sectors of activity and probably the most affected by the pandemic were identified. The results showed that 52.1% of economic agents from the transport and storage sector provided in April a restriction of activity by more than 25%; 61.4% of the economic agents in the construction sector provided for a restriction of the activity of more than 25%; 21.6% of economic agents in the retail sector estimated a restriction of the activity by more than 25% or even the closure of the activity. Also, the study shows that the most affected economic agents were in the tourism and entertainment field, 95.4% of the respondents estimated a restriction of the activity by over 25% or even the closure of the activity. The results of the studies showed that most of the economic agents included in the research predicted the suspension of activities.

The Romanian National Institute of Statistics (2020) state that the effects of the Covid-19 pandemic on the Romanian labour market materialized through the decrease of the employed population and the employment rate and the increase of the number of unemployed and the unemployment rate. In a press release on employment and unemployment, the Romanian National Institute of Statistics (2020) specified that the most visible aspects refer to the increase of the number of employed persons absent from work. The information from the National Institute of Statistics (2020) shows that the number of employed people who did not work even one hour during the analysed period was 841 thousand people in the second quarter of 2020 (9.9% of the employed population), more than four times higher than in the first quarter of 2020 and more than 7 times higher than in the corresponding quarter of the previous year. Economic or technical difficulties of the employer (lack of raw materials, customers or orders) - was indicated as a reason for the absence of 58.0% of people.

2.1. Problem Statement

The study case started from social and economic problem that affected the global economy, Covid-19. Human capital had to receive the new requirements to survive the pandemic, proving that it can cope extreme situations. Was changes concerning the place where an employee carries out his normally activity, determining to work in isolation, from his own home. Were determined modifications on the working time, working norm, program, computer system and the communication with the client, influencing the performance of entire company. One of the basics element was the relational capital (the clients) that directly influenced the continuity of the activity. In the analysed period, most companies have closed, suspended and restricted their activity. We want to follow up the changes over the companies which maintained their activity. We consider that the relation between human, relational and structural capital is eminent to maintain the activity in a critical period. At a first assessment of this pandemic, we noticed that in the private environment the activities of the companies were supported by the client or the final consumer. From an accounting point of view, it is certain that the value of the employee expenses was maintained, while the value of the monthly earnings decreased. These affected profitability during pandemic. We followed up how pandemic affected the mobility of human capital (new hires/resignations) and relational capital (dissolution and ending of the new contracts). Another important element was structural capital, which responded to the new company requirements. Another problem was over the working time for usual tasks. Therefore, we want to analyse if this aspect has been modified. We wanted to determine whether the change of workplace had repercussions on the usual time to completion the work norm.

2.2. Research Questions

How much social and economic events influence the components of intellectual capital? How adaptable is human capital to changes due to social and economic events? How essential is relational capital during of an economic impact?

2.3. Research Methods

The population of this research is formatted by Romanian citizens and citizens from Greece, China and France who work in Romania. The data used were collected through an online survey, namely Survio platform. The period in which the data was collected was from April 2020 to end of June 2020. The sample of this study was 93 economists. The number of the respondents was acceptable for the statistical analysis method which we used. The statistical analysis method used in this research was multiple regression analysis - multifactorial model. The questionnaire was applied in several companies in Romania. The questions are following a 5-point Likert scale (from the least to the most).The research covered public institutions and private companies. Was covered respondents perception from one public institution - National Agency for Fiscal Administration. In the case of private sector companies, their number cannot be identified because the questionnaire was published, in order to complete it, on several online socialization platforms from the economic field.

The research methods we used in this study case were quantitative, based on questionnaire. It was realised in Romania, over the companies that operates in Bucharest and Dâmbovița County. The research was addressed all over the hierarchical levels within private companies and public institution. This questionnaire consisted of 23 questions addressed to employees from management, financial and operational departments. Questions were based on the global pandemic, Covid-19, which directly affected the Romanian economic business market. Also, those questions followed up the relation between intellectual capital components and the influence that an economic event has on them. The intellectual capital elements supported the continuity of the activity in those new and critical conditions. Three questions aimed to knowing the respondents in an objective way. The respondents experience in the field where they activate, helped us to obtain answers that could be compared with the period before the global pandemic broke out. All the answers received were analysed from a statistical point of view, interpreting each value obtained. Those values helped us to understand and measure the impact of a social and economic problem on intellectual capital.

We achieved the perception and employees opinion from both sectors of activity (public and private) on the changes that occurred during the pandemic. We covered a sample of respondents aged between 18 and over 41 years (32.3% of respondents are between 18-24 years, 35.5% between 25-40 years and 32.3% are over 41 years), according to the table below:

Table 1. **Structure of respondents' ages**

Age range criteria	Total	%
18-24 years	30	32.3%
25-40 years	33	35.5%
>41 years	30	32.2%

(Source: Own processing based on the answers received)

From those respondents, 15.1% occupy managerial positions. The results received determining us to understand the perception of those who led the companies during the pandemic. Most of those respondents work for public institution (National Agency for Fiscal Administration), and the image they have of the pandemic is an interesting one. The changes over the human capital were different from those in the private sector (they had not access from home to the computer system, they did not have access to documents in electronic format). Most of them even during the pandemic had to be present at work, unable to work 100% from home. As opposed to employees from the private sector, the presence of those who work in public institutions was by the rotation method. A percentage of 84.9% of the respondents occupy execution functions. We believe that those employees have felt the changes the most. Organizational modifications have occurred on them over the effective workplace, organizational procedures, working rules, requirements of superior hierarchical levels.

Table 2. **The position occupied by the respondents**

The positions range criteria	Total	The position occupied by the respondents (%)
Execution positions	79	84.9%
Managerial positions	14	15.1%

(Source: Own processing based on the answers received)

Regarding the respondents experience in the field in which they work, 11.8% of them have an experience less than 1 year, 44.1% between 1 and 5 years, 4.3% between 5-10 years, and 39.8% have an experience of more than 10 years. The diversity of respondents' perceptions is also determined by the experience they have, and the effects of the pandemic are felt differently, from employee to employee.

Table 3. **Work experience of the respondents**

Work experience range	Total	Work experience of the respondents (%)
Less than 1 year	11	11.8%
Between 1-5 years	41	44.1%
Between 5-10 years	4	4.3%
More than 10 years	37	39.8%

(Source: Own processing based on the answers received)

2.4. Findings

The hypothesis of this research is that Pandemic of Sars-CoV-2 virus influences all intellectual capital components. We analysed in this sense: the influence over human capital through resignations, new employment and work efficiency; over structural capital by revealed its degree of accessibility and efficiency; on relational capital through changes on the frequency of communication, receipts, dissolution and ending of new contracts. At the same time, we consider that this hypothesis can be allocated on the analysis of social capital (culture and organizational procedures). Therefore, we followed up if there were changes through working norm, working environment, changes regarding the communication of hierarchical levels. We followed up the reaction of intellectual capital in the current economic context. Therefore, we considered the independent variable - Covid-19 pandemic, wanting to identify the effect and interdependence that this variable has on the dependent ones. The dependent variables we measured are human capital, relational capital (clients) social capital and structural capital (information systems from each company / public institution in which the respondents work). The influence of Covid-19 pandemic on human capital is determined concerning by changes in the efficiency of human capital, new employment, resignations, working time, working norm and impact on the change of working place. An impact from practice was the importance of relational capital (customers) over companies and human capital. Thereby, measuring the impact of pandemic on relational capital was determined by dissolution or ending of the new contracts, maintaining the employment of human capital and the activity of companies, the frequency of the communication between employee and client. The maintenance of the clients' activity determined changes on the revenues and companies profitability, and through our analysis we tried to measure it. The effects of Covid-19 pandemic on structural capital were delimited by perception the importance of automating the operational accounting, the efficiency of the information systems and of its adaptability in critical situations. Another analysed situation was Covid-19 over the organizational culture (if it has been kept or there have been changes).

We have to specify that from 23 questions applied, 3 of them were necessary to know the respondents by their age, their position in the company in which they work, and their experience in work. Therefore, the table presents the 20 questions that follow the directive proposed by us for analysis. To sketch the relations we followed, the answers received from our respondents are identified by the table below:

Table 4. **Questions applied about COVID-19 and intellectual capital components and answers received**

Questions applied	Answers received				
	The least	Little bit	Medium	More	The most
Changes over the working norm	40	3	17	16	17
Communication between hierarchical positions	3	8	6	30	46
Accessibility of accounting documents	2	9	17	35	30
The importance of automating accounting documents	1	1	4	14	73
Changing the workplace	2	2	5	15	69
Effective working time	15	11	21	23	23
Customer Relation	5	9	17	29	33

Questions applied	Answers received				
	The least	Little bit	Medium	More	The most
Frequency of customer communication	19	13	22	21	18
Maintaining the job	1	1	11	14	66
Dissolution of Customers' Contracts	60	12	9	4	8
Ending of the new contracts	65	11	9	3	5
Accessing computer systems	2	2	6	9	74
Efficiency of accessing information systems	0	3	14	22	54
Computer system - daily tasks	0	4	9	10	70
Maintaining organizational procedures	2	6	10	20	55
Resignations	54	8	22	3	6
New hires	37	14	31	4	7
Changes in receipts	9	9	43	13	19
Profitability	6	12	40	13	22
Human capital efficiency	1	0	13	32	47

(*Source:* Own processing based on the answers received)

What we consider necessary to be known are the answers rated with "the least" and "the most" because they show us the impact that the respondents felt depending on the problems proposed by us. "The least" answers the question with "least modified" and "the most" answers the question with "very big change." Based on the answers received, 49.46% of respondents noticed a good communication between the hierarchical levels; 78.49% signals the importance of automating financial-accounting documents; 74.19% agreed changing the working place (namely working from home); 35.48% identified an easy relation with clients; 70.97% of them consider the relational capital very important in order to maintain the human capital job; 79.57% had from home a very easy access to computer systems and 58.06% said that during the pandemic the computer systems were very efficient, having a very large influence in daily tasks; 59.14% consider that the organizational procedures have been followed; and 50.54% consider that they worked very efficiently during this period. Therefore, the needs felt by the employees were related to the automation of financial-accounting documents, a need that would clearly reduce the actual working time. An interesting result was that regardless of the changes in the economic environment, the organizational procedures are maintained, and the communication between the hierarchical levels is maintained too. Thereby, the social capital determined a maintenance of relations within the companies.

Table 5. **Answers received with "The Most"**

Questions applied	Answers received	
	The most	%
Changes over the working norm	17	18.28%
Communication between hierarchical positions	46	49.46%
Accessibility of accounting documents	30	32.26%
The importance of automating accounting documents	73	78.49%
Changing the workplace	69	74.19%

Questions applied	Answers received	
	The most	%
Effective working time	23	24.73%
Customer Relation	33	35.48%
Frequency of customer communication	18	19.35%
Maintaining the job	66	70.97%
Dissolution of Customers' Contracts	8	8.60%
Ending of the new contracts	5	5.38%
Accessing computer systems	74	79.57%
Efficiency of accessing information systems	54	58.06%
Computer system - daily tasks	70	75.27%
Maintaining organizational procedures	55	59.14%
Resignations	6	6.45%
New hires	7	7.53%
Changes in receipts	19	20.43%
Profitability	22	23.66%
Human capital efficiency	47	50.54%

(Source: Own processing based on the answers received)

Based on the answers received, 43.01% of respondents consider that their working norm has not been changed considerably; 64.52% consider that between 0-5 contracts were dissolved during this pandemic; 69.89% consider that between 0-5 new contracts were ending during pandemic; 58.06% reported that the number of resignations has not changed; and 39.78% of them claim that the demand for new employment has not changed compared to the periods before the analysed period.

Table 6. **Answers received with "The Least"**

Questions applied	Answers received	
	The least	%
Changes over the working norm	40	43.01%
Communication between hierarchical positions	3	3.23%
Accessibility of accounting documents	2	2.15%
The importance of automating accounting documents	1	1.08%
Changing the workplace	2	2.15%
Effective working time	15	16.13%
Customer Relation	5	5.38%
Frequency of customer communication	19	20.43%
Maintaining the job	1	1.08%
Dissolution of Customers' Contracts	60	64.52%
Ending of the new contracts	65	69.89%
Accessing computer systems	2	2.15%
Efficiency of accessing information systems	0	0.00%
Computer system - daily tasks	0	0.00%
Maintaining organizational procedures	2	2.15%
Resignations	54	58.06%
New hires	37	39.78%

Questions applied	Answers received	
	The least	%
Changes in receipts	9	9.68%
Profitability	6	6.45%
Human capital efficiency	1	1.08%

(Source: Own processing based on the answers received)

Therefore, we can say that regardless of the fact that some of the clients suspended or restricted their activity, this was not felt on the working norm, and the changes over existing contracts and on the new ones were little noticeable. As for fluctuations in human capital through resignations and new hires, they have not changed significantly. It was expected during job uncertainty caused by the pandemic. Therefore, the resignations did not increase, and the demand for new jobs was not changed. Due to the fact that the statistical test is valid, specifies that the independent variable (pandemic with Covid-19) is in a causal-effect relation with the problems identified by us. Regarding to companies profitability, based on the answers received, we identified that it has not changed considerably. Most responses were neutral. Due to the fact that most of our respondents are at the operational level, this is not very well known to them. An interesting thing is that proportion of 23.66% of those who answered that profitability has changed considerably, are from public institutions. This is normal, considering the fact that in Romania, during pandemic, were granted taxes bonuses, their payment being postponed.

Table 7. **Summary output**

Regression Statistics	
Multiple R	0.999999865
R Square	0.999999731
Adjusted R Square	0.933332992
Standard Error	0.000599228
Observations	20

(*Source*: Own processing based on the questionnaire results, using data analysis)

Multiple R measures how a variable can be predicted using a linear function of other variables set. It represents the correlation between the variable values and the best predictions. These can be calculated linearly from the predictive variables. Also, “Multiple R” is the multiple correlation coefficient and has a value close to the extreme, 0.99. This result indicates that between Covid-19 Pandemic and human, structural, relational and social capital is a strong and direct connection. Also, the result confirm the impact of the independent variable over the dependent ones.

R Square represents the statistical measure of data approximation to regression line. It is also known as the determination coefficient. The result for R Square is 0.99, which shows that 99% of the “Y” variation is determined by the variables influence. In our research Y is the answers of our respondents which depends of the X. “X” represents the questions applied in the questionnaire. The result represent that the answers received are determined by the questions applied in a proportion of 99%.

The adjusted R square is 93% of the “Y” variation, which is influenced by “X”. The rest up to 100% is caused by residual components (deviation factor - adjusted correlation coefficient - adjusted R square). 93% of the total respondents validated the problems presented through the questions, and 7% of the total respondents did not agree with the problems presented.

Standard Error represents the standard deviation of a statistical sampling distribution. Standard Error is a statistical term that measures the accuracy wherewith a sample represents a population. The result obtained in the current example is 0.06%, which indicates a stronger estimate of the average population. The number of respondents is significant for the statistical test, error for invalid being 0.06%. The model is representative.

All of the 20 questions was quantified. The other 3 questions refer to the age, the function and work experience of all respondents.

Table 8. **ANOVA**

ANOVA		*SS*	*MS*	*F*	*Significance F*
Regression	5	19.9999	3.9999	11139750.9	1.1285
Residual	15	5.3861	3.5907		
Total	20	20			

	Coeff.	*Std. Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
The least	1.0004	0.0007	1339.0118	1.6809	0.9987	1.0019	0.9987	1.0019
Little bit	0.9966	0.0042	235.7919	3.4560	0.9876	1.0056	0.9876	1.0056
Medium	1.0003	0.0013	735.1182	1.3548	0.9974	1.0032	0.9974	1.0032
Much	1.0002	0.0014	697.3785	2.9869	0.9971	1.0032	0.9971	1.0032
The most	0.9988	0.0005	1964.7767	5.3411	0.9977	0.9998	0.9977	0.9998

(*Source*: Own processing based on the questionnaire results, using data analysis)

The variation sum is both due to the regression value of 5 and the residual amounting to a value of 15, out of a total of 20 (these are the liberty degrees). The squares sum of the regression sums the value of 19.99, and the squares sum of the residual value adds up to 5.39.

The average of the squares or the corrected dispersion sums the values of 3.99 for regression and respectively 3.59 for the residual value.

Significance F is the test F for ANOVA, precisely the set of null hypotheses: the model is not statistically valid and the alternative hypothesis: the model is statistically valid. Critical region summing the value of 1.13> 0.05, which confirms that the null hypothesis is rejected, and the model is statistically valid. Therefore x is valid as a significant factor.

Also, Significance F represents the probability that the equation does not explain the "Y" variation, and any match is purely random. If significance F is less than 0.05 (5%), there is no significant correlation. In this study, the condition is fulfilled, the value obtained being 1.13, and the multifactorial regression model is valid (statistically significant). In the proposed model the questions represent a significant factor for respondents. The model is validated with the value 1.13 which is above the minimum allowed of 0.05. Therefore, in the model, the questions explain the variation of the answers, these being interdependent. The questions represent the independent variable, and the answers received from our respondents represent the chosen variable. The coefficients sum up y's values of 1, 0.9966, 1, 1 and 0.9988 for x. The test statistic represents the significance tests for the parameters.

Lower 95% (left limit), the alpha parameter, is significant because the probability that all of the hypotheses can handle (which it claims to be significant) 99% > 95%. The result of the alpha parameter indicates that all the hypotheses of the statistical test are validated. Upper 95% (right limit) summing values over 99%. Therefore, the beta parameter is significant. The results of the statistical test indicate that the hypotheses on which the research was based are valid. The influence of the Covid-19 pandemic on human capital was tracked in terms of resignations, new employment and work efficiency. Within the entities that contributed to the research, there were no major changes in terms of resignations and new employment. In terms of work efficiency, respondents boost their work efficiency even if the actual workplace has been changed.

The hypothesis that the Covid-19 pandemic influenced structural capital by revealing its degree of accessibility and efficiency was validated. In Romania, the accessibility of home computer programs has been a challenge for employers of service companies. The hypothesis according to which relational capital is one of the elements that supported the economic activity, was materialized. The client was the one who kept the employees' job during the pandemic. Even if the actual workplace was changed, the communication between the client and the employee was efficient. The ending of new contracts was not notified in the analysed companies, and the suspension of the already existing contracts did not represent a significant change. In terms of organizational culture, as an element of social capital, it has been maintained.The answers received from the respondents could not be measured in another way, and the statistical results validate the research questions. Comparing the results obtained with the period before the Covid-19 pandemic, it can be seen that the companies included in this research managed in a good way the economic activity. They benefited from the receptive human capital, they adapted structural capital to new needs and they benefited from a constant relational capital (clients).

3. Conclusions

The study demonstrated how Covid-19 pandemic influenced the intellectual capital components. We followed up what changes occurred over the human capital. The results showed that there were no changes on the number of employees (by dismissing employees, creating new jobs). Therefore, during a pandemic of this level, human capital remains one of the key factor. The study case followed up the evolution of structural capital and its opening to new changes in a relatively short time. The respondents notified the importance of automating financial-accounting documents during this analysed period. This automation would reduce the working time for operational accounting. Respondents were pleased with the efficiency and openness of structural capital to the new needs that arose during this period. We also wanted to analyse if the organizational procedures was maintained. Therefore, following the answers received, all procedures were maintained and communication at hierarchical levels was maintained. From respondents point of view, relational capital was the key element that supported the maintenance of the companies' activity. Therefore, we consider that during a crisis of such magnitude, the relational capital was the one that avoided the suspension of all of the companies' activity. We have to say that the public system is closely linked to the private system, and the key element was relational capital, by maintaining the demand for services and products. Through this study, we wanted to follow up the changes that occur over the intellectual capital in the current social and economic context, influenced by the Covid-19 pandemic. In March 2020, a state of emergency was established in Romania. Many companies had to suspend their activity, and the employees had to go into technical unemployment. The situation was difficult due to the gravity and insecurity caused by this health crisis. However, through the research conducted, it was identified that the companies that participated in the research managed well the intellectual capital elements. Even if the changes are minor, we can see that they did exist. The pandemic influenced the Romanian economic market by suspending the economic activities of many companies. Thus, relational capital was affected. At the same time, from the employees' point of view, the fear of restructuring existed. Also, the changes that appeared on the structural capital had to comply with the new requirements. Many companies have succeeded in this, but others have not. The impossibility of adapting the structural capital to the new requirements was decisive for the public institutions. The current economic stage, being a new one, cannot currently offer in-depth studies that would determine a complex image of the Romanian economic market. Most of the companies that were included in the research were from retail field and rendering services field. This study showed the image of these Romanian companies during the Covid-19 pandemic.

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Section 5

Funding and Spending in the Pre-University Education System

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Funding and Spending in the Pre-University Education System

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Abstract: *The new paradigms of global economy shed light on a knowledge-based economy, an economy whose growth depends largely on the quantity, quality and accessibility of available knowledge in which science, skills and know-how have a great influence, even higher than traditional factors of production. In this context, education is becoming one of the strongest influencing factors of the economy, and the fact that the needs of the system are constantly growing is part of the trend of massive investment in knowledge. However, education systems do not seem to keep up with the speed in which the economic world is changing. In this paper, we wanted to reflect on system financing versus expenses of schools in Romania, focusing on the methods of financing and expenditure in the education system and seeking new possibilities to customize the allocation of funds according to the real needs of the institutions. Through this personalization, a differentiation can be found between the allocations of funds in which the "poorer" schools can have a positively differentiated financing formula, and those with a better situation, in terms of resources, to be a bit disadvantaged. The aim of this research is to help funders allocate their funds more effectively to achieve the overall goal of education to maximize school outcomes.*

Keywords: *Funding, pre-university education, expenses, information, knowledge.*

1. Introduction

"Knowledge" and "information" with a greater involvement in the process of transition from the industrial society to a "new", "post-modern" economy, mark the evolutions of European societies and not only (Achim, 2015). The term "new economy" is understood by most as one that is based on the Internet, the flow of information that can be accessed today in a very short time almost instantly by a very large mass of people. From this very rapid development arose the concept of knowledge-based economy since the 1950s and has since been based on the thought that a high quality of education greatly influences the development of economies and thus the development of societies. In order to support the knowledge-based economy, the European Union, in a document called ET2020, outlined educational policy objectives. The ET2020 set some principles of good practice such as supporting the concept of lifelong learning, raising the quality and efficiency of education by promoting "equity, social cohesion and active citizenship" stimulating "creativity, innovation and entrepreneurship" (Official website of the European Union).

In the evolution of the development of the knowledge-based economy, Romania and Eastern European countries are in a group with a much lower level of development than Western European countries such as Germany or France and will not reach their level

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in the near future, but also presents very favorable prospects for achieving the status of a knowledge-based economy. (Fucec and Marinescu 2014). However, this goal cannot be achieved without an educational system capable of high-quality performance, in which both the providers of educational services and the beneficiaries of the services receive what they are looking for and want from the system. In this context, the financing of the system becomes a very important factor.

Education is a public service part of the public institutional system, subordinated to the government that provides education services to the final beneficiaries (Broadbent and Guthrie, 1992). Starting in the 70s and 80s, scientists began to worry about the costs of education compared to the results obtained by it. In the 80's the need was felt for a reform in the public sector by rethinking the management and financial management, making a transfer of responsibilities from the central administration to the local administration and schools. In European countries and not only, the conditions were created to move to a new style of management, similar to the private sector, which wanted to be more economical, efficient and effective (Guthrie, 2007).

The concept of New Public Management was introduced by Hood (1995), a concept that started a series of reforms in the public sector by introducing concepts such as: accrual accounting, performance indicators, delegated budgets, total costs, outcome statements, fiscal responsibility and others (Guthrie, Olson, and Humphrey, 1999, p, 210). Accrual accounting has the advantage over cash-based accounting that it provides higher transparency, increases performance and can generate more complete information about the total costs of operations (Timoshenko and Adhikari, 2010). Guthrie (2007) referring to Boadbent and Guthrie (1992, p.11) says that modern public management includes technological systems that can be described in a process with the following steps: resource definition, budgeting and reporting.

One of the most important subfields of public administration is budgeting. (Tyer and Willand,1997). The budgeting process includes the definition of funding as an element of budget revenue. Thus, we can say that the allocation of public funding has a special importance in the management of resources in pre-university educational institutions for the simple reason that it ensures the flow of income for the provision of the service (Mayston, 1998). Husén (1984, pp.30) said, “education must contribute to labor resources that will generate economic takeoff, with further development”. The educational process in a similar way to the production process in order to obtain the desired results and to maximize them requires an adequate "input", and defining its level puts in front of a difficult choice the decision makers of educational policies (Ross and Levacic, 1999). Compared to the production process, however, we find major gaps in the educational process between the quality of the "raw material" in terms of social, material, cultural conditions from which students come. According to Whittington (1994) in the public sector the three E's: economy, efficiency and effectiveness must be constantly present, so resources must be used economically, the level of achievement of objectives must be as high as possible, and the relationship between resources used and the results obtained must be optimal. The economic efficiency of the services supposes to obtain the results in the best quantity and quality with minimum costs. Finding the optimal funding formula is the responsibility of governments and involves a fair and measurable distribution that allows for a focus more on distribution than on results. (Heald and Geaughan, 1994).

Keeves and collaborators, quoting Husen, say in their paper that in most industrialized countries investment in education to increase education participation rates to higher levels than required has been motivated by the egalitarian principles associated with providing greater equality of educational opportunity and greater social equity (Keeves et al., 1991). A pioneer in research on the effect of investment in education Coleman said, "equality of educational opportunities depends not only on the idea of equality in the distribution of school resources, but the intensity of the effects of these resources" (Colemam, 1969). "In order to promote non-discrimination and equal opportunities on all grounds of discrimination, both a solid legislative basis and a range of policy instruments are needed." (EC Communication, 2008). The Universal Declaration of Human Rights states in 1948 "Everyone has the right to education. Education must be free, at least as regards elementary and general education."(UN, 1948). Equity the main objective of finding a funding formula is to partially or fully compensate for different needs and different financing needs. (Heald, Geaughan, 1994). These principles should be primarily reflected in the legislation regarding social policies, and last but not least, in education funding policies. In accordance with these principles in most countries, the state is the main financier of the education system providing access to education free of charge up to the highest levels. Achieving equality, in terms of equal participation from an arithmetic point of view, is probably an unattainable goal. What could be sought, however, is greater equality in a person's access to an opportunity, which involves the concept of "equity" (Keeves et al., 1991). This can be offset by applying the principle of positive discrimination, through grants, national programs in which students from socially disadvantaged backgrounds receive additional funding. Another type of negative discrimination that can occur in the financing of the education system in terms of capital and capital expenditures is due to the fact that in the vast majority of education systems the source of financing these expenditures is the local community, resulting in negative discrimination for schools, located in communities with lower funding opportunities. In the US, the federal government is trying to put pressure on state legislators to pass anti-discrimination regulations because the resources allocated to education providers differ greatly from state to state, which greatly influences the level of expenditure on staff, goods and services and capital (Baker and Weber, 2016). Compensatory education programs have been launched in the United States since the 1980s to reduce discrimination, making huge funds available to Member States and local schools as "categorical aid" (Husen, 1984).

In California, there has been a successful process of school finances, the case of Serrano vs. Priest who ruled that the California education system was unconstitutional in discriminating against students in their access to education due to the fact that some richer communities, with larger tax bases, spent more on students than poorer communities. From Serrano decision, many states have reformed their education systems to reduce inequality. Specifically, they moved to the state funding system for education to equalize spending among students (Soares, 2005). In their research, Hong and Zimmer ask why we expect an impact of capital spending on education outcomes. As an answer to this question would be that capital investments lead to safe and clean school environments, without overcrowding with good lighting - all this could facilitate concentration and lead to morale and effort of students and teachers (Hong and Zimmer, 2016). According to the conclusions of Hong and Zimmer, investments in education do not influence the quality of short-term services, but they have been shown to have a great influence on the results of the long-term education system for 5-10 years (Hong and Zimmer, 2016). The authors Benos and Zotou (2014) conducted a study analyzing

57 empirical studies, in which they looked for the relationship between education and economic development, through the meta-regression method and found that the vast majority of researched studies show the existence of a positive relationship between education and economic growth mainly by factors like enrollment in education and education expenditures (Benos and Zotou, 2014).

This paper tries to look for and offer solutions for the development of the financing mechanism of the education system based on the specialized literature and case study research, including the main stages of development to achieve a higher level of equity and equality in opportunities and to achieve its ultimate goal of maximize results. "Empirical research is a way to gain knowledge through direct and indirect observation or experience. Empirical evidence (recording one's direct observations or experiences) can be analyzed quantitatively or qualitatively. " (Andre, 2020). As a qualitative research, this paper does not aim to test hypotheses, and according to the authors Glasser and Strauss (1967, pp30) "neither the complete knowledge of the field nor the representation of all aspects by random selection to ensure equal chances that each case is selected in sample".

In order to carry out the research, three pre-university educational institution were selected, two of which are middle schools and one is a kindergarten. Of the two middle schools, School 1, where the language of education is Romanian, is located in an isolated, fringe society area, with a relatively large number of students, who come from materially and socially challenged families. School 2 is located in an urban environment, but in a very small town with five villages surrounding it, and it also has a relatively large number of students, being the only middle school in the city, with Hungarian as the language of education. School2 has eleven rounded structures in the five villages belonging to it, which implies a dispersion of staff as well as simultaneous classes with many buildings. The kindergarten with an extended program is located in the same city without rounded structures, having the Hungarian as the language of education, with a number of preschoolers slightly above the minimum legal number to be recognized as a financial center. These institutions were selected because two of the authors are knowledgeable in detail about the system, being employed at pre-university educational institutions in accounting positions, being fully aware of the case and having access to all the necessary documents for analysis In this regard, the financial statements, revenue and expenditure budgets, execution accounts for 2018 and 2019 were consulted to see what the funding levels were as well as the levels of salary, material, social assistance and investment costs.

The objectives of the research are to provide ideas for state authorities that decide on the funding of the system to take into account new perspectives in determining the level of funds allocated. In order to find solutions that will lead to an improvement in the funding process, we need to understand which elements need to be considered, which have an influence on budgets, which are the main shortcomings and criticisms and which are the main solutions proposed by previous studies.

This research is structured in three main chapters: the next chapter tries to present the pre-university education systems in Europe and their main characteristics looking for similarities and differences between them. Chapter 2 presents the financing mechanism and the main types of expenditures of educational institutions in Romania. Chapter 3 presents a case study an analysis of funding levels and cost levels at the three schools studied and offers some funding improvement models proposed by international studies as well as our proposals for improving and streamlining the determination of the level of funding of educational institutions in relation to real expenditures.

2. Education systems in Europe and their funding

One feature that can be remembered as common to all education systems in Europe is their public nature, meaning that all of them are either provided directly by the state or by other public or private bodies that are supervised by the state, considering that education is a public resource.

Another common property of all states is the mass character of education systems wishing to guarantee equal rights to each individual regarding the accessibility of the education system, especially at the primary and secondary levels.

In Europe, compulsory primary and secondary education for children starts at the age of 5-6 and lasts until the age of 14-16, with small differences from country to country. In Romania, compulsory education begins at the age of 6 with the preparatory class and usually ends at the age of 17 with the 10th grade.

In general, in Europe, education systems are funded by two sources, namely the government and local sources. Preschool education, for children aged 0-3, is funded by local resources and is usually carried out in nurseries that are not subject to the educational law in every country. Hungary has adopted a special financing system, with kindergarten being mandatory and 80% of the financing is done by the state based on various regulations. These regulations are based on the average salary, and 20% of kindergartens are funded by local authorities on the basis of project competitions. In France, 37% of pre-school and primary education is funded by local resources, and 90% of the funding comes from government resources and those of other state authorities, the other 10% from household resources and other private entities. Local authorities are responsible for funding primary education in most European countries but help is available from governments through programs or financial aid. Secondary education in the vast majority of countries is funded by government and local resources. Finland is a country where the financial autonomy of schools is at a very high level, with 75% of funds coming from local resources and 25% from government resources. Schools allocate their funds in a fully autonomous manner, but annually report to the Finnish National Education Agency and the Finnish Statistical Institution on the spending of funds. In Sweden, compulsory education is entirely free of charge, funded by local and government resources. In France, kindergartens and primary schools are subordinated to local authorities, have no legal personality and are not considered financial centers, the authorizing officer being the mayor. (Eurydice).

The level of funding for education systems differs from one state to another in European countries. Analyzing the data published on Eurostat, we can see the following: the highest levels of funding taking into account the average of the years 2012-2016 (presented as a percentage of GDP) and not taking into account the countries that do not have data are: Sweden with 7.17%, Iceland 6.88%, Norway 6.71%, Finland 6.70%, Belgium 6.46%. The lowest level of financing among EU countries has Greece with an average level of 3.63% and Romania with an average between 2012-2016 of 2.67% of GDP. (Table No. 1)

Table 1. **Public expenditure on education by education level and program orientation - as % of GDP**

GEO/TIME	2012	2013	2014	2015	2016	Average
European Union	:	:	5.12	5.02	:	5.07
Sweden	7.38	7.17	7.14	7.05	7.13	7.17
Iceland	7.24	6.84	6.98	6.84	6.51	6.88
Norway	:	6.45	6.64	6.72	7.01	6.71
Finland	:	:	6.81	6.75	6.55	6.70
Belgium	6.43	6.56	6.49	6.43	6.41	6.46
Cyprus	6.67	6.43	6.37	6.36	6.28	6.42
United Kingdom	:	5.89	5.85	5.68	5.40	5.71
Netherlands	5.89	5.59	5.53	5.40	5.48	5.58
France	5.46	5.51	5.52	5.47	5.43	5.48
Austria	5.62	5.49	5.40	5.43	5.40	5.47
Latvia	6.59	4.91	5.28	5.33	4.72	5.37
Malta	5.31	5.60	5.09	4.89	4.80	5.14
Ireland	6.16	5.32	4.92	3.77	:	5.04
Switzerland	:	:	5.01	5.08	5.03	5.04
Portugal	:	5.20	5.04	4.79	:	5.01
Slovenia	5.44	5.12	4.99	4.64	4.51	4.94
Poland	4.91	4.94	4.91	4.81	4.64	4.84
Estonia	4.70	4.85	:	:	:	4.78
Turkey	:	:	:	:	4.66	4.66
Germany	4.64	4.61	4.57	4.52	4.45	4.56
Lithuania	4.83	:	4.37	4.12	3.88	4.30
Hungary	4.07	3.98	:	4.26	4.46	4.19
Spain	4.34	4.18	4.15	4.16	4.08	4.18
Luxembourg	4.39	:	4.00	3.90	:	4.10
Italy	4.08	4.16	4.08	4.10	3.83	4.05
Bulgaria	3.68	4.06	4.22	3.93	3.86	3.95
Slovakia	3.05	4.01	4.09	4.59	:	3.94
Czechia	4.33	3.95	3.84	3.79	3.56	3.89
Serbia	:	:	:	3.84	:	3.84
Greece	3.64	3.58	3.62	3.68	:	3.63
Romania	2.64	2.67	2.75	2.72	2.58	2.67

Special value: ":" not available

(*Source*: Eurostat)

Research shows that investing in education can lead to high levels of student achievement and efficiency (Belmonte et al., 2020). In the opinion of Gloria Agyemang (2009) in the process of searching for the ideal formula for financing the education system in the literature, in addition to need-based financing formulas, we find other alternative types of approaches. The first of these would be the Incremental approach, which is based on expenditures made, the current allocations depending on past expenditures, not taking into account changes in the system or current real needs. The second type of approach would be the allocation based on political considerations (political funding), in which the funds are divided according to the needs of the median voter, and the third type of approach would be the activity-led approach. where funding is provided on separate activities. Formula-based funding models are mechanisms that transfer resources to public sector organizations based on explicit calculations that take into account the needs of beneficiaries (Heald and Geaughan, 1994). This form of funding was introduced in the UK after prior consultation with the parties: schools and funders. (Agyemang, 2009). During the consultations, the main objective regarding the characteristics of the formula was taken into account: simplicity, measurability and predictability, as well as the fact that it includes support mechanisms for children from disadvantaged social backgrounds (Agyemang, 2009). At the same time, the financing formula must have transparency characteristics. "Accountability and transparency are considered the most important in eliminating corruption and fraud in the public sector ..." (Paterson, Changwony, and Miller, 2019). In the conclusions formulated by Agyemang (2009) he says that general needs such as teachers' salaries can be included in the formula but there were also specific needs such as recognition of different training time, different teacher ratios, and different school characteristics. In the transition from the incremental approach based on historical expenditures to the one through the need-based funding formula, there were schools that lost and there were others that gained additional funds. (Agyemang, 2009). Initially needs-based financing formulas only served as empowerment tools without a control role. The use of these formulas has recently been delimited from this tradition following objectives of cost reduction, efficiency, and central control. (Heald, Geaughan, 1994). Whittington (1994) in his paper tried to make an analysis of the economic efficiency of public services and found that it is very difficult to find performance indicators that are measurable and comparable. As performance indicators he set out to measure inputs and outputs. The condition of economic efficiency or profitability determined it as the difference between the value of the marginal cost of input and the value of the marginal cost of output. (Whittington, 1994). The value of inputs is easily measurable in the amount of financing expressed in cash. However, measuring the value of outputs is a problem. He introduced as the output value the number of full-time students (Full-Time Equivalents, FTEs), a value that cannot be compared with the value of inputs because it cannot be expressed in money. Output methods include measuring the number of graduates employed in the labor market or the number of students dropping out of school. At the same time, different products may have higher costs than others, so the average cost per student can generate underfunding in some entities and overfunding in others. (Whittington, 1994).

In another approach the outputs can be defined in terms of the services provided. Achieving a teaching activity in an acceptable quality is the optimal output in public education services (Kelly, Burdeane Orris, 2011). Another possibility in measuring results could be students' results on standardized tests such as the Program for International Student Assessment (PISA). If we accept the idea that funding in education has an effect on results and the idea that these results can be seen as performances described and measured by tests then we can see the results of students in 2018. The results of 2018 are relevant because the students, teachers and the environment in which the students learned result, among others, from the financing of the years 2012-2016 presented in Table no.1. This assessment system uses standardized tests that measure the reading, math, and science skills of 15-year-olds and their ability to use these skills in real life. PISA tests 15-year-old students because they are the ones who are at the end of the years of compulsory education in most countries. (Andreas Schleicher, 2018). Accepting the PISA tests as a standardized measurement of the level of knowledge and as a barometer of the results obtained by the education systems, we notice that in general, the countries with higher financing in Europe like Finland, Great Britain, Sweden take the lead in the results too. Although we can see that countries like Poland, Estonia, Slovenia that are in the middle of the hierarchy in terms of funding have very good results in PISA tests being in the first quarter of the hierarchy of results, the gap is probably due to other factors influencing results. At the same time, we can observe that a weak financing, as in the case of Bulgaria, Greece and Romania, places the results in the lower quarter of the results. (Table no. 2)

Table 2. **Pisa results 2018**

GEO/TIME	Reading	Mathematics	Science	Average
European Union	480	488	483	484
Estonia	523	523	530	525
Finland	520	507	522	516
Poland	512	516	511	513
Ireland	518	500	496	505
United Kingdom	504	502	505	504
Slovenia	495	509	507	504
Sweden	506	502	499	502
Netherlands	485	519	503	502
Belgium	493	508	499	500
Germany	498	500	503	500
Switzerland	484	515	495	498
Norway	499	501	490	497
Czechia	490	499	497	495
France	493	495	493	494
Portugal	492	492	492	492
Austria	484	499	490	491
Latvia	479	496	487	487
Spain	:	481	483	482
Iceland	474	495	475	481
Lithuania	476	481	482	480
Hungary	476	481	481	479
Luxembourg	470	483	477	477
Italy	476	487	468	477
Turkey	466	454	468	463
Malta	448	472	457	459
Greece	457	451	452	453
Serbia	439	448	440	442
Cyprus	424	451	439	438
Romania	428	430	426	428
Bulgaria	420	436	424	427

Special value: “:” not available

(*Source*: OECD)

3. Financing and expenses of the Romanian education system

Based on the information from the National Institute of Statistics regarding the 2017-2018 school year, out of a total number of 6952 educational units in Romania, 89.25% were state-owned, with private property dominating at pre-school levels (75, 86%), preschool (34.89%) and post-secondary (84.47%). Starting with 2011, when National Education Law no. 1/2011 came into force, the financing of the Romanian education system is based on it. At its inception, this law introduced a new formula to funding, namely the standard cost per student instead of the old one which was based on historical costs. This type of financing tried to correlate Romanian education with modern systems. In the United Kingdom in the 1980s a similar funding formula was introduced in which the school allowance was calculated using a method that was based on the age, profile and number of students attending the school. (Edwards et al., 1996).

The National Education Law provides for three types of funding: basic funding, complementary funding and additional funding. The basic financing is provided from the state budget for the following expenses: expenses with staff salaries through the budget of the Ministry of Education and Research, staff training expenses, from amounts deducted from the value of added tax of local budgets, expenses with the regular evaluation of students from the value of added tax of the budgets of the local authorities as well as expenses with goods and services for maintenance and operation, from the value of added tax of the local budgets. Complementary financing is provided by the local budgets of the cities and communes to which the educational units belong and from the value of added tax of investment expenditures, social expenditure, expenditure on non-maintenance goods and services, subsidies for boarding schools and canteens, expenditure on public and school transport, expenditure on scholarships, expenditure on regular national assessment of pupils, expenditure on teachers' commutes, compulsory medical examination of staff, occupational safety and health expenditure, emergency situations, co-financing for European-funded projects. The additional funding is granted as a fixed global amount from the budget of the Ministry of Education and Research for awarding state pre-university education units with outstanding results in the field of inclusion or in the field of school performance.

The state provides basic funding for all beneficiaries (students, preschoolers) in state, private and denominational education, accredited for students in general compulsory education, for vocational education, private high school and denominational school. Funding is based on and limited by the standard cost per student, according to the methodology developed by the Ministry of Education and Research. The basic financing is made according to the following principle: “the financial resource follows the student”, based on which the budgetary allocation related to a student is transferred to the educational unit where they study. Government Decision no. 72/2013 with subsequent amendments decides the level of the standard cost per student for each year. The standard cost per student follows a different reasoning in determining the level of standard value in terms of salary expenditures than those with goods and services, for the maintenance and operation of educational institutions, those for continuous assessment of students and for professional training. For salary expenses, this standard cost operates with coefficients where coefficients are added to the standard value correction that change depending on the level of teaching, the urban or rural environment in which the educational process is carried out, depending on the field, profile, specialization, frequency and language of instruction. Coefficient 1 corresponds to a student from the lower secondary level (ISCED 2) from the urban environment, with frequency, with the Romanian language of instruction, without specializations and disciplines. The standard value of coefficient 1 in 2020 is 6111 lei, approximately 1260 euros. The value of the correction coefficients varies between the minimum of 0.390 for the urban high school level without attendance and 2.8 for the high school education with music specialization. A value in the range of 0.12-0.14 is added to these coefficients for teaching in minority languages. In order to determine the funds allocated for the calendar year for staff salaries, the number of students enrolled at the beginning of the school year of the previous year at each level, branch, specialization, environment and language of instruction is multiplied with the corresponding coefficient and standard value. The standard cost per student determined by law for the cost of goods and services to cover maintenance and operating costs, as well as for the periodic evaluation of students and staff training costs is determined by taking into account three calculation criteria: the numerical thresholds of total students, the type of educational and the temperature zone where the respective educational institution is located. In 2020, the final coefficient of these expenses varies between 316 and 508 lei, respectively 65.15-104.74 euros for a student. Complementary funding for educational institutions varies from one institution to another because in addition to the commute expenses of teachers whose quantum is stipulated in law, the allocation of other funds for other types of expenditure depends 100% on local authorities and their funding capacity. For additional funding, the teachers' commute expenses are provided, the amount of which is decided by law in the sense that the value of a subscription is settled, which is applied on the distance between the domicile and the school (Government Decision 569/2015). The performance, merit, study and social scholarships are also paid from the complementary financing. The first two types of scholarships are given to students who have national or county results in school competitions and Olympiads or very good results in education, and the last two are given to students who come from socially disadvantaged backgrounds, are orphans or have a chronic illness (Order 5576/2011). Social aids are financed for students with special educational needs, through the local councils, but from funds from the state budget aids whose value is decided by law and their payment depends on the attendance of students at school. The additional funding is granted sporadically depending on the decision of the Ministry of Education and Research. In addition to these basic, complementary and additional funding, there are national programs through various projects. he projects financed from the state budget through the school inspectorates, they being secondary authorizing officers are: payment of teachers' activities at national exams (Order 3856/2019), the amount of which is decided by order of the Ministry of Education, aid of 200 euros for students from socially disadvantaged families for the purchase of a computer (Law 269/2004), social assistance for students who cannot be educated in their home town in an amount determined by a government decision that depends on the distance traveled between their home town and school (Decision 863/2016) as well as scholarships for students attending high school, have results good at school and come from socially disadvantaged families through the High School Money program (Order 4839/2004). The vocational scholarship is granted to students from vocational schools in the amount of 200 lei per month (approximately 40 euros) if they attend school, as a subsidy for the costs of vocational education, being also an incentive against dropping out of school. (Decision 951/2017) As can be seen, in addition to basic funding, the state provides additional types of aid and incentives, especially to students from disadvantaged families, but the basic funding and complementary funding mechanisms can be improved.

4. Proposals to improve funding in specialized literature

The way in which states allocate resources to their education system affects their ability to achieve their main goal. This is closely related to the rate of economic growth, the rate of poverty, the income gap and social cohesion (David-Hadar, 2017). In budget accounting, the fundamental question to be answered is "How do I keep track of my expenses?". Budgeted expenditures should be adjusted to the tax revenues collected." (Mol and Kruijf, 2003). The main function of budgetary accounting is to ensure the expenditure of resources in accordance with the rules governing the preparation of the budget. (Mol and Kruijf, 2003). In our case, the expenditure should be adjusted to the level of funding. The simplest and most common form of funding based on formula is the allocation of funds based on the number of students, with variations depending on the academic subject, teaching mode and class level. The different amounts are then added and allocated in a single annual payment or grant. Levacic and Ross present a methodological approach to allocating resources specific to school systems in their paper. This approach is identified as financing needs-based formulas. This type of funding based on needs is an attempt to provide resources in a fair but at the same time objective and research-based manner. (Ross, Levacic, 1999). In addition to the tension between equity and efficiency, states also face a challenge of fiscal constraint (David-Hadar, 2017). "Average aggregate levels of spending per student are positively associated with improved or higher student outcomes" (Baker, 2012). In another approach we find that the annual cost per student, which is a widely used indicator, is difficult to compare between different areas because schools are located in a different socio-economic context (Eger and McDonald, 2012). Levacic and Ross outlined five conceptual components in their paper that must be applied in the development of needs-based funding of the education system. These components are: freedom, equality, fraternity, efficiency and economic growth. At the same time, they developed the operational components needed for the needs-based formula. The first of these components is the component of basic funds allocated on the basis of student enrollment (number of students) - funding per capita or on the basis of groups of students taking into account the level of education. In the opinion of the authors, the second component is developed based on curriculum or specialization criteria, and the third component is developed based on the needs of students with special educational needs and the location of schools. (Ross and Levacic, 1999). With the Global Monitoring Report reporting that the US education system is underfunded with $ 26 billion annually, it becomes necessary to look for new funding solutions. The authors Kim and Han (2015) considered that a solution would be the public-private partnership and proposed a financing scheme through so-called "social impact bonds" (SIBs). Through these SIBs, private investors could inject funds into public sector programs (Kim and Han, 2015). The idea of SIBs comes from Kim and Kang (2012) who say that in such a performance-based education funding project, measurement and cost-effectiveness are based on predetermined "success" values in a contract in the initial stages before implementing the chosen education project (Kim and Kang, 2012). In 2017, the OECD produced a report on funding in education in which, in addition to the analysis of existing types of funding, it analyzed the basic factors that must be taken into account when drawing up funding models. These basic factors are: transparency and efficiency but at the same time it is important to distribute additional funds for the different categories promoting the principle of equity. Thus, the way funds are allocated can play a key role in aligning the distribution of resources, taking into account educational priorities. The report argues that "regardless of the allocation mechanism, the method used to identify differential resource needs should be regularly reviewed and should be based on national research, reliable data and transparent criteria" (OECD, 2017).

The new financing system in Romania, introduced by Law 1 based on the standard cost per student has brought many positive changes compared to the previous type of financing based on historical costs. In the opinion of Heald and Geaughan (1994), the reasoning for adoption is primarily objectivity in the allocation of resources without being influenced by lobbying or other considerations. Secondly, it allows the separation of decisions on the distribution of funds from aggregate decisions on the system. The third reasoning may be the abolition of the allocation based on historical expenditure. When preparing the budgets in the pre-university education system in Romania, the revenues do not appear but only the expenses, the revenues being included only in the aggregate budget at a higher level of authorizing officer. For these reasons, instead of income, we are talking about financing in the case of educational institutions. At the same time, expenditure budgets are a means of predicting future expenditure, which may vary from one period to another. In the modern vision, the budget must be flexible, budget data must be reviewed monthly according to needs, deviations analyzed and priorities reassessed. (Păunică and Tănase, 2014). In terms of staff costs after the introduction of funding based on the standard cost per student knowing the level of funds allocated for each year the budgeting process has become more predictable thus increasing the efficiency of resource management which has, in many cases, reorganized and streamlined the number of classes. For the expenditure on maintenance and operation goods and services, the financing based on standard cost per student brought the novelty to ensure the minimum necessary for the operation of schools because before the application of this system the financing was made exclusively from the local authority’s budget and showed a great variation of the financial capacity of each locality. In 2014, the UNICEF Representation in Romania conducted research in collaboration with the Institute of Educational Sciences in the context of the National “Let's Go to School Campaign!” (Faturșnic et al., 2014). This research, which was carried out between May and October 2013, aimed to analyze the financing of educational institutions based on the standard cost per student and in terms of complementary funding in relation to real expenditures and needs from the perspective of equity. The main results of the investigation were: 47% of those surveyed were of the opinion that the total financial allocations of educational institutions were insufficient in relation to the real needs; 60% consider that the amounts allocated calculated on the basis of the standard cost per student have been totally insufficient for the categories of expenditure for which they are allocated: staff costs, continuous staff training, expenditure on goods and services for maintenance and operation; 80% consider that the funds for organizing extracurricular activities are partially or totally insufficient; almost all reported a total or very large lack of investment funds. Among the schools investigated, those operating in disadvantaged areas, especially in rural areas, reported that the level of the positive correction coefficient for salary expenditures does not cover the differences between the number of students / teachers in urban and rural schools and isolation allowances which are granted according to the location of the locality in which they operate and which vary between 3-7% of the basic salary (Faturșnic et al., 2014). At the same time, it was pointed out that the advantages of the funding system in terms of predictability and efficiency of resource management are limited by the fact that funds between schools can be reallocated by budget rectification at the end of the year. (Faturșnic et al., 2014) In relation to maintenance and operating costs, the research reported that it did not take into account the fact that rural schools are less equipped and have a smaller number of students, but the spaces to be maintained are not considerably reduced. Another significant in the research is the that 39% of the schools surveyed reported that they do not receive additional funding from local authorities for goods and services. (Faturșnic et al., 2014). Furthermore, based on the case study conducted in the three schools, we want to offer some proposals to improve the funding system. Regarding basic financing, we can formulate the following opinions: although in terms of remuneration, the standard cost coefficients per student are quite comprehensive in terms of levels, specializations, urban or rural environment and other circumstances they operate on the basis of average salary levels and do not take into account some enormous differences in terms of staff training or the existence of classes with the number of students below the legal average. In order to calculate the level of basic funding for the years 2018 and 2019, we took into account the number of students from the school years 2017-2018 and 2018-2019 in the three studied school institutions. These staffing allocations can be found in the initial expenditure budgets each year. These initial budgets for staff salaries are calculated according to regulations taking into account the number of students, specialization and level of education. The number of students and the calculated initial budget based on the standard cost per student in the three educational institutions are presented in table no.3.

Table 3. **Number of pupils and initial budget of staff expenditure**

School	Year	Number of pupils	Initial budget (thousand lei)	Average funding/pupil (Thousand lei)
School1	2018	418	1809	4,327
	2019	437	1906,79	4,363
School2	2018	754	3225,35	4,277
	2019	685	4210,79	6,147
Kindergarten	2018	174	867,95	4,988
	2019	182	1202,13	6,605

Source: Authors

As can be seen in Table no.3, the number of students in the three educational institutions varies very little from year to year, but the initial budget shows a significant increase in 2019 in School2 and Kindergarten. This increase is probably due to the fact that funders have considered a higher standard value increase for national minority language education in 2019. At the same time, the school inspectorates have the right according to the law to redistribute the funds between the schools in the county based on the history of expenses. According to the experience School1 is included in the initial budget.

Another indicator analyzed in the case of the three educational institutions is over- or underfunding and their causes.

The funding method based on the standard cost per student taking into account the number of students and some indicators related to the condition of students has nothing to do with the number of staff and their level of training. These differences may result in over- or under-financing of educational institutions. As it has never happened that education staff do not receive their salaries, the financier has to supplement the funds allocated until the end of the year, so if we compare the final budgets allocated for staff costs, we can find out which schools are underfunded and which schools are overfunded. Underfunding or overfunding can be understood as a comparison of expenditure with initial core funding. (Whittington, 1994). The situation of underfunding or overfunding in the case of the presented educational institutions is presented in Table no.4. The underfunding or overfunding indicator was calculated as the ratio between the initial budget and total staff costs.

Table 4. **Overfunding and underfunding indicators in staff expenditure**

School	Year	Initial budget (thousand lei)	Staff expenditures (thousand lei)	Overfunding and underfunding indicator
School1	2018	1809	1332,25	1,35
	2019	1906,79	1670,29	1,14
School2	2018	3225,35	4259,15	0,75
	2019	4210,79	4990,54	0,84
Kindergarten	2018	867,95	1151,7	0,75
	2019	1202,13	1356,66	0,88

(Source: Authors)

These cases of overfunding or underfunding can be caused by the following factors:

a. The standard cost per student does not take into account either the level of professional training of teachers or their seniority, although there is a ratio of 1,485-1.5 between the highest and lowest basic salary, which creates a relatively large gap between teachers which creates a relatively large gap between the salaries of beginners and those with a teaching degree I and 25 years of experience. This gap deepens on whether we take into account the increases in the ratio of gross salaries between an employee with a teaching degree 1 over 25 years of age with a degree of merit and a beginner employee can reach a ratio of 1.88-2. In the real conditions of the existence of educational institutions such as School2 with experienced teachers and a high degree of professional training, the only solution to reduce staff costs is to increase the number of students in a group or class. In addition to these considerations, there is another factor in increasing staff costs in kindergartens due to the fact that, for a group of preschoolers in kindergartens with extended program, two teacher positions are the standard but the level of standard cost coefficient per student is 1, 83, calculated for average salaries. Because, as we have shown, there can be significant differences between institutions regarding the level of staff costs due to the composition of staff, which can have the effect of doubling the salary fund regardless of the number of students. The large differences between the staff costs at the schools presented may also be due to the fact that the number of auxiliary staff positions is not in relation to the number of students. In the case of School1 the number of auxiliary staff positions is 1.5, of which 0.5 position is vacant because there is no staff being an isolated area, with a number of students of 435, which means 0.0034 positions per student. At School2 there are 6.75 auxiliary positions for a number of 685 students, which represents 0.0988 positions per student, a figure three times higher than in School1.

b. At present, according to the legislation in force, the savings made by some institutions, such as the observed Kindergarten, in terms of salaries are redistributed at the end of the year, so in our opinion schools that make efforts to fit into the budget calculated on the basis of standard cost per student have no advantage over those that do not make these efforts because the registered savings cannot be used. Although the schooling plan approved by the school inspectorates determines the number of classes and the number of staff positions with which each school operates and that in the framework plans imposed by the laws the number of hours in a class is determined and the teachers' salary is decided by law it is required by law for school management to find solutions to fit into the allocated budget calculated according to the standard cost formula by putting a lot of pressure on them without them having the necessary real leverage to act, having no autonomy in hiring teachers or reducing the number of teaching hours in classes or negotiating salary based on performance. Framework law no. 153/2017 regarding the remuneration of staff paid from public funds on the basis of which the salaries of teaching and non-teaching staff are paid stipulates some very general performance criteria, such as improving professional training, professional knowledge and skills, quality, efficiency and effectiveness of activities, ability to work in a team, communication, discipline, resistance to stress and adaptability, the ability to take responsibility, integrity and professional ethics without the actual results of the activity being measured and included in the salary. In the analysis of current maintenance and operation expenses, the financing received by the three educational institutions based on the standard cost per student is presented in Table no.5 where we may observe the number of students, the value of the initial budget and the average funding of cost/pupil.

Table 5. **Number of pupils and initial budget of maintenance and operation**

School	Year	Number of pupils	Initial budget (thousand lei)	Funding cost/pupil
School1	2018	418	169	167,2
	2019	437	182	182,2
School2	2018	754	162,8	309,89
	2019	685	160	293,18
Kindergarten	2018	174	30	74,12
	2019	182	37,9	80,8

(Source: Authors)

The differences between the values allocated in the initial budget are due to the fact that the local authorities in the case of the School2 and the Kindergarten retain the amounts from the basic financing because they pay some utilities based on contracts concluded with providers for instance natural gas, firewood, etc. This local authority provides additional funding in return. At School1 complementary financing is not provided at all for maintenance and operation expenses or goods and services because the material situation of the commune does not allow this. With regard to complementary funding, we can say that some local authorities do not have the resources or simply neglect the real needs of educational institutions and do not allocate complementary funding at all or at a very low level. This means that some essential expenditure cannot be incurred because funds cannot be allocated for these types of basic financing expenditure, which sometimes results in illegal spending of funds or non-execution of expenditure. These types of expenses are: expenses for repairs, travel expenses, expenses for the purchase of inventory items such as second-hand school furniture, endowments with teaching equipment such as inventory items, emergency expenses, investment expenses, school transport expenses, expenses with the maintenance and operation of school minibuses, expenses with the obligatory medical examination of the staff, expenses with health and safety at work. In these situations, especially when some of these expenses are mandatory by law, the directors are put in a situation where they have to pay fines or pay costs from the basic financing. In our opinion, the fact that some local authorities do not provide complementary funding at all, or to a very small extent, explains the very degraded state of the material base of some educational units, especially in disadvantaged areas, mostly rural, which deepens the gap between the urban elite and provincial schools. Some educational institutions are categorized by the authorities as located in urban areas and being their rounded structures in cities, but in reality, these units are located in rural areas with all the specific characteristics and known disadvantages presenting and stronger lagging behind in terms of the material base even compared to those communes that have a stronger financing capacity and access to European funds. Regarding the investment expenses, the three educational institutions did not have such expenses in their budget, all the modernizations being made from the budget of the local authorities. Social assistance expenditures represent the following situation: The school1 does not have such expenditures because the financial circumstances of the local authorities did not allow any such expenditures. In School2, merit scholarships and social scholarships were awarded. In the studied Kindergarten no social aid was granted. In the following part we would like to offer solutions to improve the method of defining the standard cost per student.

To remedy the existing situation, we can propose the following measures:

- Taking into account the differences between educational institutions in terms of their infrastructure
- Taking into account the fact that the educational offer to remedy learning deficiencies is financed from the basic funding when establishing the correction coefficients
- Taking the socio-economic environment into account
- Designing a financing system that stimulates quality through indicators that capture results and progress
- Public debate on the value of the standard cost, based on real needs
- Ensuring greater autonomy in reaching the funds from basic financing
- Introduction of modern funding models as in higher educational levels, based on grants and performance indicators
- Partial coverage of the complementary financing by the state budget law from amounts deducted from VAT
- Designing the financial flow in a way that avoids the delayed financing that does not allow the fulfillment of the legality requirements in the acquisition process
- Replacing the allocation per student with the allocation per teacher
- Decentralization of funds at the unit level

At the organizational level:

- Granting a higher autonomy in spending the allocated funds, real decentralization
- Much higher selection criteria for the school manager

- Implementation of a functional internal managerial control

At the level of the legislative framework:

- Creating the legislative framework for the existence of optimal preconditions for determining the value of the standard cost per student:
  - the use of electronic database platforms to obtain information on the composition of human resources
  - implementation of an efficient platform for obtaining real information on the material base and the existing infrastructure in order to correct the standard cost values
  - introduction of a correction coefficient at the value of the standard cost depending on the composition of the staff
  - introduction of a standard cost correction coefficient depending on the state of the existing infrastructure, the number of buildings and classrooms in which the school operates
  - adoption of methodologies for the standardization of auxiliary and non-teaching positions to avoid over- and under sizing the number of positions for these categories of staff
- Adoption of programs that offer the possibility to remunerate educational activities to remedy learning disabilities granted to children from at-risk families, remuneration that is conditioned by performance criteria measured by passing national exams or national assessments
- Inclusion in the basic financing of the expenses for the settlement of the teaching staff's niece
- Allowing the use of resources saved at the end of the following year
- Decision of the minimum level of mandatory complementary financing from local authorities in order to avoid discrepancies between the level of financing especially for goods, services and investments
- Allowing the expenditure of basic financing for other types of expenditure in the title of goods and services
- Introduction of the minimum level of performance, merit, study and social scholarships granted by local authorities to students in order to avoid discrimination
- Providing school minibuses at the level of needs or subsidizing at a 100% level the public transport of students
- Introduction of possibilities to access funds for professional development based on project competitions

At the organizational level, we can say that there is a management crisis in the pre-university education system created by the legislation that is too permissive in terms of knowledge in management. Creating a legislative framework in which the selection criteria of managers of educational institutions would include higher requirements for knowledge in educational and financial management by attaining at least a postgraduate master's degree, as well as minimum legal knowledge would allow a higher degree of autonomy in fund management while maintaining the criteria of transparency and accountability. By amending the legislation in order to allow the use of the resources saved in the next financial year, possibly with the agreement of the senior authorizing officers, it could have the effect of motivating the management to save on some types of expenditure. Currently, the internal managerial control system only exists on paper, being non-functional. In this sense, schools could implement new ways of measuring and managerial control by adopting measurable performance criteria.

Creating the necessary preconditions for determining the standard cost
To determine the funds allocated to staff costs the first step should be to determine the staffing needs in each school year. In terms of teaching staff based on framework plans and teaching rules, the need for auxiliary staff based on common regulations and non-teaching staff taking into account the number of buildings, classrooms, the state of the material base and the territorial administrative location. While in the case of teaching staff, the revision of the number of positions is done annually and currently in the other categories the number of positions changes only in a negative sense and is very differentiated from one school to another because the regulations for these categories staff are no longer respected, they are very outdated while working conditions have changed radically. As an example, we can show that the employment of a librarian who was standardized for one position for 10,000 volumes and 900 reader sheets is no longer actual, since the sources of information have completely changed for students and teachers, with 90% using the internet instead of books. In the case of accountants following the introduction of new regulations on monthly, quarterly and annual financial reporting as well as online reporting of financial statements in the Forexebug system, the workload has multiplied, obviously creating a need to revise the regulations. In step 2 after determining the optimal number of positions and approving then, it would be possible to collect data to determine the composition of the human resources. In this sense, the common database for the entire system called Edusal could be used. Edusal is a computer program in which, according to Order 4576/2011, the salaries of the Romanian education system are calculated and in which all staff is included with all relevant data such as level of training, specialization, seniority, seniority, bonuses, allowances , merit grades and others, on the basis of this database, an average monthly salary could be calculated for each institution in order to determine the necessary salary fund for each educational institution at the beginning of each school year. This average salary relative to the average salary in the education system could represent a correction coefficient that would increase or decrease, depending on the particularities of each institution, the volume of funds allocated by the standard cost per student method currently existing, customizing the allocation of funds according of real needs.

In determining the standard cost per student for goods and services, we propose to collect data on a material basis and its condition as well as the existing infrastructure to correct the allocated funds because it is obvious that maintaining a degraded infrastructure is much more expensive than maintaining a high-performance one.

With regard to staff costs, there are currently no provisions for the remuneration of overtime by teachers to remedy the learning situation of students at risk or with special educational needs. In this sense, we could propose the introduction of financing projects for these activities in which the performance indicators are the results of national evaluations. Teachers' shuttle expenses are reimbursed from additional funding from local government revenues. As the financing capacities, especially of the communes located in disadvantaged areas, are much lower than in the cities or municipalities, these poorer communes do not settle or delay the value of the subscriptions. Thus, this financial aid cannot produce its effects and achieve the goal of making disadvantaged areas more attractive to teachers. Our proposal is to include these expenses in the basic funding. In terms of funding for goods and services, as I have shown, there are many schools around 40%, especially in disadvantaged areas that do not receive additional funding at all and therefore cannot make expenses required by law such as medical examination of staff or the purchase of inventory items. To remedy this situation, we can propose two solutions: widening the scope of basic funding or imposing the minimum level of complementary funding from local authorities by law. Regarding the scholarships granted by the local authorities, the value of these scholarships depends exclusively on the decision of the local council and their level varies greatly from one locality to another, and in some isolated localities with very low incomes they are not paid at all, thus creating a very big disadvantage even in the most affected areas. Our proposal is to impose a minimum level for each type of scholarship by law, thus reducing the social gap between the different areas. Providing school transport or subsidizing 100% of public transport for students would facilitate the differences caused by the existence or non-existence of school minibuses because the transport of students with these minibuses is free and public transport is currently subsidized only in proportion of 50 %. Expenditures on professional training of employees are included in the basic funding but in reality, very little is spent for this purpose because maintenance and operating expenses have priority.

Conclusions

As funders of education systems are constantly torn between constraints on limited available resources and the growing needs of education systems, the ways in which education systems are funded show a wide variety. Accepting that the highest possible level of education of a nation brings prosperity and economic development, we have considered that the main concern of policy makers should be education. Starting from the international data of the funding level, from the elements that influence the expenses and from the experience regarding the case study, we have centralized the possible measures to improve the financing process. Our objective was to propose measures for decision-makers in order to guide them in adopting the legislative and methodological framework for optimizing the level of expenditure in accordance with the criteria of transparency, efficiency, effectiveness and accountability. In order to achieve this objective, we presented an analysis of the international and Romanian financing systems, taking into account the most important criterion, that of social equity, in which each individual has relatively equal opportunities in accessing the education system. We have outlined some steps that entities should take to optimize the level of funding for the system to achieve this goal. We hope that these solutions will give some food for thought to decision-makers and management in order to find the most appropriate solutions and a perspective in the financing process of the education systems, reducing the tension between the real financing needs and the available resources.

After completing this study, the question remains whether we can say that funding and spending on state-owned pre-university education are correlated and that the tension between the two is completely reduced? By presenting this model, we do not assume its completeness by accepting that it can be further developed with new proposals.

This model has its limitations, the most relevant of which is that it has not been tested in reality, which is not possible due to legislative reasons.

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The Integrated System of Auditing the European Funds for the Romanian Health System

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Abstract: *The health system represents one of the most important fields of the global economy. Its proper functioning is essential to ensure the well-being of citizens. In the European Union is currently under way the third health program, being allocated European funds to each country, based on operational programs. Non-reimbursable financial instruments, European funds, once accessed, must be audited, in order to examine the legality of the transactions effectuated. At the level of Ministry of Health exists an own audit structure, establish on the basis of internal regulations. This article is focused to highlight, through a deductive approach, the actual situation of Romanian health system, as well as the importance of audit missions of European funds. It is described the integrated system of auditing the European funds and the auditor's responsibilities for a quality audit engagement.*

Keywords: *Health system, European funds, Romania, European Union, audit of European funds.*

1. Introduction

Romania's integration into the European Union supposed a series of benefits for our country, especially regarding the financing of activities carried out by public institutions or economic agents, by submitting projects to attract European funds. Thus, the public institutions can invest the accessed funds in projects of national interest which aims different areas of activity and economic agents can develop and increase the competitiveness of the market in which they operate. Once accessed the European funds, appears the obligativity to audit them, in order to examine the legality of the transactions effectuated and the correct functioning of existing control and management systems.

The audit of European funds represents an actual subject and of major interest both for national authorities and for actual or potential beneficiaries of European funds. These funds, obtained from the European Union, can be used only in strict compliance with applicable national law and European regulations, as well as the fulfillment of the provisions of the contracts concluded between the institutions responsible for the administration of European funds and their beneficiaries, without harm to the budget of the European Union. Any deviation from the correct use of European funds is notified to penal research bodies by the Audit Authority.

This article aims to analyze the audit of the European funds allocated for Romanian health system because their proper management and use is ensured by applying audit

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actions, realized by authorities and competent professional bodies, with the main objective of defending the financial interests of the European Union. Currently, in Romania, is applied the National Health Strategy 2014-2020, considered by the Ministry of Health a tool meant to stimulate the progress and development in the priority areas of the Romanian health system. Referring to the medical field, are presented the organizational structure of the internal audit within the Ministry of Health, as well as the main steps followed by internal auditors, by respecting both the Regulation of Organization and Functioning of the Ministry of Health and internal procedural rules. Are presented also the steps that an external auditor must follow them in order to realize an audit mission on European funds.

2. Research methodology

The research methodology aims a deductive approach which highlights the theoretical perspective regarding the audit of European funds for the Romanian medical system. As research method can have mentioned the documents analyze which consists in going through the specialized literature in order to identify the significance of the audit concept in the vision of the specialists in the economic field and its importance in the projects with European financing, study of national legislation and European regulations in force. Also, the analyze had in the foreground a highlight of the current state of the Romanian health system, both from the perspective of European bodies (an analysis of the Euro Health Consumer Index) and the national ones (data provides by the National Institute of Statistics, through the Statistical Yearbook of Romania). Were accessed, in addition to books and articles in the field, European regulations and national legislation and web pages of the World Health Organization, European Commission, Ministry of Health, Ministry of European Funds, in order to collect information specific of the chosen theme.

3. Literature review

The current state of knowledge consists in presenting the relevant aspects of the following concepts: health system, European funds and audit of European funds.

The World Health Organization (WHO) has a dual perspective on the health system. On the one hand, the health system represents the set of actions whose main purpose is to promote, restore and maintain health and, on the other hand, it refers to the people, institutions and resources committed, in accordance with established policies, to improving the health of the population through a variety of activities. The national health systems play, therefore, an important role because its contribute to improving health and have a positive impact on people's lives and well-being, being one of the main sectors of the world economy. (OMS, Rapport 2000) The values who govern the health systems, according to the Council Conclusions on Common values and principles in European Union Health Systems from 2006 are universal access, quality care, equity and solidarity.

At the level of European Union is currently under way the third health program (2014-2020), whose legal basic is EU Regulation no. 282/2014. It has four specific objectives, according to information provided by the European Commission:

a. Promoting health, preventing disease and encouraging the adoption of healthy lifestyles, by including health issues in all policies;

b. Caring for citizens and protecting them from possible cross-border health threats;
c. Involvement in creating new more efficient and sustainable health systems;
d. Faster access to the best quality healthcare for European Union citizens.

The field of health is a main vector for the regional development of each country. Thus, for this sector, funding is allocated, in the base of the European Structural and Investment Funds (ESI), for investments through: European Regional Development Fund (focuses on medical infrastructure and equipment, e-health services) and European Social Fund (envisages funding for activities on active aging, health promotion, resolving health inequalities, supporting health personnel). Funding from ESI funds helps, to a large extent, to meet the priority objectives in the health sector.

The European funds represents non-reimbursable financing instruments made available to European Union countries, in order to reduce the economic and social development gaps that exist between them. In case of Romania, according to Ministry of European Funds, the principal financing canal of Operational Programs is given by European Structural and Investment Funds (ESI).

The correct use of European funds allocated to the medical field is ensured through control and audit activities undertaken both at national level (Audit Authority) and at European level (European Court of Auditors and European Commission). These institutions have as principal objective to watch the financial interests of the European Union and to sanction any deviation from the correct management of European funds. During the performance of audit missions, the auditor, through specific tools, must observe any deviations that affect the use of European funds and eliminate them, appealing to national and European authorities or through the awareness of the parties regarding the management of these funds.

In the specialty literature, for audit, we find numerous definitions offered by the specialists in the economic field. The audit represents a professional examination of information carried out by a competent and independent person, in order to formulate a responsible and independent opinion by reference to a certain quality criterion. (Toma, 2012) In the book Audit – An integrated approach, the authors Arrens and Loebbcke, consider the audit a process through which the audit evidence is collected and analyzed, in order to establish their compliance with certain defined criteria. Also, the audit is defined as a process carried out either physic persons or by legal persons authorized, called auditors, by which are examined and evaluated, with professionalism, through specific procedures, information about a particular entity, in order to collect audit evidence, through which formulates a responsible and independent opinion, included in the audit report. (Neamțu & all, 2012).

Having as a starting point the meanings of the audit, in general, can also be outlined a definition of the audit of European funds. Thus, this represents a professional examination of all the information collected from the European funds management or from the application of projects with European financing, based on them, drawing up a report by reference to the procedures agreed by the management structures.

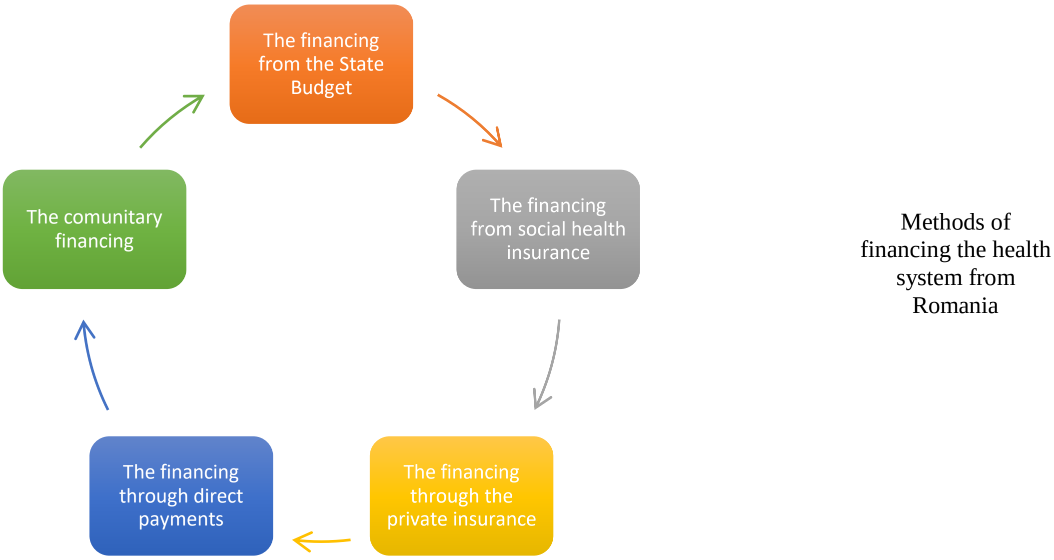
In case of audit missions of European funds, are aimed, through approfundated verifications, a series of aspects which refer to follows: (Curtea de Conturi, 2017)

- The respect the necessary requirements of accreditation / compliance / designation from the existing control and management structures;
- Proper preparation of statements of expenses which are addressed to the European Commission;
- The legality of effectuated transactions;
- The correct functioning of existing control and management structures;
- The render a real and credible image of the financial accounting events.

4. The Romanian health system – actual and perspectives

Every country must to have available a medical system which ensure the citizens state of health, fundamental component into increase the quality life and population development. The Romanian health system is based on a social health insurance model in which the State has the most important role. The general governance of the system is the responsibility of the Ministry of Health, while its administration and regulation represents the responsibility of the National Health Insurance House (CNAS). Regarding the financing the health system, there are five methods of financing, as can be seen in the figure below. Each form of financing the health system from Romania has its own characteristics and limits.

Figure 1. **The health system financing**



The financing from the State Budget refers to the funds collected from general taxes and dues. Although it has general coverage, there are situations where these funds are insufficient. The financing from social health insurance is formed from mandatory contributions of employees and employers. Regarding the financing through the private insurance, this is guaranteed by non-profit insurance companies and constitutes, certainly, an income source for health field. The financing through direct payments refers to payments realized directly between consumers and suppliers of medical services, without be necessary the involvement of financial intermediary. The last category, community financing, is based on the cooperation between the community's members.

The actual state of Romanian health system is analyzed both from international perspective (based on the Euro Health Consumer Index provided by the Health Consumer Powerhouse, component of Swedish health policy, specialized in comparing health systems in Europe), as well as based on data published by the national bodies.

4.1. The Romanian health system from international perspective

The actual state of public health system from Romania can be analyzed through Euro Health Consumer Index which is utilized in order to determine the performances of the health systems from European countries. The purpose of this index is to highlight the consumer's interests regarding the medical services. In order to realize this objective, the index is based on 46 indicators which covers 6 major areas: patient rights and them informing, the access to medical services, the results recorded by the medical system, the range and extent of services provided, the prevention and the access to the pharmaceuticals.

Table 1. **Euro Health Consumer Index at the level of 2018 in European countries**

Euro Health Consumer Index 2018								
Country	*SUBDISCIPLINES*						**Total score**	**Rank**
	Patient rights and them informing	Access to medical services	Results of system	Range of services provided	Prevention	Access to pharmaceuticals		
Switzerland	113	225	278	99	95	83	893	**1**
Netherlands	125	175	256	125	113	89	883	**2**
Norway	125	138	278	120	119	78	857	**3**
Denmark	121	175	267	120	95	78	855	**4**
Belgium	104	213	244	115	101	72	849	**5**
Finland	113	150	278	120	101	78	839	**6**
Luxembourg	100	188	244	109	95	72	809	**7**
Sweden	117	113	267	125	101	78	800	**8**
Austria	108	175	244	104	89	78	799	**9**
Ireland	121	188	222	104	107	56	797	**10**
Latvia	100	138	178	68	77	44	605	**30**
Bulgaria	79	200	167	47	60	39	591	**31**
Poland	79	138	167	57	89	56	585	**32**
Hungary	79	113	156	78	95	44	565	**33**
Romania	**96**	**175**	**133**	**52**	**54**	**39**	**549**	**34**
Albania	67	175	156	42	71	33	544	**35**

Source: Björnberg A. and Phang A. Y., Euro Health Consumer Index 2018, Health Consumer Powerhouse, 2019

In the table above are presented information from Euro Health Consumer Index Report from year 2018, the report being published on February 25, 2019. In analyze are evaluated 35 European countries, each one with a score obtained by summing the scores related to each interest area. Depending on the registered score, to every country is assigned a rank, from 1 to 35. The maximum score to which each country reports is 1.000 points.

According to the latest published report, the first three places in the hierarchy are occupied by Switzerland, Netherlands and Norway. Romania is on the 34th place (with 549 points), being sub classed only by Albania, at a difference of 5 points. Our country has the lowest scores in almost all areas analyzed, less regarding the patient rights and them informing, respectively the access to medical services. This hierarchy is quite worrying, so a series of measures should be taken in order to improve the situation of the Romanian health system and thus, our country can obtain a higher score that will ensure it a better rank and, implicitly, a different position in ranking.

4.2. The Romanian health system from national bodies perspective

The analysis of the Romanian medical system presents the evolution of the number of existing sanitary units, between years 2015-2018, at national level, as well as the situation of the medical-sanitary personnel related to the same period.

Table 2. **Number of health units in Romania**

Health units	The years analyzed			
	2015	*2016*	*2017*	*2018*
Hospitals	554	567	576	515
Other units assimilated to hospitals offering only day hospitalization services	-	-	-	161
Integrated outpatient clinics and specialized	458	469	461	473
Polyclinics	143	146	144	154
Medical dispensaries	187	187	184	185
Health centers	18	17	15	17
Mental health centers	86	80	80	82
Multifunctional health centers	-	10	10	9
Dialysis centers and working points of dialysis centers	-	-	-	69
TB sanatoriums	2	2	2	2
Balneary sanatoriums	10	11	10	10
Preventive centers	2	2	2	2
Social medical units	65	67	66	67
Diagnostic and treatment centers	30	30	26	24
Specialized medical centers	626	667	692	670
Medical offices for general medicine	770	752	776	726
School medical offices	1.735	1.878	1.875	1.902
Student medical offices	62	53	54	54
Family medical offices	11.397	11.274	11.055	10.944
Civil medical societies	149	194	211	243
Dental offices	14.763	14.879	15.095	15.203
School dental offices	428	440	442	454
Student dental offices	43	36	38	38
Civil medical dental societies	175	192	221	246
Specialized medical offices	10.332	10.754	11.079	11.382
Specialized civil medical societies	440	443	468	463
Pharmacies	7.758	7.802	7.945	8.147
Pharmaceutical points	1.727	1.693	1.755	1.806
Pharmaceutical warehouses	272	259	247	243

Health units	The years analyzed			
	2015	*2016*	*2017*	*2018*
Medical laboratories	3.856	4.009	4.077	4.280
Dental equipment laboratories	2.217	2.263	2.198	2.243
Blood transfusion centers	41	42	43	43
Other types of medical offices	693	749	737	744
Total health units	**59.039**	**59.967**	**60.584**	**61.601**

Source: National Institute of Statistics, Statistical Yearbook of Romania 2019

The data in the table above present the health units from Romania in the period 2015-2018. Them evolution is ascending, the largest growth being recorded in 2018, when the number of sanitary units increased by 1.017 units, compared to the previous year. The dental offices have the largest share in the total number of sanitary units (24,68% in 2018), these being followed by specialized medical offices (18,48% in 2018) and family medical offices (17,77% in 2018). The hospitals represent, at the level of year 2018, only 0,84% from the total number of sanitary units, according to the data published by National Institute of Statistics of Romania. Regarding the medical-sanitary personnel, in the same interval of time, the situation is as follows:

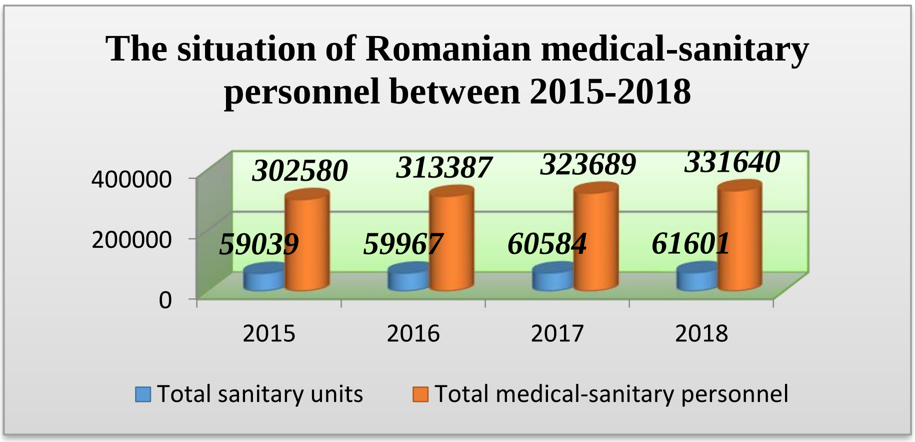
Table 3. **The situation of medical-sanitary personnel in Romania between 2015-2018**

Type of medical-sanitary personnel	Analyzed interval			
	2015	***2016***	***2017***	***2018***
Doctors	56.110	57.304	58.583	60.585
Dentists	15.556	16.442	15.653	16.457
Pharmacists	17.135	17.180	17.833	17.620
Other types of health personnel with higher education	17.749	18.959	20.164	21.404
Average sanitary staff	133.173	137.246	142.103	145.317
Auxiliary sanitary staff	62.857	66.256	69.353	70.257
Total	**302.580**	**313.387**	**323.689**	**331.640**

Source: National Institute of Statistics, Statistical Yearbook of Romania 2019

Based on the data published by National Institute of Statistics in 2019, there is an upward trend of medical-sanitary personnel. The average sanitary staff have, every analyzed year, the largest share in total medical-sanitary personnel, followed by auxiliary sanitary staff and doctors.

Figure 2. **The situation of Romanian medical-sanitary personnel between 2015-2018**



Source: National Institute of Statistics, Statistical Yearbook of Romania 2019

Currently, in Romania, is applied the National Strategy of Health 2014-2020, document meant to stimulate the progress in the priority sectors of the Romanian health system. This strategy aims three priority areas, respectively public health, health services and transversal measures for a health system sustainable and predictable (The National Health Strategy 2014-2020, 2014), for each area being established a series of specific objectives.

About the application of the National Strategy of Health 2014-2020, regarding the improvement of the primary health care and the community care, it also talks about in the publication of the European Commission - State of Health in the EU. The document published in 2019 presents statistics realized through the processing of the data taken from Eurostat database at the level of the year 2017. According to the European publication, the expenses allocated for primary medical assistance and outpatient have a very small proportion, being below the European Union average of 30%. In the same time, our country is below the European Union average in the prevention chapter, the proportion of the expenses being only 1,7% from the total of the expenses allocated of health, the average of European Union reaching 3,1%. The position of Romania in European Union regarding the financing of medical assistance is oriented to hospital services (in this category are included curative and recovery medical services in health units), according to the statistics of Organization for Economic Co-operation and Development (OECD) from 2019.

Currently, the absorption rate of Romania's European funds is 41%, the same percent being registered also by Bulgaria. Romania is sub classed, at very small difference, by Malta (40%), Italy, Slovakia and Spain (38%) and Croatia (36%). The European Union average is 46%.

For Romanian health system is being prepared the first Operational Health Program, realized through the European funds. According to the information published on the official site of Ministry of European Funds and articles from local press (the Bursa newspaper), this operational program is multifold and it will unfold between 2021-2027. Thus, beginning with 2021, 4.1 billion euros will be allocated for the Romanian health system. The program includes a various series of objectives, the purpose being to improve the current health system.

Table 4. **Objectives - Operational Health Program from Romania (2021-2027)**

The content of the Operational Health Program from Romania (2021-2027)
1. Construction of regional hospitals (the phase II of the project with 60% co-financing provided by the European Union). 2. Development of the health infrastructure. 3. Equipping the sanitary units with medical equipment’s and emergency facilities for operating blocks, intensive care unit sand imaging. 4. Training for family doctors and those who work in schools. 5. Infrastructure investments for oncological diseases, myocardial infarction or AVC. 6. Training for medical staff in the use of modern medical equipment. 7. The invigorating the area of medical research. 8. The digitization of Romanian health system.

Source: information taken from site of Ministry of European Funds

5. The Romanian medical system in the context of the pandemic caused by Covid-19

Covid-19, disease caused by a new type of coronavirus, was first discovered in the Chinese city of Wuhan in December 2019. It has spread at a rapid pace to other areas of China and around the world, thus, in the first month of 2020, isolated cases were identified in European Union countries. One of the most affected European countries was Italy, which, at the end of February 2020, saw a substantial increase in the number of cases detected, especially, in the northern areas of the country. In March 2020, all the states in the European Union confirmed cases of Covid-19. On March 11, 2020, the World Health Organization declared a global pandemic.

According to the Romanian National Institute of Public Health, the first case of Covid-19 was identified in our country on February 26, 2020, in Gorj County. Since then, the number of diseases has increased and reached the threshold of 26,970 cases on June 30, 2020, according to official data. There are 890 people in institutionalized quarantine and another 61.840 are under medical monitoring, in isolation at home. Worldwide, as of June 30, 2020, 10.273.001 cases have been reported.

The European Commission has set out a set of measures in response to the Covid-19 crisis through which be offered facilities for European Union member states in order to support actions taken at national level to prevent and combat the effects of the pandemic. Among the measures initially taken, following the amendment of European regulations, we find the following: The European Commission postponed the recovery of amounts from Member States for accounts submitted in 2020 until the closure of programs, so that money is invested in combating the pandemic crisis, investment in products and services, through the European Regional Development Fund (ERDF), needed in times of crisis of health field.

At the national level, in a press release published on June 12, 2020 on the website of the Ministry of European Funds, it is specified that funds can be contracted for Covid-19 hospitals. The total value of the funding is 350 million euros (for the endowment with medical equipment and protection equipment) and is provided by the Large Infrastructure Operational Program (POIM), and projects can be submitted between

May 15, 2020-September 30, 2020. The data available, at this moment, indicates that 16 funding applications have been submitted, whose total amounts to EUR 71,6 million. The most projects were submitted by hospitals in Bucharest and Cluj (four applications from each city), followed closely by Craiova (three applications submitted). The project with the highest value, respectively 9,99 million euros, was submitted by the National Institute of Infectious Diseases „Prof. Dr. Matei Balș" from Bucharest and aims to equip the institute with medical equipment in order to improve the management capacity of Covid-19 and the crisis generated by it.

Also, the Ministry of European Funds allocated, for medical equipment and endowments related to the national emergency system, 682 million euros, by financing a project of the General Inspectorate for Emergency Situations. In total, the value of European funds supporting the Romanian medical system received in March 2020, following negotiations with the European Commission, is 1,16 billion euros.

6. The integrated system of auditing the European funds

The internal public financial audit system from a country is formed of the internal audit and the external audit of public institutions. The cooperation between the two structures arose from their need to use each other the results of their audit work. In year 2005, in order to support the idea of a close collaboration in the field of audit, a Protocol of cooperation and collaboration for the audit activity in the public sector was concluded, the involved parties being represented by the Romanian Court of Accounts (having the quality of supreme audit institution) and the Ministry of Finance (as a body of the central public administration). This protocol was concluded following proposals launched by international bodies such as the European Commission, the International Organization of Supreme Audit Institutions (INTOSAI) and SIGMA - an initiative of the European Union, in partnership with the Organization for Economic Cooperation and Development. Through the concluded Protocol, the parties considered the following objectives: collaboration in the methodological field of public audit, coordination of audit plans in the public domain in Romania, exchange of information ensured throughout the audit and the need for unitary professional training of auditors in order to realize the planned objectives.

The protocol obtained an important validation when its component elements were included in the Peer-Review Report prepared by SIGMA on the Court of Accounts of Romania, in 2005. It should be noted that, although there is some compatibility between the two types of audit, the work carried out by internal and external auditors is based on different international standards. Therefore, from the perspective of the external auditor, in the project of cooperation and coordination, the provisions must be designed in compliance with international external audit standards (referring to International Standard on Auditing 610 – "Using the work of internal auditors") and taking into account how the public sector perceives the application the principles that govern this standard. The integrated audit system only exists if this protocol is reconsidered and implemented.

For the development of Operational Programs, at the level of each ministry involved, Internal Audit Units were implemented, whose methodological coordination is performed by the Central Harmonization Unit for Public Internal Audit, an institution with well-defined attributions on the side of European funds. If, in Romania, the Central

Harmonization Unit for Public Internal Audit, the Internal Public Audit Unit and the Audit Authority are institutions with an important role in conducting the audit, at European level, the external audit institution is the European Court of Auditors, which contributes to financial management of European Union funds. Therefore, all the regulations which ensure the connection of the institutions mentioned above outline the integrated audit system of European funds.

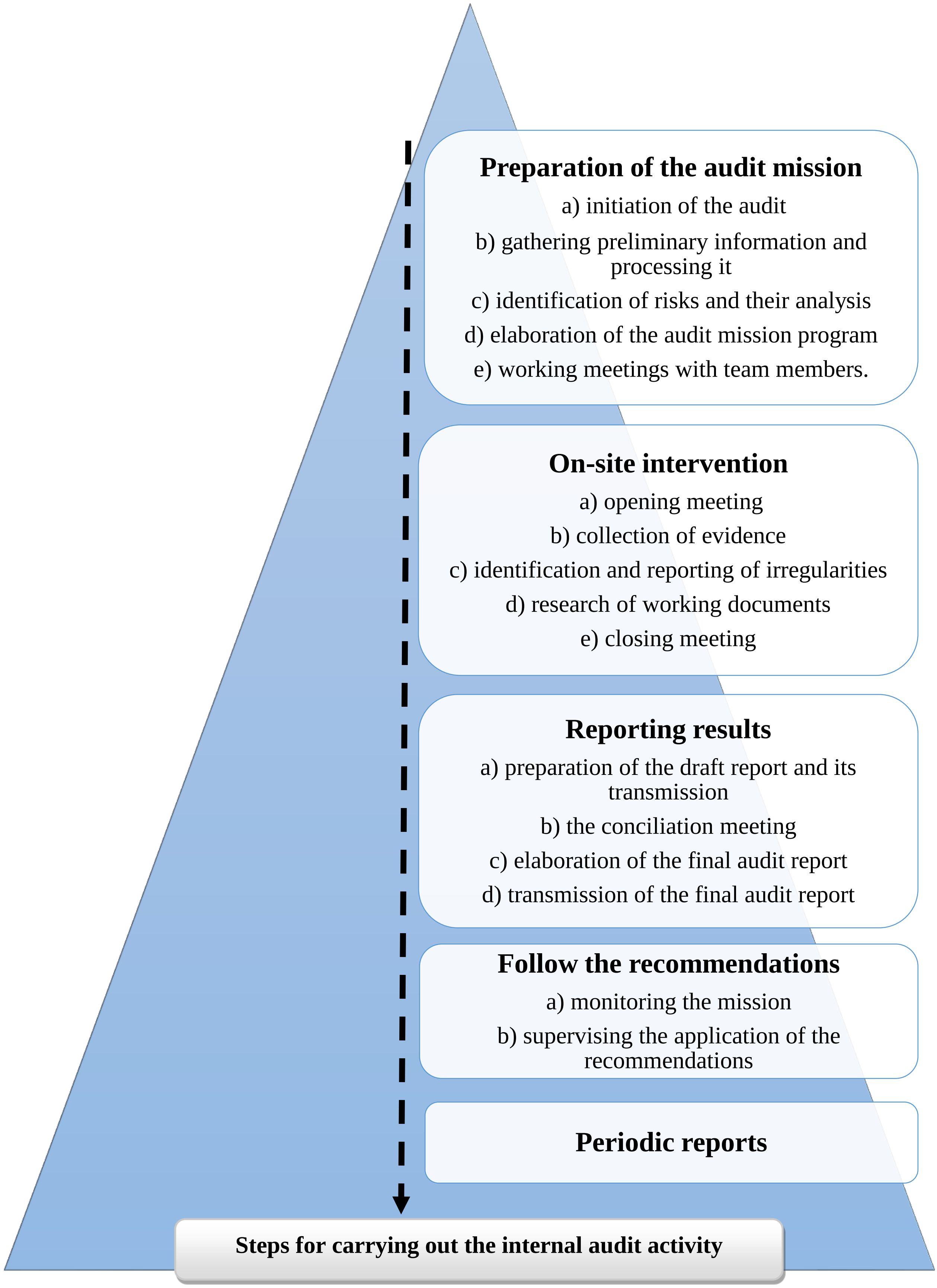
The internal audit, independent and objective activity that provides assurance to the management that the internal control systems work efficiently, is organized within the Ministry of Health at the level of the Directorate - Audit Department, a structure directly subordinated to the Minister of Health. Both the internal auditors and the Audit Department have a number of responsibilities, among which we find the following:

Internal auditors	Audit Department
• They are independent of the other departments or employees of the Ministry of Health, reporting directly to the Minister of Health; • They are not involved in the activities carried out by the Ministry and do not present executive or managerial functions, except for those aimed at managing the internal audit activity; • Communicates any issues regarding the use of European funds, identified during the audit mission; • In the case of audit activities for European funds, auditors from the Audit Authority may also take part; • The auditors from the Ministry of Health can carry out the audit process in partnership with other public institutions, in case a more adequate use of the resources destined for the audit is required.	• Prepares both the methodological norms specific to the Ministry of Health, and the draft annual public internal audit plan; • Prepares the Annual Report of the Public Internal Audit activity; • If the auditors' suggestions are not followed by the management of the audited entity, it shall notify the Central Harmonization Unit for Public Internal Audit; • Informs the head of the audited structure and the person responsible for internal control at the time of notification of irregularities or possible damages.

The internal audit activity is based on certain stages, as follows (Ghiță et al., 2009):
1. Preparation of the audit mission;
2. On-site intervention;
3. Reporting the results;
4. Monitoring the implementation of the offered recommendations;
5. Regular reports to determine the extent to which the internal auditor has contributed to improving the activity of the audited structure.

Each of the above stages has its own procedures to follow. These are highlighted in the figure below:

Figure 3. **Steps for carrying out the internal audit activity**



Source: own processing according to Ghiță et al., 2009:428

The integrated system of auditing is composed of the internal audit and the external audit of public institutions. The first part of this section focused on internal audit and its stages. Regarding external audit, it is important to know the purpose of the audit engagement and what procedures can be applied to projects with European financing.

Carrying out the audit mission requires that the auditor to apply a series of concrete procedures, in order to collect audit evidence, which form the basis for the final opinion of the auditor. The selection of audit evidence is done in compliance with the International Audit Standard 500 "Audit Evidence", which states that the evidence must be adequate and sufficient. Audit procedures (Oprean et al., 2007) refer to a series of clearly established and detailed instructions that the professional must follow in order to obtain audit evidence.

The need to carry out the audit arises from the desire to increase the reliability of information on the work carried out or in connection with the management and use of European funds. Another important aspect for European funds projects is to check the eligibility of expenses. In order for an expense to be eligible, it is necessary to comply with the provisions of Government Decision 399/2015, with subsequent amendments and completions. The document "Guidelines on accessing funding under the Human Capital Operational Program 2014-2020", available on the website of the Ministry of European Funds, lists the conditions for an eligible expenditure:

- Not to represent the object of other financing from public funds, except for the provisions of article 7 letter b) of the Government Decision no. 399/2015 on the rules for eligibility of expenditure incurred in the framework of operations financed by the European Regional Development Fund, the European Social Fund and the Cohesion Fund 2014-2020;
- To be justified by documents of probative value issued in accordance with the provisions of national and / or Community legislation, on the basis of which these expenses can be audited and identified;
- To be in accordance with the provisions stipulated in the contract or financing order concluded by the managing authority or by the body responsible for the implementation of the financial instrument;
- To be in accordance with the provisions of the legislation in force, applicable at national and European Union level;
- be reasonable, justified and respect the principles of sound financial management;
- To comply with the provisions of the applicable European Union and national legislation;
- To be registered in the beneficiary's accounting, in compliance with the provisions of Article 67 of Regulation (EU) no. 1303/2013.

Based on a project from the Operational Program for Human Capital (2014-2020), we will exemplify the procedures and steps that the external auditor must follow in order to examine the eligibility of expenditures.

POCU Project - "Treatment medical services of people infected with HIV/SIDA"

The main activity of the project financed from the European Social Fund through the Human Capital Operational Program 2014-2020 is represented by the settlement of expenses incurred for the early treatment of people infected with HIV / SIDA, included in the National Program for prevention, surveillance and control of HIV / SIDA patients, carried out in the current year. The expenses with the insured treatment between January 1, 2015 - December 31, 2018 were requested for reimbursement.

Table 5. **Presentation POCU Project**

General objective	**Improving access to low-cost, long-term, high-quality health services**
Specific objective	Increasing the number of beneficiaries who can access health programs in the form of treatment for people who have come in contact with the HIV / SIDA virus.
Target group	People infected with HIV/SIDA and receiving early treatment. According to the data, a total of 10.800 people received treatment between January 1, 2015 – December 31, 2018.
Project implementation duration	January 1, 2015 - July31, 2019
The total eligible amount requested for reimbursement	907 million lei: - 765.9 million lei ESF non-refundable value - 141.1 million lei co-financing beneficiary.

Source: Ministry of Health, Section Press Releases

When the question of the eligibility of the expenses incurred is raised, the financial auditor must go through certain steps for their classification, as follows:

1. Preparation of the mission plan defining the material and time resources to be distributed.

2. The letter of commitment shall be signed together with the manager of the structure subject to audit.

3. The veracity of the expenditure with the budget shall be inspected and verified at the same time as the analytical review of the expenditure in the Reimbursement Requests.

4. Inspecting that the budget in the Expense Reimbursement Requests is in line with the budget of the financing contract. A necessary verification is also that of the total amount requested for payment by the beneficiary which must not exceed the non-reimbursable financing provided in the general and specific conditions of the financing contract.

5. Verification of expenditure on the basis of the following criteria:
   - Eligibility of direct costs
   - Their accuracy and recording
   - Classification of expenses
   - The reality of the expenses
   - Compliance with public procurement rules.

An important element for the financial auditor in the selection of audit evidence is compliance with the International Standard on Auditing 500“Audit Evidence”, while creating a safe and appropriate situation to issue the audit opinion.

Also, on the basis of a service contract, in addition to the eligibility of expenditure, the financial auditor must examine the financial statements for payment, the accounting systems and the internal financial control systems of the audited structure.

The last step is to prepare the Audit Report. Within it, under the heading "Details of the report", for each request for reimbursement, the total budget expenditure is updated. The budget is one of the most important documents for the auditor, because it is necessary to check the amounts provided in the budget, so that they are not exceeded.

Also, based on the budget, it is verified that all the conditions related to the percentages of expenses stipulated in the financing contract are met. Therefore, the budget cannot be exceeded, but if there are unused amounts by the beneficiary, they cannot be recovered.

7. Conclusions

The efficient use and management of European funds is achieved through control actions and audit missions carried out by competent national and European authorities. Recourse to these missions is, in fact, a preventive and corrective measure, valid for any economic field, including medical.

The medical field is one of the most important sectors of the world economy because it contributes to improving health and has a positive impact on the lives and well-being of citizens. At the same time, it is considered a main vector for the regional development of each country. If we refer to Romania, the current state of the health system is quite worrying, that is why it is necessary to adopt measures to help the recovery of this sector. The situation of our country is analyzed both at European and national level. Based on the European Health Index (Table 1), it was found that Romania ranks 34th in the hierarchy of European countries with low scores in almost all disciplines analyzed, being sub classed only by Albania. At national level, data on the real situation of the health system are provided by the National Institute of Statistics through the Statistical Yearbook of Romania in 2019. Thus, it is possible to know how the number of health units and medical staff in Romania have evolved in recent years (Figure 2). An important problem that affects the Romanian economic environment is given by the insufficiency of funds allocated to social health services. The funds available for this branch are depleted at a fast pace, because, through the promoted social policy, it was wanted, in particular, the financing of more expensive medical services. Currently, in Romania, the National Strategy 2014-2020 is applied, targeting three priority areas, namely public health, health services and cross-cutting measures for a sustainable and predictable health system. For the period 2021-2027, however, the first Operational Health Program is being prepared, carried out with the help of European funds (Table 4).

The appropriate use of European funds allocated to the medical field is ensured through control and audit activities undertaken both at national and European level. The audit verifies aspects related to compliance with regulations and requirements, the correctness and legality of transactions or the existence of a real and credible image of the recorded financial-accounting operations. Major importance must be given to the integrated system of auditing the European funds allocated to the medical system. It is formed by the internal audit and the external audit of public institutions, and, following the protocol concluded in 2005, between the Romanian Court of Accounts and the Ministry of Finance, a number of advantages of this cooperation and coordination partnership were identified, such as exchange of information on the nature of audit risks or a wider scope of the results obtained from the performance of audit activities. Within the Ministry of Health, the organizational structure of the internal audit consists of the internal auditors and the Audit Department, each with its own responsibilities. At the same time, the development of the internal audit mission involves several stages (Figure 3).

As the integrated system of auditing is composed of the internal audit and the external audit of public institutions, starting from a project financed from the European Social Fund through the Human Capital Operational Program 2014-2020 (Table 5), were presented the steps to be followed of a financial auditor during his audit mission.

This article aimed to highlight the current state of the Romanian health system and future prospects for action in the medical field, as well as the importance of auditing in the management of European funds, only the audit missions ensuring their proper use.

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Sustainability of the Accounting and Audit Companies: A Romanian Perspective

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Abstract: ***Research question:*** *What is the path for sustainable development of accounting and audit firms?* ***Motivation:*** *The theme of sustainability is becoming increasingly important and companies need to evolve and integrate a framework of sustainable development into their operations, characterized by three dimensions: economic, social and environmental.* ***Idea:*** *This paper investigates the approaches of several Romanian accounting and audit companies, related to both the sustainable development of their own companies and their role in enhancing the sustainability of their clients' businesses. We explore executives' attitudes towards sustainability in terms of awareness, extent, challenges, and approaches. One particular area of our investigation relates to the potential impact of new information technologies on the accounting and audit sectors.* ***Findings:*** *We find that that these companies are struggling to survive in a competitive professional market and are facing serious economic and regulatory constraints. Therefore, the other two dimensions relating to sustainable development are largely overlooked. Although they generally recognize the need for an advance IT-based switch in their processes, the knowledge regarding relevant information technologies for these sectors is almost non-existent, and planned investments in appropriate software are extremely low. Despite their effort to diversify their advisory services, these companies are not providing advisory services regarding sustainability, and they are therefore missing important opportunities for new business.* ***Contribution:*** *Our findings may contribute to the development of a set of appropriate initiatives for implementing a culture of sustainability in accounting and audit companies, covering management, professional development, and education.*

Keywords: *Sustainability, business sustainability, accounting and audit firms, information technologies, advisory services.*

1. Introduction

Sustainable development is becoming increasingly important for all companies, governments and international global organizations. The commitment to neo-liberal economics, characterized by the dominant interest in profit-maximization and where environmental and social issues are simply externalities, is now being supplemented by an extended vision. Companies need to evolve in line with society needs, in a framework of sustainable development that may be characterized along three-dimensions: economic, social and environmental. Academic researchers are increasingly focusing on the subject of sustainable development and this is proving to be a fruitful field for investigation and debate, offering new ways of thinking and acting

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for both managers and specialists in all professional areas. The rising interest of a broad range of stakeholders is prompting managers to consider their business processes in the context of sustainable practices.

The timeliness of this topic offers a number of new research paths involving various vectors, factors and actors. One such path concerns the role of accountants and auditors in this transformation process, with the specific motivation relating to the particular nature of accounting and audit activities, and their function to represent, endorse and control the business performance of their clients.

This is, however, a field of research that remains relatively unexplored, and the focus of this paper. Our main objective is to explore the attitudes of the executives of accounting and audit Romanian companies towards both the sustainable development of their own companies and their role in enhancing the sustainability of their client's businesses.

It is important to note that Romanian accounting and audit companies are, with a few exceptions, of small and medium size, and their clients are often included in these categories as well. Small and medium companies are considered to be the engine of the emerging economies and, as the Romanian economy falls under this category, the sustainable development of these companies represents a priority.

A second aspect of note relates to the apparent vulnerability of accounting and audit sectors. These are challenged by two revolutionary technologies: Artificial Intelligence and Blockchain, both of which having the potential to dramatically change the entire financial sector. Dealing with these challenges presents difficulties, as neither the accounting nor audit sectors have experienced such technology-driven disruption in the past (excepting the less significant transition from manual to computerized processes). Although challenging, these technologies also represent opportunities to create competitive advantage in a market otherwise dominated by big accounting and audit companies.

This is the context in which this study is situated. The research framework, including our research questions, is presented in a following section of the paper. The reminder of this paper is then divided into four sections. First, we provide an overview of sustainability concepts and practices as they have been addressed in the literature. The following two sections cover our research methodology and the results of our research. The last section comprises our conclusions, the implications of our findings, comments on the limitations of our study, and some directions for further investigation.

2. Literature review

2.1.Sustainability - General coordinates

The World Commission for Environment and Development defines sustainable development as "… *a process of change, which the exploitation of resources, the direction of investments, the orientation of the technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations*" (WCED, 1987). Corporate sustainability recognizes the importance of growth and profitability but "… *also requires the* *corporation to pursue societal goals, specifically those relating to sustainable development – environmental protection, social justice and equity, and economic development*” (Çalişkan, 2018). Corporate sustainability can be also defined “… *as developing the business in a way that meets the needs of the enterprise and its stakeholders while protecting, sustaining and enhancing societal and natural resources in the future*” (Schaltegger et al., 2017).

One dimension of the concept is economic sustainability, also known as business sustainability or corporate sustainability. This emphasizes the management’s capacity to coordinate the activities of the society by minimizing economic, social and environmental risks in order to guarantee a responsible, ethic and on-going success. Although this topic has been well covered in the literature, a clear theory, concerning strategies for economic sustainability, does not exist. Many authors highlight sub-fields such as: corporate responsibility, social and environment management, rather than taking a holistic approach with three dimensions (social, environmental and economic).

Thomas Dyllick and Katrin Muff (2015) assessed the existing business models of sustainability, relying on a systematic analysis of the specialized literature on the topic and thus, they developed a typology based on the economic paradigm "*business as usual*". They propose three business models of sustainability (Business Sustainability 1.0, 2.0, and 3.0). For them, the existing economic paradigm (*business as usual*) depends on a solely economic approach towards business process. Key elements are access to cheap resources, efficient processes, and occupying a dominant position on the market. These elements together bring economic value in the form of profit or shareholder value. Shareholders are the main beneficiaries of the economic value created, followed by management and customers. Business Sustainability 3.0 changes this paradigm by noting that a society is truly sustainable only when it can minimise the impact of corporations’ negative externalities while simultaneously improving their role and actions in fields that are critical for both humankind and the planet. This approach rises from questions as “*How can business contribute with its products and services to resolve pressing sustainability issues in their societies?*” and “*How can business use its resources, competencies and experiences in such way as to make them useful for addressing some of the big economic, social or environmental challenges that society is confronted with, e.g. climate, migration, corruption, water, poverty, pandemics, youth unemployment, sovereign debt overload, or financial instability?*” (Dyllick T., Muff K., 2015). In this new paradigm, the approach should shift from the traditional “inside-out” (e.g. mankind and planet needs) to an “outside-in” one (e.g. new business models, new strategies), the benefits from this switch adding value to the greater good both for humans, as a society, and for the planet as a whole.

2.2.Sustainability – the accounting perspective

Some authors understand sustainability in the accounting profession as the process of collecting, analysing, communicating and reporting information for the purpose of increasing the sustainability of an organization (Schaltegger and Burritt, 2010). Particular emphasis is placed on redefining the accounting system and the role that the accountant plays in achieving sustainability objectives (IFAC, 2015, 2016, Schaltegger and Burritt, 2006, 2010; Zvezdov *et al.*, 2010, Marrenko and Plastun , 2017). In addition, other considerations include an extension of reporting models (which can include both financial and non-financial information), and the redefinition of corporate performance measurement (to include economic, social and environmental performance indicators). The Sustainable Accounting Standards Board (SASB, 2017) conceptualises the sustainability of the profession in terms of five essential pillars: the environment, share capital, human capital, innovation, and governance – their main function being to support the process of creating added value through the sustainable development of the economic and social environment. In their view, their purpose is the extension of financial reporting to include information relating to sustainability, since financial statements do not catch all factors influencing the capacity of a company to create long-term value, and this justifies the difference between the market value and the book value of an asset. These differences often arise from the inadequate management of human, environmental, social and corporate capital. In this sense it is necessary that corporate reporting extend beyond traditional financial statements to include sustainability information, allowing decision makers to identify the risks and opportunities of the organization. In contrast to the traditional approach, the accounting system needs to capture all factors that can influence the organization's ability to create long-term value, offering a more complete view of its performance (economic, social, and environmental performance).

Accounting companies provide services of a specific and distinct nature to their clients. In this respect, the concept of sustainability needs to be differently analysed based on a different approach than other used for similar companies. Considering the nature of their provided services, the accounting companies are not consumers of natural resources or pollution sources. At the first look their sustainable contribution seems to be limited to the decreasing the paper and electrical power consumption and green IT, which are, undoubtedly, important issues circumscribed to the general effort for environment protection. In our opinion, the analysis on the accounting companies' sustainability should be oriented towards increasing the quality of the provided services, their diversification as to better respond to society expectations, and simultaneously reducing their costs. It is already proved that the quality of accounting services and the level of their costs are important drivers for both customer retention and customer portfolio diversification.

The exposure to the reputational risk is directly linked to the quality of the accounting services - implying also compliance issues - and in this respect all the accounting companies strategically align to this imperative. The accounting companies' strategies should focus towards the services' diversification. From this perspective, the orientation towards company sustainable accounting is very rewording.

Innovation represents an important vehicle for ensuring the accounting and audit services' quality and diversification, and therefore plays an essential role in the sustainable development of any company.

Corporate sustainability management ensures the sustainable development for the company itself, but it also enables the "company to contribute to sustainable development of the economy and society as a whole" (Schaltegger, 2017). In this respect, accountants should be able to discuss the broad technical, biological and environmental implications of resource consumption and waste (Egan and Tweedie, 2018).

In 2012, Bakker stated that "… *accountants are going to save the world*" (IFAC, 2015). Through their daily practice, accountants minimize information asymmetry and assess investment risks, generate financial and audit reporting, analyse accounting standards from the perspective of sustainability and performance criteria. Through their professional skills, they are involved in the governance of organizations, risk management, economic and financial analysis, management decision-making assistance, anti-corruption activities and ensure corporate transparency. (Marrenko and Plastun, 2017, IFAC, 2016).

Zvezdov et al. (2013) identify the roles that the professional accountant plays, based on the practical activities of managing information on sustainability. The authors emphasize the skills and capabilities of the professional accountant throughout his role as expert in knowledge and information management (highlighted by their abilities in collecting information from the necessary fields and areas, processing and analysis), expert in organizing and developing their own working methodologies (indicators, accounting methods and techniques), and the ability to communicate in a timely manner and to report the information needed to the decision makers. The results of the researches in the field reveal the partial involvement of the accountants in the practice of social accounting but underline their important role as facilitators between the sustainability management and the top management of the organization. According to Mistry, "*accountants act as facilitators for upper level management in sustainable development*" (Mistry et al., 2014).

3. Methodology

3.1.Methodological considerations

Since this topic belongs to the general field of human behaviour, concerning social processes and their meanings, qualitative research methods are most appropriate for our project. Such studies are conducted with a view to understanding the way in which participants perceive situations and events, and where the meanings they attach to relevant phenomena are of critical importance (Bardi, 2007). Unlike other research approaches, qualitative methods are characterized by direct involvement, in which researchers are themselves embedded within the phenomenology of the research topic (Birkinshaw and Brannen, 2011). For this specific study, we have to interpret the data against our own knowledge of the topic, based on our background and expertise. As our research focuses on sustainability in Romanian organizations, our own knowledge of the national context and of the relevant business culture is critical to the success of our approach.

A grounded theory strategy has been chosen as a research method for this work (Glaster and Strauss, 1967). This approach is appropriate where one wishes to explore behaviours (Goulding 2002), being a method of qualitative inquiry in which researchers develop inductive theoretical analyses from their collected data (Bryman, 2016). In the current context, in which the aim is to identify factors affecting business sustainability, an exploration of the attitudes of those who lead and manage strategy in accounting firms is fundamental: leadership and management are essential matters of behaviour.

As a consequence, the approach to data collection is to elicit facts, attitudes and perspectives regarding current and future practices in the area of study. Participants in this research were asked to respond to a series of open questions that were designed to be appropriate to their roles within their businesses. We designed a reflection guide (Appendix 1) based on these considerations, aiming to capture respondents' awareness and experiences of approaches related to business sustainability, in a way that shares features with unstructured interviews. We designed the questions to encourage detailed responses, providing both factual information and opinions or perceptions. The raw data is, therefore, exclusively composed of free-text narrative responses.

The reflection guide consists of nine questions, grouped in four parts. The first two questions explore the respondents' positions on the meaning and importance of sustainability in their business context. The next three questions investigate the respondents' opinions concerning the challenges of ensuring sustainable development for their companies and ways of addressing them. The questions that follow examine respondents' perceptions relating to the potential impact of new information technologies on accounting and audit systems. The last two questions aim to reveal respondents' attitudes towards their role in their clients' sustainable development.

The target population consists of accounting and audit professionals, business leaders of small and medium size accounting firms. We collected detailed responses from 24 respondents.

We have adopted appropriate ethical standards - the anonymity of the respondents was ensured, the data collected on the Internet, and no pressure to participate in this study was applied.

3.2.Research framework

This research focuses on the attitudes of accounting and audit professionals towards the sustainable development of their businesses and that of their clients. It aims to provide an assessment of the current situation – in terms of awareness, challenges, opportunities and achievements – and to determine the most likely approaches for establishing a culture of sustainability within accounting and audit companies.

- Research Question 1 (RQ1): *What are the accounting professionals'/managers' attitudes towards sustainability of their businesses?*
- Research Question 2 (RQ2): *What are the main challenges for the sustainable development of the accounting firms and how are these to be addressed within businesses*
- Research Question 3 (RQ3): *What is the potential impact of new information technologies on the sustainability of the accounting firms and what are the approaches towards it?*
- Research Question 4 (RQ4): *How accounting firms perceive their role in the sustainable development of their clients?*

In line with the scope of the research, a set of themes was investigated. For each theme and sub-theme, the main issues were identified and analysed. Our research framework (Table 1) also includes the mapping to the nine questions that form our research instrument.

Table no. 1. **The research framework**

Topics investigated and their relation to the research question mapped to the nine questions included in the Reflection Guide

Research question	Theme	Sub-Theme	Reflection guide questions
RQ1	The Business Sustainability	Awareness	1, 2
		Approach	
RQ2	Addressing the challenges of a sustainable development	Limiting factors	3
		Plans for action	4,5
RQ3	IT impact on accounting and audit activities	Acknowledgment	6
		Reaction	7
RQ4	The role in the clients' sustainable development	Involvement	8,9

4. Results and discussion

Theme 1. Business sustainability

This theme investigates managers' vision regarding business sustainability. We investigated the companies' main strategic pillars, their means for consolidating and extending the client portfolio, and their preparedness to respond to short and medium-term changes of their clients' requests for services.

Awareness

All the respondents representing small and medium-sized accounting and audit companies emphasize the same main factors affecting their strategic path: the intense market competition that seems to be far from fair, a hostile economic and legislative environment affecting them and their clients, the existing legislation discouraging private small and medium-sized companies, and the unstable regulatory environment. All these factors make the companies hardly resist on the market, despite their efforts to improve and diversify their services.

One of the respondents answered: "*We can't think about a medium term-strategy, as we barely manage to survive…*". Another response was "*Our strategy is to avoid bankruptcy*". While some other responses are more positive, it is obvious that, for our respondents, sustainability is primarily a matter of ensuring the continuity of their activity.

Approach

The vision of the respondents regarding their strategic approach in the context of a sustainable development can be summarized in the following actions: ensuring high quality services and a good professional reputation, diversification of their services, and getting more visibility on the market using all accessible means: social media, professional fairs, clients' recommendations.

It is worth noting that all the respondents are willing to diversify their services. The firms are providing all the accounting and audit professional services in the limit of the existing accounting and tax regulations and requirements. They are preparing also to extend their services, as to respond promptly to their clients' expected needs. This will be discussed in more detail under the theme 4 below.

We can affirm that business sustainability seems to be, for a great part of small and medium accounting and audit firms, just a matter of ensuring the continuity of their activity. One of their main strategic approaches consists in developing and offering new advisory services to their clients.

Theme 2. Addressing the challenges of sustainable development

Under this theme, we investigated both the main challenges of sustainable development and ways of addressing these challenges from a managerial perspective.

Limiting factors

Various factors, which are both time and space dependent and related to the business context itself, can challenge a company's sustainable development. In order to address these challenges, companies should clearly identify, analyse and prioritize them. We were interested to see which factors accounting and audit small and medium companies' leaders perceive as being the most restrictive for their businesses' sustainability. According to our respondents, the main barriers to a sustainable development of their companies are: globalization, instability of the legislative system, competition, corruption, and abuses of tax authorities directed to their companies.

Another limiting factor relates to the international economic crisis and its effect on their clients' economic vulnerability.

Some respondents consider information technologies as a challenge in the context of business sustainability. This point is well-made, as new information technologies (like Blockchain, AI, and Data Analytics) promise to dramatically change the traditional systems of accounting and audit. Surprisingly, the acknowledgment of these challenges is not replicated by any of the respondents in a later question focused on this subject (Theme 3).

One respondent identifies the inadequacy of the education system as being a risk factor. This is noteworthy, as it indicates a weakness related to the availability of the required skills and expertise in the field.

Plans for action

The responses here indicate that generally the respondents are willing to address the identified challenges and their approach can be summed up in the following actions: provide high quality and diversified services, acquire new clients, maintain the current level of prices for their services, extend their advisory services, and attract qualified employees.

Worryingly, some responses suggest the lack of confidence in addressing these deficits. There are executives who seem to be overwhelmed by the magnitude of the risks to which their businesses are exposed and, moreover, by the persistence or even exacerbation of these risks in the future. As one of our respondents stated: "*The main risk is the crisis of the political, economic, social, educational, and legal system and currently we cannot think about a sustainable development…we barely manage to survive*". Another response was: "*I don't have any hope that things will improve at the macroeconomic level, so I don't think about sustainability. For now, we are struggling to survive*".

Considering the nature of accounting and audit activities and, therefore, the importance of the reputation of a company that provides this kind of services, we were interested to see how the issue of reputational risk is perceived by our respondents. The responses indicate that, generally, executives are preoccupied by the image of their companies. The majority of the responses refer to the professional deontological code, seriousness, integrity, and professionalism. With one possible exception (as one of the responses was: "*…permanent assurance of a positive image for our clients…*", but without offering any other details), it seems that executives are not considering increasing the visibility of their companies through their involvement in social issues. None of the respondents included comments or initiatives related to CSR, for example, as part of their strategy to secure and increase their companies' reputation.

Another issue that we aimed to explore under this subtheme relates to the ways in which company leaders are balancing their costs against the quality of their services. The majority of the responses here converge in large proportion towards the investments in software (*e.g.* AI, iCloud archive) as a solution for the automation some activities, to digitize the materials, and to enable real-time communication with clients. Although reasonable, this approach is not consistent with their position related to the challenges and opportunities raised by modern information technologies for sustainable development.

Some responses include measures like subcontracting part of the activities.

We can summarize our findings under this theme as follows:

- *The challenges faced by small and medium-sized accounting and audit companies are significant and mostly relate to the ineffectiveness of the political and economic system (instability, corruption, abuses).*
- *Although generally executives of these companies are willing to address such challenges, they seem to consider the sustainability issue as being a "luxury" in the current economic and political context, one in which they are struggling to survive.*
- *The image and reputation of their companies is acknowledged as being an extremely important asset by executives. However modern approaches (like CSR for example) for addressing the reputational risk are not on their agenda.*

Theme 3. IT impact on accounting and audit activities

We were interested to see if respondents are aware of new information technologies that have the potential to disrupt their activity. We also investigated if, and to what degree, they are planning to face the current IT challenge, and what are, in their view, the implications for the sustainability of their business.

The responses show that executives are not fully aware of the new information technologies having the potential to impact their activity. For example, and surprisingly, none of them identified blockchain as being one of these technologies.

It is worth noting the unexpected low interest of our respondents – both in terms of awareness and response – in this subject, whose considerable leverage effect on business sustainability cannot be questioned. Moreover, all these new technologies are expected to change the nature of work and the skills required for accounting and audit professionals. This will have major implications both for businesses and the educational system. Therefore, executives of accounting and audit companies should take very seriously this deficit and elaborate short- and long-term strategies to cope with it.

Acknowledgement

Most of the respondents identified integrated information systems and accounting software packages as being the main information technologies that impact their activity. Some of them also included Artificial Intelligence (AI) – especially Expert Systems and Integrated Intelligent Systems.

Although AI will definitively impact audit and accounting, it is not clear that the respondents have a reasonable level of understanding of what AI is, and in which ways it can affect their work. Some of them indicated that both AI and Expert Systems are potentially disruptive technologies. However, Expert Systems are part of AI. These systems have been developed in a cognitive approach in the AI field, and are mature and stable solutions, available for decades now. The current interest in AI for businesses – including in accounting and audit - is related mostly to machine learning and its potential connection with Big Data. Blockchain, Big Data and Business Analytics are completely missing in our respondents' answers. This is really worrying, as all these technologies are expected to have an important impact on accounting and audit systems and, consequently, on the sustainability of accounting and audit firms.

Reaction

Generally, all the respondents are using traditional accounting systems. The most common are integrated systems and specialized accounting and audit systems for small and medium-sized organizations. Some of the companies use BI systems. A small number of companies use only partially dedicated information systems in their activity. As one respondent states: "*We use for accounting an integrated software, but for audit we use Excel*". None of the respondents that identified AI (and Expert Systems) as relevant technologies for their activity has such systems. Some indicate that they intend to acquire such systems in the near future. However, the small value of (declared) anticipated investments in IT does not support this expressed intention. Our respondent's attitudes towards IT and its potential impact on their activity lead to the following ideas:

- *There is a general lack of awareness of accounting and audit professionals and business leaders regarding the new information technologies and their expected impact on accounting and audit systems.*
- *There is a general lack of interest of accounting and audit professionals and business leaders in developing and implementing appropriate strategies to address the IT challenge.*

However, it is worth noting that new information technologies are identified by some respondents' as a challenge (question 3 in the Reflection guide) and by other as an opportunity (question 5 in the reflection guide) in the context of their companies' sustainable development.

Theme 4. The role in the clients' sustainable development

All respondents recognised their role in supporting their clients' sustainable development. The most common actions included in their answers were: periodic SWOT and financial analysis with their clients (based on the balance sheets and/or financial statements), tax advisory services, support for accessing EU funds, risk assessments, analysis of competitors and market evolution, forecasting on PKI. All these services focus on the economic dimension rather than the environmental and social. The majority of accounting services currently provided are "classical", addressing present economic requirements and pressures. Thus, they are not covering all three dimensions needed to fully support a sustainable approach.

Our respondents are concerned about a leadership shortage at the macroeconomic level, which reflects on economy and, therefore, on its unpredictable evolution. As one of our respondents replied: "*How can we speak about sustainable development, when our country is threatened with infringement and we lack leadership at the macroeconomic level*?". Another one listed as a major service to its clients: *"The risk management in a drifting emergent economy*".

In our opinion, an important pillar for sustainability is represented by advisory activities offered to their clients from a forward-looking perspective. It is important to offer new quality services, and to stress their value for business development and sustainability. The role of the accountant has already changed in the dynamic economic environment: the advisory role in relation with their clients has become a high priority.

For these firms this is a worthwhile market space that should be exploited, and it is in the clients' interest to be advised regarding their sustainable development and sustainable reporting. This forward-looking perspective well covered by international and national regulations addressing sustainable development is lacking from our respondents' agenda. This threatens their sustainability, as companies will soon be required to transform to their businesses according to these sustainability standards. The accountant's role is crucial to this process. Sustainable integrated reporting, for example, requires the support of accountancy professionals to identify and propose key indicators linking financial reporting to non-financial reporting.

We may claim that accounting and audit companies' executives, while interested in actively participating in assuring their clients' sustainability, are not addressing this role proactively. They are, therefore, losing sight of important opportunities that they could take advantage of in the short and medium term. Moreover, this attitude reflects on their clients' sustainable development.

All these findings can be summarized in conclusions regarding a feasible approach towards sustainability of accounting and audit firms and, indirectly, of their client companies.

5. Conclusions

This study, focusing on small and medium-sized accounting and audit companies, has explored executives' perceptions regarding the sustainability of their businesses and their role in enhancing the sustainable development of their clients.

In order to address the research objectives, business leaders from Romanian accounting and audit organisations were invited to reflect on a range of issues concerning sustainability. As the success or failure of any initiative related to sustainable development depends primarily on people and their attitudes, we considered a qualitative approach to be the most appropriate and designed suitable research instruments to investigate the research questions.

The findings of our research have been discussed in the previous section of this paper. Three important conclusions arise:

First, for the executives of accounting and audit companies, sustainability is a "luxury" in the current economic and political context; a context in which they are struggling to survive. Therefore, other dimensions related to sustainable development are largely overlooked. Although business leaders are determined - at least at declarative level - to address the requirements of a sustainable development, they are suffocated by the ineffectiveness of the political and economic system. Undoubtedly, this is an important challenge and any approach to sustainability in our national context has to be designed accordingly.

Second, executive's attitudes towards the potential impact of new information technologies on their activity are important drivers for business sustainability. Although they generally recognize the need for IT-based transformations of their processes, their knowledge regarding relevant information technologies for their sector is almost non-existent, and planned investments in appropriate software are extremely low.

Third, our respondents emphasize the importance of being permanently aligned to the professional code of ethics, in order to improve knowledge and develop new skills, ensure high quality and prompt responses in all their services: rigour, integrity and professionalism are the main values followed. Without full trust in any professional relationship, there is no chance of success. This has been long understood by accounting firms which need to work in order to consolidate their relationships with all their clients. In this respect, providing advisory services on business sustainability is currently compulsory, and addressing this trend will provide competitive advantage for both them and their clients. Such new advisory services will strengthen their relations with their clients and consolidate their reputation. However, they are not at present addressing this issue appropriately, and are therefore they are losing sight of these important opportunities.

These research results have important implications. These cover management, professional development and education.

Managerial Implications

Accountancy and Audit firms should aim to diversify and improve their consultancy services, by providing:

- A holistic approach to risk management, permitting the identification of clients' vulnerabilities and opportunities in three areas of interest for the development of sustainability (environmental, social and economic).
- Economic advice based on the principles of sustainability, supporting decision-makers in new investments or in remodelling working practices.
- Management consultancy that offers solutions integrating sustainability within company strategy, and offering new economic, environmental, and social performance indicators within their forecasting models.
- Advice in developing systems and modern technologies (based on technologies such as AI, blockchain, big data) through the integration of specialist expertise in the area of accountancy and audit.
- Specialist services in associated areas of interest, such as: health, agriculture, animal husbandry, energy, and urban development, permitting entry into a partnership with prestigious firms (Big Four).

Implications for Professional Organizations

- National professional organizations (CAFR, CECCAR) offering regulations, guides, sustainable working practices and procedures that support the strategies of small and medium-sized accountancy and audit firms.
- National professional organizations offering a sustainable professional development framework, assuring the development of abilities and competencies in areas such as: emerging information technologies, risk management, and the analysis of sustainable performance at the organizational level.
- Professional organizations that encourage accountancy and audit firms to adopt those best practices regarding emerging technology.

Implications for Educational Systems

- The academic environment promoting university curricula that offer young specialists multidisciplinary competencies and abilities.
- Multidisciplinary teaching methods embedding IT knowledge and skills in accountancy training.

Limitations

Although relevant in the context of our research methodology (Grounded Theory), a limitation of this study relates to the small number of participants engaged. We received responses from only 24 executives, though these did represent 24 distinct small and medium-size accounting and audit firms.

The study is restricted to Romania. However, the national context plays an important role not only in our research, but in all other investigations addressing sustainability at organizational level.

Future research

A number of future research directions emerge from our study. One future research objective includes a more in-depth analysis of how and to what extent accounting and audit companies should be engaged in their clients' sustainable development. Such an analysis would further require an investigation of the role of accountants in their clients' activities and business review, in order to respond to the question: *How we can make sustainability meaningful through accounting?*

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Appendix 1

Table no.2. **Reflection Guide**

No	Questions
1	Do you have a short and medium-term strategy for your company?
2	How do you ensure that you consolidate and extend your client portfolio?
3	What do you consider to be the risk factors that would have a significant impact on your firm?
4	How do you manage reputational risk?
5	How will you reduce the costs of your services while maintaining the quality of your services?
6	Which information technologies do you consider as having the greatest impact on the work of auditors and accountants? Do you use these technologies?
7	What percentage of your annual budget do you allocate for investments in software?
8	What advice services do you offer to your clients and their companies for decision-making in the area of sustainable development?
9	What do you think are the short and medium-term requirements/requests of companies for the services of accountancy and audit companies? What new services will be required?

Section 6

The First-Time IFRS Adoption by Non-Banking Financial Institutions: A New Milestone for the IFRS Convergence in Romania

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Aurelia Ștefănescu
Cosmina Pitulice

The Effectiveness of the Performance Audits Conducted by the Supreme Audit Institutions. Romania's Experience

Cristina-Petrina Trincu-Drăgușin
Aurelia Ștefănescu

Financial Professionals' Perceptions on IFRS Reporting in Romania

Silvia Petre

The First-Time IFRS Adoption by Non-Banking Financial Institutions: A New Milestone for the IFRS Convergence in Romania

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Abstract: *IFRS convergence is one of the most important projects that non-banking financial institutions operating in the Romanian non-banking sector have faced in recent years. Starting with January 1, 2023, these institutions will apply IFRS as basis for accounting. For 2019 – 2022 period, a set of annual IFRS financial statements for informative purposes will be prepared. We conducted a comparative analysis between the provisions of the national accounting framework and IFRS and identified that there are numerous new reporting requirements potentially having a strong impact on the financial results and daily activities, especially on the IT systems. IFRS convergence will also impact the external audit process. Our paper provides valuable insights on the main areas NBFI professionals should be focussing on for the preparation of the first set of IFRS financial statements.*

Keywords: *IFRS, non-banking financial institution, convergence, credit institution.*

1. Introduction

The IFRS implementation by the non-banking financial institutions ("NBFI") starting with 2023 will be an important milestone for the IFRS convergence in Romania. NBFI sourced financing has become increasingly popular in recent years, the non-banking sector strengthening its position within the Romanian financial sector for both non-financial companies and individuals.

These institutions have an important role in the economy as they supplement credit institutions in providing financial services to clients and, at the same time, create competition. While credit institutions may offer a set of financial services as a package deal, NBFI unbundle these services, tailoring them to particular groups. Additionally, individual NBFI may specialize in a particular sector, gaining an informational advantage. By this unbundling, targeting, and specializing tactics, NBFI promote competition within the financial services industry (The World Bank, 2020).

The evolution of the non-banking financial sector has led to new measures being adopted by the National Bank of Romania ("NBR"), which aimed to ensure the premises for better risk management as well as to diminish the regulatory arbitrage and to improve the potential systemic effects that may originate from this sector. One of these measures considered the alignment of the NBFI reporting framework with that of credit institutions. In this sense, on October 30, 2019, NBR issued Order no. 8/2019

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(republished on 23 June 2020) ("NBR Order 8/2019"), which regulates the IFRS as basis for accounting for NBFI starting with January 1, 2023. To prepare for the implementation, NBFI are required to draw up, for the financial years 2019-2022 a set of individual IFRS compliant financial statements, for informative purposes.
With these new rules applying, from an IFRS convergence perspective, by the end of 2020, the majority of the entities operating in the Romanian financial sector will prepare IFRS compliant financial statements, both at individual and consolidated level, as follows:

- Entities whose securities are listed on the regulated markets - IFRS as basis for accounting;
- Credit institutions - IFRS as basis for accounting;
- Entities operating in the capital markets sector, such as investment services, asset management, alternative pension funds, central depositories, market/system operators and central counterparties - IFRS as basis for accounting;
- Insurance and reinsurance companies – IFRS for informative purpose only; and
- Non-banking financial institutions (leasing companies, microfinancing, factoring, etc.) – IFRS for informative purpose only until January 1, 2023.

In this context, this paper aims to conduct a comparative analysis between the IFRS principles and the provisions of current Romanian accounting regulations applicable to NBFI and to identify the key differences which might have a significant impact on the financial results, implementation challenges and impact on external audit for NBFI, once IFRS applies.

The novelty of this subject for the financial market in Romania is the reason behind choosing this proposed research topic. To the best of our knowledge, as of the date of this paper, there are no theoretical or empirical studies conducted for this specific subject.

Our paper contributes to the enrichment of the IFRS literature in the financial services sector and can be used as a best practice guide, providing valuable insights to both, representatives of the academic environment, as well as professionals responsible with the financial reporting of NBFI on the specific adjustments that these entities should perform in order to translate their statutory figures into IFRS ones and prepare their first set of IFRS compliant financial statements.

2. Literature review

2.1 Brief history of IFRS adoption in the banking sector

At European Union (EU) level, the IFRS application across the non-banking sector is not widely spread. According to the European Commission (EC) report on the IFRS applicability for different categories of companies (non-financial, credit institutions, insurance providers and other financial undertakings), there are only 11 Member States where the "other financial undertakings" are required to apply IFRS at individual level. We assumed that NBFI are classified within this category in absence of any further descriptive information. The limited IFRS application across NBFI was further confirmed when conducting the literature review.

Given the close links between banking and non-banking financial sectors, we conducted a review of the IFRS implementation stages for the banking sector, both at EU and local level.

Thus, at EU level, the preparation of the IFRS financial statements by credit institutions has been introduced through Regulation (EC) no. 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards, according to which all publicly traded companies, including credit institutions, operating in an EU Member State, were required to prepare their consolidated financial statements in accordance with IFRS starting with January 1, 2005.

From then on, the national accounting frameworks applicable to the banking sector have been further updated, from one country to another. According to the EC report on the IFRS application across EU as of December 31, 2018, 12 out of the 28 Member States, including Romania, have required all credit institutions, irrespective of listed status, to prepare both their individual and consolidated annual financial statements in accordance with IFRS.

In Romania, the implementation of IFRS as basis for accounting of credit institutions took place in several stages and was declared one of the most difficult projects underwent by the Romanian banking system, having a significant impact on the banks' financials and operations (Grecu, 2011; Girbina et al., 2012). The implementation project was conducted by the key institutions operating in the accounting and banking regulatory framework, namely the Ministry of Finance (MF), NBR and the Romanian Banking Association (ARB).

In the context of the EU integration process, the national accounting framework applicable to credit institutions was updated in 2005 to align with the provisions of EU Regulation 1606/2002. As a first step of the transition process, starting with the financial year end 2006, all credit institutions operating in the Romanian banking system were required to prepare their consolidated annual financial statements in accordance with IFRS.

Going forward, several assessments were conducted in order to evaluate the ability of the credit institutions to implement IFRS. This second stage of the process took three years, period during which credit institutions prepared an annual set of IFRS financial statements for informative purposes. At the same time, the regulators, MF and NBR, defined the accounting regulatory framework in accordance with IFRS. The end of this preparation stage was marked by the issuance of the NBR Order no. 27 from December 2010, which regulated the IFRS as basis of accounting for credit institutions, starting with January 1, 2012. The financial year 2011 was considered a transitional year, during which these institutions carried out their internal implementation projects.

By comparison to the credit institutions, the convergence of the national accounting framework applicable to NBFI with the European Directives and IFRS evolved much slower. NBR fully transposed the provisions of the European Directives in the national accounting regulations by the end of 2011, these requirements being applicable starting with January 1, 2012. This moment coincides with the adoption of IFRS as basis of accounting for credit institutions.

Seven years later, NBR prepared and submitted for public consultation a draft order meant to bring important changes to the accounting framework applicable to NBFI, namely the introduction of IFRS as basis for accounting starting with January 1, 2022. On 30 October 2019, NBR issued Order 8/2019, which entered into force on November 11, 2019. NBR issued a modified version of Order 8/2019 on June 23, 2020, by which the IFRS implementation date was delayed until January 1, 2023, in the context of COVID-19 pandemic.

2.2 Studies on IFRS convergence on financial sector

We conducted a documentary research and identified, reviewed and interpreted the results of the main studies performed on topics related to the accounting regulatory framework applicable to the non-banking financial institutions across the EU.
The results of the literature review revealed that, while there are numerous studies conducted on the non-banking sector and the activity of the non-banking financial institutions, few address the accounting regulatory framework matter. Furthermore, in most cases, the studies targeted only a certain category of NBFI, especially leasing and microfinancing companies.

The reviewed studies related to the leasing business are focused on: business and market analysis (Pakhtusov and Bay, 2006; Popa, 2011; Degl'innocenti and Giradone, 2012; Stanciu, 2013; Hontar, 2016; Anzhela, 2017; Fuior and Sanduta, 2018; Lubonja, 2018), regulatory framework and capital (Pavkovic and Matek, 2019; Nesleha et al., 2019), legal framework (Bloom, 2002; Barbulescu and Balteanu, 2012), risk management (Popa, 2009; Ajupov et al., 2014; Rusy and Kopa, 2017; Svitil, 2019, Kouzmina and Okrepilov, 2019), green leasing (Collins and Junghans, 2015), leasing performance (Popa, 2011; Chitu and Opris, 2013), sales methods (Vujic et al., 2013), reputation of leasing companies (Pollak et al., 2018) and customers satisfaction (Barbulescu, 2015). The studies on accounting related matters are limited. Hartmann-Wendels et al. (2014) developed a methodology to compute the loss given default indicator used for the computation of loan loss provisions, while Glaserova and Otavova (2010) studied the main differences between the lease accounting under IFRS and Czech GAAP.

As in the case of the leasing sector, the studies conducted on microfinancing activity are not focused on accounting related matters, but mainly on: business performance (Matul and Tsilikounas, 2004; Fila, 2015; Bourles and Cozarenco 2017; Efendic and Hadziahmetovic, 2019), agricultural financing (Amersdorffer et al., 2015; Manta, 2016; Manta, 2017), green microfinancing (Forcella and Hudon, 2016) and social performance and sustainability (Bateman and Sinkovic, 2008; Halilbasic and Crnkic, 2010; Pandzo and Kemal, 2012; Efendic and Hadziahmetovic, 2017).

As this paper aims to identify the most important differences between the provisions of the accounting framework currently applied by NBFI and IFRS and the similarities and links between the banking and non-banking financial sectors, we conducted a review of the main studies performed in respect of the IFRS transition for credit institutions, both in EU and Romania. We analysed and compared the research methodologies used by the authors and identified the similarities and discrepancies between the results obtained. The results of this analysis represent an important and reliable source of information for conducting our study cases, as the accounting framework applied currently by the Romanian NBFI is similar to the one applied by credit institutions before the IFRS adoption in 2012.

The implementation of IFRS for listed entities starting with 2005 has been the most important change in the financial reporting framework in Europe in the last thirty years, which has impacted directly approximately 7,000 EU listed entities and indirectly many consolidated subsidiaries (Jermakovicz and Gornik-Tomaszewski, 2006).

Numerous studies have explored the topic of the IFRS adoption by listed entities in Europe, operating in all types of industries, including banking sector. Some were conducted prior to the implementation date and included analyses on the possible consequences of the IFRS adoption (i.e. Delvaille et al., 2005), but most of them were published post IFRS implementation date. The post implementation studies analysed the impact of IFRS adoption on different areas, such as: fiscal impact (i.e. Haverals, 2007), earnings and capital management (i.e. Leventis et al., 2011), value relevance (i.e. Devalle et al., 2010), financial reporting quality (i.e. Daske și Gebhardt, 2006; Daske et al., 2013), accounting systems classification (Nobes, 2011), harmonisation of national accounting standards with IFRS (i.e. Fontes et al., 2005; Street și Larson, 2005) and the impact on financial results (i.e. Callao et al., 2007; Gray et al., 2009; Iatridis et al., 2010).

By comparison to the studies conducted for the above-mentioned entities, the literature addressing specifically the IFRS adoption by credit institutions is more limited. These studies have focused on the impact on: financial results (E&Y, 2005; Leventis et al., 2011; Palea and Scagnelli, 2016), financial reporting quality (Armstrong et al., 2008; Gebhardt and Novotny-Farcas, 2010; Guo and Matovu, 2012), value relevance (Agostino et al., 2010; Manganaris et al., 2016; Bolibok, 2014; Escaffre and Sessaf, 2011; Drago and Mazzuca, 2013), liquidity and capital management (Gkougkous and Mertens, 2010; Alexandre and Clavier, 2016; Dimitras et al., 2018), financial audit and external auditors' fees (Cameran și Perotti, 2013).

On the other hand, the researchers, academics, financial consultants and practitioners in Romania analysed the impact of IFRS adoption on the banking system both prior and post IFRS implementation date.

The majority of the ex-ante studies were focused on identifying the key differences between the accounting policies applied under the national accounting framework and IFRS principles (Grecu, 2011; KPMG, 2011; Deac et al., 2012; Socol, 2012; Munteanu and Brezeanu, 2012), as well as the benefits of IFRS implementation for the banking system (Ștefan and Mușat, 2011; Gîrbină et al., 2012; Dochia, 2012). Also, the authors presented the main challenges of the IFRS implementation project (Grecu, 2011; Ștefan and Mușat, 2011; Dochia, 2012).

Regarding the post implementation studies, the authors analysed the impact of IFRS adoption on the financial results of the credit institutions, as well as the general influence on the banking system (Brad et al., 2013; Lovin, 2013; Istrate, 2014; Dandara, 2015; Stoica and Buculescu, 2016; Ionascu et al., 2018).

The information presented in the ex-ante studies and their outcomes are of an ultimate importance for the practitioners in the non-banking sector. Not only can they enrich their IFRS knowledge and understand the particular differences between the former accounting regulations for credit institutions (part of which are currently applied by NBFI) and IFRS principles, but also leverage on the implementation experience of the credit institutions, especially regarding the challenges encountered.

As this paper addresses the implications of the transition to IFRS by NBFI, we conducted a literature review of the studies done in connection with the IFRS transition by credit institutions (papers published before and or during the transition year) and presented below some of their key findings.

Grecu (2011) identified six main areas with a major impact on the financial statements or whose implementation required increased resources, namely: the impairment adjustment of financial assets, the recognition and measurement of financial instruments, the revenue recognition, deferred taxes, the consolidation of special purpose entities and financial statements disclosures. Same areas were also mentioned in the studies conducted by Deac et al. (2012), Socol (2012), Munteanu and Brezeanu (2012).

Out of these main areas, the impairment adjustments were considered to have the most significant impact on the financial results, as well as consuming the most resources allocated for the implementation project. Ghețea (2011) stated that these adjustments caused several disagreements in the trilateral negotiations between MF, NBR and ARB.

Deac et al. (2012) analysed the main differences between the financial statements prepared in accordance with NBR regulations and those based on IFRS for a sample of four credit institutions operating in Romania. For the comparative analysis, the authors studied the statutory and IFRS financial statements for the financial years end 2009 and 2010, period during which the Romanian banking system was transitioning to IFRS. As compared to the results obtained by Grecu (2011), the authors identified an additional significant adjustment required for the IFRS transition, namely the value adjustments for hyperinflation, given that Romanian economy was hyperinflationary until December 31, 2003.

Similar to the studies carried out by Grecu (2011) and Deac et al. (2012), Socol (2012) analysed the main differences between the provisions of the national accounting regulations and IFRS principles. On top of that, the author also analysed the impact of IFRS implementation on the external audit process. The research includes a case study which analysed the IFRS financial statements and the external auditor’s report for the three credit institutions listed on the Bucharest Stock Exchange as of December 31, 2011. In all three cases, the auditors were concerned with determining the effects of the events occurring after the financial statements’ reporting date, namely the IFRS implementation period starting with January 1, 2012.

The topic of the differences between the national accounting framework and IFRS principles was also addressed by the financial consultants of KPMG Romania, who conducted annual studies during 2008 – 2011. These studies focused on the evaluation of the impact that IFRS adoption had on equity and net result for a sample of 19 credit institutions. The results indicated that the value of the differences between the two GAAPS increased from one year to another, the most significant difference being related to the calculation of the impairment of loans.

The IFRS implementation project involved numerous challenges and difficulties and significant costs. Ștefan și Mușat (2011), NBR's representatives, identified the following main challenges faced by the credit institutions during their implementation projects: significant costs with IT systems changes, adequate training for the employees, updating the accounting framework according to the new regulations, as well as applying professional judgement in interpreting IFRS principles and their application for specific transactions. Additionally, Grecu (2011), Popovici (2011) and Dochia (2012) identified two other important challenges, namely: the fiscal treatment of the retained earnings at transition and implicitly the recognition of deferred taxes and the revenue recognition using the effective interest method.

The impact analysis on the foreign exchange position was considered another important challenge at the IFRS transition date. Dochia (2012) stated that the accounting adjustments made in connection to the loans to customers, in order to obtain IFRS figures, would generate long-term foreign exchange positions, which banks would have to liquidate or hedge in order to avoid volatilities in the profit or loss account, caused by exchange rates fluctuations.

The study carried out by Gîrbină et al. (2012) indicated that most credit institutions were concerned about the costs with the IT system changes, the need to comply with multiple reporting requirements (accounting, tax and prudential), the impact on capital requirements and the lack of resources allocated to all these processes.

3. Overview of the Romanian non-banking financial sector

Over the last few years, at EU level, the degree of financial intermediation conducted by the non-banking financial sector has increased. According to the NBR's financial stability report as of December 2019, in Romania, the degree of financial intermediation, at this sector level, as share in the Gross Domestic Product (GDP), remained relatively stable in recent years, namely around 17% (i.e. 17.4% as of June 2019).

The non-banking financial sector in Romania is formed of private pension funds, investments funds, NBFI and insurance and reinsurance companies (listed upon their assets share in the total assets of the financial services sector, including credit institutions). As of December 2019, NBFI assets represented almost 6% of the total assets at the financial services sector level (NBR, 2019).

The NBR is the national authority responsible for the NBFI regulation and supervision, while in case of the other entities from the non-banking financial sector, the regulatory and supervisory responsibilities rest with the Financial Supervisory Authority (FSA). With regards to the financial reporting framework, the investment funds and the insurance and reinsurance companies prepare their individual financial statements in accordance with IFRS (in the case of the latter category, only as a second set of financial statements, for informative purposes only), while the NBFI and the private pension funds apply the national accounting regulations issued by the NBR and FSA respectively.

All NBFI having their headquarters in Romania are registered in the NBR's General Register. As of May 31, 2019, there are 176 NBFI incorporated in Romania, 88% of them providing multiple financing solutions, such as consumer loans, finance leases and issuance of letters of guarantee. 7% of the NBFI are only providing finance lease solutions, while 2% are specialized in issuing letters of guarantee. As we can observe in Table no. 1 below, the structure of the NBFI per activity type remained relatively stable in the last three and a half years.

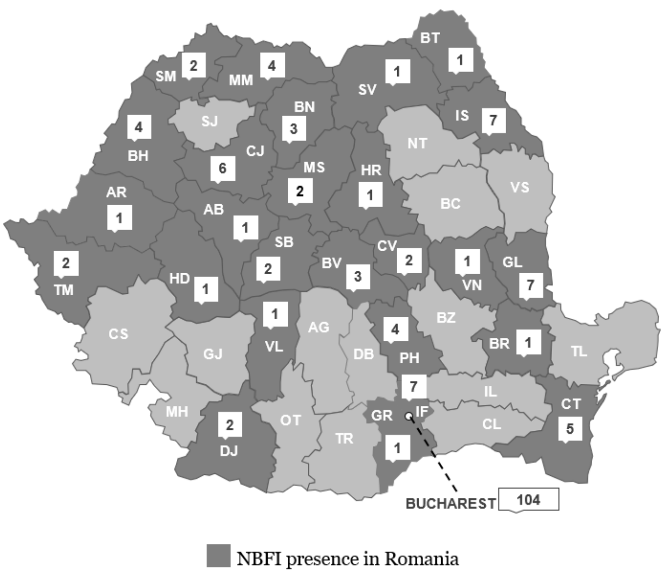
Table 1. **Structure of the NBFI per type of activity**

Activity type	**31 May 2020**	**31 December 2019**	**31 December 2018**	**31 December 2017**
Multiple financing activities	154	153	149	149
Finance lease	13	13	17	5
Issuance of guarantees	4	4	5	5
Consumer loans	3	5	5	21
Microfinancing	2	2	2	2
Factoring	-	-	-	1
TOTAL	**176**	**177**	**178**	**183**

Source: author's own analysis based on the data published in the General Register, available at https://www.bnr.ro/files/d/RegistreBNR/ifn/RegistrulGeneral/registrul_general_ifn_active_tot.htm

In terms of geographical distribution, 59% of the NBFI are incorporated in Bucharest, the capital of Romania, while another 18% are incorporated in four different counties in Romania of significant economic importance, namely: Iasi, Ilfov, Cluj and Constanța.

Figure 1. **Geographical distribution of NBFI across Romania as of May 31, 2020**



Source: author's own analysis based on the data published in the General Register, available at https://www.bnr.ro/files/d/RegistreBNR/ifn/RegistrulGeneral/registrul_general_ifn_active_tot.htm

The information on the NBFI structure per activity type and their geographical distribution is important in analysing the challenges these institutions might face during the IFRS implementation. These implications are further discussed in the next section of this paper.

In terms of key performance indicators, we observe that the yearly share capital, net assets and the net results increased as of 31 December 2019 compared with the figures as of 31 December 2018, indicating the upward trend and development of the NBFI activities in Romania. This comes in a context where the number of contracts and clients decreased in the last two years, indicating that these companies are focused on a qualitative portfolio of clients.

Table 2. **Key performance indicators of the NBFI sector**

Key performance indicator	**31 December 2019**	**31 December 2018**	**31 December 2017**	**Variation (%) Dec-19 vs. Dec-18**	**Variation (%) Dec-18 vs. Dec-17**
Share capital*	689	670	627	3%	7%
Net assets*	8,379	7,555	6,970	11%	8%
Loans and commitments, out of which*:	**6,600**	**6,005**	**5,469**	**10%**	**10%**
Finance lease	*3,393*	*3,028*	*2,685*	*12%*	*13%*
Other loans	*3,207*	*2,978*	*2,784*	*8%*	*7%*
Net result for the year*	148	126	141	17%	-11%
Number of contracts	2,041,087	2,297,567	2,478,152	-11%	7%
Number of clients, out of which:	**1,597,411**	**1,940,091**	**2,046,984**	**-18%**	**-5%**
Individuals	*1,448,300*	*1,845,562*	*1,935,398*	*-22%*	*-5%*
Legal entities	*149,111*	*94,629*	*111,586*	*58%*	*-15%*

**Note: all amounts are expressed in million EUR, unless specified otherwise*

Source: author's own analysis based on the data published in the NBR's Annual Reports, available at https://bnr.ro/Publicatii-periodice-204.aspx

The NBR is continuously implementing measures in the NBFI sector with the main aim of ensuring the premises for better risk management, reduction of regulatory arbitrage and amelioration of the potential systemic effects that may arise.

Our paper continues with the presentation of the main differences identified between the requirements of the national accounting framework applicable to NBFI and IFRS principles and a discussion on the potential challenges these institutions might face during their implementation. When approaching the potential implementation challenges, we are leveraging insights from the banking sector's experience in implementing IFRS in 2012 and our practical experience in conducting financial audits for credit institutions and NBFI as well as in IFRS implementation projects.

4. Research methodology

The research aims to identify the divergent elements between IFRS and national accounting framework applicable to NBFI, which influence, in a three-dimensional way, the following fundamental coordinates: NBFI's financial performance, the prospect of IFRS adoption and statutory audit engagements.

To achieve this goal, we used a qualitative scientific research methodology. The research approach considered the typology of NBFI's activity in Romania, the evolution of the financial and non-financial key performance indicators for these entities during 2017 – 2020, as well as their geographical distribution in the current year. This approach is completed by the comparative analysis between the provisions of IFRS and national accounting framework and the identification of divergent elements with an impact on their financial performance, and implicitly on the prospect of IFRS adoption and statutory audit engagements. In this regard, the comparative analysis referred to the national accounting regulations, NBR Order 6/2015 and NBR Regulation 5/2012 and NBR Order 8/2019, and IFRS, namely, IAS 1 "Presentation of financial statements", IFRS 1 "First-time adoption of IFRS", IAS 12 "Income taxes", IFRS 9 "Financial instruments" and IFRS 16 "Leases".

The advantages and limitations of the IFRS transition were also addressed, given the turbulences in the international and national economic environments, generated by COVID-19 pandemic.

5. Transition to IFRS: accounting framework comparative analysis and envisaged challenges

5.1 Regulatory framework

Currently, NBFI operating in the Romanian market prepare their financial statements in accordance with NBR Order no. 6/2015 for the approval of the accounting framework according to the European Directives ("NBR Order 6/2015"). Additionally, the classification of loans from a credit risk perspective and computation of related impairment adjustments are conducted based on the provisions of NBR Regulation 5/2012.

Starting with financial year end 2019, new reporting obligations apply to NBFI. On October 30, 2019, NBR issued Order 8/2019 which regulates IFRS as basis for accounting for all NBFI operating on the Romanian market, starting with January 1, 2023. To prepare for the IFRS implementation, NBFI are required to prepare an annual set of IFRS financial statements for informative purposes for the financial years 2019-2022.

The informative IFRS financial statements will be the subject of an external audit exercise, except for those related to the 2019 financial year. Additional exceptions apply for 2019, such as: the financial statements may include only the statement of financial position and statement of financial performance and there is no mandatory requirement to present comparative information (2018 IFRS information), which can be done, optionally. Moreover, the IFRS informative financial statements must be accompanied by an analysis which reflects the differences between the accounting treatment under local GAAP and IFRS for each element of the statement on financial position and of the statement on financial performance.

The informative IFRS financial statements must be prepared and submitted to NBR within 180 days from the reference date, except for those related to 2019 financial year. For these, NBR extended the submission deadline until December 31, 2020, due to the COVID-19 pandemic.

Against this background, we conducted a comparative analysis between the provisions of local accounting framework and IFRS and identified the key differences which might have a significant impact on NBFI financial results. Given that the submission of the first IFRS financial statements is due on December 31, 2020, our paper provides valuable insights to practitioners responsible for financial reporting within NBFI.

5.2 Comparative analysis between the Romanian accounting framework and IFRS

Based on the research conducted, we identified a number of areas which might have a significant impact on NBFI financial statements or which will require significant resources for implementation. Our comments on these are included below.

i. Presentation of financial statements

IAS 1 “Presentation of financial statements” (“IAS 1”) provides guidance on the overall structure of financial statements, including minimum requirements for each primary statement (statement of financial position, statement of profit or loss and other comprehensive income, statement of changes in equity and statement of cash flows) and notes to the financial statements. Other accounting standards’ requirements supplement IAS 1 requirements.

The components of a complete annual set of financial statements are similar under both IAS 1 and local GAAP, with one exception: where an entity applies an accounting policy retrospectively or makes a retrospective restatement of items in its financial statements, or where it reclassifies certain items, IFRS requires the presentation of the statement of financial position as at the beginning of the preceding period. Under the local GAAP, entities are only required to present details on these reclassifications or restatements in the explanatory notes.

As compared to IFRS, NBR Order 6/2015 provides for specific format of each primary statement, at component line level. Moreover, there are prescriptive rules for mapping the internal accounts on each line of each primary statement. This is not the case under IAS 1.

Given that IAS 1 includes only minimum presentation requirements for each primary statement, with no prescriptive rules, IFRS financial statements presentation might vary significantly from one NBFI to another. Probably, the most affected primary statement will be the statement of profit or loss and other comprehensive income, where IFRS stipulates the mandatory presentation of only a few elements and requires Management to consider the presentation methods that it regards the most relevant. Financial statements users should consider this aspect when comparing the financial statements of several NBFI.

Moreover, IFRS requires numerous disclosures for each of the financial statement's component. Therefore, Management must identify each mandatory disclosure requirement from the applicable IFRS, which is very likely to require significant efforts. This will imply costs with staff training and or with external consultants.

ii. First-time adoption of IFRS

IFRS 1 "First-time adoption of IFRS" ("IFRS 1") deals with the accounting principles applicable when an entity applies IFRS for the first-time. The underlying principle of IFRS 1 is retrospective application of the standards in force at the end of an entity's first IFRS reporting period. Entities must use the standards in force at the end of the latest period covered by their first IFRS financial statements in their opening IFRS balance sheet and throughout all periods presented in their first IFRS financial statements. Also, there are specific optional exemptions and some mandatory exceptions from this general requirement.

A very important aspect is establishing the date of transition. According to the standard, the date of transition is the beginning of the earliest period for which an entity presents full comparative information under IFRS standards in its first IFRS financial statements. IFRS 1 requires an entity to prepare and present an opening balance sheet as a primary statement at the date of transition to IFRS.

If we apply these requirements for Romanian NBFI, we obtain the following schedule:

Table 3. **IFRS financial statements preparation**

January 1, 2019	December 31, 2019	December 31, 2020
Opening statement of financial position compliant with IFRS	Comparative financial statements	First full set of financial statements compliant with IFRS
⇩	⇩	⇩
Only for entities applying the first-time informative IFRS financial statements	Statement of financial position and financial performance	Full set of IFRS financial statements subject of an external audit

Source: author's own analysis

Therefore, in order to obtain a full set of financial statements compliant with IFRS, NBFI will have to prepare an opening balance sheet statement according to IFRS. This is also important in the context of the external audit for the 2020 financial statements, as the auditors are required to audit the opening statement in order to issue their opinion. In the event that NBFI will not prepare and present an opening IFRS balance sheet statement, the external auditors will issue a modified opinion in this respect. Out of the costs for implementation we mention the staff training costs and additional costs with external auditors' fees. The auditors' fees will increase as a result of the additional number of hours necessary to conduct appropriate audit procedures to consider the complexity of IFRS provisions as compared with the national accounting framework.

iii. Deferred taxes

IAS 12 “Income taxes” is the standard dealing with the accounting for income taxes, which is not regulated under NBR Order 8/2019. The accounting for income taxes recognises both the current tax consequences of transactions and events as well as the future tax consequences of the future recovery or settlement of the carrying amount of an entity's assets and liabilities. Any differences between (i) the carrying amount and tax base of assets and liabilities and (ii) carried forward tax losses and credits, are recognised as deferred tax liabilities or deferred tax assets, with the latter also being subject to a probable profits test.

NBFI should apply IAS 12 requirements both at transition date and at each reporting date. At transition date, NBFI will have to analyse the potential deferred tax impact deriving from the accounting policies changes that are made on transition to IFRS standards. Any deferred tax impact should be accounted for as part of the adjustments made on transition, against retained earnings or another appropriate category of equity. The implementation of these requirements might imply costs with staff training and or with external consultants.

iv. Financial instruments: classification and measurement

The most important discrepancies between the provisions of the local accounting framework and IFRS relate to the classification, measurement, impairment and disclosures of financial instruments. As part of the IFRS transition, NBFI should analyse and fully implement these requirements.

IFRS 9 “Financial instruments” (“IFRS 9”) is the standard dealing with the classification, measurement and impairment of financial instruments. The guidance for the financial statements’ disclosures related to financial instruments is provided by IFRS 7 “Financial instruments: disclosure” (”IFRS 7”). IFRS 9 replaced IAS 39 “Financial instruments: recognition and measurement”, being effective for annual reporting periods beginning on or after January 1, 2019.

In terms of classification and measurement, the most important discrepancies compared to the provisions of NBR Order 8/2019 relate to the subsequent measurement of financial assets. IFRS 9 brought important changes in this area, which are not captured by the local accounting framework.

Under IFRS 9, all financial assets are subsequently measured at either amortised cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVPL). The conditions for such classification differ upon the financial asset type: debt or equity instrument. NBFI should conduct the assessment on the classification and measurement of their financial instrument at IFRS transition date. Thus, if the financial asset is a debt instrument (for example, loans, treasury bills, bonds), Management should consider the assessment of NBFI’ business model for managing the financial asset and the contractual cash flow characteristics of the financial asset (the solely payments of principal and interest test – SPPI). Depending on the results of the assessments conducted, the financial assets will be classified within one of the available three categories according to IFRS 9 criteria. The results obtained might lead to a different measurement category compared to the existing one under NBR Order 6/2015, for example: exposures from loan agreements failing the SPPI test will be automatically measured at FVPL, while their current measurement might be at cost, financial assets under the hold to collect and sell business model and for which the SPPI test is passed, will be measured at FVOCI, while their current measurement might be at cost.

The business model and SPPI test assessments are complex and require numerous resources to be allocated for a significant amount of time. Management will need to apply judgment to determine the level at which the business model assessment is performed. The determination is made based on how each NBFI manages its business, it is not made at the level of an individual asset. This assessment becomes complex for NBFI providing multiple financing solutions, such as leasing and consumer loans. These entities will have to define at least two business models, one for each segment of activity.

Following the business model assessment, NBFI should assess whether the contractual cash flows of the financial assets represent solely payments of principal and interest. Practically, they should review the contractual clauses of their financial assets and assess whether the contractual cash flows deriving from those contracts meet the principal and interest definitions under IFRS 9. The contracts should be grouped in different categories upon the specifics of their clauses (individual/legal entities, standard/negotiated contracts) in order to facilitate the assessment process.

Under IFRS 9, investments in equity instruments are always measured at fair value. Equity instruments held for trading are always measured at fair value through profit or loss, while for the other equity instruments, the standard provides Management with an option to classify and measure them at fair value through other comprehensive income. This option is irrevocable, meaning that the same classification and measurement category will be maintained until the instrument will be sold or written off. Therefore, at transition date, NBFI should conduct a market valuation of their equity instruments and determine which measurement category will apply for their equity portfolio.

Significant disclosures on financial instruments are required to be presented in the financial standards. IFRS 7 “Financial instruments: disclosures” sets out these disclosure requirements. The objective is to provide information to users of financial statements about NBFI’s exposures to risks and how they manage those risks. Out of the most important risk management disclosures, we mention: credit risk disclosures (policies and management practices, quantitative and qualitative information about amounts arising from expected credit losses, collateral information, credit risk exposure), liquidity risk disclosures (policies and management practices, maturity analysis for all financial assets and financial liabilities), market risk disclosures (policies and management practices, sensitivity analysis for each type of market risk to which the NBFI is exposed). The implementation of these requirements will imply additional costs for staff training, additional payroll costs as more resources will be required during the implementation project, as well as after the implementation date and possible costs with external consultants.

v. Financial instruments: impairment

The assessment of the financial assets' impairment is presumed to be the most complex process that NBFI will face during the IFRS transition exercise, especially for loans granted to customers. Currently, NBFI compute the loans' impairment according to the provisions of NBR Regulation 5/2012. The methodology assumes the classification of the loans into five categories (standard, under observation, under-standard, doubtful, default), upon predefined criteria (days past due and status of debt recovery procedures). Each category is allocated an impairment coefficient based on which NBFI compute the impairment status.

On the contrary, IFRS 9 outlines a three-stage model (general model) for impairment of financial assets, based on changes in credit quality since the initial recognition of the instrument. The impairment (expected credit losses) is computed differently for each stage, as follows:

Table 4. **Overview of IFRS 9 three-stage model**

Stage 1 (performing)	Stage 2 (underperforming)	Stage 3 (non-performing)
Includes financial instruments that have not had a significant increase in credit risk since initial recognition.	Includes financial instruments that have had a significant increase in credit risk since initial recognition but that do not have objective evidence of impairment.	Includes financial assets that have objective evidence of impairment at the reporting date.
Computation of 12-month expected credit losses.	Computation of lifetime expected credit losses.	Computation of lifetime expected credit losses.

Source: author's own analysis

The significant increase in credit risk is assessed by comparing the risk of default at the reporting date with the risk of default at the date of initial recognition.
Thus, for the computation of the expected credit losses for loans granted to customers, NBFI should develop a three-stage model, based on the significant increase in the credit risk of those instruments. The process is deemed to be complex, with significant IT developments needed.

IFRS 9 provides also some operational simplifications for trade receivables, contract assets and lease receivables, and a practical expedient for financial assets with low credit risk. For example, for lease receivables, NBFI can apply the simplified approach and measure the loss allowance at an amount equal to the lifetime expected credit losses at initial recognition date and throughout their life. If the NBFI applying the simplified approach for lease receivables also provides loans to its customers, a separate three-stage model should be developed for the computation of related expected credit losses.

Moreover, as an exception to the general model, if the credit risk of a financial instrument is low at the reporting date, NBFI can measure the impairment using the 12 month expected credit losses and does not have to assess whether a significant increase in credit risk has occurred. This is usually the case for debt instruments, such as treasury bills and bonds.

NBFI should assess whether there is a deferred tax impact at transition date and at each reporting period end. The deferred tax impact should be accounted for as an adjustment against retained earnings or another appropriate category of equity.

The implementation of all these requirements will imply significant IT costs for the development or acquisition of an IT application for the computation of the expected credit losses (if the IT application is acquired, NBFI should consider also the yearly license fees), staff training costs, additional payroll costs as more resources will be required during the implementation project, as well as after the implementation date and possible costs with external consultants.

vi. Revenue recognition from financial instruments

According to IFRS 9 principles, the interest income and interest expenses deriving from financial instruments are recognised using the effective interest rate method. The effective interest rate is the rate that exactly discounts the estimated future cash flows or receipts throughout the financial instrument expected life to the gross carrying amount of a financial asset or to the amortised cost of a financial liability. The effective interest rate is adjusted to consider the origination fees received by entities for the development or acquisition of a financial asset, commitment fees to originate a loan (when the loan commitment is not measured at fair value through profit or loss), and origination fees paid on issuing financial liabilities measured at amortised cost.

This is partially consistent with the provisions of NBR Order 8/2019, according to which fees which are an integral part of the effective interest rate and transaction costs are recognised as an adjustment of the interest income, either by using a linear method or the effective interest rate. This is also applicable for interest expenses.

Therefore, NBFI not applying the effective interest rate method should consider developing their internal system in order to correctly compute the interest income and interest expenses from financial instruments. This will be an important challenge that NBFI will face during the IFRS implementation project, as significant resources will be required, both in terms of financial and human resources. The revenue recognition using the effective interest rate method was acknowledged as an important challenge also during the IFRS implementation for banks (Dunne et al., 2008; Grecu, 2011; Popovici, 2011; Dochia, 2012).

The implementation of all these requirements will imply significant IT costs for IT developments to provide for the revenue recognition using the effective interest rate, costs for staff training and possible costs with external consultants.

vii. Lease accounting

IFRS 16 "Leases" ("IFRS 16") deals with the accounting for lease contracts. The standard entered into force on January 1, 2019 and changed significantly the lease accounting from the lessee perspective. Under the new leasing model, the distinction between operating and finance lease is eliminated for lessees and a new lease asset and lease liability are recognised for all lease contracts, if no exemptions are applied. This is an important difference compared to the provisions of NBR Order 8/2019, which provides for different accounting treatments for operating and finance lease contracts.

Lessor accounting did not change and lessors continue to reflect the underlying asset, subject to the lease arrangement, on the balance sheet for leases classified as operating. These principles are consistent with provisions of NBR Order 8/2019.

Practically, NBFI should conduct an inventory of all their leasing contracts at IFRS transition date and identify, for each contract, whether they are either a lessee or a lessor. For contracts where NBFI act as a lessee, they should initially recognise a right-of-use asset and lease liability based on the discounted payments required under the lease, taking into account the lease term as determined under the new standard. The right of use assets and lease liabilities should be subsequently measured, according to IFRS 16 provisions.

As the lessor accounting does not change, NBFI will continue to reflect the underlying asset, subject to the lease arrangement, on the balance sheet for leases classified as operating. For financing arrangements or sales, the balance sheet will reflect a lease receivable and the lessor's residual interest, if any. We present below a summary of lessee and lessor accounting under IFRS 16 and comment on their consistency with the provisions of NBR Order 8/2019:

Table 5. **Overview of IFRS 16 accounting**

	Statement of financial position	**Statement of profit and loss**	**Consistent with NBR Order 9/2019**
Lessee	Right of use assets Depreciation of right of use assets Lease liabilities	Finance cost Expenses with depreciation of right of use assets	Not consistent, local GAAP differentiate between operating and finance lease, for which different accounting treatment applies
Lessor – finance lease	Lease receivable (net investment in the lease)	Finance income	Consistent
Lessor – operational lease	Leased assets based on their nature (either property, plant and equipment or investment property) Depreciation of the leased asset	Rental income Expenses with depreciation of the leased asset	Consistent

Source: Author's own analysis

Moreover, NBFI should assess the deferred tax impact at transition date and at each reporting period end. NBFI should apply IAS 12 requirements to the temporary differences between the carrying amount of the assets and liabilities and their tax bases as at the date of their opening IFRS balance sheet, as the Romanian Fiscal Code differentiates between finance and operating lease. The deferred tax impact should be accounted for as an adjustment against retained earnings or another appropriate category of equity.

During the IFRS implementation phase, NBFI should consider whether there is a need to develop or acquire a dedicated IT system to keep evidence and the accounting for the lease contracts. This will depend upon the number of contracts and their complexity. The implementation of all these requirements will imply IT costs for the development or acquisition of an IT application for the computation of the assets and liabilities deriving from the lease contracts (if the IT application is acquired, NBFI should consider also the yearly license fees), staff training costs and possible costs with external consultants.

5.3 Envisaged challenges for IFRS conversion

The degree of difficulty of IFRS conversion will depend on NBFI activity, the type, complexity and volume of activity. An important effect of IFRS convergence will be the increased effort at NBFI level to analyse and report all the new information that must be presented in the financial statements. The simplest example can be observed for NBFI providing both consumer loans and finance lease products, where multiple distinct IFRS principles will apply. IFRS 9 "Financial Instruments" principles will apply for the classification and measurement of the consumer loans granted, while IFRS 16 "Leases" principles will apply for finance lease products.

The most significant challenges for the IFRS implementation are deemed to be the IT developments and staff training. Significant IT developments will be needed, especially for the implementation of IFRS 9 requirements in terms of impairment and revenue recognition based on the effective interest rate method. Intensive training will be required for the employees involved in the IFRS implementation project, especially in the areas where there are discrepancies between the national accounting framework and IFRS. Having highly trained employees is of an ultimate importance for the quality of financial reporting and successful finalisation of the project.

Another factor which might affect the quality of financial reporting and external audit outcome is the geographical distribution of NBFI across the country. With regards to the quality of financial reporting, it is not unjustified to assume that the practitioners across the country have limited ways of developing their own IFRS knowledge, especially if the NBFI for which they are working for are not part of an international financial group. According to the data from the NBR's General Register and the National Trade Registry Office, the majority of the NBFI incorporated outside Bucharest are owned by Romanian individuals and/or Romanian legal entities and not part of international groups.

Therefore, for these practitioners, the development of their own IFRS knowledge is limited to self-study or participating in online/classroom courses or technical events organized by institutions such as the Romanian Banking Institute and the Institute of Financial Studies, and/or financial advisory companies with relevant experience in the field. However, these courses and events are usually held only in Bucharest and cities across the country of significant economic importance, such as Cluj-Napoca, Timisoara and Iasi. NBFI should budget the staff training costs as part of the overall budget allocated for the IFRS implementation project.

As for the external audit outcome, we conducted an analysis on the external audit firms auditing the financial statements of the Romanian NBFI. We reviewed the latest available annual transparency reports of Big4 audit firms (available on the firms' official websites) and identified that these companies audited a number of 45 NBFI during 2018 – 2019 (out of 177 – 178 active NBFI at the end of 2018-2019). Remaining NBFI are audited by mid-tier international audit firms, local audit firms, not part of an international group and authorised external auditors – individuals.

The challenge with the local audit firms and the authorized external auditors - individuals, is that they might lack sufficient relevant IFRS knowledge. The best example is IFRS 9, where there is a need for specialized staff (data modellers, statisticians) to perform audit procedures on the impairment computation model. Therefore, these categories of auditors should ensure they assign skilled personnel to conduct the audit procedures for complex areas, such as revenue recognition using the effective interest rate method, impairment of loans under IFRS 9, recognition and measurement of deferred taxes.

6. Conclusions

IFRS convergence is one of the most important projects that Romanian NBFI have faced in recent years. The comparative analysis conducted between the local accounting framework and IFRS revealed that there are numerous new reporting requirements which will have a strong impact on the financial results and daily activities, especially on the IT systems.

IFRS are principle based rather than rules based, therefore, the professional judgment and training of the personnel involved in the conversion process will be of prime importance. Training is important not only for personnel directly involved in the reporting process but also for employees from business and risk departments, responsible for the monitoring of the impairment indicators and development of the expected credit losses methodology. External auditors will have to adapt their audit strategy and testing according to the new accounting framework and engage in the audit team skilled personnel in the IFRS area, especially for IFRS 9 audit.

Furthermore, NBFI should consider the impact of the current economic environment in the context of COVID-19 pandemic on their IFRS implementation project. Special attention should be paid to the allocated budget and managing costs throughout the project given the uncertainties surrounding future cash inflows, due to the possibility granted to customers, through Government Ordinance, to delay the repayment of their instalments for a maximum 9 months' period, in the context of COVID-19 pandemic.

This paper contributes to the enrichment of the IFRS literature and can be used as a best practice guide, providing insights to both, representatives of the academic environment and professionals responsible with the financial reporting, on the main areas NBFI practitioners should focus on for the preparation of the first set of IFRS financial statements.

Future research on this topic envisage the review of the first set of IFRS financial statements and analysis of the IFRS convergence impact on NBFI financial results and key performance indicators.

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The Effectiveness of the Performance Audits Conducted by the Supreme Audit Institutions. Romania's Experience

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Abstract: *The research objective is to analyze the perception of the public entities' representatives regarding the effectiveness of the performance audits performed at their level by the professionals of the Romanian SAI, in order to determine the extent to which these missions bring added value and promote changes to the audited entities. In order to analyze the perception on the performance audits effectiveness, a questionnaire was disseminated to the representatives of the performance audited entities in the period 2015-2019. In order to identify the homogeneous perceptions and the audited entities trends, the descriptive analysis of the opinions expressed is complemented by cluster analysis (hierarchical and using the K-means algorithm) and multidimensional scaling (MDS). The collected data processing, the clustering of the respondents who show similar behavior and the obtained results analysis were performed using the SPSS statistical software. The research contribution is related to the under-exploration of the approached topic in Romania. Moreover, in the context in which the history of the performance audit in our country dates back a little over a decade, we appreciate that the opinions of the audited entities representatives will allow us to establish the level of adoption and adaptation of the performance audit to a still developing environment.*

Keywords: *Performance audit, SAI, public sector, Romania, cluster.*

1. Introduction

The research premise is the performance audit importance, as the activity that the supreme audit institutions carry out at the level of the entities within their area of competence, in order to contribute, through the recommendations made in the specific reports, to improving their activities' economicity, efficiency and effectiveness.

In Romania, the performance audit has a short history of just over a decade. The concept was explicitly regulated in 2008, when the activity of the Court of Accounts was divided into three levels, specific to the supreme audit institutions, namely control, financial audit and performance audit (Bostan and Dascălu, 2016: 391).

According to the regulations in the field at national level (the Organic Law of the Court of Accounts and the Regulation regarding the organization and conduct of its specific activities), the performance audit is the independent evaluation of how an entity, program / project / process, activity or operation works through the prism of "the 3E" (efficiency, effectiveness and economicity).

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From the perspective of the International Standards of Supreme Audit Institutions, the performance audit focuses on determining whether the operations, programs and institutions operate in accordance with the principles of economicity, efficiency and effectiveness and whether there is room for improvement. Within these missions, the performance is evaluated in relation to certain criteria, analyzing the causes of deviations from them or other problems. The purpose of this form of audit is to answer the audit questions and to issue recommendations for improving the pursued issues (Trincu-Drăgușin and Ștefănescu, 2020: 557).

The effectiveness of the performance audits, performed by the Romanian SAI professionals, and the extent to which they promote and produce changes at the level of the audited entities, can be assessed by analyzing the perception of the representatives of these entities on the added value following the missions.

The paper is structured in the following sections: the first section presents the review of the specialized literature; the second is dedicated to an empirical research regarding the investigation of the audited entities representatives' perception on the effectiveness of the performance audits performed by the Romanian SAI and includes the research methodology description and the research results. The last section is dedicated to the research conclusions, limits and future directions.

2. The specialized literature review

The research of the added value through the performance audit actions, carried out by the external public auditors of the Court of Accounts, is closely related to the analysis of the ways of measuring the results of the supreme audit institutions.

The importance of measuring the SAIs results is recognized in the specialized literature, which also discusses how they could be improved, but as Johnsen (2019: 121) points out, the literature regarding the public sector audit, aside from the Anglo-American and North European contexts, is limited.

The research conducted regarding the way of measuring SAIs results has focused mainly on the performance audit and, to a lesser extent, on the other types of external public audit, and researchers have used descriptive indicators more frequently than quantitative indicators (Bonollo, 2019: 468).

As Slobodyanik (2019: 472) highlights, SAIs are able to increase the responsibility of state administrative bodies towards the society both in terms of the used resources and regarding the results related to performance.

The public sector performance audit has a significant role in assessing the government accountability, by monitoring the public power functioning and, in particular, the way in which the public resources are used. Subsequent to the performance audit missions, of particular importance are the actions of monitoring the implementation of the recommendations advanced by the auditors regarding various issues reported. The lack of such monitoring can cause problems both in terms of measuring the real value of the performance audit and in the expected results of the recommendations (Umor *et al.*, 2016: 49).

Yetano *et al.* (2019) analyzed the performance audits effectiveness at the level of the audited institutions in Latin America. The results of their study show that performance auditing can become a relevant and effective practice in Latin American countries, although some audited entities are far from taking coercive measures. The differences regarding the level of corruption and the lack of adequate capacity in performance audits influence the trust in SAIs, but a relationship of mutual trust between the latter and the audited entities is essential for the missions' effectiveness and to foster a learning cycle. The audited entities with the best results in the study confirm that the recommendations made following the audits have produced changes in their management and admit that the periodical missions with the aim of monitoring the recommendations implementation are an incentive to increase the performance audits effectiveness.

A similar study was recently conducted at the level of the supreme and regional audit institutions in the European Union. In order to assess the impact of the performance audits, Torres *et al.* (2019) analyzed the extent to which the formulated recommendations are implemented. The results of their research highlight two main ways in which the recommendations included in the performance audit reports produce an impact: The Anglo-American way, based on the audited entities actions and on the monitoring processes, and the German way, based on the parliamentary reaction.

Using the survey technique and the regression analysis, Johnsen *et al.* (2019) recently studied the impact of the performance audit exercised by the SAIs on the public administration of four Nordic countries (Denmark, Finland, Norway and Sweden). The results of their study indicate that the entities that have experienced performance audits perceive a positive impact of these approaches on their usefulness, changes, improvement and, to some extent, on the accountability. At the same time, they point out that some of the factors that previous research considered important for the impact of performance audits in some countries have been perceived as insignificant for all four Nordic countries, but that the legitimacy of SAIs, the audit quality and the media attention consequences were important factors.

Reichborn-Kjennerud and Johnsen (2018: 1422) emphasized, on the one hand, that performance auditing is a widespread but contested approach, and on the other hand, the lack of empirical evidence regarding the audit impact. Using the survey technique, they analyzed the tendency of the audited entities to make changes as a result of the performance audits undertaken by the Norway's SAI. The results of their study showed that there is a tendency to make changes, but the institutional, political and instrumental factors have to some extent an impact on this tendency to change.

Previously, exploring the performance audit impact on the public policies, Reichborn-Kjennerud (2014: 368) showed that Norway's SAI is primarily concerned with the managerial issues and that most performance audit reports receive moderate attention from the media and the parliamentary control committee.

Analyzing the performance audits impact on the Estonian public sector organizations, Raudla *et al.* (2016) showed that these approaches are perceived as useful even if they do not lead to specific changes in the organizational policies and practices, and the adoption of the advanced recommendations through the audit reports is more likely when the lawmakers pay attention to this form of audit and when the media attention leads to political debates.

From a similar perspective, the study of the performance audits impact on the Belgian administration (Desmedt *et al.*, 2017) highlighted that these actions did not cause radical changes in the organizational life of the entities, but the auditors' intervention was still visible, the nature of the impact being rather conceptual than strategic or instrumental.

In Romania, the effectiveness of the performance audits conducted by SAIs has not been addressed so far in the context in which the external public audit (in general) and the performance audit (in particular) are limited topics from the research point of view. The main approaches in the Romanian specialized literature focused on the correlation analysis between the volume of activity of the audited entities and the errors that generate the distortion of the fair image within the financial statements (Pitulice and Ștefănescu, 2016), on the external public audit typology (Trincu-Drăgușin and Ștefănescu, 2020), on the parallels between the performance audit and the financial audit (Nișulescu and Martin David, 2009), on the principles and ethical values in the specific activity of external public audit (Marcu, 2018).

3. Empirical research regarding the effectiveness of the performance audits conducted by the supreme audit institutions. Romania's experience

3.1. Research methodology

The research carried out in this paper is based on the questionnaires disseminated to the representatives of the entities at the level of which the Romanian supreme audit institution (abbreviated SAI) professionals performed performance audit missions. The sample taken into account was composed of the representatives of the performance audited entities in the period 2015-2019.

The information on the performance audit missions carried out during the research horizon, as well as the information on the entities audited by the professionals within the specialized structures of the Court of Accounts, was obtained by reviewing the reports portfolio of the Romanian SAI, available online on its official website (www.curteadeconturi.ro).

Thus, in the period 2015-2019, the professionals of the Romanian SAI performed 730 performance audit missions, at the level of 644 entities that are part of Court of Accounts' field of competence (Appendix 1).

The dynamic analysis of the number of performance audit missions conducted, in the period 2015-2019, highlights a fluctuating evolution from one year to another, determined by the evolution of the number of missions performed at the level of the territorial structure, which have the majority share (over 90%) from the number of performance audit missions performed within the research horizon. It can be observed that the year with the most intense performance audit activity at the level of the Romanian SAI was 2017.

If we consider the maximum number of performance audit missions performed annually at the level of the territorial structure of the Court of Accounts, we note that the most of such actions were performed in 2015 in Bucharest (10 missions), in 2016 at the counties Ialomița and Iași (7 missions / county each), in 2017 in Bucharest (15 missions), in 2018 in Galați county (8 missions) and in 2019 in Iași county (11 missions). We also identified territorial structures at the level of which no annual performance audit missions were carried out (Arad, Argeş, Bistrița-Năsăud, Bucharest, Călărași, Covasna, Dolj, Ilfov, Mehedinți, Olt, Prahova, Satu-Mare, Teleorman, Vâlcea, Vrancea); these structures represent 35.71% of the territorial structures of the Romanian SAI.

The questionnaire, as an investigative tool, included 24 questions, in order to produce an eloquent snapshot on the entities representatives' perception regarding the effectiveness of the performance audits performed by the professionals within the Romanian SAI.

Taking into account the respondent's reticence regarding the open questions, in the questionnaire elaboration, we mainly formulated closed questions and partially open questions starting from the premise that we will facilitate a respondents' better understanding of the questions, which will lead to a shorter response time. In the structure of the questionnaire, we inserted a single opened question related to the respondents' field of study.

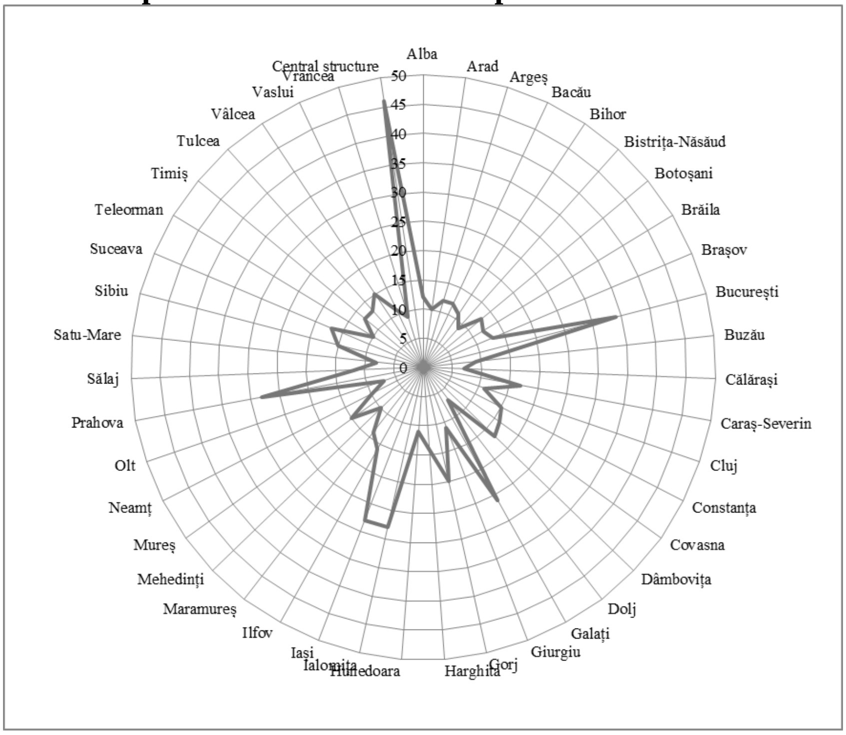
From the informational point of view, the questionnaire includes identification and classification questions, opinion or attitude questions, knowledge questions and filter questions. Regarding the answers typology, the questionnaire includes: grid questions with one or more allowed answers, an open question, answer matrix questions and a hierarchical question.

The questionnaires were distributed online through the Google Forms platform. We opted for Google Forms, as an alternative to formatting and disseminating the questionnaire, because we believe that it facilitates the response time reduction and optimizes the answers collection, thus eliminating some of the disadvantages of the classic version, in which the questions are formulated and sent to the respondents as Word documents. Respondents were assured of the responses anonymity and confidentiality.

The questionnaires were disseminated to the executive management and/or of the financial-accounting departments within the 644 entities, at the level of which, in the period 2015-2019, the Romanian SAI conducted the 730 performance audit missions, through its specialized structures at central and territorial level. The email addresses of the respondents were obtained from the official websites of the audited entities (contact section).

In order to ensure that the questions are clear and correctly perceived, the questionnaire was initially tested on a sample of 5 respondents, and following the comments they made, we reviewed it and, subsequently, disseminated it in electronic format, using Google Forms. The questionnaires dissemination and the answers collection were carried out March-April 2020, 74 answers being obtained. All the answers were valid.

Figure 1. **The distribution of the number of entities at the level of which performance audit missions were performed, in the period 2015-2019, on the specialized structures that performed them**



(*Source*: Own projection according to the data available at www.curteadeconturi.ro accessed on March 23, 2020)

The distribution of the number of entities at the level of which performance audit missions were performed, in the period 2015-2019, on the specialized structures that performed them, is presented according to Figure 1.

The data show that most of the entities were audited by the central structure of the Court of Accounts (46 entities). At the level of the territorial structure, most of the entities were from Bucharest (34 entities), followed by the counties of Ialomiţa, Iaşi, Prahova (with 28 audited entities each) and Galaţi (26 entities). From a diametrically opposite perspective, the counties with the fewest performance audited entities are Călăraşi, Dolj, Olt (with 7 entities each), Satu-Mare (8 entities), Bistriţa, Buzău and Vrancea (with 9 entities each).

The audited entities, in the period 2015-2019, by the Romanian SAI represent different fields of the public sector, as follows: administration, health, education, research, environment, sports, infrastructure, transport, culture, public finances, public utilities, health insurance, social assistance, communications, post office, pensions and regional development.

The answers were collected and centralized using Google Forms, which allowed us to view them in detail in Excel file format. Starting from this file, we continued our investigative approach, by processing and statistically analyzing the collected data and information, using the SPSS statistical software.

With the purpose of identifying the homogeneous perceptions of the audited entities representatives, regarding the effectiveness of the performance audits performed by the

Romanian SAI, the descriptive analysis of the collected opinions was completed by the cluster analysis and MDS (Multidimensional Scaling) analysis. By adapting the vision of Yetano *et al.* (2019), these techniques allowed us to graphically illustrate the characteristics, by grouping the respondents who show similar behavior.

The approach regarding the cluster analysis took into account the responses classification into several major groups, in order to identify the trends associated with each group. By cluster analysis we found out, for example, the perception of the persons with different degrees of experience within the entities, on the performance audits performed by the Romanian SAI.

3.2. The research results

The analysis of the received answers highlights that the respondents are diverse considering the gender, the field of study and the experience within the entity. The representativeness of the results for the statistical population is ensured in the context of the respondents' diversity and of their territorial distribution, answers from each historical region of the country being obtained. The territorial distribution of the respondents is presented in Figure 2.

The analysis of the territorial distribution by counties highlights the highest number of respondents in Bucharest, directly proportional to the number of performance audit missions performed both by the Bucharest Chamber of Accounts and by the specialized departments in the central structure of the Romanian SAI. In the descending order of the number of answers, Bucharest is followed by Bacău county (six answers), Ialomița (five answers), Galati, Iași and Suceava counties (with four answers each), Hunedoara, Sibiu and Teleorman counties (with three answers each) follow, the counties of Botoșani, Brașov, Brăila, Buzău, Covasna, Gorj, Ilfov, Maramureș, Prahova, Sălaj, Vâlcea, Vaslui and Vrancea (with two answers each) and the counties of Alba, Argeș, Bihor, Dâmbovița, Satu Mare, Timiș, Tulcea (with one answer each).

Figure 2. **The territorial distribution of the respondents, by counties and historical regions**

(*Source*: Own projection)

The respondents' territorial distribution is presented, on the historical regions of Romania, correlative with their incomes per 1000 residents, in Table 1.

Table 1. **The respondents' territorial distribution correlated with the incomes related to 2018 per 1000 residents, by historical regions**

Historical regions	**Number of responses**	**%**	**The local budgets execution - 2018 (million lei)**		**Number of residents (01.01.2019)**	**Incomes per 1000 residents (million lei)**
			Total revenues	**Subsidies from the state budget**		
0	1	2	3	4	5	6=3/5*1000
Muntenia	27	36.49%	20,212.30	2,935.10	5,948,265	3.3980
Transilvania	13	17.57%	11,000.00	1,721.80	3,899,366	2.8210
Moldova	18	24.32%	7,674.40	1,565.80	3,019,160	2.5419
Oltenia	4	5.41%	5,531.30	1,456.90	1,926,860	2.8706
Crișana	1	1.35%	2,798.50	427.60	978,826	2.8590
Banat	1	1.35%	2,699.30	419.50	976,405	2.7645
Dobrogea	1	1.35%	2,554.60	409.40	868,130	2.9426
Bucovina	6	8.11%	2,543.70	532.10	1,004,185	2.5331
Maramureș	3	4.05%	2,161.30	430.40	793,261	2.7246
Total	**74**	**100%**	**57,175.40**	**9,898.60**	**19,414,458**	**2.94**

(*Source*: Own processing on the data published by the National Institute of Statistics, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table accessed June 29, 2020)

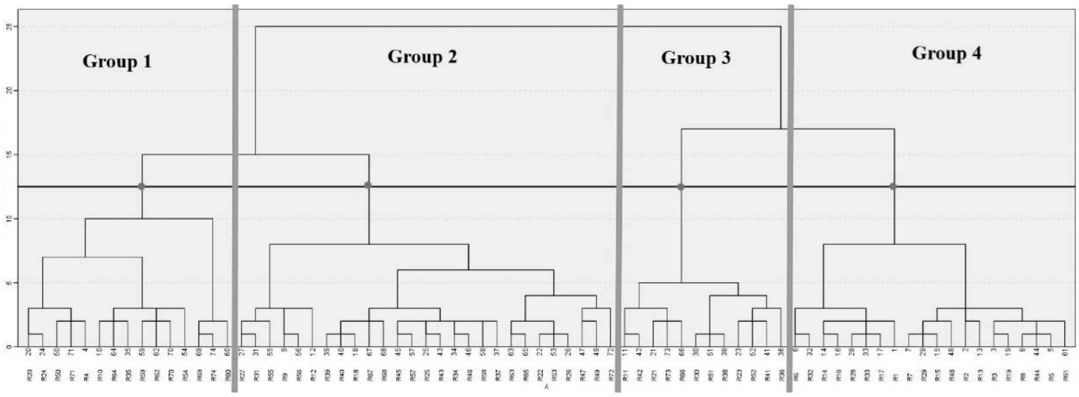
The analysis of these data shows that, although over 36% of the responses were obtained in "the richest" region of the country (Muntenia), the number of respondents was not directly influenced by the regions revenues, thus the study representativeness being ensured. Basically, the answers share comes not only from richer regions, but also from middle-income regions (Transylvania, Oltenia) and lower-income regions (Moldova, Bucovina).

Analyzing the general coordinates of the respondents, we highlight the fact that 60.81% of the respondents are women and 39.19% are men.

If we refer to the field of study, the respondent's structure is diverse, the questionnaire being completed by graduates of the following fields of study: public administration, aviation, chemistry, construction, law, economics, sports, geography, computer science, engineering, history, medicine and environment. Most of the respondents are graduates of Economics (64.86%), being followed, in the descending order of percentages, by the respondents with studies in Engineering (9.46%) and Law (8.11%).

Figure 3 presents the classification tree (the dendrogram) made using Ward's grouping method, taking into account all the variables obtained through the respondents' answers. The dendrogram resulting from the cluster analysis facilitated the configuration of four groups or major classes of respondents.

Figure 3. **The classification dendrogram using the Ward method**



(*Source*: SPSS output)

The hierarchical classification method was used to identify the number of groups to be considered, but the K-means algorithm was used to assign each respondent to a group, as well as to describe the profiles.

The variables taken into account in clustering are those presented in Table 2. The application of the K-means algorithm was preceded by the normalization of the values associated to the variables, using the Z score.

Table 2. **The variables presentation**

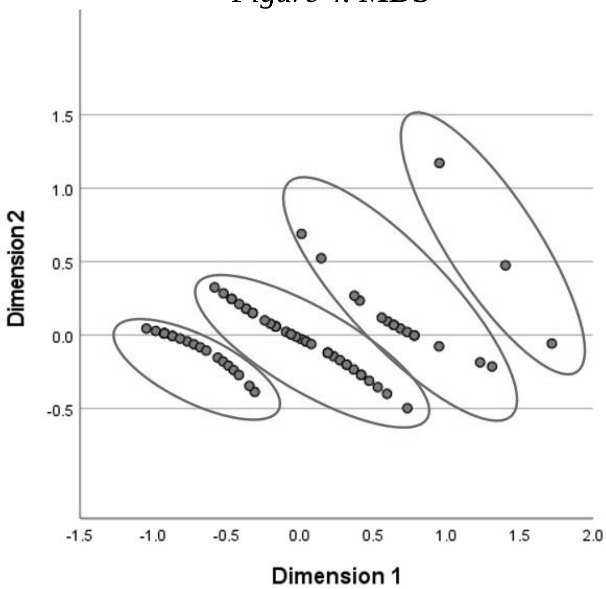
Questions	Variables
Q1	Gender
Q4	The respondents' experience within the entity
Q5	The year in which the Romanian SAI performed the last performance audit mission at the level of the entity
Q6	The usefulness of the performance audits performed by the Court of Accounts at the level of public entities
Q7	The extent to which the performance audit missions add value for increasing the economicity, efficiency and effectiveness within the activity of the public sector entities
Q8	The adequacy of the performance audit theme and objectives to the most important aspects of the entity's activity
Q9	The appropriate and faithful to reality assessment of the economicity, efficiency and effectiveness with which the public resources are managed in order to achieve the set objectives
Q10	The audit predominant focus on error identification and/or on the performance evaluation according to certain viable landmarks
Q11	The approach practiced by the external public auditors in the performance audit compared to the financial or the compliance audit
Q12	The relationship between the auditors and the audited entity staff in the performance audits compared to the financial and the compliance audits
Q13	The respondents involvement in the process of identifying the best ways (recommendations) to improve the activity
Q15	The extent to which changes were recommended after the performance audits
Q16	The extent to which the performance audits have led to the improvement of the management policies and practices, of the internal management control systems, of the accountability in the economical, effective and

Questions	Variables
	efficient use of the public funds, of the own mechanisms of monitoring and evaluating performance, of the transparency regarding how to manage public funds and the accuracy of the financial-accounting activity
Q18	The extent to which the stakeholders perceptions have changed as a result of the performance audit report publication
Q19	The extent to which the entity has implemented the recommendations made by the SAI professionals after the performance audit missions undertaken
Q20	The extent to which the SAI professionals also carried out monitoring actions regarding the recommendations implementation
Q22	The extent to which the recommendations made after the performance audit missions have contributed to increasing the economicity, efficiency and effectiveness of the public funds use at the entity level.

(*Source*: Own processing)

The results related to the cluster and MDS analyzes are presented in Figure 4, which graphically reflects the 4 major groups identified.

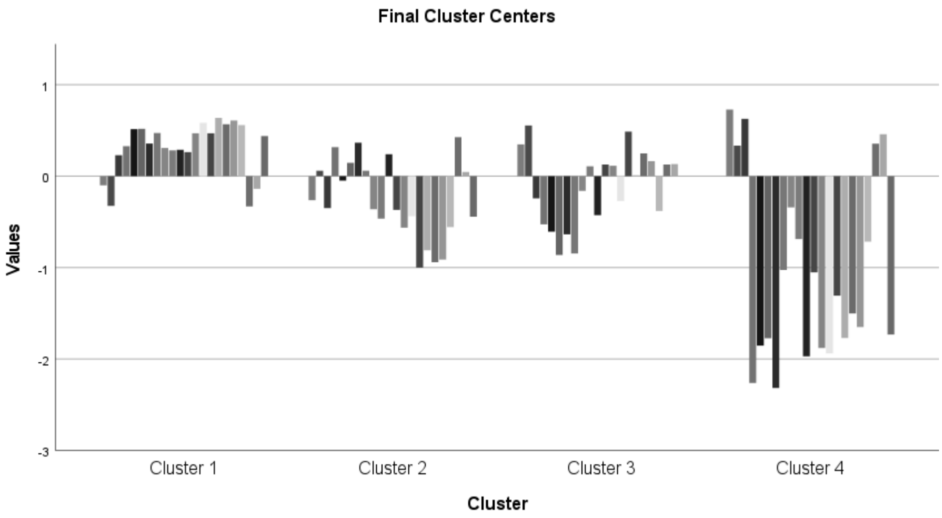
Figure 4. **MDS**



(*Source*: SPSS output)

The differences between clusters (the clusters complementarity) are reflected through Figure 5.

Figure 5. **The clusters complementarity**



(*Source*: SPSS output)

The statistical significance of clustering was assessed using the ANOVA table (Figure 6), resulting:

- *important significance* for the respondents experience within the entity, the performance audits usefulness, the extent to which they add value to the economicity, the efficiency and the effectiveness increase in the activity of public sector entities, the adequacy of the performance audit theme and objectives to the most important aspects of the entity's activity, the appropriate and faithful to reality assessment of the economicity, efficiency and effectiveness with which the public resources are managed in order to achieve the set objectives, the audit focus on identifying errors and/or evaluating performance against certain viable benchmarks, the audit focus on the errors identification and/or on the performance evaluation according to certain viable landmarks, the relationship between the auditors and the audited entity staff in the performance audits case compared to the financial and the compliance audits, the respondents involvement in the process of identifying the best ways (recommendations) to improve the activity, the extent to which changes were recommended after the performance audits, the extent to which the performance audits have led to the improvement of the management policies and practices, of the internal management control systems, of the accountability in the economic, effective and efficient use of the public funds, of the own mechanisms of monitoring and evaluating performance, of the transparency regarding how to manage public funds and the accuracy of the financial-accounting activity, the extent to which the stakeholders perceptions have changed as a result of the performance audit report publication, the extent to which the entity has implemented the recommendations made by the SAI professionals after the performance audit missions undertaken, the extent to which the recommendations made after the performance audit missions have contributed to increasing the economicity, efficiency and effectiveness of the public funds use at the entity level;

Figure 6. **The statistical significance of clustering (the ANOVA table)**

ANOVA

	Cluster		Error			
	Mean Square	df	Mean Square	df	F	Sig.
Zscore(Q1)	1.901	3	.961	70	1.977	.125
Zscore(Q4)	3.037	3	.913	70	3.327	.024
Zscore(Q5)	2.222	3	.948	70	2.345	.080
Zscore(Q6)	10.185	3	.606	70	16.796	.000
Zscore(Q7)	9.653	3	.629	70	15.342	.000
Zscore(Q8)	11.409	3	.554	70	20.598	.000
Zscore(Q9)	11.643	3	.544	70	21.408	.000
Zscore(Q10)	7.839	3	.707	70	11.088	.000
Zscore(Q11)	2.227	3	.947	70	2.351	.080
Zscore(Q12)	2.988	3	.915	70	3.266	.026
Zscore(Q13)	7.482	3	.722	70	10.359	.000
Zscore(Q15)	3.228	3	.905	70	3.569	.018
Zscore: Q16-1	9.350	3	.642	70	14.561	.000
Zscore: Q16-2	10.583	3	.589	70	17.959	.000
Zscore: Q16-3	12.442	3	.510	70	24.413	.000
Zscore: Q16-4	13.090	3	.482	70	27.165	.000
Zscore: Q16-5	12.722	3	.498	70	25.566	.000
Zscore: Q16-6	13.377	3	.470	70	28.490	.000
Zscore(Q18)	7.064	3	.740	70	9.545	.000
Zscore(Q19)	2.680	3	.928	70	2.888	.042
Zscore(Q20)	.610	3	1.017	70	.600	.617
Zscore(Q22)	7.485	3	.722	70	10.366	.000

The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

(*Source*: SPSS output)

- *relative significance* for gender, the year in which the Romanian SAI performed the last performance audit mission at the entity level, the approach practiced by external public auditors in performance audit compared to the financial or the compliance audit;
- *reduced significance* for the extent to which the SAIs professionals also performed actions for monitoring the recommendations implementation following the performance audit missions; in other words, this variable has no impact on clustering.

Cluster 1 represents 47% of the total respondents. They have an average of 11 years of experience in the entities they represent; 74% of them give high utility to performance audits; they consider that the performance audit missions add, to a great or a very large extent, value for the economicity, efficiency and effectiveness increase in the activity of the public sector entities; most of them consider that the themes and the objectives of the performance audits are appropriate to the most important aspects of the entities' activity and that the auditors properly assessed the factual situation and gave a fair image of the economicity, efficiency and effectiveness with which the public resources are managed in order to achieve the set objectives; more than half believe that the performance audit was equally focused on identifying errors and evaluating performance, and 37% believe that the audit was focused more on evaluating performance; regarding the approach adopted by external public auditors in performance auditing compared to financial or compliance audit, 51% consider it to be relatively different and 34% significantly different; 46% believe that the relationship between the auditors and the audited entity staff was felt to be different, perhaps more collegial, in the case of the performance audit than in the case of the financial or the compliance audit; most of them declared they were involved in identifying the best ways to improve their activity; 80% stated that, following the audits, changes were recommended at the level of the entities they represent (64% stated that the recommended changes were not significant); from the perspective of the majority of respondents, the performance audits have largely led to the improvement of the management policies and practices, the managerial internal control systems, the accountability in the economic, effective and efficient use of the public funds, the own mechanisms for monitoring and evaluating performance, the transparency regarding the way of managing public funds and of the financial-accounting activity accuracy; 34% declared that the stakeholders perception changed as a result of the performance audit report publication; half of them stated that the recommendations had been partially implemented; in most cases, the SAI professionals also carried out actions for monitoring the recommendations implementation; according to most respondents, the recommendations made following the performance audit missions have contributed a lot in terms of increasing the economicity, efficiency and effectiveness in the public funds use at the entity level.

Cluster 2 groups 26% of the total respondents. They have an average of 15 years of experience in the entities they represent; 74% of them consider that the usefulness of the performance audits is high and over 63% consider that these missions bring, to a large extent, added value in order to increase the economicity, the efficiency and the effectiveness in the public sector entities activity; 68% of them consider that the performance audits themes and objectives are appropriate to the most important aspects of the entities activity and 95% of them believe that the auditors properly assessed the factual situation and gave a fair image of the economicity, efficiency and effectiveness with which the public resources are managed in order to achieve the set objectives; 68% consider that the performance audit was equally oriented towards the errors identification and the performance evaluation; regarding the approach adopted by the external public auditors in performance auditing compared to financial or compliance auditing, 53% consider it to be relatively different, while 37% consider that it was not different; 90% of them stated that the relationship between the auditors and the audited entity staff was not felt to be different in the performance audit case compared to the financial or the compliance audit and that they were involved in the process of identifying the best ways to improve the activity; 68% stated that, following the performance audits, changes were recommended at the level of the entities they represent, but these changes were not significant; from the perspective of most respondents, the performance audits have relatively improved the management policies and practices, the management internal control systems, the accountability in the economic, effective and efficient use of the public funds, the own mechanisms for monitoring and evaluating performance, the transparency regarding the way of managing public funds and the financial-accounting activity accuracy; 74% stated that stakeholders' perception did not change as a result of the performance audit report publication; most stated that the recommendations were fully implemented, contributing relatively to increasing the economicity, efficiency and effectiveness in the use of public funds at the level of the entity and that the SAI professionals also carried out actions for monitoring the recommendations implementation.

Cluster 3 includes 22% of the total respondents. They have an average experience of 19 years in the entities they represent; 75% of them consider that the performance audits have medium utility; half consider that these missions bring relatively added value for increasing the economicity, the efficiency and the effectiveness in the activity of public sector entities; 69% consider that the themes and the objectives of the performance audits are relatively appropriate to the most important aspects of the entities' activity; half of them believe that the auditors properly assessed the factual situation and gave a fair image of the economicity, the efficiency and the effectiveness with which the public resources are managed in order to achieve the set objectives; 63% consider that the performance audit was mainly focused on identifying errors and that the approach adopted by the external public auditors in these missions was relatively different from the approach in the financial or the compliance audits, but the relationship between the auditors and the audited entity staff was not felt to be different; over 60% said they were involved in identifying the best ways to improve their activity; 75% stated that, following the performance audits, changes were recommended at the level of the entities they represent, but these change were not significant; in their opinion, the performance audits have determined, to a large extent, the improvement of the management policies and practices, the management internal control systems, the accountability in the economic, effective and efficient use of the public funds, the transparency regarding the way of managing public funds and the financial-accounting activity accuracy and relatively the improvement of the own mechanisms for monitoring and evaluating performance; half stated that the stakeholders perceptions had changed as a result of the performance audit report publication; the majority stated that the recommendations made were fully implemented, contributing relatively to increase the economicity, the efficiency and the effectiveness in the use of public funds and that the SAI professionals also carried out actions for monitoring the recommendations implementation.

Cluster 4 includes 5% of the total respondents. They have an average of 17 years of experience in the entities they represent; 75% of them consider that the performance audits have low utility; half consider that these missions bring, to a low extent, added value for increasing the economicity, the efficiency and the effectiveness in the activity of public sector entities; most of them consider that the themes and the objectives of the performance audits are not appropriate to the most important aspects of the entities' activity, that the SAI professionals made a relatively appropriate assessment of the factual situation regarding the economicity, the efficiency and the effectiveness with which the public resources are managed in order to achieve the set objectives and consider that the performance audit was mainly oriented towards the errors identification; half consider that the approach adopted by the external public auditors in the performance audit was not different from the approach in the financial or compliance auditing; the respondents grouped in this cluster stated that the relationship between the auditors and the audited entity staff was not felt to be different in the case of the performance audit compared to the financial or the compliance audit; they also stated that the recommendations for improving the activity had been made without consulting them; 75% of them stated that, following the performance audits, no changes were recommended at the level of the entities they represent; in the opinion of the majority of the respondents in this cluster, performance audits determined to a small extent the improvement of the management policies and practices, of the management internal control systems, of the own mechanisms for monitoring and evaluating performance, of the transparency regarding the way of managing public funds and of the financial-accounting activity accuracy and relatively the improvement of the accountability in the economic, effective and efficient use of the public funds; the respondents stated that the stakeholders perceptions did not change as a result of the performance audit report publication; most of them stated that the recommendations made were fully implemented; in all the cases, the SAI professionals also carried out actions for monitoring the recommendations implementation; according to the majority, the recommendations made following the performance audit missions had little contribution in the increase of the economicity, efficiency and effectiveness of the use of public funds at the entity level.

Most of the respondents represent entities that were audited for performance in 2019 (66%), while 18% represent entities audited in 2018, 12% during 2017 and only 4% before 2017.

4. Conclusions

The research undertaken on the basis of a questionnaire made it possible to know the perception of the public entities representatives regarding the effectiveness of the performance audits conducted by the Romanian SAI.

The profiles identified through the cluster analysis highlight some interesting findings.

A first finding refers to the fact that the majority of respondents, who have an average experience in the entities they represent, attribute a high utility to performance audits and consider that they bring, to a large or a very large extent, added value regarding “the 3E” in the activity of the public sector entities, unlike respondents with a long experience at the level of the performance audited entities, which attribute a medium or low utility to these approaches, and most of them adopt a neutral opinion on the added value they generate.

However, the research showed that most of the respondents consider that the themes and objectives of performance audits are appropriate to the most important aspects of the audited entities' activity and that the SAI professionals properly assessed the factual situation, providing a fair image of the economicity, efficiency and effectiveness with which the public resources are managed, in order to achieve the set objectives.

Another finding is that most respondents stated that the performance audit missions focused equally on identifying errors and evaluating performance. Also, from the perspective of most respondents, the approach taken by external public auditors in performance auditing, compared to financial or compliance auditing, was relatively different, but the relationship between the auditors and the audited entity staff was not perceived to be different. Most respondents stated that they were involved in the process of identifying the best ways to improve the activity.

The research results showed that, most of the times, subsequently to the performance audits, at the level of the audited entities, changes were recommended, but these were not perceived as significant.

A high level of agreement among the performance audited entities’ representatives was reported on the extent to which stakeholders' perceptions changed as a result of the performance audit report publication, the majority stating that this perception was not influenced.

Although the SAI recommendations were fully or partially implemented at the level of the entities, they contributed to the economicity, efficiency and effectiveness increase in the use of public funds, and in most of the cases, the external public auditors performed subsequent missions, following the implementation of the advanced recommendations.

Regarding the limits of the research, we consider that they are related to the low number of responses, by reference to the number of questionnaires disseminated, correlative with the reluctance of the respondents to disseminate information within the entity or to express their perception on the subject. An explanation of the low number of respondents is the socio-economic context in which the research took place, respectively the COVID-19 pandemic that forced the Government to declare and subsequently extend the state of emergency in Romania and that generated radical changes in the human resources organization in the public sector. At the same time, we consider that the reluctance to participate to the undertaken study might be influenced by the management changes within the audited entities or by the respondents' daily activity volume.

As future research directions, we intend to continue the investigative approach, by extending the analysis regarding the effectiveness of performance audits conducted by the supreme audit institutions, through a comparative study between the experience of Romania and that of another Member State of the European Union. We also consider the analysis of how the COVID-19 pandemic context has impacted on the supreme audit institutions activities.

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Appendix 1. **The number of performance audit missions conducted by the specialized structures of the Romanian SAI and the number of audited entities between 2015 and 2019**

No.	Specialized structures of the Romanian SAI	2015	2016	2017	2018	2019	No. of missions	No. of audited entities
1	Alba	1	2	3	2	4	**12**	**12**
2	Arad	0	1	3	1	5	**10**	**10**
3	Argeș	2	0	6	2	4	**14**	**12**
4	Bacău	2	3	2	2	5	**14**	**12**
5	Bihor	1	1	4	2	4	**12**	**11**
6	Bistrița-Năsăud	1	0	5	1	4	**11**	**9**
7	Botoșani	2	1	8	1	5	**17**	**13**
8	Brăila	1	5	3	1	4	**14**	**12**
9	Brașov	1	1	6	1	5	**14**	**13**
10	București	10	5	15	0	8	**38**	**34**
11	Buzău	1	2	4	2	4	**13**	**9**
12	Călărași	2	0	4	3	4	**13**	**7**
13	Caraș-Severin	4	2	5	2	5	**18**	**17**
14	Cluj	2	3	4	1	2	**12**	**11**

No.	Specialized structures of the Romanian SAI	2015	2016	2017	2018	2019	No. of missions	No. of audited entities
15	Constanța	5	2	3	1	4	**15**	**15**
16	Covasna	1	0	11	0	4	**16**	**16**
17	Dâmbovița	2	3	4	3	6	**18**	**17**
18	Dolj	1	0	2	0	4	**7**	**7**
19	Galați	2	5	8	8	3	**26**	**26**
20	Giurgiu	5	1	3	1	3	**13**	**11**
21	Gorj	5	6	3	7	4	**25**	**20**
22	Harghita	1	2	6	2	4	**15**	**14**
23	Hunedoara	2	2	3	1	4	**12**	**11**
24	Ialomița	9	7	12	3	5	**36**	**28**
25	Iași	8	7	4	3	11	**33**	**28**
26	Ilfov	2	0	8	1	8	**19**	**16**
27	Maramureș	2	1	4	2	5	**14**	**14**
28	Mehedinți	2	0	4	1	3	**10**	**10**
29	Mureș	1	5	4	2	4	**16**	**15**
30	Neamț	1	1	3	1	4	**10**	**10**
31	Olt	2	0	1	0	4	**7**	**7**
32	Prahova	0	6	10	5	9	**30**	**28**
33	Sălaj	3	1	5	1	4	**14**	**12**
34	Satu-Mare	0	1	3	0	4	**8**	**8**
35	Sibiu	3	1	5	4	4	**17**	**15**
36	Suceava	1	2	6	4	6	**19**	**17**
37	Teleorman	1	0	4	2	3	**10**	**10**
38	Timiș	4	1	3	2	4	**14**	**13**
39	Tulcea	2	1	4	3	4	**14**	**13**
40	Vâlcea	3	0	4	2	6	**15**	**15**
41	Vaslui	2	1	3	3	3	**12**	**11**
42	Vrancea	0	1	4	1	4	**10**	**9**
	Accounts Chambers (territorial structure)	100	83	206	84	194	**667**	**598**
	Departments (central structure)	17	18	13	9	6	**63**	**46**
	Total	**117**	**101**	**219**	**93**	**200**	**730**	**644**

(*Source*: Processing after www.curteadeconturi.ro accessed on March 23, 2020)

Financial Professionals' Perceptions on IFRS Reporting in Romania

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Abstract

Idea: *To investigate what are the perceptions of accounting professionals, auditors, tax consultants etc. on IFRS-related topics, such as perceived benefits and disadvantages, education and IFRS environment.*

Data: *A questionnaire was disseminated between March-April 2020. 122 valid responses were recorded, out of which 106 answers were received from participants having IFRS experience.*

Tools: *The instrument employed for the present study is the questionnaire, as it enables researchers to investigate complex phenomena, as they occur, benefitting from a degree of standardization useful for quantitative analysis.*

What's new? *Key findings: 1) The majority of the respondents agreed with the fact that when IFRS compliance is high, the quality of the financial statements is also high; 2) There is a lack of perceived enforcement, a yet strong link accounting-taxation and a yet immature economic environment, for which the accounting information's quality is not so relevant; 3)* More *than half of the respondents consider that IFRS are suitable for emerging countries setting.*

So what? *Individual professionals' recent opinion on the IFRS application and compliance in an emerging country context may prove to be useful, because standardized databases in these countries are poor or non-existent and especially because the financial reporting under IFRS may have stabilized since 2012 – the year of the first time application in individual financial statements of the listed companies.*

Contribution: *The results provide an updated perspective of financial professionals on IFRS, which may be of interest for standard-setters, national regulators and auditors, as they shed light on a less accessible, qualitative side of IFRS compliance.*

Keywords: *IFRS perception, emerging country, questionnaire, IFRS compliance.*

1. Introduction

The CEE countries represent an interesting research population, on one hand due to their commonalities in part arisen from a Soviet history, but on the other hand being a diverse group of countries, which gradually adapted their social and political context from a communist past and became a market economy (Albu *et al.*, 2020). Their transition journey was not an easy one, as they are characterized by a poor regulatory and governmental infrastructure, high corruption levels, underdeveloped capital markets, low investors protection and a strong link between accounting and taxation (Albu *et al.*, 2017). However, they have proven to be significant to the European context, as their population represents 20% of the total EU population (Albu *et al.*,

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2020) and they displayed "the fastest economic growth rate in the world prior to the global financial crisis" (Labaye *et al.*, 2013, cited in Albu *et al.*, 2020:5). Also, as the world is becoming increasingly globalized, this having an impact on the organizations and institutions involved in international trade, we witness a higher demand for transparency, better quality financial reporting and additional requirements for those involved in the economic market, particularly at international levels (Glaum *et al.* 2013; Joshi *et al.*, 2008). These necessities could be addressed by IFRS as many suggest (Houqe, 2018; Ionașcu *et al.*, 2014; Navarro-Garcia and Bastida, 2010). However, available literature points to the fact that IFRS were developed by using models from countries characterized by common law and high investor protection level (Albu *et al.*, 2011; Houqe, 2018).

Săcărin *et al.* (2013:3) note that "accounting standards are only one element in a complex set of institutional factors that contribute to an increased quality of accounting information: the motivations of financial statement preparers, the intervention of government, and the training level of the accounting profession" therefore, exploring professionals' perception on the above elements may provide a better understanding of the compliance process.

Thus, the purpose of this paper is to investigate what are the perceptions and attitudes of actors involved in the process of producing and auditing financial statements under IFRS (accounting professionals, auditors, tax consultants etc.) on IFRS-related outcomes, such as perceived benefits and disadvantages, education and IFRS environment. The instrument employed for the present study is the questionnaire, as it enables researchers to investigate complex phenomena "as they occur in their natural setting, while at the same time maintaining the degree of standardization that is necessary for quantitative analysis and theory testing", by "obtaining data on respondents' perceptions, attitudes, and beliefs that drive their behavior" (Spekle and Widener, 2018:1).

The present paper is structured as follows: after the introduction, Section 2 contains the literature review, Section 3 details the research methodology employed, Section 4 presents the results, findings and discussions and Section 5 comprises the conclusions of this study.

2. Literature review

IFRS adoption and compliance are important for developing countries, CEE region included, because they imply many benefits: increased comparability of the financial statements produced under higher-quality accounting standards, higher levels of foreign direct investments as a result of an increased attractivity for investors, following lower cost of capital due to more credibility assigned to financial reporting packages (Houqe, 2018; Săcărin *et al.*, 2013). Moreover, Kim *et al.* (2014), cited in Houqe, (2018) and Albu *et al.* (2020) mention that higher-quality accounting standards could substitute less developed institutional set-up, thus CEE countries displaying higher benefits following IFRS adoption. However, there are two important factors which determine whether emerging countries will really benefit from adopting IFRS standards: the level of legal enforcement in a country (Nurunnabi, 2014; Hodgdon *et al.*, 2009) as well as accounting, cultural and environmental particularities.

Despite the fact that CEE countries face numerous challenges, from the communist past to the low quality of the institutional characteristics (such as poorly developed capital markets, secrecy, strong tax-accounting relationship), during the last years, they put serious efforts in reforming their institutions, investing in education and infrastructure, attracting FDIs rather based on the latter than prevented by the former (Albu *et al*., 2020). Also, in terms of IFRS, CEE countries have different institutional contexts, even if in some papers they are treated as a whole (Obradovic, 2017; Albu *et al*., 2017) with gaps found between countries, but also between companies in the same country.

Studies find that generally, there is a positive attitude towards IFRS and a perception that IFRS adoption benefits exceed costs (Săcărin *et al*., 2013; Obradovic *et al*., 2017; Guerreiro *et al*. 2008; Albu *et al*., 2020). Some of the prior research investigating IFRS compliance has employed quantitative methods: the unweighted index, also known as "Cooke's dichotomous approach" (Tsalavoutas, 2011; Glaum *et al*., 2013; Juhmani, 2017; Kwame Agyei-Mensah, 2017; Mazni *et al.*, 2012) and the Partial Compliance index (Al-Shiab, 2003 cited in Tsalavoutas *et al*., 2010; Mazni *et al*., 2012; Tsalavoutas *et al*., 2014), calculating compliance scores based on data collected from financial statements or available in databases. On the other hand, papers employing qualitative research use questionnaires, surveys and interviews with various stakeholders in order to explore compliance processes.

Joshi *et al*., (2008) and Săcărin *et al*. (2013) find a positive attitude towards IFRS: the conviction that they ensure a higher level of financial performance comparability around the world and increase information transparency, relevance and reliability and as well attractivity to investors. Moreover, Săcărin *et al*. (2013:10) find that respondents agree with the fact that "the application of IFRS would have been necessary […] even if it had not become mandatory" and rate the fiscal risk and the IT systems' adaptation as the most stringent challenge in Romania. However, Joshi *et al*. (2008) find that respondents also considered that some economic sectors would need some personalization and more detailed guidance.

Guerreiro *et al*. (2008) found little preparedness for IFRS, a year and a half before IFRS adoption, while in Romania, companies having to report for the first time under IFRS found out about the new regulatory requirement in the same year that was subject to the change, as compared to other EU countries, where companies "were informed three years before the mandatory application of IFRS to the preparation of consolidated financial statements" (Săcărin *et al*., 2013:9). Guerreiro *et al*. (2008) also noticed a significant influence of Big 4 firms, a lower desire to be compliant, from smaller companies which have lower international exposure, with a non-Big 4 auditor, with a general preference for local accounting standards.

Albu *et al*. (2020) also employ a questionnaire-based method and find that in the CEE region, the main impediments regarding IFRS include the strong link of accounting with taxation, high difficulty of IFRS, poorly developed capital markets, translation issues, lack of sufficient guidance, satisfaction with local accounting standards. Obradovic *et al*. (2017) also found the main impediments mentioned above, regarding the complicated nature of some standards, the language barriers, the tax-accounting link and the lack of training. Interestingly, Jermakowicz and Gornik-Tomaszewski (2006) observe the same difficulties among non-CEE EU countries, regarding the complex nature of IFRS, lack of guidance and training among accountants and auditors, the challenges posed by the adaptation of the IT infrastructure.

Guerreiro *et al.* (2012) employ the analytical framework proposed by Oliver (1991) and the institutional logics concept and suggest that when companies adopt IFRS, it is not because of institutional requirements, but rather because they choose to what institutional pressures to respond so that the strategy fits their own goals and means.
Oliver (1991), employed in Guerreiro *et al*. (2012:7) the companies' organizational response to IFRS adoption pressures "should have depended on why these pressures were being exerted (cause); who was exerting these pressures (constituents); what these pressures were (content); how these pressures were exerted (control); and where the pressures occurred (context)".

They identify as potential pressures leading to IFRS voluntary adoption: the degree of social legitimacy companies perceive IFRS would provide, being a subsidiary of a multinational company, the conviction that the new accounting requirements come at a right time, the listing status of the parent company, the degree to which they can maintain autonomy on internal decisions, the perception on IFRS international acceptance, the perceived environmental uncertainty and the interconnectedness within the industry.

The Romanian context shares the commonalities of CEE countries: poor investor protection, a close tax-accounting dependence, secrecy-characterized reporting and institutional setting, mainly due to its communist period (1947-1989), when the accounting regulation had Soviet roots, with a rule-based approach and an orientation towards the State's requirements. After 1989, French influences emerged and in 2007 financial institutions and listed companies were required to report under IFRS and the scope expanded in 2012, when IFRS became mandatory for individual accounts, for all listed entities. As such, a more recent perspective of financial professionals on IFRS topics may be interesting for regulators and auditors, as they may contribute to explaining application and IFRS compliance as Săcărin *et al*. (2013) note.

IFRS practitioners' opinions are complementary to the analysis of financial statements and very important in fully understanding a phenomenon, as they provide a specific view, that couldn't be studied using the archival research (Navarro-Garcia and Bastida, 2010) and that wouldn't be available in CEE countries, due to lack of databases availability (Albu *et al*., 2020). Also, as Săcărin *et al*. (2013) note, the high-quality of the financial statements produced under IFRS is highly depend on the attitude of the main stakeholders involved, practitioners' included, thus their understanding is a factor that can contribute to a better compliance in practice and an improvement in the institutional setting.

3. Research methodology

The purpose of this study is to investigate the perceptions of various actors involved in producing, auditing and evaluating financial statements produced using IFRS on IFRS-related topics such as perceived benefits and disadvantages, education and IFRS environment. To this end, I have constructed and disseminated a questionnaire to above-mentioned actors, in order to obtain a clear view on how different institutions present in Romania influence IFRS perception, education, environment and benefits arising from the adoption of higher-quality accounting standards.

I applied the questionnaire to the respondents, in order to obtain a better understanding of the IFRS topic. The respondents were kindly asked to answer a series of demographical questions (professional certifications, education, IFRS experience in years and source of IFRS experience). Also, the various educational sources' impact on their professional development was evaluated. Respondents were also asked to assess issues on IFRS compliance, benefits and disadvantages, and overall IFRS application, on a Likert scale, from 1 (strongly disagree) to 5 (strongly agree).
I disseminated the proposed instrument to financial professionals (accountants, auditors, evaluators, tax specialists) between March-April 2020. 122 valid responses were recorded, out of which 106 answers were received from participants having IFRS experience while the others didn't, so the analysis pool mainly consisted in the experienced professionals' responses.

Table 1. **Respondents' characteristics**

Criteria	***Element***	***Number***	***Percent***
Certification	1 certification	39	36.79%
	More than 1 certification	36	33.96%
	No certification	31	29.25%
Total		*106*	*100%*
Big 4 Experience	Yes	47	44.34%
	No	59	55.66%
Total		*106*	*100%*
IFRS Experience (years)	1-3 years	32	30.19%
	3-5 years	18	16.98%
	5-10 years	30	28.30%
	Over 10 years	26	24.53%
Total		*106*	*100%*
Age	24-30 years	22	20.75%
	30-40 years	54	50.94%
	40-50 years	21	19.81%
	Over 50 years	9	8.49%
Total		*106*	*100%*

(*Source*: Own processing)

I analyzed the sample using criteria regarding number of professional certifications respondents held, whether they possess Big 4 experience or not, how much IFRS experience they have and their age. The sample is balanced regarding the professional certifications held criteria, with 36.79% of the respondents having 1 certification, while 29.25% of them held no certification at all. 55.66% of the sample didn't have Big 4 experience and 30.19% of the respondents have 1-3 years IFRS experience, with 24.53% having over 10 years of IFRS experience (32 respondents and 26 respondents respectively). Also, most of the sample consisted in young professionals, aged 30-40 years (over 50%), while nearly 9% were over 50 years old. Thus, the professional IFRS experience and age groups are reasonably represented, so that the results can be useful for the regulatory bodies and financial professions.

4. Findings and discussions

The following areas were covered by the applied questionnaire: the respondents' perception on IFRS, the perceived benefits and disadvantages of IFRS, the IFRS environment and education in Romania. The figures below contain a coding of the questions from the questionnaire, used for the paper's space optimization and detailed in Appendix I.

Table 2. **Respondents' perception on IFRS**

Perception	Mean	Std. Dev	Certification			Big 4 Experience		IFRS Experience		Agree
			One	> one	None	Yes	No	Low	High	(*Strongly Agree* or *Agree*)
P. Suitability	3.56	1.14	3.33	3.47	3.94	3.64	3.49	3.54	3.57	66 (62.26%)
P. Translation	3.60	0.79	3.56	3.39	3.90	3.70	3.53	3.52	3.68	56 (52.83%)
P. Obligation	3.56	1.10	3.59	3.47	3.61	3.57	3.54	3.52	3.59	59 (55.66%)
P. Culture	2.67	0.92	2.56	2.61	2.87	2.72	2.63	2.62	2.71	15 (14.15%)
Compliance	3.07	1.05	2.79	3.11	3.35	3.06	3.07	3.04	3.09	34 (32.08%)
P. Quality	4.07	0.92	4.03	4.03	4.16	4.28	3.90	3.98	4.14	82 (77.36%)

(*Source*: Own processing)

Respondents agreed in a considerable manner (77.36%) with the fact that when IFRS compliance is high, the quality of the financial statements is also high, proving the trust professionals put in International Accounting Standards in providing reliable, high-quality accounting information. The agreement was higher among professionals having Big 4 exposure and those having more than 5 years of working with IFRS. They also considered that IFRS are suitable for emerging countries setting (62.26%), despite the fact that IFRS originated from an Anglo-Saxon environment, whose principles are significantly different from those of developing countries, but a great majority agreed, as well, that in Romania, the IFRS compliance is perceived rather as a legal obligation, than an opportunity to benefit from better financial communication.

On the other hand, respondents tended to rather disagree with the idea that cultural factors in Romania contribute to a good level of IFRS compliance (only 14.15% of them strongly agreed or agreed), which could be correlated to the fact that 32% of the respondents considered that IFRS compliance is realized to such an extent that the benefits can be maximized, in this specific context.

Therefore, in their opinion, despite the significant higher-quality IFRS compliance provide to financial disclosures (which are correlated with numerous advantages, both at country and company level), the benefits in Romania can be realized to a lesser extent, one of the contributing factors being the culture-related one.

Table 3. **Respondents' perception on IFRS benefits**

IFRS benefits	Mean	Std. Dev	Certification			Big 4 Experience		IFRS Experience		Agree
			One	> one	None	Yes	No	Low	High	(*Strongly Agree* or *Agree*)
B. Comparability	4.37	0.77	4.36	4.19	4.58	4.47	4.29	4.32	4.41	94 (88.68%)
B. Financing costs	3.30	0.83	3.33	3.22	3.35	3.32	3.29	3.28	3.32	34 (32.08%)
B. Cost> Benefits	2.80	0.84	2.97	2.53	2.90	2.68	2.90	2.88	2.73	15 (14.15%)
B. Fair view	4.01	0.93	3.97	3.92	4.16	4.09	3.95	3.94	4.07	79 (74.53%)
B. European Dir.	3.98	0.85	4.00	3.83	4.13	4.09	3.90	3.90	4.05	78 (73.58%)

(*Source*: Own processing)

Table 3 shows the results regarding the perceived IFRS benefits in Romania and one of the most significant ones is related to the companies' financial statements increased comparability in an international context (88.68%), which is especially important, since this country, just as many CEE, former communist countries have put significant efforts into becoming a market economy, trying to benefit from international networks' exposure and facilitated access to financing sources. However, only 32% of the respondents considered that, since IFRS adoption, financing costs have decreased for listed companies, while, at the same time, there was a general disagreement with the idea that IFRS compliance costs may be higher than the benefits (only 14.15% agreed), with slightly higher means for professionals having no IFRS or Big 4 experience, and for participants having just one, or no professional certification at all. Respondents also agreed with the fact that IFRS policies that sometimes involve a higher level of complexity and associated administrative costs do ensure a more accurate representation of the events and transactions in companies' financial reporting (74.53%). Also, respondents with more IFRS experience and former Big 4 exposure agreed to a higher extent with the proposed benefits than did their peers with less IFRS or Big 4 experience.

Table 4. **Respondents' perception on IFRS disadvantages**

IFRS disadvantages	Mean	Std. dev.	Certification			Big 4 Experience		IFRS Experience		Agree
			One	>one	None	Yes	No	Low	High	(*Strongly Agree* or *Agree*)
D. Results manipulation	2.63	0.95	2.74	2.56	2.58	2.34	2.86	2.50	2.75	15 (14.15%)
D. Flexib_Non. comp	2.81	0.92	2.82	2.61	3.03	2.79	2.83	2.80	2.82	23 (21.70%)
D. Not covered cases	2.90	1.02	3.10	2.56	3.03	2.81	2.97	2.88	2.91	26 (24.53%)
D.Less useful info	2.88	1.08	3.08	2.56	3.00	2.79	2.95	2.96	2.80	30 (28.30%)

(*Source*: Own processing)

On the other hand, when it came to IFRS perceived disadvantages, respondents disagreed to a higher extern than they agreed with the advantages. Professionals agreed the least with the idea that IFRS could lead to results' manipulation in emerging countries (14.15%) and to the idea that IFRS flexibility in terms of accounting treatments could be a potential source of non-comparability (21.70% agreed).

Table 5. **Respondents' perception on IFRS adoption strategies**

Intermediate IFRS	Mean	Std. dev.	Certification			Big 4 Experience		IFRS Experience		Agree
			one	>one	none	Yes	No	Low	High	(*Strongly Agree* or *Agree*)
I. Strategy +	3.93	0.89	3.87	3.69	4.29	4.04	3.85	3.84	4.02	76 (71.70%)
I. Strategy -	2.89	1.07	3.08	2.78	2.77	2.70	3.03	2.94	2.84	29 (27.36%)

(*Source*: Own processing)

Regarding the strategy that could be adopted for a smoother IFRS compliance process, respondents generally supported the concept of a long-term national convergence strategy, that would allow the emerging countries' environment to gradually incorporate the IFRS requirements and adapt the socio-economic context (71.7%). Means were higher for respondents having Big 4 exposure (4.04 versus 3.85), over 5 years of IFRS experience (4.02 as compared to 3.84) and no professional certification held (4.29 versus 3.87 for participants having only 1 certification and 3.69 for those having more than one certification).

Table 6. **Respondents' perception on IFRS environment in Romania**

IFRS environment	Mean	Std. dev.	Certification			Big 4 Experience		IFRS Experience		Agree
			one	>one	none	Yes	No	Low	High	(*Strongly Agree* or *Agree*)
E. Managers	3.02	1.12	2.92	2.97	3.19	3.09	2.97	2.84	3.18	44 (41.51%)
E. Tax regulation	2.79	1.21	3.03	2.44	2.90	2.62	2.93	2.84	2.75	32 (30.19%)
E. Non-compl. Pen.	2.74	0.99	3.00	2.42	2.77	2.43	2.98	2.78	2.70	21 (19.81%)
E. Ec. environment	3.28	1.07	3.44	3.17	3.23	3.11	3.42	3.28	3.29	44 (41.51%)
E. Regulation	3.15	1.06	3.33	2.97	3.13	3.09	3.20	3.04	3.25	39 (36.79%)

(*Source*: Own processing)

Concerning the IFRS environment in Romania, the enforcement level, understood via the penalties applied for non-compliance, seems to be rather low, with only 19.18% of the respondents considering the sanctions are a strong enough incentive to be compliant.

The mean for this item was higher for participants having less than 5 years of IFRS experience and for those with no Big 4 exposure. Also, respondents rather did not agree with the statement that the tax regulation does not interfere with the IFRS compliance process (69.81% of them disagreed) and less than half of the sample considered that funding allocated by the managers at company level is enough and the economic environment is sensitive to higher quality accounting information (only 41.51% agreed). Thus, the results highlight a lack of perceived enforcement, a yet strong link of accounting with taxation, a lack of investment in companies' IFRS compliance and a yet immature economic environment, for which the accounting information's quality is not so relevant.

Table 7. **Respondents' perception on IFRS education in Romania**

IFRS Education	Mean	Std.	Certification			Big 4 Experience		IFRS Experience		*Agree*
		dev.	one	>one	none	Yes	No	Low	High	*(Strongly Agree or Agree)*
Ed. Accessible	3.42	1.29	3.28	3.22	3.84	3.60	3.29	3.20	3.63	63 (59.43%)
Ed. Comp. invest	2.93	1.21	2.79	2.64	3.45	3.04	2.85	2.92	2.95	40 (37.74%)
Ed. Proff. incr.prep.	3.55	1.03	3.36	3.33	4.03	3.60	3.51	3.44	3.64	68 (64.15%)
Ed. Proff. cont. devl.	3.04	1.15	2.72	2.92	3.58	3.13	2.97	2.90	3.16	46 (43.40%)

(*Source*: Own processing)

Table 7 reveals the respondents' perception on IFRS education in Romania and highlights the fact that over a half of the participants (59.43%) considered that accounting professionals are rather likely to afford IFRS education, than were not and that, since IFRS adoption, their preparedness level increased, with no significant differences in the means of Big 4/ Non-Big 4 groups. In line with the fact that less than half of the respondents considered that managers direct enough funding to support IFRS compliance, only 37.74% of the participants agreed with the idea that the level at which companies invest in IFRS education allows the application quality to tend at the maximum level, in Romania's context.

I further explored the association between the perception on IFRS compliance (understood for the purpose of this study as being directly proportional with the benefits brought in the specific context of a country; as Glaum *et al*. (2013:4) mention "whether the introduction of IFRS truly enhances transparency and comparability depends on how the standards are implemented", therefore, in order for the companies to benefit from positive transformations following IFRS adoption, they must also ensure that actual compliance is sought and achieved) and the perceptions on the other elements relevant for IFRS topic: the overall perception on IFRS, the perceived benefits and disadvantages arising from IFRS application, the approach to be followed for a better adoption process in emerging countries, the IFRS perceived environment and the IFRS education in Romania. For the above mentioned elements, I calculated an average of the perception, benefits, disadvantages, environment and education, based on scores respondents allocated for the questions detailed in the Appendix 1 (for example, *AVG.E* was calculated as an average of perceived benefits based on scores received for *E.Managers, E.Tax regulation, E.Non-compl. Penalties, E.ec. environment, E.Regulation*).

Table 8. **Regression of perception on IFRS compliance on perceptions evaluated in the questionnaire for number of certifications held by respondents**

	More than 1 certification				1 or no certification			
	Coeff.	**SE**	***t***	**VIF**	**Coeff.**	**SE**	***t***	**VIF**
AVG.P	0.878***	0.236	3.719	2.292	0.643**	0.260	2.473	1.970
AVG.B	0.245	0.280	0.873	3.305	-0.120	0.257	-0.469	1.777
AVG.D	-0.175	0.159	-1.102	1.195	0.055	0.129	0.429	1.137
I.Strategy+	0.352	0.167	2.112	2.397	0.198	0.147	1.345	1.624
I.Strategy-	-0.025**	0.104	-0.241	1.209	-0.177*	0.094	-1.882	1.092
AVG.E	0.299	0.229	1.305	2.724	0.234	0.154	1.519	1.380
AVG.Ed	-0.340**	0.152	-2.242	2.380	0.416***	0.130	3.199	1.604
n			36				70	
R^2			0.725				0.525	
Adjusted R^2			0.656				0.472	
F statistic			10.542				9.794	

(*Source*: Own processing)

Means are reported for sub-groups of respondents, with ***, **, * indicating statistical significance in means at 1, 5, and 10% levels respectively.

Table 8 shows a positive association between the perceived compliance and the education quality, overall perception and a bad perception on an intermediary national convergence strategy with IFRS in the case of financial professionals having one or no certification. This result emphasizes the importance this category of respondents attaches to the IFRS education and also show that a good overall perception on IFRS tends to increase the perception on IFRS compliance. Regarding the intermediary convergence strategy for IFRS adoption, we can see that it is negatively associated with a good perception on IFRS compliance.

For respondents having more than one certification, the same elements are positively associated with perception on IFRS compliance, but the most important one is the overall perception on IFRS. Paradoxically, they also consider that the education quality has a negative impact on IFRS compliance.

Table 9. **Regression of perception on IFRS compliance on perceptions evaluated in the questionnaire for Big 4/Non-Big 4 experience held by respondents**

	Big 4 Experience				No Big 4 Experience			
	Coeff.	**SE**	***t***	**VIF**	**Coeff.**	**SE**	***t***	**VIF**
AVG.P	1.067***	0.386	2.766	1.543	0.404	0.257	1.569	2.654
AVG.B	-0.402	0.366	-1.098	1.678	0.226	0.255	0.885	2.483
AVG.D	-0.189	0.173	-1.091	1.150	-0.022	0.150	-0.145	1.238
I.Strategy+	0.230	0.176	1.306	1.628	0.183	0.180	1.019	2.186
I.Strategy-	-0.116	0.117	-0.994	1.091	-0.158	0.112	-1.413	1.162

	Big 4 Experience				No Big 4 Experience			
	Coeff.	**SE**	***t***	**VIF**	**Coeff.**	**SE**	***t***	**VIF**
AVG.E	0.023	0.247	0.095	1.486	-0.057	0.165	-0.349	1.671
AVG.Ed	0.218	0.175	1.246	1.812	0.436***	0.139	3.128	1.727
n			47				59	
R^2			0.421				0.515	
Adjusted R^2			0.318				0.448	
F statistic			4.059				7.738	

(*Source*: Own processing)

Means are reported for sub-groups of respondents, with ***, **, * indicating statistical significance in means at 1, 5, and 10% levels respectively.

Table 9 explores the association between IFRS perceived compliance and respondents' experience in a Big 4 working environment. For those having no Big 4 exposure, the most important factor was the IFRS education quality, while for the ones with Big 4 exposure, the overall IFRS perception has a positive impact on IFRS perceived compliance.

Table 10. **Regression of perception on IFRS compliance on perceptions evaluated in the questionnaire for High/Low IFRS experience held by respondents**

	High IFRS Experience				Low IFRS Experience			
	Coeff.	**SE**	***t***	**VIF**	**Coeff.**	**SE**	***t***	**VIF**
AVG.P	0.557**	0.228	2.440	1.552	-0.175	0.312	-0.562	2.258
AVG.B	0.276	0.296	0.931	1.900	0.488	0.295	1.655	2.145
AVG.D	-0.314**	0.133	-2.357	1.061	-0.321*	0.190	-1.691	1.358
I.Strategy+	0.124	0.145	0.857	1.554	0.526**	0.212	2.483	2.163
I.Strategy-	-0.230**	0.097	-2.367	1.205	0.002	0.133	0.018	1.086
AVG.E	0.065	0.170	0.381	1.738	0.135	0.234	0.579	1.697
AVG.Ed	0.270*	0.145	1.860	2.029	0.009	0.173	0.053	1.678
n			56				50	
R^2			0.527				0.396	
Adjusted R^2			0.458				0.295	
F statistic			7.630				3.933	

(*Source*: Own processing)

Means are reported for sub-groups of respondents, with ***, **, * indicating statistical significance in means at 1, 5, and 10% levels respectively.

Table 10 emphasizes the fact that highly experienced IFRS professionals assess IFRS education quality has a positive impact on perceived compliance and their perception on an intermediary IFRS convergence strategy is negatively associated with the perceived compliance in Romania. Perceived disadvantages resulted from IFRS application are also negatively associated with perceived compliance, both in the highly and low-IFRS experienced professionals.

Table 11. **Means analysis for High/Low perceived compliance**

Element	Low perceived compliance (1)	High perceived compliance (2)	Difference in means (2-1)
P.Suitability	3.269	4.059	0.790***
P.Traslation	3.423	4.029	0.606***
P.Obligation	3.462	3.500	0.038
P.Culture	1.846	3.176	**1.330*** **
P.Quality	3.692	4.500	**0.808*** **
B.Comparability	4.115	4.706	0.590**
B.Financing costs	2.962	3.706	**0.744*** **
B.Cost>Benefits	2.885	2.735	-0.149
B.Fair view	3.692	4.382	0.690***
B.European Dir.	3.538	4.500	**0.962*** **
D.Results manipulation	2.808	2.588	-0.219
D.Flexib&Non.comp	2.846	2.824	-0.023
D.Not covered cases	2.962	2.912	-0.050
D.less useful info	3.000	2.765	-0.235
I.Strategy+	3.500	4.471	**0.971**
I.Strategy-	3.077	2.794	-0.283
E.Managers	2.538	3.441	**0.903*** **
E.Tax regulation	2.231	3.088	**0.857*** **
E.Non-compl. Penalties	2.308	3.029	**0.722*** **
E.ec. environment	3.154	3.441	0.287
E.Regulation	3.308	3.206	-0.102
Ed_Accessible	2.577	4.176	**1.600*** **
Ed_Comp. invest	2.154	3.471	**1.317**
Ed_Proff. incr. prep.	3.077	3.971	**0.894*** **
Ed_Proff. cont. devl.	2.231	3.500	**1.269*** **

(*Source*: Own processing)
Means are reported for perceived compliance subsets with ***, **, * indicating statistical significance in means at 1, 5, and 10% levels respectively.

In table 11 the sample was split between low and high perceived compliance, analyzing only non-neutral responses. Significant differences between means can be observed for perceptions on cultural factors, the quality of financial statements produced under IFRS, the evolution of the financing costs since Romania has adopted IFRS, the convergence with the European Directive, the positive attitude towards an intermediary national convergence strategy with IFRS, managers' support towards IFRS compliance, tax regulation disconnection from the accounting one, the non-compliance sanctions' severity, IFRS education accessibility and positive impact on the professionals' level of preparedness.

5. Conclusions

By conducting this study, I expect to have complemented the available literature with a recent perspective from financial stakeholders on IFRS (non)compliance in their country, with a qualitative research instrument that has the purpose to uncover attitudes and opinions that cannot be found in standardized databases.

IFRS in general provide higher-quality financial information and bring numerous benefits to economies, but for CEE countries they have proven to be more significant than for developed countries, as the latter could be "less inclined to surrender standard-setting authority to an international body" (Nurunnabi, 2018:2), while for developing countries, IFRS could act as a substitute for a higher-quality institutional setting (Albu *et al*., 2020; Kim *et al*., 2014, cited in Houqe, 2018).

We can conclude that respondents agreed (77.36%) with the fact that when IFRS compliance is high, the quality of the financial statements is also high, proving the trust professionals put in IAS in producing high-quality accounting information. Also, we can see that there is a lack of perceived enforcement, a yet strong link accounting-taxation and a yet immature economic environment, for which the accounting information's quality is not so relevant, while at the same time, 62.26% of the respondents consider that IFRS are suitable for emerging countries setting.

The results may further explore the above and be of interest for standard-setters, national regulators and auditors, as they shed light on a less accessible, qualitative side of IFRS compliance.

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Appendix 1

P.Suitability = IFRS are suitable for application to all listed and unlisted companies in emerging countries such as Romania

P.Translation = The official translation published on the site of the European Commission, from English to Romanian of IFRS standards and of the documents

accompanying IFRS standards is sufficiently good, so that the quality of IFRS application tends to the maximum possible, in the specific context of Romania
P.Obligation = IFRS compliance is perceived as a legal obligation rather than an opportunity to benefit from better financial communication
P.Culture = The cultural factors in Romania contribute to a good level of compliance with IFRS
Compliance = In general, I believe that compliance with IFRS in Romania allows the benefits of applying IFRS to be maximized, in the specific context of this country
P.Quality = A high level of compliance with IFRS also implies that financial statements have a high level of financial reporting quality
B.Comparability = IFRS in Romania helps companies' financial reporting be more comparable in an international context
B.Financing costs = The cost of financing for listed companies is lower since Romania adopted IFRS
B.Cost>Benefits = IFRS compliance costs are higher than the benefits
B.Fair view = The use of accounting policies that sometimes involve a higher level of complexity and associated administrative costs (such as valuation at present value, valuation at fair value, deferred taxes, etc.) ensure a more accurate representation of the effects of transactions and events in the financial statements.
B.European Dir. = The application of IFRS in Romania has also had beneficial effects in terms of improving the quality of accounting regulations complying with the European Directive.
D.Results manipulation = The application of IFRS in emerging countries leads to results' manipulation
D.Flexib_Non.comp = Too much flexibility in presenting financial statements in IFRS reporting is a potential source of non-comparability
D.Not covered cases = There are accounting cases that IFRS does not cover in practice
D.Less useful info = The use of accounting policies that imply a higher level of complexity (valuation at present value, valuation at fair value, deferred taxes, etc.) implies that the information generated will be very difficult for users to understand and therefore less useful
I.Strategy+ = A national convergence strategy with IFRS would support long-term compliance, as emerging countries could gradually adapt their socio-economic context to higher quality accounting standards
I.Strategy- = A national convergence strategy with IFRS prior to full implementation would lead to the impression that emerging countries accept a second quality reporting and not a premium quality, which would depreciate the capital markets in the eyes of potential investors
E.Managers = Managers support IFRS compliance and direct sufficient funds for this purpose
E.Tax regulation = Tax regulation does not interfere with nor does it impact the correct application of IFRS
E.Non-compl. Pen. = Penalties for non-compliance with IFRS are strong enough incentives to be compliant
E.Ec. environment = The economic environment is sensitive to high quality financial information, disseminated using IFRS
E.Regulation = I have identified in the Romanian legislation some provisions that make it difficult / impossible to apply some IFRS provisions
Ed.Accessible = IFRS education is accessible for Romanian accounting professionals

Ed.Comp. invest = Companies invest to such an extent in their employees' IFRS education that the quality of IFRS application tends to the maximum possible, in the specific context of Romania
Ed.Proff. incr. prep. = The IFRS application in Romania has led to an increase in the preparedness level of the accounting professionals
Ed.Proff. cont. devl. = The continuous professional development of the accounting professionals is carried out at a sufficiently good level, so that the quality of the IFRS application tends to the maximum possible, in the specific context of Romania

Section 7

Value Relevance Provided by the Comprehensive Income and Other Comprehensive Income in Measuring the Performance of Companies. Perception of Users of Financial Statements
Claudia-Mihaela Rapan

The Impact of the Fair Value Through Other Comprehensive Income (FVOCI) Option for Equity Instruments on Romanian Entities
Maria Mădălina Gîrbină

Insights of Research on Corporate Governance and Performance Relationship Within an Emerging Country. A Structured Literature Review
Pompei Mititean

Camelia Iuliana Lungu

Chirața Caraiani

Daniela Constantinescu

Value Relevance Provided by the Comprehensive Income and Other Comprehensive Income in Measuring the Performance of Companies. Perception of Users of Financial Statements

Claudia- Mihaela Rapan [a,18]

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Abstract: *The disclosures and level of detail related to comprehensive income should add value to investors' decision-making. Therefore, as a major objective of this paper, is to analyses the perception of users of financial statements regarding the value relevance provided by the comprehensive income and other comprehensive income in measuring the performance of companies. The relevance of the information provided by comprehensive income and other comprehensive income differs from one category of financial information users to another, and thus managers are interested in overall performance, while investors are interested in return on investment and creditors will analyze the company's performance from a solvency perspective. Accounting can create value for investors and the links between market values and the accounting book values as it is essential for identifying accounting information that reflects the economic value of the company. Thus, the share price could be influence by a different perception of the other comprehensive income that could be analyzed in an aggregate way or in an individually way. Also, as a secondary objective of the paper is the analyses of the value relevance of fair value measurement and why the criteria for applying fair value are not often met in companies that prepare financial statements in accordance with international financial reporting standards.*

Keywords: *Comprehensive income, other comprehensive income, value relevance, share price, company's performance.*

1. Introduction

In the context of globalized and continuous changing capital markets, the presentation of comparable financial information, based on quality standards and applied globally, such as International Financial Reporting Standards (IFRS), is an important matter for capital providers (investors, banks and other creditors) in making investment decisions and for risk management. The current approach to determining the financial performance of companies that apply IFRS means that some elements of the nature of income and expenses - such as some gains and losses, are not recognized in profit or loss for the period, but are charged to equity (IASB, 2019). Therefore, the assessment of the performance of companies based on the IFRS framework operates with the concept of comprehensive income which involves the inclusion of all elements of income and expenses, including those recognized in equity and generically called other comprehensive income (IASB, 2018: Conceptual Framework, par. 7.15).

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Within the information available for the decision to invest in the capital markets, the comprehensive income must be disclosed in such a way that it can be understood and compared by users, so that they can create projections on the future cash flows they will obtain. Bartov *et al.*, 2005 in an empirical study talk about financial reporting frameworks and their impact on the value relevance of financial information, so the results obtained according to IFRS are much more relevant for users than those obtained according to local standards.

International Financial Reporting Standards offer two possibilities for presenting the overall result: i) profit or loss for the period together with other comprehensive income or ii) in two separate disclosures: profit or loss for the period and other comprehensive income (IFRS, 2019: IAS 1, para. 81).

Other comprehensive income includes those items that should be reclassified to profit or loss for the period and those items that would never be reclassified to profit or loss for the period such as changes in revaluation surplus (IAS 16, IAS 38), actuarial gains and losses on defined benefit plans recognized in accordance with IAS 19; gains and losses arising from the translation of the financial statements of a foreign operation (IAS 21); gains and losses on the revaluation of available-for-sale financial assets (in accordance with IFRS 9); the portion of gains or losses on hedging instruments (IFRS 9).

Some authors (Amiram, 2012) have shown that asymmetries in financial information generate behavioral biases caused by unknown variables among foreign and local investors, so that investors are limited to trading shares only in their local markets.

However, financial information published in accordance with IFRS increases market liquidity and reduces information asymmetry, but the cost-benefit ratio of adopting IFRS is not uniform for all countries that adopt IFRS (Li *et al.*, 2019).

The accounting literature speaks of the relevance of financial information as one of the fundamental qualitative characteristics of financial information (IASB, 2018: Conceptual Framework, par. 2.6) and the value relevance of the financial information, which explains how accounting information manages to influence the share price and the economic value of the entity (Barth *et al.*, 2018). Some authors (Biesland, 2009) have concluded that accounting information can be considered relevant if there is a statistical association between accounting information and the market value of companies.

2. Literature review

The concept of comprehensive income was introduced in 1985 in the United States (US) conceptual framework and was defined as a change in an entity's equity (net assets) over a period, transactions, other events and circumstances from sources other than (Financial Accounting Standards Board - FASB - Elements, para. 70). In 1997, after 12 years, the separate reporting of the comprehensive income was introduced in the American Accounting Standards, (SFAS no. 130- Reporting Comprehensive Income). This notion was introduced in Canadian standards in 2005 (Canadian Institute of Chartered Accountants - CICA - Manual: Section 1530 Global Outturn) and in International Financial Reporting Standards in 2007 (IAS 1, revised in 2007).

In the context of globalized and constantly changing capital markets, the presentation of comparable financial information, based on quality standards and applied globally, such as International Financial Reporting Standards (IFRS) is an important issue for capital providers (investors, banks and other creditors) in making investment decisions and for risk management. Within the information available for the decision to invest in the capital markets, the overall result must be presented in such a way that it can be understood and compared by users so that they can create projections on future cash flows they will obtain (Suprayogi and Barokah, 2019). Chambers (1994) considers that the evaluation of the company's performance can be done with the help of the comprehensive income. In his opinion, the acquired assets contribute to the company's performance not only with sales margins, but also with the expected price changes. Chambers supports the valuation of assets at net realizable value.

Firescu (2015) mentions that the relevance of global outcome information differs from one category of financial information users to another, and thus managers are interested in comprehensive income, while investors are interested in return on investment and creditors will analyze the company's performance from a solvency perspective.

In their paper, Felthman and Ohlson (1995) mentioned how accounting can create value for investors and the links between market values and book values. Accounting research returns cyclically to what is essential for identifying accounting information that reflects the value of the company.

Ohlson (1999) developed and analyzed a model of the company's market value on present and future earnings, book values and dividends. Two elements underlie the model: "the clean surplus" (the method of net surplus accounting that provides elements of a forecast model that determines the price based on earnings, expected returns and change in book value, the main theory is the estimation the value of a company's shares instead of approaches with discounted dividends / cash flows) and dividends (which diminish the present carrying amount but do not affect current earnings). The model provides a useful benchmark for the company's market value, referring to accounting data and other information. Using the statistical pricing model developed by Ohlson, the results of the study suggest that both net income and other comprehensive income have relevant value, especially other comprehensive income (e.g. gains and losses on revaluation of financial assets available for sale, the gain or loss portion of hedging instruments).

Marchini and D'Esteb (2015) in their study conducted in Italy examined the impact of the effect of reporting unrealized gains and losses on the performance of entities and therefore on the decision-making process of investors. The result of the study shows that the overall result significantly affects the performance of the listed entities in Italy, despite the appearance of the lack of link between the net result and other comprehensive income elements.

Bartov *et al.* (2005) in an empirical study talk about financial reporting frameworks and their impact on the the value relevance of financial information, so the results obtained according to IFRS are much more relevant for users than those obtained according to local standards, in the case of the study financial reporting applicable in Germany. Basu (1997) created a model that predicts the correlation between profits returns and the accounting result when future economic performance may deteriorate or appreciate based on information received in the form of "good news" or "bad news". Thus, Basu manages to defuse the tension between the two known economic categories in relation to the profit that results in increasing information efficiency.

The present need of existing investors in a company, but also of potential ones, is to have information about the inherent risk and return on their investments so that they can evaluate and forecast the future performance of the company. Thus, the overall result, taking into account changes in the fair value of assets and liabilities in the reporting period, better measures the value creation process and allows predicting the company's ability to generate future cash flows (Van Z. and Whittington, 2006). According to De Beelde and Van Cawenberge (2008) the profit / result is determined by comparing the carrying amount of equity at the end of the financial period with the same amount recorded at the beginning of the period, without the operations performed by shareholders. This theory is found as named clean surplus accounting theory.

International Financial Reporting Standards offer two possibilities for presenting the overall result: i) profit or loss for the period together with other comprehensive income or ii) in two separate disclosures: profit or loss for the period and other comprehensive income (IFRS, 2019, IAS 1, para. 81).

Other comprehensive income includes those items that should be reclassified to profit or loss for the period and those items that would never be reclassified to profit or loss for the period.

The literature also highlights the debates between the concept of comprehensive income and the concept of current performance or net result. It is necessary to analyze all sources that create value so that users of financial information can analyze and compare the information provided by the financial statements, in particular those referring to changes in capital, future cash flows and relevant information in quantifying the real value of the company. Empirical studies have provided conclusions regarding the value relevance of the financial information to investors. Thus, Ferraro and Veltri (2012), analyzed whether other comprehensive income elements provide investors with added value in terms of information content and their relevance.

Gains and losses reported as other comprehensive income are often seen as having a similar nature, being transitory items with little ability to predict future cash flows and minimal implications for the value of the company. The study by Jones and Smith (2011) compares gains and losses using a model that estimates the value relevance of information and its predictive value. The results show that both gains and losses recorded as other comprehensive income are information with value relevant but have a poor predictive value. Similarly, in the study by Devalle and Magarini (2012) analyzes the relevant value and importance in decision making in the capital markets of the elements of the comprehensive income and focusing on other elements of the comprehensive income, concluding by applying the regression model, that the relevance of these elements depends on the country.

In his paper, Veltri and Ferraro (2018) analyzed the incremental importance of the values of other comprehensive income elements in the Italian environment after the application of IAS1, using a regression model that takes into account the results of previous research. Thus, it finds that other elements of the comprehensive income are not incrementally relevant, moreover, it concludes that dividends are relevant in this context. Kvaal and Nobes (2010) note that despite the adoption of a common set of accounting standards for listed companies, there are still many differences that could lead to different accounting practices and therefore to different perceptions of the value relevance of the of accounting information. Revenues and expenses recognized in other comprehensive income could differ significantly from country to country.

The primary factors of the various accounting options identified by Mechelli and Cimini (2014) are the source of funding and the legal system. Thus, the incremental of the value relevance of other comprehensive income elements in European countries is determined by these factors, but also by the level of market development, the credit-oriented financial system and a legal framework for financial reporting.

The comprehensive income is becoming more and more important as an indicator of companies' performance (Gazzolaa and Ameliob, 2014) and is much closer to the reality of the market than the net result. For this reason, investors, in the valuation of investments, should use the ROE (return on equity) indicator corresponding to the comprehensive income instead of the simple ROE indicator; considering that the comprehensive income has a higher informational potential than that of the traditional net result. An evaluation of stock performance, such as ROE related to the comprehensive income, presents the impact on the market much more clearly and provides relevant information for users and especially for investors.

Because other comprehensive income usually includes several types of “mark-to-market” adjustments, their financial reporting may be influenced by the professional judgment of the company's management (Lee and Myung, 2013). Thus, company managers can influence other comprehensive income in terms of classification, the choice of valuation methods, including key assumptions, when determining their fair value. According to this guidance, when there is no active market for a security, the use of management estimates is acceptable. The use of professional judgment in making estimates of fair value can significantly affect the quality of financial information, which is subject to an inherent degree of uncertainty and therefore the actual / concrete results could differ materially from the estimates. Dhaliwal *et al*. (1999) mention that some components of other comprehensive income may be based on subjective estimates, therefore they can generate interpretations in financial reporting. Fair value measurement is identified as one of the most significant risk areas (PCAOB, 2011). The primary shortcomings identified by the PCAOB regarding fair value measurement include (1) whether fair value measurements are determined using appropriate measurement methods; and (2) the reasonableness of significant assumptions used by management to measure fair value, such as discount rates and lending cost expectations.

Some components that are part of other comprehensive income, such as foreign exchange gains and losses and actuarial gains and losses related to benefit plans, may involve estimates with a higher degree of subjectivity than marketable-securities adjustments (Dhaliwal *et al.*, 1999) and changes in the revaluation surplus. When there is an active market, market prices are most relevant in determining fair value and should be used as a basis for measurement, thus generating relevant value for investors and creditors who regularly base these prices on decisions. The level of subjectivity of the professional judgment of a company's management required to establish fair value may be diminished when the valued asset is listed on an active market.

All this shows that it is necessary to be aware of the importance of measuring the financial performance of companies not only by profit or loss for the period but also by using information from other comprehensive income.

3. Research methodology

For the research purposes, professional experts were interviewed. The professional experts are employed in financial services companies such as "Big 4" or "Second-tier firms" and companies operating in various industries in Romania, but which prepare financial reports or a full set of financial statements in accordance with the accounting policies of the groups to which they belong, in accordance with IFRS. The auditors interviewed are involved in various projects as IFRS experts, given their solid knowledge of IFRS, their familiarity with national and international contexts, their knowledge of the business environment, they speak English given the terminology of IFRS standards. (Albu *et al.*, 2014).

A qualitative approach was used based on interviews in order to identify and to conclude on the actions, motives and interpositions of various actors (8 structured interviews with professional accountants, auditors and users). In order to respect the ethical part of the interviews, a protocol was adopted (the purpose of the interview, why they were chosen, the purpose of the research, the preservation of anonymity and confidentiality).

The interviewees were not chosen random and are therefore not part of a statistical sample on the overview of the accounting environment in Romania and Europe. The interviewees are having significant experience in preparation and reviewing the statutory financial statements prepared in accordance with International Financial Standards (some of them with more than 15 years of experience).

The interviews were structured with questions on the topic studied: "Comprehensive Income and other comprehensive income" with emphasis on the value relevance of financial information.

During the interviews, there was generally a reluctance to share the interviewee's professional experience. The interviews lasted from a minimum of 50 minutes to a maximum of 65 minutes, with an average of 58 minutes.

The interviews were conducted using video calling (Videocall, engl) through the Skype software. All interviewees are Romanian citizens, have Romanian as their mother tongue and are located in Bucharest. The interviews were conducted in Romanian, in order to capture the nuances, to allow a more fluent course of discussion and to ensure the consistency of the interviews, even if some of the interviewees use English daily in practice at work, given the terminology from IFRS standards.

The interviews were recorded, with the permission of the interviewees, using the function offered by Skype for recording. All interviews were transcribed in full immediately. An analysis of the transcribed content was subsequently made to identify the themes and observations so as to avoid misinterpretations of the transcribed ones. No software was used for the qualitative analysis of the data, given that the number of interviews and their transcripts is not large. Based on the interviews' summary a questionnaire was structured in order to be address to a large population of professional experts. The collection of data through questionnaire was online, and the responses to the questionnaires were saved. The survey was conducted on 53 respondents, professional experts, with IFRS background, employed in financial services companies such as "Big 4", "Second-tier firms", Financial service firms and companies operating in various industries in Romania. The collection of date was performed online between May 12, 2020 – July 3, 2020.

Questionnaires, together with interviews, provide researchers with the opportunity to investigate complex phenomena from several perspectives (Speklé and Widener, 2018). This method collects the interviewers' perceptions reflecting their understanding of a phenomenon. Several studies use experts (trainers, users, investors, academics, auditors) to obtain opinions on the adoption of IFRS (Albu *et al.*, 2020).

The questionnaire included a total of 12 questions that collected demographic information about respondents (first 4 questions) and questions on "Reporting of comprehensive income, net result and performance of companies" (8 questions):

- Use of perceptions (qualitative research), but for the same sample of respondents (quantitative research).
- Closed questions were used.
- Combination of question types (single answer, ranking, grading (Likert scale))
- Presentation of results

In the welcome letter, is recommended that the respondents to complete the questionnaire, given their experience in reviewing or preparing IFRS financial statements.

The first group of questions collected demographic data (IFRS experience in terms of number of years and number of companies, type of experience [preparer, auditor, consultant or both] and gender) and was followed by questions related to "Comprehensive income and other comprehensive income".

The questions covered the following matters related to the " Comprehensive income and other comprehensive income": predictive value for future performance; the frequency of the presence of other comprehensive income in the financial statements; Influence on the price and yield of the stock; the influence that other comprehensive income and comprehensive income have on credit risk and the cost of borrowing; benefits brought by the relevance of the value of the global result (a list of benefits derived from the literature, with an evaluation on a Likert scale in 5 points); fair value measurement.

The questionnaire has been previously tested with two auditors working in a Romanian company that is a member of a network of independent affiliated companies and with an IFRS financial statement preparer, all being part of the mentioned above interviewers. The best practices in conducting the surveys recommend that the individuals involved in the pre-testing phase be selected based on two criteria: be representative of the population that will complete the survey and provide constructive opinions on the structure and content of the questionnaire (Nazari *et al*., 2006). The target population to be studied consists mainly of IFRS preparers, auditors and consultants with different levels of experience.

Several questions were adjusted following the pilot test to improve clarity and relevance. A major change was the elimination of questions about any details that could lead to the name of the company where he works, so that the results of the study are not misinterpreted. Questionnaires completed during pre-testing are not included in the sample.

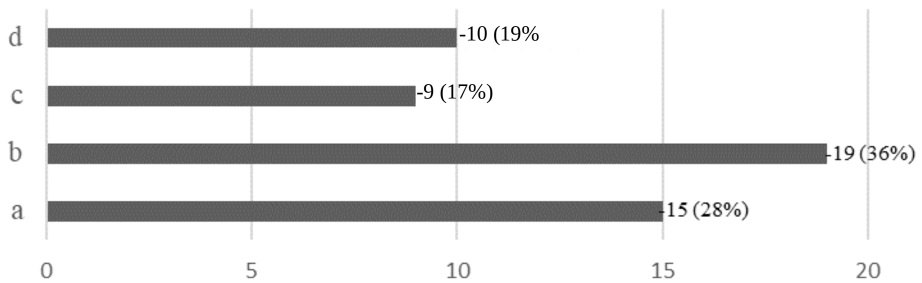
4. Empirical study on comprehensive income and other comprehensive income

In order to analyze the value relevance of comprehensive income and other comprehensive income, the questionnaire was structured in 12 questions. The research includes 53 respondents over the age of 25. Most of the respondents are preparers or reviewers of the IFRS financial statement in Romania.

The purpose of this questionnaire is to gather information related to the perception of the Romanian business environments related to comprehensive income and other comprehensive income, as well as to help in the presentation of the conclusion on the impact of comprehensive income and other comprehensive income from users' perspective (e.g. management, investor, creditor).

1. Your IFRS experience is related to (choose one answer):
a) involvement in the preparation of IFRS financial statements;
b) mainly on the reviewing of IFRS financial statements;
c) mainly in consulting on IFRS matters;
d) both, in auditing and consulting services for companies that have adopted IFRS;

Figure 1. **IFRS experience**

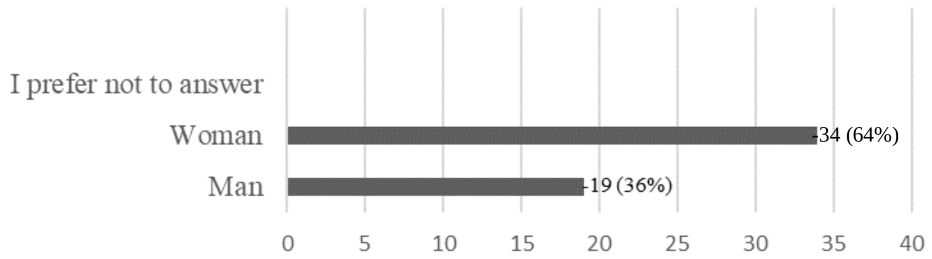


More than 50% of were involved in the preparation of financial statements and in reviewing the IFRS financial statements, thus having a solid background on IFRS matters and could provide a relevant feedback on the further queries related to our research subject.

This first question identifies the number of respondents, as well as the share of the category per IFRS experience segments.

2. Your gender is:

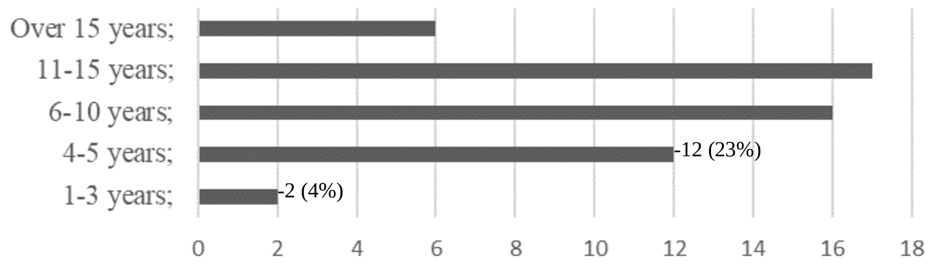
Figure 2. **Gender**



The high percentage of women is according to expectation. In Romania, the finance profession has a predominant percentage of women.

3. How long is your experience with IFRS? Indicate an approximate number of years
a) 1-3 years;
b) 4-5 years;
c) 6-10 years;
d) 11-15 years;
e) Over 15 years;

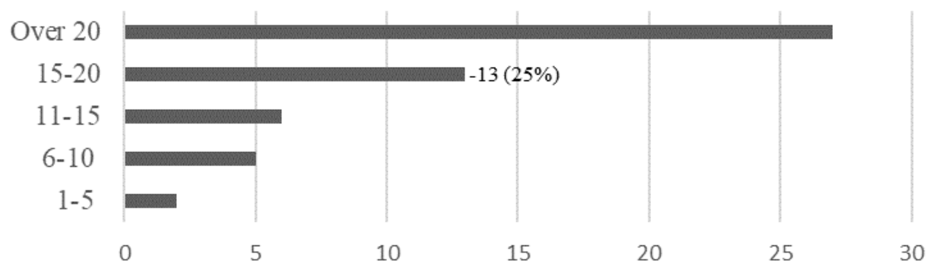
Figure 3. **Years of experience**



A percentage of 62% from analysis population has experience between 6-10 and 11 - 15 years which is relevant further in the analysis.

4. For how many companies did you prepared/ reviewed IFRS financial statements?
a) 1-5
b) 6-10
c) 11-15
d) 15-20
e) Over 20

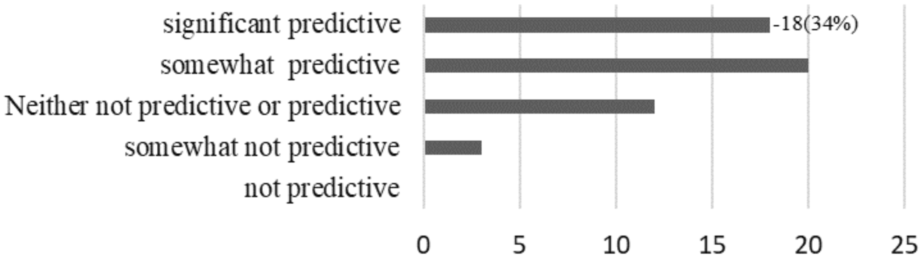
Figure 4. **Numbers of IFRS financial statements reviewed/ prepared**



More than a half (51%), was involved in over 20 financial statements, which confirms the relevance of the answers of the next questions.

5. Does the comprehensive income of companies have a more predictive value for future performance than the net result? From 1 to 5, where 1 is "not predictive" and 5 "significant predictive".

Figure 5. **Comprehensive income's predictability value for future performance**



Based on the respondents IFRS experience, more than a half concluded that the comprehensive income of companies has a more predictive value for future performance than the net result: 38% concluded somewhat predictive and 34% significant predictive. Thus, the current trend of the Romania companies is to consider the comprehensive income as a predictive indicator for the future result.

6. Assess from 1 to 5, how frequently is the disclosure of other comprehensive income in the IFRS financial statements, where 1 is "frequency - very low" and 5 is "very frequently":

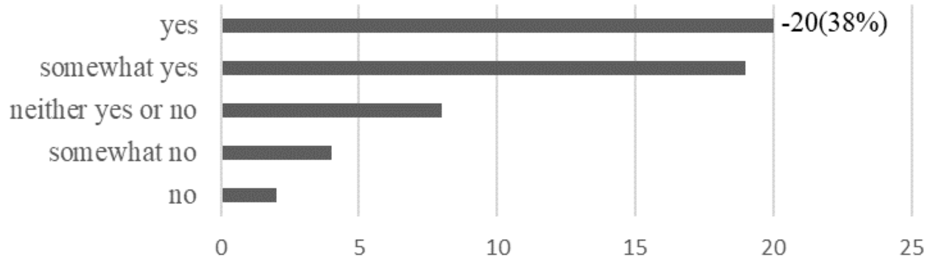
Table 1. **Frequency of other comprehensive income in the IFRS financial statements**

Type	1	2	3	4	5
(a) changes in revaluation surplus (IAS 16 "Property, plant and equipment", IAS 38 "Intangible assets");	7.5%	13.2%	28.3%	41.5%	9.4%
b) actuarial gains and losses related to defined benefit plans recognized in accordance with IAS 19 "Employee benefits	5.7%	3.8%	34.0%	39.6%	17.0%
(c) gains and losses arising from the translation of the financial statements of a foreign operation (IAS 21 "Effects of exchange rate changes");	7.5%	9.4%	32.1%	43.4%	7.5%
(d) gains and losses on the revaluation of available-for-sale financial assets (in accordance with IFRS 9 "Financial Instruments");	5.7%	11.3%	43.4%	30.2%	9.4%
(e) the portion of gains or losses on hedging instruments (in accordance with IFRS 9 "Financial Instruments").	3.8%	9.4%	35.8%	37.7%	13.2%

The answers of the respondents are between 3 – frequently and 4 – partiality frequently, highlighting the presents of other comprehensive income in the current IFRS financial statements.

7. Are the other comprehensive income, individual or aggregate, relevant in decision making for the potential investors with regards to the future performance?

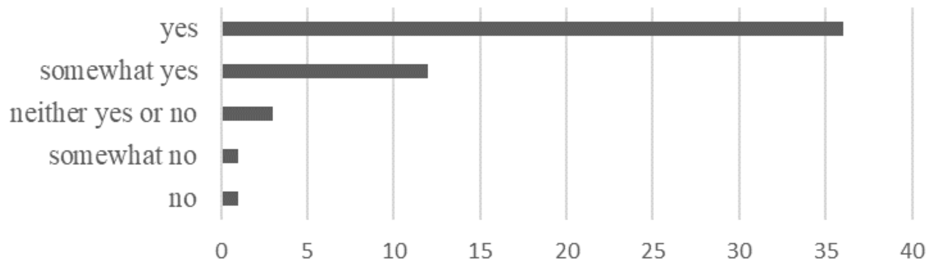
Figure 6. **Other comprehensive income, individual or aggregate, relevant in decision making for the potential investors**



A percentage of 74% ("somewhat yes" and "yes") of the respondents mentioned that other comprehensive income is relevant in decision making for the potential investors, which lead to a significant value relevance that needs to be considered in the IFRS financial statements preparation.

8. Does the comprehensive income and other comprehensive income significantly influence the share price and return on investment in the case of listed companies?

Figure 7. **Impact of Comprehensive income and Other comprehensive income over the share price and return on investment**



Most of the respondents (68%) answered "yes" considering that other comprehensive income and comprehensive income have a significant impact in share price and return on investment. Thus, the value of the company on the stock market could be significant influenced by the disclosure and the value of the comprehensive income and other comprehensive income.

9. The following benefits have been previously reported in the literature on comprehensive income and other comprehensive income in measuring the performance of companies. How much do you agree with each of the ones listed below, based on your own experience, where 1 is "disagree" and 5 is "agree"?

Table 2. **Benefits of comprehensive income and other comprehensive income**

Benefit	1	2	3	4	5
a) Increased transparency of the reported information	0.0%	1.9%	3.8%	15.1%	79.2%
b) increased relevance of the reported information	0.0%	1.9%	1.9%	11.3%	84.9%
c) Increased comparability of reported information	0.0%	1.9%	5.7%	9.4%	83.0%
d) Attracting foreign investments	0.0%	1.9%	5.7%	9.4%	83.0%

A significant percentage of the respondents agreed that comprehensive income and other comprehensive income are offering benefits in measuring the performance of listed companies.

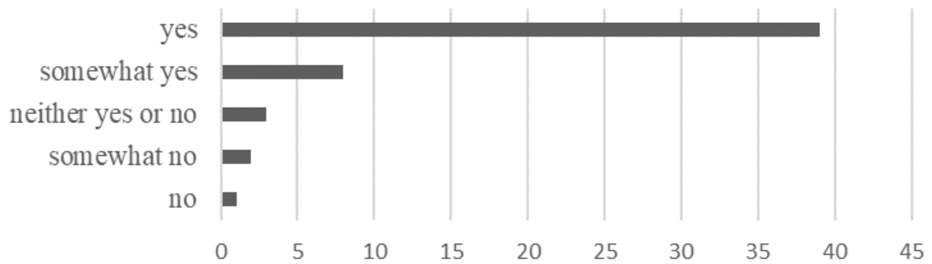
10. Assess from a scale from 1 to 5, where 1 is "not relevant" and 5 is "relevant", the significance of the following factors that determine the relevance of the presentation of other comprehensive income:

Table 3. **Relevance of the factors that determine the relevance of the presentation of other comprehensive income**

Factors	1	2	3	4	5
a) the technical qualification of the accounting staff that prepares IFRS financial statements	0.0%	1.9%	3.8%	9.4%	84.9%
b) the support of the company management	3.8%	5.7%	30.2%	28.3%	32.1%
c) legal pressures for compliance	0.0%	3.8%	9.4%	26.4%	60.4%
d) listing the company on a capital market	0.0%	1.9%	5.7%	9.4%	83.0%
e) shareholding structure	5.7%	3.8%	22.6%	17.0%	50.9%

11. Does the volatility of other comprehensive income influence credit risk and the cost of borrowing, from a scale from 1 to 5, where 1 is "no" and 5 is "yes"?

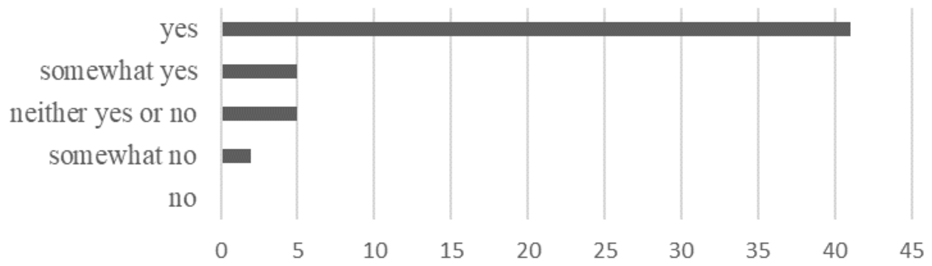
Figure 8. **Impact of Other comprehensive income on influence credit risk and the cost of borrowing**



A percentage of 74% of the respondents answered "yes" confirming that other comprehensive income influence credit risk and the cost of borrowing, thus for creditors, the elements of other significant income could influence the decision in granting the financing and also the assessment of cost of borrowing.

12. Is the fair value relevant for the users and in the analysis of other comprehensive income's elements (from a scale from 1 to 5, where 1 is "not relevant" and 5 is "relevant"?

Figure 9. **Relevance of the fair value in other comprehensive income**



A number of 41 respondents (77%) considered that fair value included in other comprehensive income, is relevant for users and further analysis, thus further in decision making.

5. Conclusions

Based on the results of the research, respondents in majority agreed that the application of IFRS reflects a better picture of the companies' performance and investors, creditors, shareholders and management can benefit from the value relevance provided by the comprehensive income and other comprehensive income in order to make the best decisions from each perspective. Users, such as investors or creditors, can benefit from relevant information in making decisions in order to purchase shares or to grant loans. Professional experience is relevant in the application and interpretation of IFRS on comprehensive income and other comprehensive income.

The perception of fair value should not be interpreted differently in terms of actors operating in different business environments, but the majority agreed that fair value is relevant as part of other comprehensive income.

Romanian companies complying with IFRS standards provides relevant information for different types of users, but in Romania it is still a challenge due to the local accounting mentality that is more oriented towards the fiscal area.

6. Future research directions

In order to conclude whether the comprehensive income and other comprehensive income are important and represents a significant information for investors on the Romanian capital market and in other European capital markets, a quantitative research should be performed based on value relevance of these information. In the scope of research, different econometric models that have tested the relevance of the comprehensive income and other comprehensive income will be analyzed and, based on them, a model will be build in order to be tested in this research.

The researched population will be represented by the companies that apply IFRS on the capital market in Romania and in other European countries. The chosen interval will refer to the period after 2007 for two reasons: since that year Romania applies IFRS according to the requirements of European regulations and also since 2007 IAS 1 "Presentation of Financial Statements" has been modified, which introduced the reporting of comprehensive income and other comprehensive income. The data to be processed will be obtained from databases (e.g. Thomson Reuters Eikon, Orbis, etc.) or will be collected manually from the financial reports of listed companies, as appropriate.

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The Impact of the Fair Value Through Other Comprehensive Income (FVOCI) Option for Equity Instruments on Romanian Entities

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Abstract*:*

Research question: *Having the controversies on the new accounting treatment for equity investments according to IFRS 9 at European level, the purpose of this paper is to identify the Romanian entities that are or could be affected by the new accounting treatment, to assess the reasons of the use of the FVOCI option for equity instruments and to evaluate the potential impact on the volatility of the net result of the classification of all equity investments as FVPL and the effect of the new accounting treatment on the investment strategy of these entities.*

What is new? *As IFRS 9 is applicable from 1st January 2018, to our knowledge, this is the first paper on the impact of the new accounting treatment for equity instruments in compliance with IFRS 9 for Romanian entities. Although during consultations conducted by EFRAG at EU level certain stakeholders affirmed that the elimination of recycling would make the fair value with value changes through other comprehensive income option (FVOCI) unattractive for preparers, we found that Romanian listed financial investment companies classified more equity investments in this category than in the fair value with value changes in profit or loss category (FVPL). The acquisitions and sales of equity investments classified as FVOCI continued in 2018 and 2019 despite the change of the accounting treatment. Listed investment entities did not use consistently the FVOCI option which affects the comparability of their net results and justifies the need of clarifications in the text of the standard on the situations for which the use of FVOCI option is justifiable.*

Tools: *Financial statements in compliance with IFRS for 2018 of 59 Romanian entities (listed entities, banks, and insurance companies) were reviewed for the identification of the entities with significant equity investments classified as AFS or FVOCI (after the application of IFRS 9). Entities were grouped in function of the materiality of equity instruments in total AFS financial assets in 2017 and for the entities with material equity investments we analysed the type of instruments included in AFS and then in FVOCI financial assets categories and transfers occurred after the application of IFRS 9 and we assessed the potential additional volatility in profit or loss if all equity instruments are included in FVPL financial assets category and the level of the acquisitions and sales of equity instruments classified as FVOCI after the application of IFRS 9.*

Keywords*:* *Equity investments, IFRS 9, FVOCI option, investment strategy, volatility.*

1. Introduction

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Financial assets (including long term equity investments) were accounted till recently by the entities applying the International Financial Reporting Standards following the requirements of IAS 39 "Financial instruments: recognition and measurement". According to this standard, equity instruments that were not included in the held for trading (HFT) category (measured at fair value with value changes in profit or loss) were classified as available for sale –AFS. AFS financial assets were measured under IAS 39 at fair value and value variations were reported in other comprehensive income-OCI. The decreases in their value were reflected in OCI, excepting impairment losses that affected the income statement. A problem that occurred in practice was related to the difficulty to distinguish between value decreases reported in OCI and impairments. Subsequent increases of value impacted the OCI and cumulative gains and losses were transferred from OCI to the income statement at the derecognition of AFS financial assets (operation called recycling). IAS 39 was replaced by IFRS 9" Financial instruments", applicable starting 1st January 2018 (excepting the case of insurance companies for which its application could be deferred till 1st January 2023[i]). According to IFRS 9, entities should measure equity investments at fair value and present fair value variations in the profit or loss. There is also an irrevocable option to designate equity investments in the category of the financial assets measured at fair value with value changes presented in other comprehensive income (FVOCI financial assets category). If this choice is used, all value changes are reported in OCI, no impairment should be recognized in the profit or loss and recycling the cumulative gain or loss from OCI to profit or loss at the sale of the assets is prohibited. IFRS 9 does not allow the measurement of equity investments at other measurement basis than fair value. Consequently, entities that would want to avoid the impact on their profit or loss of the changes in the market value of equity investments could use the irrevocable option to designate them in the category of the financial assets measured at fair value with value changes in other comprehensive income (FVOCI). Dividends for these assets will continue to be included in the profit or loss, value changes will affect OCI, but if they decide to sell the investments later, they are not allowed to transfer in the income statement the gain or loss accumulated in other comprehensive income from the moment of the acquisition till the sale.

Certain stakeholders expressed their discontent regarding the accounting of long-term equity and equity-type investments under IFRS 9 as fair value variations can produce volatility in the financial statements even when there is no impairment in the underlying fundamentals of these instruments. To avoid this effect, entities could decide to invest less in long-term equity investments which is not desirable from the perspective of sustainable finance.

Having the controversies on the accounting treatment of equity investments included in FVOCI category in compliance with IFRS 9, the purpose of this paper is to identify the Romanian entities affected or that could be affected by the new requirements of IFRS 9 and to assess the impact of the change.

In the first part we reviewed the main points of view for and against the current prescriptions for equity investments according to IFRS 9 and academic papers investigating the accounting treatment of long-term equity investments. In the second part we presented the methodology used and results and then we synthesized the conclusions.

2. Controversies around the accounting treatment of equity investments in compliance with ifrs 9: literature review

Before the presentation of the main points of view regarding the accounting treatment of long-term equity investments in compliance with IFRS 9, we mention that equity investments are not entirely under the scope of IFRS 9. We present below the measurement basis and the incident standards for equity investments according to the International Financial Reporting Standards:

Table no 1. **-Measurement of equity investments in compliance with IFRS**

Equity investment type	Measurement basis	Applicable standard
Investments in subsidiaries, associates, and jointly controlled entities in the separate financial statements of the parent	• The parent may choose between: • Cost • Fair value with value changes through profit or loss or fair value with value changes through other comprehensive income (according to IFRS 9). • Fair value and, by exception, cost, if the parent still applies IAS 39. • Value determined using equity method. • Lower of the carrying amount and fair value less costs to sell for investments measured at cost or under equity method that are held for sale according to IFRS 5	IAS 27
Investments in subsidiaries held by investment entities as defined by IFRS 10 in consolidated and separate financial statements	Fair value with value changes through profit or loss	IFRS 10/IAS 27
Investments in associates or investments of entities that hold joint control over an investee in the financial statements of the investor	• Value determined using equity method. • Lower of the carrying amount and fair value less costs to sell for investments that are held for sale according to IFRS 5. • Fair value with value changes in profit and loss could be used optionally for investments in associates or joint ventures held directly or indirectly by venture capital entities, mutual funds, unit trusts and similar entities.	IAS 28

Equity investment type	Measurement basis	Applicable standard
	• Fair value, according to IFRS 9, for long-term interests that are part of the net investment in the associate or joint venture for which is not used equity method.	
Other equity investments	• Fair value with value changes through profit or loss. • Optionally, fair value with value changes through OCI. • Fair value and, by exception, cost, for the entities that continue to apply IAS 39	IFRS 9/IAS 39

Source: Elaborated based on requirements of the standards

This paper discusses the controversies around the accounting treatment of equity investments that fall in the scope of IFRS 9, applicable starting 1st January 2018.

In the context of its efforts on how to integrate sustainability into its financial policy, the European Commission established the EU High-Level Group on Sustainable Finance (HLEG) to provide solutions on how to direct public and private funds to sustainable investments at EU level. The workings of the Group were finalized by a Report (2018) which included recommendations aimed to improve the contribution of the financial system to sustainable growth and to reduce the negative effects of short-termism in financial markets. Accounting rules represented a subject of concern as they influence the information disclosed to external providers of capital for companies and companies' investment decisions. Certain stakeholders expressed their discontent regarding the accounting of long-term equity and equity-type investments under IFRS 9 as fair value variations can produce volatility in the financial statements even when there is no impairment in the underlying fundamentals of these instruments (EU High-Level Group on Sustainable Finance Report (HLEG) (2018). To avoid this effect, entities could decide to invest less in long-term equity investments which is not desirable from the perspective of sustainable finance (important objective for EU public policies). The Group recommended consequently the identification of an appropriate accounting treatment for long term equity investments.

The International Financial Reporting Standards are applied within EU after an endorsement process. The European Financial Reporting Group (EFRAG[ii]) noted in its endorsement advice to IFRS 9 that measuring equity investments through profit or loss may not reflect the long term business investment model for insurance entities or for entities from the energy or mining sector investing in equity instruments due to the long-term nature of many of their liabilities (for asset-liability management purposes) and that the fair value through other comprehensive income category from IFRS 9 would not be appealing for these entities because the prohibition of recycling would not result in an appropriate depiction of their performance.

The Long-Term Investors (LTI) Club Working Group asserted also that standard setters should pay attention to the effects of accounting standards on long term investments and criticized the accounting treatments from IFRS 9. In the view of this group, IFRS 9 doesn't grant appropriate consideration to the business model and investor's holding horizon criterion and inappropriately affects the profit and loss with fair value changes of long term investments (equity instruments, some hybrid instruments and some subordinated instruments) and, by prohibiting recycling, denies the possibility to the investor to measure the actual performance for equity investments (for which FVOCI option was selected).

Equity instruments are defined by IAS 32 from the perspective of the issuers. IFRS 9 allows entities to designate only direct equity investments within the FVOCI category (IFRS 9. BC 5.21). Certain stakeholders expressed their discontent for the fact that certain equity type investments (unit funds or puttable equity instruments) cannot be included in the category of assets measured at fair value through other comprehensive income (EFRAG,2020).

In exchange, EFRAG (2020) underlined the need to limit structuration opportunities.

On the other side, *Hoogervorst (2019) admitted the existence of short termism pressures in the markets generated mainly by the short length of CEOs tenure and the inappropriate structuration of the reward schemes (that are related to the governance of the entities) and stressed the importance of accounting in providing accurate and timely information to support long term investment decisions.* Regarding the controversies over the short term volatility and the accounting treatment of equity investments, *Hoogervorst (2019) underlined the importance of reflecting the real economic volatility in the financial statements of investors and illustrated how companies could hide their poor performance by selling their available for sale financial assets (AFS) and recycling accumulated gains in the years with modest net profits. Lloyd (2018)* criticized too the transfer of accumulated gains or losses from OCI to profit or loss as it allows companies to smooth earnings or to avoid or reduce losses by delaying the recognition in the income statement of losses for loss-making investments or to diminish profits in current financial period so that future results look better. This behaviour was confirmed by empirical research for US banks. Using data from quarterly bank regulatory reports, Barth *et al.* (2017) observed, for a sample of 6.300 listed and non-listed U.S. commercial banks between 1996 and 2011, that they realized gains and losses accumulated in OCI to manage prudential indicators and earnings. Research reported also that the selection of the reporting format of financial performance is related to engagement in earnings management activities. *After examining the reporting decisions of* 82 publicly traded property-liability insurers, *Lee et al., (2006) observed that insurers with a tendency to manage earnings choose less transparent presentation formats. Lloyd (2018) emphasized the importance of reporting changes in the value of equity investments in the period they arise and criticized the distortion effect of recognizing the cumulative gain, that reflect* the performance for the entire holding period, only *in the year of the sale*. According to *Lloyd (2018), in certain situations, it is justifiable as value changes for equity investments to be reported in other comprehensive income if these changes are not indicative for investor's performance. When developing IFRS 9, IASB considered the cases from* Japan, where certain companies invest in each other to solidify their long-term relationships (*Lloyd, 2018)*. Reflecting value changes in OCI was a solution to distinguish between investments held for returns and such strategic investments that are not held for value appreciation or dividend payments. As mentioned above, IFRS 9 prohibits the transfer of the cumulative changes in the value of equity investments from OCI to the profit and loss. *Lloyd (2018)* *considers that this is an appropriate solution for strategic investments for which* value changes are not indicative of the investor's performance, neither when they arise, and neither when sold. However, the option to designate equity investments to be measured at fair value with changes in other comprehensive income was not limited to strategic investments in IFRS 9 because of the difficulty to define them. To prevent the abuses, the standard setter required entities to disclose the reason for designating instruments in this category (IFRS 7.11A.(b)).

Another argument for the treatment from IFRS 9- is that it avoids the complexity of developing an impairment test and the subjectivity in determining the moment when equity investments become impaired, which raised application problems for IAS 39. T*he identification of the moment when a decrease in the fair value* of equity investments becomes "significant" or is "prolonged" and should be accounted in profit or loss as impairment determined late recognition of impairment losses under IAS 39 (*Lloyd, 2018)*. The use of unreasonably high thresholds or the lack of comparability between entities were other problems reported for the recognition of impairment of equity instruments classified as AFS financial assets. For example, ESMA (2013) found in the case of financial institutions that different quantitative thresholds were used (a decrease duration from 6 to 36 months was considered prolonged and a decline from 20% up to 50% was significant).

Certain stakeholders expressed their preference for the reintroduction of recycling for equity investments valued at fair value through OCI. EFRAG letter to the European Commission (2018) synthesized their arguments as follows:

- the accounting treatment of equity investments and debt investments should not be different as investors may hold mixed investments. Currently, under IFRS 9, recycling accumulated gains and losses from OCI to profit or loss is allowed only for debt instruments. Lloyd (2018) replied that for debt instruments, measured at fair value through OCI, both the amortised cost and fair value provide relevant information, having the fact that they are held within a business model that combines holding the instrument to collect its associated cashflows or for sale. Fair value information is provided in the balance sheet and amortised cost information is provided in the profit or loss.
- as dividends (that represent a partial realization of the value of the investment) are presented in the the income statement, disposal gains and losses should be included in the same statement,
- realised and unrealised gains and losses should be reported differently because realisation is an important event,
- realised gains and losses have confirmatory value and serve management stewardship objective of accounting.

Although realization is not used consistently in IFRS to distinguish between gains and losses that are reported in OCI from the ones that affect the net profit, certain empirical researches reported that the distinction between realized and unrealized gains and losses seem to matter for users and that investors value differently realized vs unrealized gains and losses (Dong *et al.*, 2014). Dong *et al.* (2014) concluded for a sample of 200 large US banks from 1998 to 2006 that recycled gains and losses are value relevant and improve the predictive ability of future performance. Using data available on Compustat's Global Vantage for 19,784 public firms over 1996–2005, Barton *et al.*

(2010) examined how attributes used to assess earnings quality are correlated with their value relevance and concluded that nearness to cash flows of a performance measure is relevant for investors. On the other side, other researchers illustrate why recycling is complex and hampers users' ability to extract the information from financial statements (Tarca et al., 2008 after an experiment with 477 subjects including 168 financial analysts,110 professional accountants and 199 post graduate MBA students observed that accuracy improved for non-recycled items). Rees and Shane (2012) stated that no recycling promotes the determination of earning per share (EPS) based on comprehensive income and pointed out that, if recycling is eliminated, users might interpret unrealized gains/losses similarly to realized gains/losses. A review of academic literature realized for EFRAG by Barone and Bullkvist (2018) concluded around few general points: investors find information from the profit and loss easier to review, recycling is complicated and is used by firms to manage earnings, but recycled gains and losses are value relevant, investment strategy of long term investors may change as a result of new accounting requirements but other factors (such as taxation, prudential regulations, expected returns) could also play a role.

In June 2018, the European Commission (EC) requested EFRAG to provide an analysis of alternative accounting treatments to fair value through profit or loss for long term portfolios of equity and equity type investments. In the period May-July 2019, EFRAG conducted a public consultation and in January 2020 replied to EC (EFRAG, 2020). Mixed views were expressed by respondents to the consultation regarding the definition of long-term business model and sustainable investments. 30% from respondents suggested that the discussions should be around equity instruments not held for trading. Regarding the need of a new accounting treatment, respondents from insurance and asset management industry and a large majority of banks and non-financial entities supported the change of IFRS 9, while standard setters and users had split views. EFRAG advised EC to recommend IASB to conduct a review of the current nonrecycling treatment from IFRS 9 in the light of the New Conceptual Framework.

The recent Conceptual Framework of Financial Reporting issued by IASB mentions that the statement of profit or loss represents the primary source of information about an entity's financial performance. Recycling gains and losses from OCI to profit and loss is permitted when it allows the calculation of a profit that provides a more relevant or a more faithful representation of the financial performance of the entity in the year of the transfer. Some stakeholders consider that a profit including the recycled gain or loss of equity investments ensures a more faithful representation of the financial performance of the investor in the year of the sale. But the New Conceptual framework mentions also that if there is no clear basis to decide in which period should take place the transfer from OCI in profit or loss, the Board may decide that recycling should not occur. Absence of clear conceptual criteria for separating gains and losses reported within OCI from those included in net profit or for deciding which OCI elements are recycled and when will open the door to long debates.

In EFRAG's view (2020), if recycling is to be reintroduced, it should be accompanied by a robust impairment model, including the reversal of the impairment losses that should affect the income statement. The reintroduction of impairment eliminates the incentive to maintain loss making investments in the portfolio and is consistent with the notion of prudence. EFRAG rejected the idea of replacing a robust impairment model by more disclosure in the notes invocating researches arguing that information from the primary financial statements is more value relevant, more reliable and receives more attention than the information disclosed in the notes. By allowing entities to reverse impairments, extreme fluctuations are diluted in time and entities are not pressured to defer the recognition of impairment. Impairment of equity investments classified as AFS was problematic under IAS 39 because of the difficulty to distinguish consistently between decreases of value under the cost that were significant and prolonged from temporary fluctuations. A proposal was the introduction of quantitative thresholds defined by the standard setter or by each entity. There are still different opinions on what would be the best solution for an appropriate recognition of impairment that is relevant, ensures comparability among entities and limits subjectivity.

As there is no empirical paper on the impact of the new accounting treatment for equity instruments classified as fair value through other comprehensive income (FVOCI) according to IFRS 9 in the case of the Romanian entities, the purpose of this paper is to identify the entities that are most affected or that could be most affected by the new requirements of IFRS 9 and to assess the impact of the change on the investment strategy of these entities and on the volatility of their net result if FVPL classification is used for equity instruments for which FVOCI was selected.

3. Research methodology and results

3.1 Sample description and research methodology

We reviewed the financial statements in compliance with IFRS for 2018 of 59 Romanian entities (listed entities, banks, and insurance companies) in order to identify the entities with significant equity investments classified as AFS or FVOCI (after the application of IFRS 9). The detailed structure of the sample is presented in appendix 1.

Table no 2. **-Structure of the sample**

	No. of entities
Entities listed at Premium Category at Bucharest Stock Exchange (BSE)	25
Unlisted banks	14
Unlisted insurance companies	20
Total	**59**

Companies listed at Bucharest Stock Exchange apply IFRS for the preparation of both consolidated and individual financial statements. Starting 2012, listed non-financial entities and banks use IFRS as basis of accounting. Listed financial investment companies apply IFRS as basis of accounting starting 2015. For the entities that presented both consolidated and individual financial statements, we used consolidated financial statements as data source.

We investigated the financial statements for 2018 in compliance with IFRS of the entities listed at Bucharest Stock Exchange Premium category (25 entities) in order to identify the entities that presented on the face of their balance sheet available for sale financial assets (AFS) in 2017 or financial assets measured at fair value through other comprehensive income (FVOCI) in 2018.

As discussions at European level mention insurance companies as being affected by the requirements of IFRS 9 for equity investments we analysed the financial statements in compliance with IFRS for 20 insurance entities (that present financial statements in compliance with IFRS on their website). Insurance, insurance-reinsurance, and reinsurance undertakings are required to present, for information purposes, a second set of financial statements in compliance with IFRS according to Rule no 19/2015 of the Romanian Financial Supervisory Authority. Financial statements in compliance with IFRS of the insurance entities are obtained by restating the balances determined in compliance with Rule no 41 / 2015 issued by the Romanian Financial Supervisory Authority. The main differences between the two accounting frameworks are related to the classification and measurement of the financial assets in compliance with IAS 39, the elimination of the *catastrophe reserve determined according to Rule no 38/2015* of the Romanian Financial Supervisory Authority, the liabilities adequacy test in compliance with IFRS 4, recognition of deferred tax assets and liabilities and the preparation of disclosure under IFRS. The insurance companies from the sample took the option to defer the application of IFRS 9 to match it with the first application of IFRS 21. That is why, for the year 2018, listed entities and banks presented the financial assets categories from IFRS 9, while insurance companies used the classification and measurement requirements of IAS 39.

The banks apply IFRS as basis of accounting since 2012. Starting 2018 they applied IFRS 9. The main changes were related to the new impairment model for financial assets (the expected loss model), the evaluation of the business model and of contractual characteristics of the financial assets and the presentation of explanatory disclosures for the transition to IFRS 9. We reviewed the financial statements for 2018 of 14 unlisted banks to determine the materiality of equity investments classified as AFS (and then FVOCI financial assets).

According to IAS 39, financial assets were classified in four categories: held to maturity investments, loans and receivables, available for sale financial assets and financial assets at fair value through profit or loss (designated and held for trading). Available for sale financial assets (AFS) included non-derivatives financial assets designated in AFS category or that did not fulfil the conditions to be included in the other three classes of financial assets. IFRS 9 requires three categories of financial assets: financial assets measured at amortised cost, that fulfil both the hold to collect business model and contractual cash flows test (or the solely payments of principal and interest- SPPI test), financial assets at fair value through other comprehensive income (FVOCI) that fulfil both the hold to collect and sell business model and contractual cash flows test and financial assets at fair value through profit or loss-FVPL (including financial assets that are held for trading or classified in this category to eliminate an accounting mismatch or that are managed on a fair value basis). Equity investments are included in the fair value through profit or loss category (FVPL) or could be designated optionally at fair value through other comprehensive income (FVOCI).

The objective of this paper is to identify the entities that are affected or could be affected by the new treatment of equity investments from IFRS 9. We identified entities with balances for AFS or FVOCI financial assets and analysed the type of instruments included in AFS and then in FVOCI financial assets categories and transfers occurred after the application of IFRS 9. We grouped the entities in function of the materiality of equity instruments in total AFS financial assets to identify entities that could be the most affected by the accounting treatments from IFRS9. For entities with material equity investments classified as AFS financial assets we assessed the impact or potential impact of IFRS 9 on their investment strategy and the potential additional volatility in profit or loss if all equity instruments are included in FVPL financial assets category.

3.2. RESULTS AND DISCUSSION

We observed that only 32% from BSE Premium category entities presented AFS or FVOCI financial assets. The total value of FVOCI financial assets in 2018 for these entities was 8,29 billion euro (compared to 7,59 billion euro AFS financial assets in 2017) representing an average of 26,54% from their total assets. Non-financial entities listed at BSE Premium category did not report amounts for the AFS or FVOCI financial assets categories. All listed entities with AFS or FVOCI balances presented significant financial assets in total assets in both 2017 and 2018 (they are banks and financial investment companies).

Table no 3. **The weight of financial assets in total assets for listed entities presenting amounts for AFS or FVOCI financial assets**

	Financial assets/Total assets 2018		**Financial assets/Total assets 2017**
Listed banks presenting AFS or FVOCI financial assets			
Mean	95.02%	Mean	94.74%
Median	95.72%	Median	95.79%
Standard Deviation	3.91%	Standard Deviation	3.82%
Minimum	90.81%	Minimum	90.51%
Maximum	98.54%	Maximum	97.93%
Listed financial investment companies presenting AFS or FVOCI financial assets			
Mean	93.16%	Mean	87.07%
Median	98.22%	Median	91.93%
Standard Deviation	7.83%	Standard Deviation	14.58%
Minimum	83.57%	Minimum	64.15%
Maximum	99.32%	Maximum	99.39%

We observe that the weight of financial assets in total assets increased in 2018 compared to 2017 in the case of financial investment companies and that standard deviation decreased. This happened partially because certain financial investments companies applied the IFRS 10 investment entities consolidation exemption starting 2018 and their investments in subsidiaries were measured at fair value with changes reported in the profit or loss after a deconsolidation process.

The insurance companies from the sample reported in their 2018 balance sheet available for sale (AFS) financial assets in amount of 1,32 billion euro (compared with 1,26 billion euro in 2017). 20% of the insurance companies from the sample did not use the AFS category at all in both 2017 and 2018.

The unlisted banks from the sample presented FVOCI assets in 2018 in amount of 6,03 billion euro (compared with 6,3 billion euro classified as AFS in 2017).

We determined the weight of AFS or FVOCI financial assets in total assets for the entities from the sample and we observed a higher use of AFS or FVOCI categories by listed financial investment companies and insurance companies than by banks. However, there are insurance companies (20%) that did not use the AFS category at all.

Based on the information in the notes we identified the instruments included in AFS and then, in FVOCI financial assets category for each entity. The analysis of the main types of instruments classified as AFS in 2017 and FVOCI in 2018 revealed that listed banks did not include in FVOCI category in 2018 fund units and part of shares classified as AFS in 2017, while listed financial investment companies classified fund units, certain shares, bonds and treasury certificates in other categories than FVOCI financial assets starting 1st January 2018 (mainly within FVPL category).

Insurance companies applied IAS 39 in 2018. The AFS financial assets for these entities included shares, debt instruments and fond units. One entity included a financial asset generated by a derivative (forward contract used for currency risk hedge of state titles in other currencies) in AFS category although the definition from IAS 39 explicitly excludes derivatives.

Table no 4. **- Instruments classified as AFS financial assets by insurance entities**

Types of instruments classified as AFS financial assets	**Frequency =No of insurance entities holding the instrument in AFS category/Total insurance companies from the sample (2018)**
Bonds and state titles	87.50%
Shares	62.50%
Fund units	37.50%

To have an indication of the impact or the potential impact of IFRS 9 on assets allocation decisions, we analysed the dynamic of equity investments classified as FVOCI or AFS by the entities from the sample. In the case of listed financial investments companies, FVOCI category includes mainly equity instruments (between 99,59% and 100%). However, we noticed that these entities did not apply consistent criteria for using FVOCI option. For example, one entity used as starting point available for sale financial assets reported in 2017 and reclassified the financial assets which did not fulfil FVOCI criteria within FVPL category. Other entity classified as fair value through OCI investments in entities other than subsidiaries or associates that were not held for trading. Other entity reclassified held for trading financial equity instruments under IAS 39 partially as FVPL and partially as FVOCI. All the entities from the sample that applied IFRS 9 in 2018 choose not to restate the comparative amounts for 2017 (so the amounts for 2017 were determined in compliance with IAS 39). For equity investments in unquoted entities measured at cost using the exception from IAS 39, comparative amounts for 2017 were not restated. The entities recognized the difference between previous values and fair values determined on 1st January 2018 in the opening balance of retained earnings. In the case of listed financial investment companies which measured equity investments in unlisted entities at fair value after the application of IFRS 9, more disclosure related to fair value in compliance with IFRS 13 was provided in 2018.

We grouped the entities from our sample in function of the weight of equity investments in total AFS financial assets in 2017 to identify the entities that could be the most affected by the new accounting treatment of equity investments in compliance with IFRS 9. The entities for which equity instruments represent more than 2% from AFS financial assets are the listed financial investments companies, 20% from the insurance companies and 14,29% from the unlisted banks from the sample. This is consistent with the results cited by Lloyd (2019) and findings of EFRAG (2018), that investment equities held as AFS are specific to a reduced number of companies.

In the case of unlisted insurance entities, the importance of equity investments in total AFS financial assets varies from entities with no equity investments in AFS category to insurance entities that include only shares in AFS financial assets. 20% from the insurance entities from the sample did not use the AFS category and 50% did not hold equity instruments classified as AFS. In the case of insurance companies holding equity investments representing more than 2% from total AFS, they represent a small portion from total assets (up to 2,01% in 2018, or up to 2,43% in 2017). This is consistent with data reported by https://www.insuranceeurope.eu/insurancedata according to which equity investments represent only 2,68% from the total investment portfolio of insurance undertakings.

Table no 5. **- The weight of fair value reserve in total AFS financial assets for insurance undertakings**

	Min	**Max**	**Average**
Fair value reserve balance/AFS 2018	-6.90%	31.92%	1.25%
Fair value reserve balance/AFS 2017	-5.27%	12.00%	0.52%

The weight of fair value reserve in total AFS financial assets is lower in the case of insurance companies than in the case of listed financial investment entities (which was between 31.90% and 49.24% from total AFS in 2017 and between 2.71% and 52.27% from total FVOCI in 2018). This could be explained partially by the fact that insurance entities used the exception from IAS 39 and measured equity investments in unlisted entities at cost. 50% from the insurance entities with equity investments representing more than 2% from total AFS financial assets measured equity investments at cost and did not recognize value changes. Disclosure related to the recognition of impairment for equity instruments classified as AFS was generic and only one insurance company defines in quantitative terms what represents a significant and prolonged decrease of fair value under the cost of AFS financial assets (being considered significant any decrease more than 25% and prolonged a decrease for a period more than 6 months).

In the case of unlisted banks with equity investments of more than 2% from total AFS financial assets, equity instruments represented between 0% and 0,91% from total assets.

All listed financial investment companies held equity instruments representing more than 52.60% from total AFS financial assets. For these entities, after the application of IFRS 9, equity investments classified as FVOCI in 2018 represented between 43,23% and 71,29% from all the equity investments. Also, in 2018 the weight of investment equities in total FVOCI financial assets was higher than their share from FVPL financial assets.

Table no 6.- **The weight of equity investments in total FVOCI and FVPL financial assets in the case of listed financial investment companies**

	Investments in equity/FVOCI financial assets 2018	Investments in equity/FVPL financial assets 2018
Min	99.59%	20.29%
Max	100.00%	93.27%
Average	99.92%	53.64%

The same preference for FVOCI category could be noticed comparing the monetary values (investments in equity classified as FVOCI represent 0.99 billion euro compared with 0,38 billion-euro, equity investments classified as FVPL).

If equity instruments optionally designated as FVOCI would have been classified as FVPL in 2018 net result would transform from profit in loss in the case of 40% of financial investments companies.

Table no 7. **- Fair value change for AFS or FVOCI equity instruments as percentage from net result in the case of listed financial investment companies**

	Fair value change for AFS equity investments in 2017/Net result 2017 x 100	Fair value change for FVOCI equity investments in 2018/Net result 2018 x 100
Min	0.43%	-681.45%
Max	302.58%	55.33%
Average	139.41%	-142.43%

Fair value changes of equity instruments classified as AFS or FVOCI are significantly higher/lower than net profit both before and after the application of IFRS 9 which means that the classification of these equity instruments as FVPL would bring significant supplementary volatility in net result. This implies that avoidance of net result volatility could represent an incentive for the use of FVOCI option.

Table no 8. **– The use of fair value for financial assets in the case of listed financial investment companies**

	Fair value assets/Total financial assets 2017	Fair value assets/Total financial assets 2018
Min	89.20%	68.99%
Max	97.83%	97.11%

Average	94.84%	90.10%

Most financial assets are measured at fair value (between 68,99% in 97,11% in 2018). Lower values are due to investment companies that do not use IFRS 10 investment entities consolidation exemption. Level 3 equity investments represent a higher share from FVPL shares (between 0 and 97,9%) than from FVOCI or AFS shares in 2017 (which is between 0% and 37,29%). This means that the difficulty to measure fair value is not a reason for the use of FVOCI option.

Most financial investment entities (except one) continued to purchase and sell equity investments classified as FVOCI after the application of IFRS 9. When equity investments classified as FVOCI were sold, financial investment companies transferred the corresponding fair value reserve to retained earnings. For all the financial investment companies that transacted FVOCI equity instruments in 2018, sales of equity instruments classified as FVOCI exceeded acquisitions (net changes in equity instruments were between -0,28% and -13,04 % from total FVOCI equity investments at the beginning of the year). We collected data for listed investments entities in 2019 and determined that the net changes in equity instruments classified as FVOCI were between -8,49% and 25,75%. This contradicts the theory of lower investments in long term equity because of the disadvantages of FVOCI option.

We observed inconsistencies in the determination of total comprehensive income, certain financial investment companies presenting the variations in fair value reserve due to the transfer to retained earnings as part of the annual comprehensive income. It is true that for recycled elements, IAS 1.par 93 prescribed the deduction of recycled gains from OCI in the period of the reclassification in the profit or loss to avoid its inclusion in total comprehensive income twice. According to IFRS 9, recycling of cumulative gains or losses is prohibited for equity instruments classified as FVOCI, which means that fair value changes should be reflected in comprehensive income only when occurred. One financial investment entity changed this presentation policy in 2019 but did not restate the comparatives for 2018. Another financial investment entity disclosed separately in the explanatory notes amounts for impairments for FVOCI equity investments. These inconsistencies and misunderstandings of the requirements of IFRS 9 affect the comparability and interpretation of total comprehensive income and net income for financial investment companies. The comparability of net results is affected also by the fact that investment entities used different criteria for the FVOCI option.

4. Conclusions

In the context of the controversies on the accounting treatment of equity investments classified as FVOCI according to IFRS 9 we reviewed the financial statements of 59 Romanian entities applying IFRS (25 listed entities, 14 banks and 20 insurance undertakings) in order to identify the entities that are the most affected or could be affected by the change. We observed that entities listed at Premium Category of BSE that present AFS of FVOCI financial assets on the face of their balance sheets are banks and financial investments companies. This is different from the results of EFRAG study (2020) according to which non-financial entities hold a higher percentage of equity instruments classified as AFS from total equity investments.

The weight of FVOCI or AFS financial assets in total assets is higher for listed financial investment companies and insurance entities than for banks. However, there are insurance undertakings with nil balances for AFS financial assets. In the case of insurance undertakings and unlisted banks with equity investments representing more than 2% from total AFS, these instruments represent a small portion of total assets. AFS assets are less volatile for insurance undertakings because insurance entities used the exception from IAS 39 and measured equity investments in unlisted entities at cost. For this reason, we could not simulate the potential impact of the application of IFRS 9 for insurance entities.

The entities that were the most affected by the new accounting treatment for equity instruments from IFRS 9 were the listed financial investment companies. After the application of IFRS 9 in the case of these companies, equity investments represent a higher share form the FVOCI financial assets category than from FVPL category which contradicts predictions about the unattractiveness of FVOCI option with the elimination of recycling. Value changes for equity investments classified as FVOCI are significant compared with net result which means that net result would be even more volatile if these instruments would be included in FVPL category and that the avoidance of net profit volatility could represent an incentive for the use of FVOCI option. Level 3 fair value measurement was used for FVPL equity instruments to a higher extend which means that the use of the FVOCI option was not guided by the search of a more reliable result.

The existence of inconsistent criteria for justifying the use of FVOCI option in the case of investment entities illustrates the need of clear explanations in the text of the standard on the situations when the option may be used (*even more because the basis for conclusion of the standard is not included in the European Regulations).*

As investment entities continued to purchase equity instruments classified as FVOCI we found no evidence that they ceased these investments following the application of IFRS 9. Inconsistencies in the calculation of comprehensive income -in some cases changes in fair value reserves due to transfers to retained earnings were included in other comprehensive income-reveal a misunderstanding of the concept of comprehensive income and the focus on net result of preparers. The fact that the investigated period was represented by the year of the first application of IFRS 9 and that insurance entities postponed the implementation of IFRS 9 and used cost exception from IAS 39 for unlisted equity investments did not allow us to obtain complete evidence on the impact of the use of FVOCI option for equity instruments in the case of all of the entities from the sample.

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Appendix 1. Entities from the sample

Companies listed at Premium BSE category
Alro S. A
Med Life S.A.
S.N.T.G.N. Transgaz S.A.
Banca Transilvania S.A.
SIF Oltenia S.A.
Biofarm S.A.
Antibiotice S.A.
S.N.G.N. Romgaz S.A.
Fondul Proprietatea
SSIF BRK Financial Group SA
SIF Moldova S.A.
Conpet SA
Electromagnetica SA
Bursa de Valori Bucuresti SA
Sphera Franchise Group
Impact Developer & Contractor S.A.
SIF Muntenia S.A.
Societatea Energetica Electrica S.A.
SIF Banat Crisana S.A.
OMV Petrom S.A.
BRD - Groupe Societe Generale S.A.
SIF Transilvania S.A.
Patria Bank S.A.
S.N. Nuclearelectrica S.A.
C.N.T.E.E. Transelectrica
Unlisted insurance undertakings
Uniqa Asigurari S.A.
BCR Asigurari de viata Vienna Insurance Group SA
Societatea de Asigurare-Reasigurare City Insurance SA
Signal Iduna Asigurare Reasigurare
PAID Pool-ul de Asigurare impotriva Dezastrelor Naturale S.A
NN Asigurari de viata S.A
S.C. Gothaer Asigurari Reasigurari S.A.
Onix Asigurari SA
Omniasig Vienna Insurance Group S.A.
Groupama Asigurari SA
ABC Asigurari Reasigurari SA
Eurolife ERB Asigurari de viata SA
Eurolife ERB Asigurari Generale SA
Asito Kapital SA

BCR Asigurari de viata
SC Certasig Asigurare-reasigurare SA
Ergo Asigurari SA
Compania de asigurari-reasigurari Exim Romania (C.A.R.E.) S.A
German Romanian Assurance SA
Grawe Romania Asigurare S.A.
Unlisted banks
Alpha Bank
BCR
CEC Bank
Credit Agricole
Credit Europe Bank
EximBank
Intesa Sanpaolo
Bank Leumi (acquired by First Bank)
OTP Bank
ProCredit Bank
Raiffeisen Bank
GarantiBank
UniCredit Bank
Marfin Bank (Vista Bank)

Insights of Research on Corporate Governance and Performance Relationship Within an Emerging Country. A Structured Literature Review

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Abstract: *The objective of this study is to debate on the relevance that the Romanian researchers have given to the study of the corporate governance and performance relationship. A structured literature review is used to analyse the papers published by Romanian authors in national and international journals or presented at international conferences for the 2010-2019 period. The main research proposition is to identify the particular interest of researchers, their work visibility and features, as well as the trend in the literature for this area of research from an emerging country perspective. The results illustrate multiple waves both in the interest of the researchers, as well as in the validation of their research. Most of the studies engage a quantitative methodology, focusing on the national companies' policies of corporate governance. Furthermore, the authors concentrate within three main universities in the country. This paper provides an approach to discover under-investigating topics and methods, thus being a starting point for researchers who will further study this subject. It may have direct implications especially in the academic environment of the European emerging countries.*

Keywords: *Structured literature review, corporate governance, corporate performance, emerging countries.*

1. Introduction

Corporate governance and corporate financial performance have experienced great attention from the academic environment during the last twelve years, being an important theme for debating. At international level, there is a number of studies conducted on the relationship between the corporate governance and the performance (Guest, 2009; Topak, 2011; Kalsie and Shrivastav, 2016; Tang, 2017; Duruet *et al.*, 2016; Liu, 2019; Welch, 2003; Shah *et al.*, 2011; Paniagua *et al.*, 2018; Varshneyet *et al.*, 2012; Kaur and Vij, 2018; Arora and Bodhanwala, 2018). Based on these studies, the variables frequently chosen to measure the corporate governance mechanisms are: board size, CEO duality, ownership structure, ownership concentration, managers' revenue, corporate governance index. Related to various governance variables, the most used performance measures are: Tobin's Q, return on equity (ROE), return on asset (ROA), return on investment (ROI) and economic value added (EVA).

Despite the numerous research papers published on this topic, only a limited number includes a structured literature review (SLR), such as Arora (2015), Ng'eni (2015), Knut (2016), Azila-Gbettor (2018). There are two primarily reasons to conduct a SLR.

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First, it allows to identify and systematize the existing literature on a particular research topic, as well as to identify the interest that researchers have given to studying a specific area. Second, it provides new insights into the type of the researched relationships in the particular setting.

Advancing the importance of conducting a structured literature review (SLR), this paper focuses on corporate governance and performance relationship research and the interest on this filed for authors from a European emerging country. To study this relationship, a review of the publications indexed in the Web of Science database was carried out. Being a world-wide recognized database, it covers a large number of journals and international conferences, highly considered for academics' assessment in Eastern-Europe countries (Lungu *et al.*, 2016; Albu and Lungu, 2012; Glanzel, 2012; Kearney, 2012). By applying a SLR methodology, the main features of the Romanian research are identified. The three stages that must be followed to perform a SLR (Tranfield *et al.*, 2003) are applied: (1) planning the review, (2) conducting the review and (3) reporting and dissemination.

Considering the corpus of the Romanian literature, this paper approaches three research questions, relative to the corporate governance and the performance Romanian economic literature:
RQ1. How have the corporate governance and performance area of research developed in recent years within an emerging country setting?
RQ2. The relevance of Romanian literature on the relationship between corporate governance and performance?
RQ3. Which are the main characteristics of the Romanian literature on the relationship between corporate governance and performance?

> *RQ3.1. Which are the most used theories in the Romanian authors' scientific research?*
> *RQ3.2. Which are the most used research methodologies, methods and databases?*
> *RQ3.3. Which are the most used variables measuring corporate governance and performance in the Romanian authors' scientific research*
> *RQ3.4. How may the Romanian authors' papers be characterised in terms of general features?*

The key characteristics and the results in this area of research are presented, using descriptive and frequency analysis, and discussed by referring to specifics of the international research on the subject. New insights, research questions, critical reflection and future research paths (Massaro *et al.*, 2016) may be developed. Moreover, examining the structure and the characteristics of the papers published by Romanian authors, the use of this method replies to the need for systematization and identification of existing research in this field (Gonzales-Bustos and Hernández-Lara, 2016). It contributes by providing an overview of the awareness and relevance in the field of governance. The results of this research provide a general overview on the different approaches taken by the Romanian authors when studying the relationship between the corporate governance and the performance.

Future research directions may attempt broaden the sample of the papers analysed in the sense of extending it to other countries from the Eastern European region with the purpose of finding possible patterns of research in this geographical area. Moreover, future research could also investigate the tools needed by different companies in order to improve their current corporate governance mechanisms so that they have a positive impact on the performance.

This paper is organized as follows: Section 2 includes an overview of the corporate governance and performance studies, offering an international background. In Section 3, the key methodological aspects of the SRL method are explained, while in Section 4 the research findings are discussed. Section 5 is dedicated to the concluding remarks of this study.

2. Literature review – corporate governance and performance background

Over the past twelve years, after the biggest economic scandals from USA, a lot of emphasis has been placed at international level, both on major reforms (Brown and Caylor, 2009) and on the importance of studying the corporate governance (Tarraf, 2010). In general, corporate governance can be defined as the way the company management can influence its stakeholders (Shah *et al.*, 2011). According to Cadbury Report (1992) „corporate governance is the system by which companies are directed and controlled". OECD (2015) defining the corporate governance as a set of procedures and processes which helps an organisation to be controlled and directed. Gonzales-Bustos and Hernández-Lar (2016:34) consider that "the main goal of good governance in companies is to protect shareholders and other stakeholders from the managerial discretion". Corporate governance serves to create value in a company. For value creation, there is a need to implement corporate governance mechanisms. According to Cuervo (2002) the separation of owners and managers is necessary for maximising the value for the firm, to make it necessary to adopt the best governance mechanisms.

An extensive number of researchers investigated the importance of corporate governance for the company's performance through examining the relationship using different measures. Most prior research analyses limited subsets of corporate governance characteristics in relation with various performance indicators. Accordingly, Guest (2009), Topak (2011), and Kalsie and Shrivastav (2016) examined the impact of the board of directors' size on the financial performance. The number of executive and non-executive directors were used as measures of the board size, while the financial performance was measured using the ROA, Tobin's Q and the annual share return, the market-to-book value ratio (MBVR) and the return on capital employed (ROCE). Guest (2009) and Topak (2011) found that the board size has a strong negative impact on the corporate profitability, Tobin's Q and share returns, or there is no relation between the board size and the financial performance. On the contrary, the study carried out by Kalsie and Shrivastav (2016) revealed that the board size has a positive and significant impact on the financial performance measured by using Tobin's Q and the market-to-book value ratio (MBVR).

Duru *et al.* (2016), Tang (2017) and Liu (2019) used the governance variable measured as CEO duality to analyse the impact on financial performance. The latter was measured as total shareholder return (TSR), Return on Assets (ROA), Return on Sales (ROS) and Return on Equity (ROE), Tobin's Q and Earnings Per Share (EPS). The authors found that the effect of CEO duality was negative when the CEO had dominant power relative to other executives and when the board had a block holding outside director. The results of Tang (2017) showed that the CEO duality has a statistically significant negative impact on financial performance, while Liu (2019) found that non-duality provides better performance than duality, by using Tobin's Q and EPS.

The same relationship was also studied by Welch (2003), Shah *et al.* (2011) and Paniagua *et al.* (2018) but using different variables, such as: the ownership structure, the percentage of the shares held by the Board of Directors' members in total number of shares, the investments of the five largest shareholders and of the firm's top management and board of directors, or a composite index. For the performance measurement, the researchers used the Return on Equity (ROE), Return on Investment (ROI), Marris Ratio and Tobin's Q. Their studies revealed mixed results, that either the financial performance is not influenced by the ownership structure or provide limited evidence of a nonlinear relationship between the managerial share ownership and the financial performance. Detailing, findings show that the ownership dispersion has no significant effect on ROE. Moreover, Varshney *et al.* (2012), Kaur and Vij (2018), and Arora and Bodhanwala (2018) assessed a corporate governance index (CGI) by using various parameters for governance mechanisms, such as the board of directors' structure, the ownership structure, the market for corporate control and market competition. The results illustrate a positive impact of CGI on financial performance measured by Economic Value Added (EVA), ROA, EPS, and Tobin's Q.

The relationship between corporate governance and financial performance was grounded on various analysis' frameworks designed on particular settings and criteria. Differences are also identified in the theories the researchers used, including the agency and signal theory (Abdallah and Ismail 2017; Aras *et al.*, 2010; Azeez, 2015). Adding to the specific settings, different research methods were applied. A number of authors have conducted statistical tests and regression analysis to describe the association between corporate governance and performance at international level. Detailing, part of them (Mahadeo *et al.*, 2015; Makki *et al.*, 2014) focused on the search for a correlation between different measures of corporate governance and performance, using Pearson's and Spearman's coefficients. Other authors (Nyaruri *et al.*, 2019; Akbar *et al.*, 2016; Christensen *et al.*, 2010; Grove *et al.*, 2011) used descriptive statistics and frequency analysis to discuss on the particularities of the researched databases. Their models were used by authors from emerging countries to describe this relationship at national (Achim *et al.*, 2016; Bunea and Țurlea, 2016; Groșanu *et al.*, 2014; Müller *et al.*, 2013).

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[i] Recently IASB decided to postpone the first application of IFRS 17 for the annual exercises starting after 1st January 2023

[ii] EFRAG (the European Financial Reporting Advisory Group) is an independent private body that provides advice on the technical soundness of International Financial Reporting Standards before the adoption at EU level

Table 6. **Research focused on carrying out a SLR in the corporate governance area**

Authors	**Factors associated with corporate governance**	**No of papers analysed**	**Time period**	**Data sources**	**Keywords chosen**	**Main results and implications**
Vahdati *et al.*, (2019)	Sustainability	27 papers	N/A	Scopus database	Leadership, Sustainability, Mission, Corporate governance, Vision, Framework	• Sustainability frameworks suggest a number of avenues for investors, policy makers and future market scenario which will increase the efficiency of companies; • Integration of governance into sustainability is interpreted differently.
Azila-Gbettor *et al.* (2018)	Family firm performance	159 papers	2000 - 2016	Google Scholar	Performance, Systematic review, Family firm, Corporate governance structures	• Heterogeneous relation between measures of CGS and performance; • Family businesses with corporate governance policies have grown rapidly.
Oehmichen (2018)	Corporate performance	84 papers	2002-2016	Not reported by the author	Emerging markets, Asia Institutions, Corporate governance, Ownership structure, Boards of directors	• Research about CG mechanism could be extended to more than agency theory; • Researchers are recommended to add a stakeholder-oriented perspective; • For a better understanding of the CG a detailed investigation of institutional contingency factors might be conducted.
Gonzales-Bustos and Hernández-Lara (2016)	Innovation	163 papers	1990-2014	Web of Science	Corporate Governance, Ownership Structure, Board of Directors, Innovation, Systematic Literature Review	• The number of the studies published is relatively low until 2004; • The previous research showed no achieved consensus on the effect of CG mechanisms and innovation; • The main topics discussed refer to ownership concentration and the composition, and structure of boards of directors.

Regardless of the popularity of corporate governance (CG) concept addressed in the accounting literature in general, and its relationship with the financial performance, in particular, little research focused on carrying out a SLR (Arora, 2015; Ng'eni, 2015; Knut, 2016; Azila-Gbettor *et al.*, 2018). Additionally, Gonzales-Bustos and Hernández-Lara (2016) conducted a SLR on the relationship between corporate governance and innovation. Vahdati *et al.*, (2019) conducted a SLR on corporate governance and sustainability integration. Oehmichen (2018) conducted a SLR to show how corporate governance mechanisms in the Asian emerging markets (AEMs) context affect firm-level outcomes. Azila-Gbettor *et al.* (2018) examined, based on a SLR, the extant of knowledge on corporate governance structures and performance relation within family owned firms. The main descriptives and results of these studies are presented in Table 1.

3. Research methodology

3.1 Research method

Regardless of the popularity of corporate governance concept addressed in the accounting literature in general, and its relationship with the financial performance, in particular, there is limited research focused on carrying out a structured literature review (Arora, 2015; Ng'eni, 2015; Knut, 2016; Azila-Gbettor, 2018). Various methods for conducting a literature review are identified as "systematic review, meta-analysis, rapid review, (traditional) literature review, narrative review, research synthesis, and SLR" (Massaro *et al.,* 2016:769). The authors conclude that even if the traditional literature review is widely used in the accounting research, a more structured approach begun to be developed. Thus, the need for clear steps, following a logical structure, with increased validity and relevance supports the use of the SLR.

To answer the research questions, a Structured Literature Review (SLR) is conducted, analysing the research published by the Romanian academics, referring to corporate governance and the performance of the companies. According to Becheikh *et al.* (2006:645), the main purpose of this method is „to identify key scientific contributions in a field and its results are often descriptively presented and discussed".

Tranfield *et al.* (2003) present three stages that must be followed to conduct a SLR. The first stage, planning the review, is detailed in three steps displayed in *Figure 1*. Performing a SLR means adopting a detailed, repeatable, scientific and transparent process, that minimizes bias through comprehensive literature research of published and unpublished studies (Moustaghfir, 2008). From the beginning, it is important to develop a review protocol. This protocol is a plan that may help to conduct the review. The plan contains information about the topics, the sample, the research topics, the strategy of choosing the relevant studies and some criteria that may help to include or exclude some papers. The second stage, conducting a review, is presented in seven steps that include: identifying the main purpose, identifying the keywords, selection of database, period and region, selection of studies, data extraction and data synthesis. The third stage, reporting and dissemination, is the last stage into a SLR that include two steps: the report and recommendations and the practically evidence.

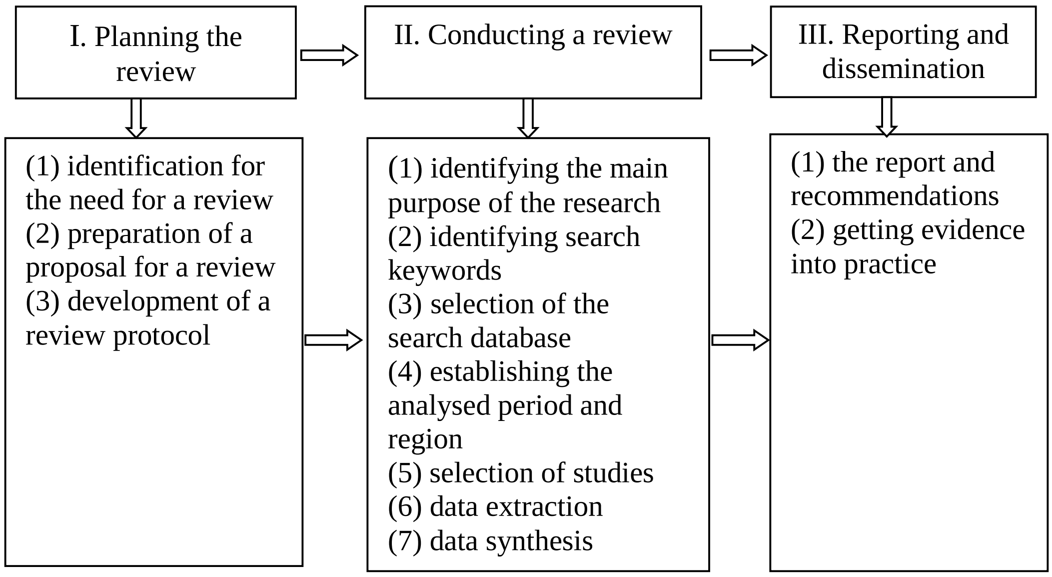

Figure 1. Steps in a Structured Literature Review (SLR) research methodology
(Source: Tranfield *et al.*, 2003:214)

These steps need not to be chronologically followed, hence, this method has a great flexibility, allowing to the researcher to adding new criteria as they advance with the analysis of the articles (Caraiani *et al.*, 2018:539).

In order to carry out this research, for each accessed article, several specific aspects were followed, such as: keywords (how many times the two words appear in each article: governance and performance), the methodology that the researchers used it, the research methods used as well as the results obtained by the authors. Specific characteristics of each paper are also included in the analysis: number of citations, number of references, affiliation of the authors.

3.2 Research database

Following the purpose of this paper designed as a Structured Literature Review (SLR) on the relationship between corporate governance and performance, a comprehensive list of studies conducted by Romanian researchers are to be identified. The detailed steps of the second stage in a SLR design are addressed further.

Once the topic has been delimited, as the first step of conducting the review process (according to Tranfield *et al.*, 2003), the data is extracted following the specific design of a SLR. Accordingly, the second step is to identify the keywords. The choice of keywords is established from the beginning and relates to broad and generic topics on the concepts analysed, based on a very clear motivation. The keywords chosen for this study are: *corporate governance, performance, firm performance* and *company performance.* These chosen keywords allow to identify any study that has dealt with this relationship.

The third step is selecting the database. The database selected for the research is Web of Science, a multidisciplinary platform, connecting regional and specialty data, allowing to trach ideas across different disciplines over time. This is a world-wide recognised database covering a large number of journals and conferences highly considered for academics' evaluation at international and national levels. The search in the database has the purpose of finding papers with Romanian authors, having the research topic within the area of corporate governance and performance relationship. Both articles published in economic journals and papers presented at international conferences were considered.

The fourth step is to establish the analysed period. The searched span-time started at the beginning of the 2000s, when the first code of corporate governance addressed to the companies on Bucharest Stock Exchange was published in Romania and ended at the moment of the database construction, the late of 2019. The search initially generated 340 publications.

The fifth step is to download information about the articles that resulted from the search. Based on the information provided by the database, information about the authors, year of publication, keywords used, article summary, number of citations were downloaded. Next, the list was processed by sorting, comparing, analysing. After removing the duplicates and analysing the abstracts of these articles, the database was narrowed to 164 papers, published over the 2006-2019 period.

After establishing this level of the database, the full content of each article was searched in order to be apply the structured analysis, according to the sixth and sevenths steps of conducting the review (Tranfield *et al.*, 2003). Thus, some articles were downloaded directly from the journal or conference website, as they were of open access type, others were found on Google Scholar, or on Research Gate, while, for the restricted access articles, emails were sent to authors or to the conference/journals. Because of the restricted access to a number of publications, only 114 papers (published between 2010 and 2019) were included for a detailed analysis in the final database. By conducting a content analysis of the papers' abstract and keywords, the elimination process and the creation of the final database, the keywords selected for this structured literature review were combined three-ways, as presented in *Table 2*.

Table 7. **The breakdown of keywords' combinations and number of papers**

Keywords' combination	Papers initially selected	Papers considered in the final database
Corporate Governance and firm performance	65	38
Corporate Governance and company performance	111	53
Corporate Governance and performance	164	23
Total	**340**	**114**

The final number of 114 articles, considered for the in-depth analysis, was downloaded in their complete format.

4. Results

4.1. Descriptive and frequency analysis of Romanian literature on relationship between corporate governance and performance

In order to debate on the relevance that the Romanian authors gave to the research on the relationship between corporate governance and performance, the evolution in time was first observed and analysed. The structure and the trend of the articles published starting with the early 2000s to 2019 are presented in *Figure 2* with a breakdown on the type of publications (articles published in journals and papers presented at conferences). Further details are included in *Table 3.* Considering the type of publication, findings show that, during 2010-2019, out of the 114 articles included in this analysis, 57 articles were presented at conferences and 57 articles were published in internationally recognized journals.

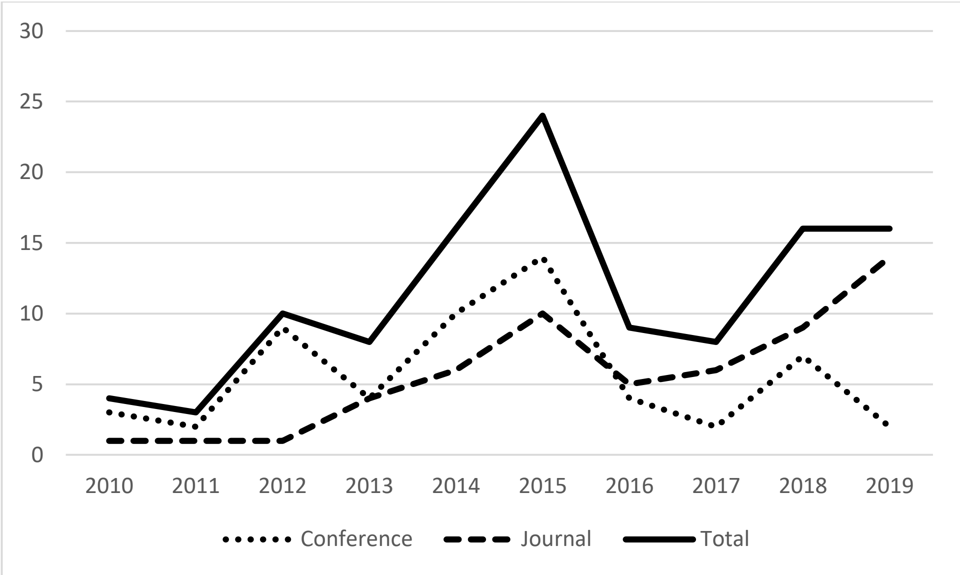

Figure 2. **Evolution of the number of papers per year and type of publication**

The results illustrate that the first Romanian publications in this field dates from 2010 and counts 4 articles. Three of the papers are published in conference proceedings (2nd World Multiconference on Applied Economics, Business and Development and 17th International Economic Conference (IECS) and address the Romanian features of corporate governance. Accordingly, Dănescu (2010) studies the relationship between the performance of internal control regarding the methodology used in Financial Auditing practice by using a descriptive analysis. Ștefănescu *et al.* (2010) use an econometric analysis to investigate the relationship between foreign ownership, board of directors, and performance in Romanian banking system. They conclude that both corporate governance metrics have a positive and significant influence over banks' performance. Feleagă *et al.* (2010) provided an interpretation of leading corporate governance paradigms, by using a comparative and critical approach. The fourth article (Zaharia *et al.,* 2010) is a qualitative research published in a Romanian journal (Amfiteatru Economic). The authors use an interview approach, applied to 10 small and medium sized companies from Bucharest, to show the way in which their activities of social responsibility meet the national strategy of sustainable development.

Table 3. **Number of papers published in conference proceedings or journals**

Year / Type	**'10**	**'11**	**'12**	**'13**	**'14**	**'15**	**'16**	**'17**	**'18**	**'19**	**Total**	**Yearly average**
Conference	3	2	9	4	10	14	4	2	7	2	57	5.7
Journal	1	1	1	4	6	10	5	6	9	14	57	5.7
Total	**4**	**3**	**10**	**8**	**16**	**24**	**9**	**8**	**16**	**16**	**114**	**11.4**

As presented in *Figure 2* and *Table 3*, during the early stages of the studied period, the number of publications conducted by Romanian authors on this topic was limited. In the first two years of the research period, only 2 articles were published in journals and 5 papers were included in conference proceedings. Starting with 2012, the evolution began to change, resulting in an overall increasing trend until 2015. The year 2015 registers a pick, with the highest number of papers published for both journals (10 articles) and conference proceedings (14 articles). Following this year, the interest among Romanian researchers on the study of the relationship between corporate governance and performance decreased much more for conferences as compared to the articles published in the journals. Another pick registered only for journal publications for the year 2019. Thus, an oscillating and inconsistent evolution may be noticed in the interest of Romanian researchers for this topic, with an average of 11.4 articles/year from 2010 to 2019.

4.2. Descriptive and frequency analysis of authors' affiliation

Tables 4 and 5 illustrate a breakdown analysis in which features of articles were included, such as the number of Romanian and international authors, the number of articles with details on the affiliation of authors, and the top five Romanian universities with authors interested in corporate governance and performance area of research.

Table 8. **Papers' characteristics – author affiliation and papers**

Papers' characteristics	Number	Frequency
Total number of researchers, of which:	**269**	**100%**
Number of authors affiliated to Romanian universities	246	91%
Number of authors affiliated to international universities	23	9%
Total number of papers, of which:	**114**	**100%**
Number of papers with the first author affiliated to Romanian universities	109	96%
Number of papers with the first author affiliated to international universities	5	4%
Number of papers with Romanian authors only	101	89%
Number of papers with international affiliated authors	13	11%
The average number of authors for an article	**2.36**	

The total number of researchers who participated in the construction of the 114 papers included in this analysis is 269 researchers, of which 246, representing a percentage of 91%, are part of Romanian universities and 23 of them, representing a percentage of 9%, are affiliated to international universities. The average number of researchers involved in this research area is 2.36 authors per article. Out of the 114 published papers, a number of 101 articles belong to all researchers affiliated to Romanian universities, representing 89%, of their total and only 13 articles, representing 11% of the total analysed papers have a mix of affiliated authors. There are 18 authors affiliated to international universities that collaborated with Romanian authors on the topic of the relationship between corporate governance and performance: School of Economics, Qingdao University (China), Qingdao Municipal Centre for Disease Control &

Prevention (China), School of Management, Xi'an Jiaotong University (China), University of Toulouse (France), Rouen Business School (France), SKEMA Business School (France), University ALMustansiriya (Iraq), Al-Qadiseya University (Iraq), Comsats University Islamabad (Pakistan), Czestochowa University of Technology (Poland), Jerzy Kukuczka Academy of Physical Education in Katowice (Poland), University of Aveiro (Portugal), University of Murcia (Spain), University of Geneva (Switzerland), University of St. Gallen (Switzerland), Kent Business School (United Kingdom), Yuriy Fedkovych Chernivtsi National University (Ukraina), Ton Duc Thang University (Vietnam).

Table 5. **The university breakdown analysis with the first author affiliated to Romanian universities**

Universities	**No of articles**	**Frequency**	**Cumulated frequency**
Bucharest University of Economics Studies	46	42%	42%
Babeș-Boyai University of Cluj-Napoca	22	20%	62%
Alexandru Ioan Cuza University of Iași	10	9%	71%
University of Oradea	4	4%	75%
Stefan cel Mare University of Suceava	4	4%	79%
University of Craiova	4	4%	83%
Other universities	19	17%	100%
Total	**109**	**100%**	

The top six Romanian universities with authors interested in corporate governance and performance research area includes 90 (87%) of the researches conducted at country level, while three of the universities concentrates most of the papers published in this area (78 papers, as 71% of the total). Detailing, 46 papers (42%) are conducted by researchers affiliated to the Bucharest University of Economic Studies. The second place is taken by the authors affiliated to Babeș-Bolyai University of Cluj-Napoca with 22 papers (20%) and the third place is held by the authors affiliated to the "Alexandru Ioan Cuza" University of Iași, with 10 papers (9%). All the other Romanian universities are represented by 4 papers or less.

4.3. The relevance of Romanian literature on the relationship between corporate governance and performance

Table 6 illustrates the number of citations for the articles published by Romanian authors in the area of corporate governance and performance. The total number of citations is 238 for all the articles of the Romanian authors published between 2010 and 2019. Considering the last 10 years of data, the average citation score registers a value of 23.8 citations/year and of 2.1 citations/paper (238 citations for a total of 114 papers). The maximum of citations is represented by 2017 year when count a number of 42 citations and the minimum is represented by 2019 with a number of 7 citations. It can be seen that most citations belong to articles published in journals, with a number of 189 citations for the analysed period out of a total of 238 citations.

Table 6. **Number of citations by type of publication**

Year	**Type of publication**					
	Conference		**Journal**		**Overall**	
	No of citations	**%**	**No of citations**	**%**	**No of citations**	**%**
2010	0	0%	17	7%	17	7%
2011	0	0%	38	16%	38	16%
2012	18	8%	1	0%	19	8%
2013	9	4%	2	1%	11	5%
2014	11	5%	26	11%	37	16%
2015	8	3%	21	9%	29	12%
2016	1	0%	19	8%	20	8%
2017	0	0%	42	18%	42	18%
2018	2	1%	16	7%	18	8%
2019	0	0%	7	3%	7	3%
Total	**49**	**21%**	**189**	**79%**	**238**	**100%**

The top ten most cited articles published by Romanian authors in the field of corporate governance and performance for the analysed period are presented in Table 7. Out of the total of 114 articles included in this analysis having a total of 238 citations, a number of 137 citations belong to the top 10 most cited articles.

Table 7. **Top 10 most cited papers**

No	**Title**	**Authors**	**Publication year**	**No of citations**	**Average citations per year**
1	Gender and management on Spanish SMEs: an empirical analysis	Minguez-Vera and Martin	2011	38	4.22
2	Testing the Correlations between Corporate Giving, Performance and Company Value	Hațegan and Curea-Pitorac	2017	17	5.67
3	Commercial activity's contribution to sustainable development by social responsibility actions: a vision of SMEs	Zaharia *et al.*	2010	17	1.70
4	Environmental Reporting and Good Practice of Corporate Governance: Petroleum Industry Case Study	Ienciu *et al.*	2012	12	1.50
5	Exploring the impact of corporate social responsibility policies on firm value: the case of	Gherghina and Vintilă	2016	10	2.50

No	Title	Authors	Publication year	No of citations	Average citations per year
	listed companies in Romania				
6	Multinationals as Vectors of Corporate Governance Improvement in Emerging Economies in Eastern Europe: A Case Study	Albu *et al.*	2014	10	1.67
7	Corporate governance and business performance: evidence for the Romanian economy	Achim *et al.*	2016	9	2.25
8	Women on Boards and Financial Performance: Evidence from a European Emerging Market	Ionașcu *et al.*	2018	8	4.00
9	Compliance with corporate governance codes in emerging economies. How do Romanian listed companies comply-or-explain?	Albu and Gîrbină	2015	8	1.60
10	The influence of internal corporate governance on bank performance - an empirical analysis for Romania	Dedu and Chițan	2013	8	1.14
Average citation of the top ten papers cited in the literature				**137**	**2.62**

Note. A synthesis based on the information extracted from Web of Science database

The most cited article, considering the total number of citations, is that published by Minguez-Vera and Martin (2011) in the International Journal of Human Resource Management. They studied the impact that women have on the management of small and medium-sized companies in Spain. Findings show that entities with less debt, more assets, and larger boards have a higher number of women as directors. It is the only article in the tot 10 most cited, having a mixed affiliation of the authors: University of Murcia, Spain and Alexandru Ioan Cuza University of Iași, Romania.

The most cited article, considering the yearly average, with a score of 5.67 citations per year, is published by Hațegan and Curea-Pitorac (2017) in Sustainability journal. They tested the correlation between governance, performance and company value for a sample of Romanian listed companies, and found a positive correlation between the charitable contributions, performance, and company's market value of the Romanian listed companies. The two authors are affiliated to a Romanian university (West University of Timișoara).

Out of the ten top articles based on the number of total citations, eight are published in economic or multidisciplinary journals, such as Amfiteatru Economic; Economics and Sociology, Corporate Governance in Emerging Markets: Theories, Practices and Cases; International Journal of Human Resource Management; Journal of Business Economics and Management or Sustainability, and two are included in the Proceedings of the International Conference Emerging Markets Queries in Finance and Business.

4.4. Advanced analysis of Romanian literature on the relationship between corporate governance and performance

The top fourth most used theories characterising the Romanian authors' research in corporate governance and performance area are presented in Table 8. The *Agency theory* is the most used, as found within 21 articles (18.4% of the total). According with this theory, there is a conflict of interests between the owners and the managers, as the managers want to increase their own personal profit, detrimental to the objective of increasing the shareholders' value. The second most used is the *Stakeholder Theory,* found within 8 articles (7%), from the perspective of corporate governance. The stakeholder theory encourages managers to ensure that the board identifies the interests, views and expectations of all individuals and groups with an interest in the company's activity. Other two theories, however less used by Romanian researchers are the stewardship theory and the attribution theory.

Table 8. **Top four most used theories in the articles**

Theory	No. of articles
The Agency theory	21
The Stakeholder theory	8
The Stewardship theory	4
The Attribution theory	2

The research methodology used by Romanian researchers in corporate governance area is mostly quantitative (78%, with 89 papers out of 114). The majority of the papers use descriptive statistics, quantifiable-answered questionnaires, regression models or correlation matrix. The qualitative research methodology covers 18% of the papers (20 out of 114). Results show that five papers didn't present any research methodology (Table 9).

Table 9. **Research methodology**

Research methodologies	No. of articles	Frequency
Quantitative	89	78%
Qualitative	20	18%
No research methodology	5	4%
Total papers	**114**	**100%**

Details regarding the research methods are presented in Table 10. Even if a variety of research methods are used by the Romanian authors, the most common one is the regression/econometric analysis, applied in 47% out of the papers analysed for this study. It is followed by the descriptive statistics (with 15%) and descriptive analysis (with 11%). Content analysis and questionnaires are employed in other 10 papers. All the other methods utilized by the authors are not significantly represented. Within 5 of the articles the authors specified other methods, such as case study, comparative analysis, deductive approach, inductive analysis, and non-participating observation.

Table 10. **Research method**

Research method	No. of articles	Frequency
Regression/Econometric analysis	54	47%
Descriptive Statistics	17	15%
Descriptive Analysis	12	11%
Content Analysis	6	5%
Questionnaires	6	5%
Reports Analysis	3	3%
Literature Review	2	2%
Historical Analysis	2	2%
Interview	2	2%
Other specified methods	5	4%
No specified method	5	4%
Total papers	**114**	**100%**

The research methods and methodology analysis generated an in-depth analysis of the characteristics of the population addressed in the Romanian research aiming at the relationship between the corporate governance and the corporate performance.

Table 11. **Samples' characteristics associated with the research method**

Research method	Studied population	No. of articles	Number and frequency of studies referring to Romanian data
Regression/Econometric analysis	Companies	52	20 (38%)
	Countries	1	0 (0%)
	Not Specified	1	0 (0%)
Descriptive statistics	Companies	16	10 (63%)
	Not Specified	1	0 (0%)
Descriptive Analysis	Companies	3	2 (67%)
	Law	1	0 (0%)
	Not Specified	8	3 (38%)
Content analysis	Companies	5	5 (100%)
	Not Specified	1	0 (0%)
Questionnaires	Companies	4	2 (50%)
	Individual respondents	2	1 (50%)
Reports Analysis	Articles	1	0 (0%)
	Companies	2	2 (100%)
Literature review	Not Specified	2	0 (0%)
Historical analysis	Not Specified	2	0 (0%)
Interview	Companies	1	1 (100%)
	Individual respondents	1	1 (100%)
Other specified methods:			
Case study	Companies	1	1 (100%)
Comparative analysis	Countries	1	0 (0%)

Research method	Studied population	No. of articles	Number and frequency of studies referring to Romanian data
Deductive approach	Articles	1	1 (100%)
Inductive analysis	Not Specified	1	0 (0%)
Non-participating observation	Companies	1	1 (100%)
No specified methods	Companies	1	1 (100%)
	Job position	1	1 (100%)
	Not Specified	3	0 (0%)
Total		**114**	**52 (46%)**

Table 11 illustrates that the studies of Romanian researchers are largely focused on the analysis of companies, but they also focus on the analysis of articles, analysis of individual respondents, and issues related to national and international regulations. Advancing on the geographical location of the population investigated by Romanian authors, it may be noticed that overall, almost half of the studies use Romanian data. At each method level, only the regression/econometric analysis were primarily performed on international databases, with only 38% using the Romanian data. Details of these findings are showed in Table 12.

Table 12. **Top 10 most used databases**

Database	No. of articles	Frequency	Type of the database
Bucharest Stock Exchange	31	27%	Romanian Database
Companies site	12	11%	Romanian Database
Thomson Reuters Database	8	7%	International Database
National Bank of Romania	3	3%	Romanian Database
London Stock Exchange	3	3%	International Database
ORBIS Database	3	3%	International Database
Ministry of Public Finance	2	2%	Romanian Database
Bloomberg	2	2%	International Database
Chinese stock market	2	2%	International Database
Eurostat	2	2%	International Database
Others	46	40%	Romanian, International or not identifiable in the paper
Total	**114**	**100%**	

Table 12 shows that the most used database for the Romanian researcher papers is the Bucharest Stock Exchange database with a number of 31 articles (27% of the total 114 papers). The second one is represented by the companies' websites used in 12 articles (11% out of the total 114). This suggests that the main interest of the Romanian researchers in studying the relationship between corporate governance and corporate performance is related to the Romanian companies. A limited number of papers studied data extracted from worldwide databases as Thomson Reuters (8 papers), ORBIS (3 papers), Bloomberg (2 papers) or Eurostat (2 papers). Worthy to be mentioned here is that 46 papers have no information provided relative to the database the authors used to collect the data.

Moving forward with the analysis of the articles published by the Romanian authors, the statistics of the most used metrics to measure the corporate governance, and corporate performance, respectively, are presented (Table 13).

Table 13. **Top 7 corporate governance and performance related metrics**

Corporate Governance	No. of articles	Corporate Performance	No of articles
Board independence	16	Return on Assets	35
CG index	13	Return on Equity	31
Board size	13	Tobin's Q ratio	11
Board gender diversity	10	Total assets	7
CEO-chair duality	9	Market to book value	5
Ownership structure	8	Earnings per share	4
Audit committee	6	Altman score	3

After filtering and sorting the indicators used by the Romanian authors to measure of corporate governance and corporate performance, the most common variables chosen by the authors of the studied articles are *the independence of board, the corporate governance index/score* and the *board size*. For quantifying the corporate performance, the most common metrics used by the authors are *Return on Assets, Return on Equity,* and *Tobin's Q ratio*. These results are similar with the studies conducted at international level, by Bhagat and Bolton (2008), Jackling and Johl (2009) or Masulis *et al.* (2012). They studied the relationship between corporate governance and performance using as metrics of the corporate governance the board independence, board ownership, board size and CEO-chair duality and for the corporate performance they used Return on Asset, Tobin's Q and Total assets.

The frequency of the two underlying keywords chosen for this study (governance and performance) is presented in Table 14. The keyword *governance* counts a total of 4,907 occurrences within the 114 articles studied, with an average of 43.04 occurrences/article, a minimum of 1 occurrence and a maximum of 211 occurrences in a single article. The keyword *performance* counts a total of 4,931 occurrences within the 114 articles studied, with an average of 43.25 per article, a minimum of 2 and a maximum of 302 occurrences in a single article.

Table 14. **Descriptives of the *governance* and *performance* keywords**

Type	Governance	Performance
Total count	4,907	4,931
Average frequency of the keywords	43.04	43.25
Min	1	2
Max	211	302

Counting the number of pages, the total number of the analysed articles, including the appendix, amounts to 1,799 pages, with an average number of pages of paper is 15.78 per paper (Table 15). The descriptive statistics indicate the shortest paper, having 3 pages and published in the *Metalurgia International* journal. It should be noticed that starting with the year 2013, this journal was removed from indexing in the Web of Science database. The most extensive one, with 79 pages is a paper published in December 2019, in the *Journal of Risk and Financial Management*.

Table 15. **Number of pages and number of references**

Characteristics	**Descriptive statistics**
Total number of pages of papers	1,799
Average pages per paper	15.78
Min of pages of one paper	3
Max of pages of one paper	79
Total number of references	4,580
Average number of references per article	40.18
Min of references	6
Max of references	140

Analysing the number of papers' references, a total of 4,580 references are counted for the 114 articles, with an average of 40.18 references/paper. The minimum number of references used in a paper is 6. There are 4 papers in this category, out of which 3 are single authored papers, affiliated to Romanian universities, and one has multiple authors, with mixed affiliation. All four are published in conferences' proceedings. The paper with the highest number of references is an article (having also the highest number of pages), published in December 2019, in Journal of Risk and Financial Management.

5. Conclusions

This paper provides an overview of the state of research in the field of corporate governance and performance conducted by researchers from an emerging country. Using a Structured Literature Review (SLR), this research analyses papers published between 2010 and 2019, by Romanian authors, both in international journals and proceedings of international conferences, indexed by the Web of Science database. The initial search returned 340 results. After the processing based on a list of keywords, elimination of duplicates, and the availability for the full text download, a number of 114 unique articles were included in the analysis.

The results illustrate an oscillating trend, both in the interest of the researchers, and for the validation of their research through the citations score. Most of the Romanian authors' studies engage a quantitative methodology, focusing on the national companies' policies of corporate governance. Furthermore, the authors concentrate within three main universities in the country. In terms of papers' characteristics, the average number of authors is 2.36 per paper, and the average number of pages of one paper is 15.78 pages. Another aspect considered is that out of a total of 269 authors, 246 authors are affiliated to Romanian universities, publishing a total of 101 articles. Moreover, 13 articles were published in collaboration with 23 international researchers.

For a more advanced analysis, a series of characteristics of the scientific papers were considered for the analysis: research theories, research methodologies, research methods, the population's characteristics, the frequency of the governance and performance keywords, and main metrics used for quantifying corporate governance and corporate performance. The results show that most papers are quantitative research, using regression analysis and descriptive statistics to analyse and debate on the relationship between corporate governance and performance. The most common underlying theory of Romanian studies is agency theory. Approximately 46% of the papers use information collected from Romanian databases, especially the Bucharest Stock Exchange and the Romanian companies' websites.

Another layer of analysis in this study focuses on the quality of the articles measured through several quantitative characteristics: the number of pages, the number of references and the number of citations. The frequency analysis and the descriptive statistics show that articles with a length of 3 to 79 pages, an average of 40.18 references, and an average of 2.1 citations per paper were published by the Romanian authors in the area of corporate governance and performance research.

This detailed analysis may have direct implications especially in the academic environment of the European emerging countries. It contributes to providing an approach to discover under-investigating topics and methods, thus being a starting point for researchers who will further study this subject. Future research directions may attempt broaden the sample of the papers analysed in the sense of extending it to other countries from the Eastern European region with the purpose of finding possible patterns of research in this geographical area. Moreover, future research could also investigate the tools needed by different companies in order to improve their current corporate governance mechanisms so that they have a positive impact on the performance. A difference-in difference analysis on a sample including both emerging and developed countries characteristics may also be addressed in a future research.

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Section 8

Transfer Pricing Lessons from Related Party Transactions: A Metanalysis of WOS Publications

Neli Căpățină-Verdeș

Marilena Mironiuc

Maria-Carmen Huian

Is the Regulation on Stimulating Employment in Romania in the Context of the Covid-19 Pandemic Effective?

Monica Aureliana Petcu

Maria-Iulia Sobolevschi-David

Ion Anghel

Ștefania Cristina Curea

Adrian Anica-Popa

Consequences of Exits from Political Unions on Dividend Policy: The Case of Ethiopian Split

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Transfer Pricing Lessons from Related Party Transactions: A Metanalysis of WOS Publications

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Abstract: *Globalization dictates the game rules in international trade companies around the world having the opportunity to make transactions of any kind, from anywhere in the world in unlimited volumes, without encountering major difficulties. Being engaged in numerous economic transactions, related parties from all over the world are looking for opportunities that would benefit their business, using transfer pricing (TP) as a key instrument in related party transactions. The purpose of this paper is to review the literature on TP. In order to achieve it we have performed a metanalysis of TP research, based on a sample of representative in this field scientific papers. As a result, it was found that: TP are used as an indispensable tool in cost accounting and resource allocation between companies; in determining TP it is necessary to choose the appropriate methods for compliance with the arm's length principle; regulations on TP and related parties transactions (RPT) must be developed considering both internal and external factors; controlled transactions using TP are often used as an instrument in tax evasion.*

Keywords: *Management accounting research, strategic transfer pricing, international taxation, transfer pricing manipulation.*

1. Introduction

Since their establishment, TP has created numerous controversies in the economic, political, administrative and also scientific area (dos Santos, 2015; Gadzo, 2018; Global *et al.,* 2020; Hall and Wood, 2016). Globalization has led the opportunity to use TP worldwide, so that more than 30% of global trade is a result of intra-firm transactions (Deloitte, 2017). The research literature presents TP as a way to facilitate related party transactions, for an efficient allocation of resources (de Matta and Miller, 2015; Kumar *et al., 2011*; Lakhal, 2006; Villegas and Ouenniche, 2008). First research works in this field are focused on this subject (Eccles, 1983; Hirshleifer, 1956; Ronen and McKinnley, 1970; Watson and Baumler, 1975). However, evidence indicates the use of TP as a tool for tax optimization by multinational companies, thus being misused and causing RPT distortions (Baldenius *et al.,* 2004; Cristea and Nguyen, 2016; Halperin and Sniridhi, 1991). As a result, TP has become a legal method of undervaluation or overvaluation of transactions, with the purpose of profits manipulation. Some authors use the term "artificial transfer pricing" in such cases (Demirhan, 2020; Weichenrieder, 1996). Stricter regulation of transactions and the use of TP practices at international level would be beneficial, when mitigating the effects of their manipulative use. Legislators have developed laws and regulations that apply to both cross-border transactions and those within a country's internal markets, aimed at clarifying how TP

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is used. The ALP seems to be an effective measure in setting TP, being introduced by the Organization for Economic Co-operation and Development (OECD) for 50 years ago (Development. Committee on Fiscal Affairs, 1979). The globalization of intrafirm trade determined this principle to be inefficient. The availability of data in achieving comparability is not always possible. This problem imposes governments to change TP regulations (Wittendorf, 2010). The differences from one country to another are unfortunately an impediment to the unitary treatment of TP transactions. It is also to be mentioned that in present the impact of COVID-19 pandemic on applying ALP is high. In some cases, there are only a few publicly available comparable third-party prices possibly to use in determining TP (OECD, 2020). It seems that in 2020 and further many companies will register higher expenses than incomes. This suggests that such companies cannot be used as comparables. There also will incur loss or bankrupt companies and at the same time, tax authorities will need more budget to finance the COVID-2019 recovery. May be TP will be a subject of tax examinations. The question is how they will apply ALP?

The purpose of this paper is to review the literature on TP, that allow us to assess the state of knowledge in the field, to identify key research issues that require more detailed study in the future, to assess the gaps in TP research, as well as the interdisciplinarity of TP. In order to achieve the purpose of the research, we aimed to perform a metanalysis based on qualitative and quantitative content analysis of representative scientific papers in this field. We consider metanalysis as being the most useful tool in summarizing the research results in the field and to provide ways in conducting further investigations (Auclert, 2019; Constantinides, 2017; Lusardi *et al.*, 2017). Following a complex selection process on existing studies in the literature, a sample of 172 relevant studies from the Web of Science (WOS) database published between 1975-2018 was identified. We suggest to analyse the TP problem from an international point of view, using high rated research material. The results have shown the importance of TP in international trade, especially in transactions between related companies. TP is an indispensable tool in cost accounting and resource allocation and because of this, in determining TP is necessary to choose the appropriate methods, to ensure compliance with the arm’s length principle. In order to assure fair revenues, tax regulations on TP must be developed considering both internal and external factors that influence their use. At the same time, tax authorities must pay attention to development of the markets and their economic conjuncture. The connection to tax havens provides opportunities for multinationals to use TP for purposes that disadvantage the governments of the countries to which the parent company belongs, which reports financial information to its users. In driving such opportunities there were proposed to introduce taxation of corporate profits, duties, restrictions on the repatriation of profits, price controls etc. The results of the review have materialized in a solid knowledge of the research area of TP practices, providing clear directions for future research. On the one hand it is difficult to assess that TP are fully studied, because there are more and more situations when companies have no answers how to treat them in specific situations. TP policies cannot be generalized and there are no models suitable for all the situations. Tax authorities, on the other hand may suggest alternatives in order to simplify the treatment of TP and to minimize their manipulative using in international trade. May be the unitary tax treatment of transactions should solve this problem, but it needs a lot of research in constructing such a tax, that will not occur to other problems later.

The study consists of three chapters followed by conclusions. Initially, the research strategy and methodology are presented. Then it was realized a short structure analysis of the research works selected. The analysis of research directions and topics is the most consistent part of the study, based on the actual content analysis. This section reveals important issues related to TP, from the perspective of managerial accounting and taxation. Finally, in the conclusions, the main results of the content analysis, the future research directions, the limits of the study, as well as a series of recommendations were summarized.

2. Research strategy and methodology

A sample of articles from WOS was chosen for analysis. It is considered the oldest database, with extensive coverage in terms of citations and bibliographic references of scientific papers, dating from 1900 (Meho and Yang, 2007). The sample of works was selected from the WOS Core Collection. The keywords used are *transfer price**. The WOS interrogation was carried out in October 2018, resulting in a number of 8688 scientific papers, published and indexed during the years 1975-2018. After a selection of studies according to the WOS categories: Economics, Management, Business Finance, Business, Operations Research Management Science and Agricultural Economics Policy, the number of studies was reduced to 3796. After reading and analyzing the abstracts a significant number of works were excluded, because they did not address the topic of interest. The number of studies resulting at this step of the analysis was 652. Subsequently, depending on the number of citations, only works with at least 5 citations were selected, to highlight the scientific impact and the degree of use as a bibliographic reference of the studies, resulting in a number of 172 studies.

The content analysis is approached both from a quantitative and qualitative perspective. Initially, a quantitative analysis was performed on the structure of the sample, which highlighted the number of citations and the Hirsch index (H index). Also, the analysis of the studies was performed according to the year of publication, and the research methods used within them. In the second part of the analysis we focused on the proper content analysis.

3. Qualitative sample analysis

The first stage of the literature review consists on the structural analysis of the sample in order to highlight the qualitative aspects of the publications. The qualitative evaluation of the scientific work found in the WOS can be done considering several criteria. One of these is based on the H index, with which an overall estimate of the importance, significance and impact of the activity of a scientific researcher can be made (Hirsch, 2005). Based on H index, the results of scientific research of both researchers and academic institutions can be quantified. It measures, on the one hand, the productivity of the research activity, i.e. the performance of the researcher, and on the other hand, the total impact of citations (Frangopol, 2012). A researcher or a scientific publication/institution is assigned the H index, if he/it has a number of scientific papers, each having at least one citation (Hirsch, 2005). H index results by sorting the descending studies, according to the number of citations.

In Figure no. 1 the report of citations for the 172 scientific papers is presented. As it can be seen, the entire sample H index value is 35, on average each paper is cited about

39,5 times. Comparing the H index in the field of Economy, Econometrics and Finance, which is 12 (source: www.scimagojr.com), it can be noted a high level of quality of these publications. Globally, the studies were cumulative cited 5967 times. The articles are cited in 4566 scientific papers.

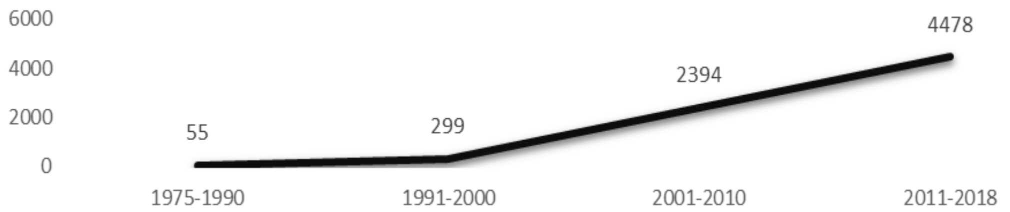
Figure 1. **WOS citation report**

Total publications 172 *Period* 1975-2018	*H-Index* 35 *Average citations per item* 39,5	*Sum of Times Cited* 5967	*Citing articles* 4566

(Source: www.webofknowledge.com)

According to Figure no. 2, the number of citations can be followed, corresponding to the 172 studies according to four periods, starting with 1975, until 2018, registering an ascending trend. We tried to observe the evolution of citations every 10 years. The first period presents 15 years, as the number of citations is significantly lower than in subsequent periods, the subject of TP being new and little known in research. Until 1990, a small number of citations was observed, this being 55, for each year on average 3 citations. This is due to a small number of studies in the field and limited access to the texts of the papers, which were not available at that time in electronic format, their dissemination being difficult. At the same time, during this period, research in the field was not as developed as it is today. Comparing with the immediately following period, the number of citations increases approximately six times, i.e. to 299 in the period 1991-2000, after which it increases almost eight times compared to the previous period, i.e. it registers 2394 in the period 2001-2010, and in the last period it practically doubles compared to the previous one, increasing to 4478 citations between 2011-2018. It is observed that over time, this issue has begun to be studied extensively and debated more and more among researchers, being currently considered an important topic globally.

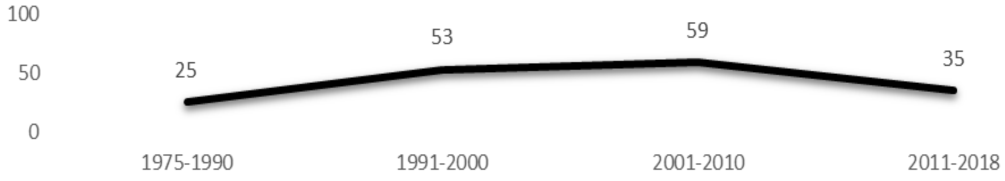
Figure 2. **Citations distribution**



(Source: own processing)

Figure no. 3 presents the distribution of articles according to the publication year. The studies were grouped, as in the case of citations in four periods. There is an upward trend in the number of publications per year, which is moderately increasing, starting with one publication in 1975 and increasing to 17 publications in 2015. If in the period 1975-1990 the number of publications is only 25, their number doubles in the following period (53), also registering an enlargement in the next period 2001-2010, i.e. 59 publications as a result of the increasing importance of this topic in research. The lower number of works from 2011-2018 (35 articles) compared to the previous period can be explained by the fact that at that moment, there were probably works published in 2018, but which were waiting to be WOS listed. The growing trend of publications shows that the frequent use of TP and RPT has contributed to the development of research on this phenomenon, the importance of this issue, growing more and more recently.

Figure 3. **Sample distribution by year of publication (number of works)**



(Source: own processing)

We would also like to highlight the fact that not only the number of works has changed over time, but also the issues addressed. If the first studies were more focused on subjects related to managerial accounting, such as establishing optimal TP, distribution chains and management control system, between 1980-2000, the TP taxation subject was increasingly much debated, being connected with the impact of the use of TP on profit and implicitly on the differences of the profit tax from different jurisdictions, giving a special importance to the subject of multinationals and tax havens. Following the scandals that affected large corporate groups in the early 2000's, in which many transactions with related parties were used, regulation authorities tried to impose new policies and rules on these transactions, to mitigate their incorrect or even fraudulent use. For example, the revision of the international accounting standard IAS 24 *Related party disclosures* in 2003, the new regulations issued by OECD on RPT (OECD, 2017), rules imposed in different countries, related to the taxation of TP, adapted to the conditions under which they are used at national level. In Romania was introduced the Order 442/2016 *regarding Transfer Pricing thresholds, deadline and content of the TP file and the adjustment procedure*, that regulate all RPT that involve the use of TP. The interest of the researchers was thus oriented towards aspects related to: compliance of TP with these rules; legislation drafting, considering the economic context of transactions; development of economic, mathematical or statistical models for the optimization of TP, leading to an increase in the company's performance and, at the same time, to align with the tax regulations.

TP involve the use of numerous mathematical and statistical calculations, for this reason, according to the data in the Table 1, in 172 papers analyzed quantitative analysis was used, to the detriment of the qualitative one (26 studies), one study being based on both quantitative and qualitative analysis. The economic-mathematical models have the largest number in the total sample, being characteristic for 92 works and are based on calculations, economic formulas and mathematical functions. Statistical models also have a significant quote, 33 of 145, confirming that they have an increasingly use and are an important tool, especially for empirical research. Among the methods of qualitative analysis, we note that content analysis (19 articles) is more preferred that case studies (2 works), the last being characterized by a lower use in our sample research methodology.

Table 1. **Research methods used**

No.	Analysis type	Number of works	%	Method type	Number of works
1.	quantitative	145	84,3	Economic-mathematic model	92

No.	Analysis type	Number of works	%	Method type	Number of works
				Statistical model	33
				Experiment	6
				Case study	12
				Financial analysis	2
2.	qualitative	26	15,1	Content analysis	19
				Case study	2
				Questionnaire	5
3.	mixt	1	0,6	Case study+ Questionnaire	1
Total		**172**	**100**	**-**	**172**

(Source: own processing)

The content analysis of 19 studies is mostly based on theoretical studies, namely on the review of the literature, but it is observed also regulation and TP reviews. Regarding the questionnaire (5 works), the figures are not much insignificant, even the response rate is usually quite low, data collection difficult, and long processing time. For the 33 papers in which statistical models were proposed and developed, the most commonly used tools are linear regression and panel data analysis, both equally important for statistical analysis. Even it is followed in a single paper, the Principal Component Analysis (PCA) is also an indispensable statistical instrument for identifying the factors that most influence a particular phenomenon. The use of statistical tools is characteristic especially for studies after 1990, when they became accessible to researchers, the works until then being based mainly on economic-mathematical models. However, even if statistical tools try to take the first place the economic-mathematical models are also preferred in studies from recent years, probably being more accessible to researchers from older schools, who have extensive experience in field, as well as an advanced ability to explain phenomena in this way.

4. Quantitative sample analysis

Reading the articles, 2 main research directions (categories) were identified: TP through the management accounting and TP taxation. If an article addresses several topics, the most widely debated research direction in the paper was selected, so that each paper was included in a single category. Each research direction was divided into more detailed research topics, which are presented in Table 2.

Table 2. **Research directions and topics of the sample publications**

No.	Research directions and topics	Number	% in research direction	% from sample
Managerial accounting		**75**	**100,00**	**43,6**
1.	Methods for determining TP	32	42,7	18,6
2.	Distribution chains and decentralization	31	41,3	18,0
3.	Others	12	16,0	7,0
TP taxation		**97**	**100**	**56,4**
1.	International taxation	62	63,9	36,1
2.	Price manipulation	35	36,1	20,3
Total		**172**	**-**	**100**

(Source: own processing)

TP taxation is the most frequently addressed research direction in the sample proposed for analysis, with a weight of 56,4%. The behavior of related parties in the context of the tax regulations has shown an increased interest in research. The share of works in the field of international taxation is 63,9% in TP taxation and 36,1% in total sample, which means that this topic has the largest use. TP taxation is the most frequently addressed research direction in the sample proposed for analysis, with a weight of 56,4%. The behavior of related parties in the context of the tax regulations has shown an increased interest in research. The share of works in the field of international taxation is 63,9% in TP taxation and 36,1% in total sample, which means that this topic has the largest use. In case of related parties, it is much easier to manipulate the transactions value using over or undervalued TP, because the terms and transactions can be negotiated much easier. For the companies located in different states, where the differences between the tax rates are obvious, there have been many cases of tax fraud involving transactions with TP. The publications that refer to the cases of tax evasion through TP are on the second place, the given topic being approached in 20,3% of the works. The next share present TP from the perspective of managerial accounting, 43,6% of sample. This category is equally valuable, being considered the central topic of TP research from the beginning of their use, in present, as well, being a quite important area of research.

4.1. Transfer prices from managerial accounting point of view

Methods for determining transfer prices. First studies related to the interested topic are TP methods, namely the use of optimal prices in transactions between various profit centers, their main objective being to increase the global profit of the company. The classical TP methods are based on: cost, market and negotiated prices. Many authors have highlighted the advantages and disadvantages of these methods, creating various economic and mathematical models that show how to apply them (Arunachalam and Dilla, 1995). An advantage in using costs prices is that they are a strategic component when making decisions about TP (Alles and Datar, 1998). Conducting a review of TP practices, Eccles (1983) presents the full or variable cost as being possible to use successfully as TP between different segments of a company, making it impossible to practice them globally. A more effective alternative in this case is the use of market-based prices. Pfeiffer *et al.*, (2011) make a performance comparison of alternative cost-based methods: centralized standard-cost, cost-plus, contribution-margin and reported standard-cost TP. Results showed that each of them is effective depending on the information availability. Dikolli and Vaysman (2006) highlight the benefits of both cost-based and negotiated TP, with the use of one or other, according to costs allocated by the profit centers for knowledge transfer.

Some authors have focused on establishing optimal TP in conditions of information asymmetry, with decision-making power belonging to managers from lower hierarchical levels (Avila and Ronen, 1999; Besanko and Sibley, 1991; Groves and Loeb, 1976; Srivastava *et al.,* 2000; Van Mieghem, 1999). The efficiency management of TP is conditioned by the way of carrying transactions (Cavusgil, 1996). In this context, negotiated TP are considered to be the fairest, with a special contribution to conflict interest reduction, respectively to time reduction a compromise to reach (Ghosh, 2000). The parties involved in the negotiation process must have sufficient and relevant information to obtain fair TP. Information asymmetry in this case is a decisive factor in negotiating TP (Srivastava *et al.,* 2000). The potential advantage of negotiated TP is the creation of subsidiary autonomy, for performance evaluation and better integration of profit objectives, both for subsidiaries and for the company as a whole

(Ravenscroft *et al.*, 1993). Having sufficient information about the company's income and expenses, managers from low hierarchical levels may negotiate optimal TP, with the management from parent company (Edlin and Riechelstein, 1995; Vaysman, 1998). Johnson (2006) noted that renegotiated prices are most effective in transactions with intangible assets, Lantz (2009) points out that negotiating TP under bilateral monopoly conditions is a solution to the conflict created by competition and Zhao (1998) reveals that the process of negotiating is most often carried out between subsidiaries and the parent company, even if transactions take place between subsidiaries. Luft and Libby (1997) conclude that negotiated prices must faithfully represent reality, even if they are influenced by the prices used in an external market. This can only be possible if TP are negotiated directly (Kachelmeier and Towry, 2002). In high-tech industries, the use of market-based TP in the case of transferred intangible assets leads to conflicts between managers causing serious decision-making errors, eventually being replaced by cost-based pricing (Colbert and Spicer, 1995). In their study, Dejong *et al.*, (1989) conducted a comparative analysis of alternative methods of TP, concluding that negotiated TP are the least efficient compared to those set by demand and supply, success rate of TP negotiation process being quite low. When using negotiated TP, managers distribute both the expected surplus and the risks associated with RPT (Anctil and Dutta, 1999). It often happens that managers are focused on their personal goals, i.e. on increasing the subsidiary profit (Chalos and Haka, 1990), and if they did not take the risks, their distribution would not have implications for the well-being of the entire company (Anctil and Dutta, 1999). Negotiating prices in the various departments coordinated through the use of dynamic prices, will create benefits such as: a higher TP, a higher resale price, a reduced promotion effort and, respectively, an increased effort in terms of regarding product quality improvement (Liu *et al.*, 2015). The branch profit increase will also offer advantages to the parent company, because, in the latter's attempt to increase its global profit, it will also include the one at the branch level.

Market prices are a solution to eliminate conflicts of interest and information asymmetry between the managers of a company, because they include all the information relevant to a transaction, in case of a perfectly competitive market (Palumbo, 2006). Baldenius and Reichelstein (2006) consider that market prices can be used successfully when the company's production capacity is limited or when the internal market is very small compared to the external market, especially since methods based on market prices are agreed by tax authorities. If the company is involved in both the production and supply of similar goods from external suppliers, it will be able to benefit from market prices, even in the case of an imperfectly competitive market (Arya and Mittendorf, 2008).

Other studies have focused on determining TP for mergers between companies (O'Brien and Shaffer, 2005), integrated into related markets, such as skilled healthcare in hospitals (Robinson, 1996), or coordinating the use of information systems (Westland, 1992). Following their analysis, it was concluded that TP issue is not as simple as it seems at first glance, because no single method can be identified for determining the optimal TP that would be applicable in any situation (Drury, 1998). Both external and internal factors that impact the activity of a company must be considered, many of which are either not quantifiable or unidentifiable due to the relationship complexity and RPT.

Distribution chains and decentralization. Studies that have focused on distribution chains and decentralized companies span a time horizon of over 35 years (1979-2015), which indicates the timeliness of this issue over time. Of the 31 papers that refer to the issue of distribution chains, most were focused on the context of a decentralized decision-making system when setting TP. Centralized structures aim at an efficient allocation of resources, for this reason, decision-making centers have been called cost centers. In case of decentralized ones, they are called profit centers, because the decisions are rather oriented towards maximizing the profit of the company as a whole. The concern for cost allocation is already an obsolete issue, and the goal of making as much profit as possible is still considered one of the main objectives of a company. At the same time, decentralized decision-making is one of the most important tasks in managing large companies, with the right to decide being given to the people who are best informed (Lee and Whang, 1999; Swieringa and Waterhouse, 1982), or to the departments to which these functions are assigned (Erickson, 2012). As a result, in the conditions of the globalization of the economy, due to which companies have considerably increased their volume, expanding all over the world, decentralization is inevitable.

Kanodia (1979) proposes a TP model for decentralized companies, considering both price and technological uncertainty, so that risks are equitably distributed among managers from different hierarchical levels. Van de Panne (1991) considers that, in designing a decentralized distribution chain, it is very important to establish from the outset which of companies is the main unit and which is the secondary unit, one of them having the ability to set TP and the other, the quantity needed to be sold, thus creating a relational balance between them. Ronen and Balachandran (1988) propose an improvement on the model previously developed by Ronen and McKinley (1970) by including uncertainty factors. It should be noted that Ronen and McKinley (1970) have developed an economic model called *Ronen and McKinley scheme* which offers the possibility of determining optimal TP for a decentralized company aimed at increasing its profitability, given the information asymmetry. Similar studies, in which information asymmetry was considered, were performed by Li and Balachandran, (1997) and Ronen (1992). The results obtained by Ronen and Balachandran (1988) compared to the model proposed by Ronen and McKinley (1970) show that TP function is similar to that of demand. Later Ronen (1992) contributes to the development of the model by reducing the information asymmetry between managers at lower hierarchical levels, and those in management, setting TP being delegated to the former.

Kogut and Kulatilaka (1994) showed how companies can benefit from the creation of geographically dispersed distribution chains, having the flexibility to distribute production in such a way as to achieve the expected performance, through discreet management. Kouvelis and Gutierrez (1997) proposed a model for determining optimal production, by reducing fixed and variable costs. In applying the model, account is taken of centrally TP set and the exchange rate when production is handled in markets located in different geographical areas. Later, under the same conditions, Kim and Park (2014) also consider the geographical location of the board and note that currency risk influences TP.

Jiang and Anupindi (2010) have focused on identifying the optimal TP in a decentralized company, considering both the particularities of the supplier and those of the customer, in order to ensure the circulation of an optimal quantity of goods, depending on demand, in a distribution chain. Pfeiffer (1999) constructs a model that offers at the same time the facility to plan the production in the conditions of decentralization, as well as to allocate the costs efficiently, using TP in both processes. Kouvelis and Lariviere (2000) describe a decentralized distribution chain model, in which TP are set differently, from one company to another, each having the autonomy to decide their size and at the same time contributing to the increase of global profit, even if each company is oriented to achieve its own objectives. A vertically integrated company, in the field of retail or wholesale, can gain from decentralization, through an efficient delegation of tasks related to the decision-making process, so that the resulting TP lead to increased profitability of the company (Arya *et al.,* 2008). Zhao (2000) uses TP as a tool to reduce competition in the market, and Shor and Chen (2009) investigate how TP can be used as a strategic tool for competing companies to reach a tacit agreement. Arya and Mittendorf (2007) showed that in a decentralized distribution chain, benefits can be obtained from the option to produce, to the detriment of the option to buy, especially when the external supplier offers goods at a price higher than the marginal cost. TP thus charged is lower than the purchase price of the goods from the external supplier. Chang *et al.,* (2008) consider that the accuracy of reasoning in negotiating TP has a favorable impact on the overall profit of the decentralized company. Meijboom and Obel (2007) have concluded that TP as a coordination tool for building distribution chains, the traditional mechanism being impossible to implement in the case of multinational companies, requiring a rigid IT system and a way of organizing either centralized or such as extended decentralization.

After 2000, as a result of changes in tax legislation related to TP, in many countries, this issue was also discussed in the distribution chains, the projected models also considering variables related to taxation rates, exchange rates etc. The model described by Vidal and Goetschalckx (2001) is applicable for optimizing global distribution chains, for companies with a centralized structure and can be exploited by multinational companies to significantly increase their overall net profit, without violating tax legislation. Subsequently, Villegas and Ouenniche (2008) included similar variables in the model, such as the allocation of transport costs and the volume of transactions, in order to highlight important issues in distribution chains operating in a regulated capital market. The results showed that these variables do not influence the decision-making process regarding the setting of TP. Perron *et al.,* (2010) reformulate the model and optimize it so that obtaining solutions to achieve goals is much faster. Given the limitations of TP legislation, Wilhelm *et al.,* (2005) and Miller and de Matta (2008) developed models for optimizing profits in distribution chains, considering taxation, when determining TP. As a result, the given models are recommended to be used as support in the decision-making process of managers. Due to the fact that taxation legislation allows the use of TP that vary in a certain range, Goetschalckx *et al.,* (2002) proposed a distribution chain programming model for companies located in various jurisdictions aimed at increasing net overall profit, the optimal TP being possible to calculate in a few minutes, compared to the sophisticated decision-making processes used at that time. The study by Matsui (2011) on distribution chains provides additional perspectives on the regulation of TP in cross-border transactions, providing relevant evidence regarding the inefficiency of the market value principle in this context.

For companies using advance pricing agreements (APA), models have been developed to establish the optimal TP for goods, values or services, considering the reasonable allocation of resources and maximizing profits in a distribution chain, oriented towards consolidating the global profit and not only the individual one (Lakhal, 2006). For an efficient allocation of costs and resources, de Matta and Miller (2015) have developed a model for optimizing distribution chains within multinational companies, TP being established based on differences in corporate tax rates and exchange.

Among the economic models developed by the authors in connection with setting TP in distribution chains, it is noted that some of them are based on the demand function (Kanodia, 1979; Karray, 2015; Kim and Park, 2014; Kouvelis and Gutierrez, 1997; Kouvelis and Lariviere, 2000; Lee and Whang, 1999; Matsui, 2011; Meijboom and Obel, 2007; Pfeiffer, 1999; Shor and Chen, 2009; Van de Panne, 1991; Wilhelm *et al.*, 2005), others the inverse function of demand (Arya and Mittendorf, 2007; Arya *et al.*, 2008) or income-based demand elasticity (Ronen, 1992; Ronen and Balachandran, 1988), which are widely used in various economic models. The common variables used in the three functions are Price (in the case of the given study TP), Quantity Sold and Demand, plus Marginal Cost (Kouvelis and Lariviere, 2000; Lee and Whang, 1999; Ronen, 1992; Ronen and Balachandran, 1988; Shor and Chen, 2009; Van de Panne, 1991), Substitutable Products (Arya and Mittendorf, 2007; Arya *et al.*, 2008), Marginal Income (Ronen, 1992; Ronen and Balachandran, 1988), Profit (Kouvelis and Lariviere, 2000; Pfeiffer, 1999; Ronen, 1992), Product Stocks (Lee and Whang, 1999).

Other subjects on transfer pricing. Studies related to TP from the perspective of managerial accounting also refer to other topics such as: the management control system (Cools *et al.*, 2008; Mouritsen and Thrane, 2006; Rossing, 2013; Spicer, 1988; Taipaleenmaki and Ikaheimo, 2013; Watson and Baumler, 1975), cost-effective allocation (Diamantaras and Wilkie, 1994; Rossing and Rohde, 2010), transaction cost savings (Shelanski and Klein, 1995; Shelanski, 2004), alliance between companies (Morasch, 2000), resource allocation in information companies (Kumar *et al.*, 2011) and review of the literature (Lambert, 2001).

The papers highlight the fact that the differentiation from the segments of a decentralized company and accounting, as a whole, are important factors in the design of management control system. Therefore, being part of this, the mechanism of TP must be applied at the level of each segment according to its particularities (Watson and Baumler, 1975). Accounting is able to mediate and form the activity of the management control system, including in terms of TP, through self-regulation and orchestration mechanisms (Mouritsen and Thrane, 2006). Taipaleenmaki and Ikaheimo (2013) emphasized that in the context in which financial accounting has shifted from historical cost to fair value to ensure information transparency and facilitate decision-making among investors, the relationship with management accounting is indispensable, the convergence of the two being necessary. At the same time, they highlight the fact that currently the convergence process between the two accounts ensures the proper functioning of the managerial control system.

Given that TP must comply with tax legislation imposed by the authorities, the management control system is affected by the fact that managers, instead of focusing on the decision-making process, as the main objective of this system, are obliged to apply policies aimed to standardize TP (Cools *et al.*, 2008; Rossing, 2013). If in the work of Cools *et al.*, (2008) the authors fail to explain how this can be done, then Rossing (2013) presents practical solutions regarding the alignment of the decision-making process with the uncertainty in the fiscal environment of TP, more precisely, it shows how managers can cope with the dynamic changes in the field of TP in real situations.

Given that TP is an important contingent variable in the efficient design of the cost allocation system (Diamantaras and Wilkie, 1994), this process can only be done in close connection with the policies adopted by companies in relation to the tax regulations imposed. (Rossing and Rohde, 2010). Shelanski (2004) points out that TP is a key component of how multinationals manage and structure RPT and how resource and profit costs are allocated to profit centers located in different countries. Shelanski and Klein (1995) and Shelanski (2004) studied the issue of transaction cost savings. The first paper addresses this issue in general, from a theoretical perspective, noting that TP can be approached in terms of transaction cost savings. Shelanski (2004) points out that TP is a key component of how multinationals manage and structure RPT, as well as the ways in which the costs of resources and profits are allocated at the level of geographically dispersed profit centers.

Lambert (2001) discusses the issue of TP from the perspective of agency theory, bringing a number of examples by reviewing the literature in this area. He is of the opinion that the mechanism of TP, together with accounting, budgeting, performance measurement and management systems, affect the way in which the economic actors interact.

4.2. Transfer pricing taxation

International taxation of transfer pricing. Through theoretical studies in the field of international taxation, a revision of TP legislation from 1979-2006 and of the practices related to their use at international level was carried out. The tax strategies the companies in relation to TP differ depending on the type of control held over the companies: joint ventures (Al-Saadon and Das, 1996), total control (Ruf, 2011) or partial control (Kant, 1988a). Researchers emphasize the tendency of multinationals to manipulate TP transactions in order to obtain tax benefits. Lall (1979) analyzes the main problems arising from TP transactions at that time in developing countries, focusing on the ability of companies to handle given transactions, due to gaps in tax legislation. Eden *et al.,* (2001) succeed in constructing a theoretical model of the arm's length principle application, following its evolution in the North American countries. The authors emphasized the need for this principle in setting TP, which has been imposed in many OECD countries, and accepted over the time in several other countries. Picciotto (1992) examines the ways in which multinational profits are allocated to various jurisdictions and highlights the inability to comply with the arm's length principle in cross-border transactions at the multinational level. Fjell and Foros (2008) note that many companies, in order to comply to margin squeeze imposed by tax authorities set predatory TP in order to weaken or drive the market competition.

In order to avoid the practices of profit manipulation, by moving them to low-tax jurisdictions, thus eroding their tax base, the formula for allocating the consolidated tax base (apportionment formula) was proposed. This has been harshly criticized, as it has proven ineffectiveness for US companies (Hellerstein and McLure, 2004; Picciotto, 1992; Sorensen, 2004). Bradford (2003) proposes to include in the profit tax base all cash flow RPT from different jurisdictions, but this measure can lead to liquidity problems for companies with a high degree of indebtedness. International capital mobility and tax competition create serious difficulties in tax policy development in an open, developing or transition economy, with withholding tax being effective when tax regulations cope profit manipulation mechanisms (Zodrow, 2006).

The need for specific regulations regarding transactions with intangible assets, TP of which is difficult to determine, given their specificity and the impossibility of identifying comparable prices, has created conditions for empirical research in this regard, which highlights the behavior of the companies regarding this problem. Kopits (1976) tests a model that captures the factors that influence the transfer of intangible assets, especially in the case of intellectual property rights, emphasizing that foreign investment could greatly increase at their expense, given the way in which their taxation would be reduced. Buckley and Hughes (1998) emphasize the importance of functional analysis in determining TP. Later, De Waegenaere *et al.,* (2013) observe that the volume of research and development expenditures varies depending on the size of the profit tax rate, the lower the rate, the higher the expenditures. Thus, some companies manage to obtain intangible assets, at reduced prices, through related parties located in low-tax countries, which are used by companies in the country of origin, where the level of taxation is increased. Controversial results were obtained by Ge *et al.,* (2015), in connection with the trading of intangible assets. TP used, on the other hand, are higher in countries with lower tax rates, being part of the strategy to stimulate the increase of production quality within related parties in these countries.

Lakhal *et al.,* (2005) propose a computer programming model that facilitates the determination of TP, for goods and values traded on the market, for which comparable prices cannot be identified. In applying this model, the prices of similar or substitutable products with similar characteristics to those for which TP is to be calculated shall be considered. The qualitative analysis based on the questionnaire, on a sample of US multinationals, showed that TP in cross-border transactions are largely influenced by the tax rates, especially in the case of large companies and those that do not comply with the tax rules (Burns, 1980). The use of correct method in determining TP is one of the objectives of tax and accounting legislation on TP. The choice of TP method is determined by legislative factors, such as tax regulations, financial reporting rules, antitrust and anti-dumping rules, economic or social factors having an insignificant influence (Al-Eryani *et al.,* 1990). Research on a sample of companies in Slovakia showed that about 1/3 of all RPT were based on TP determined by inappropriate methods, which led to the distortion of transaction values (Rajnoha *et al.,* 2014).

In order to avoid misunderstandings, in the case of tax controls, companies use a single TP, both for tax purposes and for decision-making process (Halperin and Sniridhi, 1991). Because there are differences between TP used for various purposes, some companies choose to charge two TP, one for tax reporting and other for internal or decision-making purposes. Using a single price for both purposes, when transactions take place between companies with differences in profit tax rates, will be effective only in the case of a centralized structure (Bond, 1980) or in a less competitive market (Dürr and Göx, 2011). The advantage of determining separate TP is that those set for tax reporting are in accordance with the required legislation, and the others are calculated in relation to the economic context of the transactions. Empirical evidence shows that when two TP are charged, the one set for tax purposes is determined considering the market value principle, and the one intended for domestic purposes is influenced by the first and in the case of cross-border transactions, by differences in level profit tax rates

(Baldenius *et al.*, 2004). The discrepancies between TP reported by the companies and the one calculated by the tax authorities have as finality the adjustment of TP and the application of the penalties, according to the legislation in force. According to the logic of the tax authorities, penalties are imposed to counteract inappropriate behavior of taxpayer. In case of TP penalties, which are not in line with the arm's length principle, they could have adverse effects on the expected net profits of multinational companies (Eden *et al.*, 2005). The company will have to bear additional expenses in order to collect the information necessary to document and justify TP, in order to avoid the payment of penalties, and the profit will be reduced at the expense of those expenses.

Research results in the field of TP international taxation, focusing mainly on differences in profit tax rates in different countries refer to the following: TP had a strong impact on production and volume of imports into Canada, budget revenues from taxation significantly reducing (Eden, 1983); companies in countries with high corporate tax rates practice high TP in transactions with related companies in tax-relaxed areas over which they have no total control (Kant, 1988a) and, conversely, companies in developed countries with high taxation underestimate the value of exports to low-tax related parties in developing countries (Kant, 1988b); the allocation of resources and the profitability of companies with a decentralized structure are affected, even if they use the methods recommended by the tax authorities (Halperin and Sniridhi, 1987; Halperin and Sniridhi, 1991; Halperin and Sniridhi, 1996); the application of the profit-based method proved to be more efficient than the one based on marginal cost, in determining TP and as a result, the volume of international RPT decreased sharply (Schjelderup and Weichenrieder, 1999); the higher the tax rates and tax restrictions, the lower the volume of transactions in intermediate and finished products (Madan, 2000); differences in tax rates provide facilities for foreign direct investment (FDI) (Gresik, 2001; Hines, 1994; Hines, 1999); through holding companies, related party finance loans, using TP schemes (Ruf, 2011); multinationals increase TP used in RPT to combat gray market activity as a result of increase remains the price used by the companies that operate in this market (Autrey and Bova, 2012); the use of different TP established in accordance with the arm's length principle depends not only on differences in profit tax rates (Homburg, 2007), sometimes causing tax arbitrage, but also on market segmentation, exchange rate covariance and cash flows in foreign currency, as well as the structure of specific costs (Usmen, 2012); companies choose the taxation mode based on tax residence, to the detriment of withholding tax (Becker and Fuest, 2012); application of the arm's length principle misrepresent companies' activity decreasing investment and debt ability of foreign related parties (Keuschnigg and Devereux, 2013).

In the 1970s, in order to combat the effect of TP manipulation by multinationals, the formula for allocating the consolidated tax base was adopted at the level of several countries, which we mentioned in a previous chapter. In this context, Dworin (1990) makes a theoretical and empirical analysis of tax measure compatibility, in the case of the USA, to see if it proves to be successful and mitigates the unfavorable effect of TP on budget revenues. It highlights several disadvantages of applying the formula for allocating the consolidated tax base, one of the most important being the double taxation for some companies and the avoidance of taxation for others. Later, in 2001, the OECD proposed to implement a Common Corporate Tax Base (CCTB), a measure equivalent to the formula for allocating the consolidated tax base at Member State level, which aims to avoid the tax base erosion and to move profits by multinationals. Its advantage is that the application of the formula for consolidated tax base allocation does not require information on the location of profits, although this condition may serve as an impediment to the efficient collection of tax revenue. (Gresik and Osmundsen, 2008). This measure has not been implemented so far, being widely criticized among researchers (Altshuler and Grubert, 2010; Gresik, 2010; Hyde and Choe, 2005; Nielsen *et al.,* 2010).

Having further studied the specificities of cross-border transactions involving the use of TP and the possibilities for companies to manipulate them to obtain tax benefits, several ways have been proposed to limit these opportunities: using equivalent TP for similar goods and services in the case of countries with the same rates of income tax, and if there are differences in their level, progressive taxation schemes should be applied (Booth and Jensen, 1977), thus avoiding discrimination in TP and distributing profits in equally between geographically dispersed jurisdictions; implementing indigenization as an attractive policy to raise the host tax profit by causing more suitable combinations of investments by subsidiaries and an increase in the share of additional income held by residents of households, when the parent company charge TP (Falvey, 1986); reducing the information asymmetry between tax authority and reporting company, the last being stimulated to present information related to costs, in exchange for government subsidies (Prusa, 1990; Stoughton and Talmor, 1994; Dasgupta and Sengupta, 1995); parallel implementation of restrictive rules, for both the host country and the home country company (Gresik and Nelson, 1994), namely increasing the corporate tax rate in the low-tax country or using equal tax rates (Elitzur and Mintz, 1996).

Keuschnigg and Devereux (2013) and Raimondos-Moller and Scharf (2002) argue that the arm's length principle is not the most appropriate benchmark for taxing multinationals, as TP set in accordance with this principle influence all resulting revenues from taxing the profits of companies located in different countries (Solilova and Nerudova, 2013). Linked to the arm's length principle, bilateral price agreements in advance (BAPA) are a possibility by which the tax authorities have managed to reduce the effect of shifting the profits of multinationals to related parties in low-tax regions. BAPA is an agreement between two tax authorities in different countries and a multinational. TP used under the terms of these agreements must be the same in both countries. BAPAs are usually promoted in states with differences in profit tax rates, being hardly used between states with approximately equal tax rates (De Waegenaere *et al.,* 2007). By using these agreements, the efficiency of transactions is lost, due to the fact that regulations related to TP are not harmonized in all countries, which leads to the distortion of decision-making process within the multinationals (Tomohara, 2004).

Transfer pricing manipulation. It is assumed that companies manipulate TP through a strategic RPT assessment, due to the opportunities offered by tax regulations. Studies addressing TP manipulation refer to: shifting profits to related parties in low-income tax jurisdictions (Azemar, 2010; Azemar and Corcos, 2009; Barry, 2005; Bartelsman and Beesma, 2003; Bauer and Langenmayr, 2013; Beer and Loeprick, 2015; Clausing, 2000; Cristea and Nguyen, 2016; De Simone, 2016; De Simone *et al.,* 2017; Dischinger and Riedel, 2011; Dyreng and Markle, 2016; Gabrielsen and Schjelderup, 1999; Grubert and Mutti, 1991; Haufler and Schjelderup, 2000; Jacob, 1996; Karkinsky and Riedel, 2012; Klassen *et al.,* 2017; Lund, 2009; Neiman, 2010; Smith, 2002; Swenson, 2001; Weichenrieder, 1996); RPT located in tax havens (Davies *et al.,* 2018; Klassen *et al.,* 2017; Dyreng and Markle, 2016; Richardson and Taylor, 2015; Stewart, 1989; Taylor *et al.,* 2015a; Taylor *et al.,* 2015b); tax evasion generated by value added tax (VAT) (Ferrantino *et al.,* 2012); distortion of macroeconomic indicators (Ali-Yrkko and Rouvinen, 2015; Birnie and Hitchens, 1998; Eden and Rodriguez, 2004); business ethics (Hansen *et al.,* 1992; Mehafdi, 2000); corporate social responsibility (Ylonen and Laine, 2015); barter, as a form of exchange (Yakovlev, 2000); and others (Samuelson, 1982).

Because, according to theoretical assumptions, it was assumed that companies use TP to move profits to countries with low tax rates, the researchers developed statistical models in which they studied the correlation between Net Profit and Income Tax Rate. In the case of a producing company's sample, the Net Profit/Production Sold rate was chosen to include in the model the specificity of the activity (Grubert and Mutti, 1991), and to confirm the robustness of the results, the Net Profit and Profit Tax Rate were used, resulting the following indicators: Net Profit/Total Assets and Income Tax/Total Assets (Jacob, 1996). Beer and Loeprick (2015) propose the analysis of profit according to EBIT. Gross profit, Operating income, Income tax/Gross profit, Income tax/Operating income and dummy variables related to compliance with IFRS (Voluntary adoption, Compulsory adoption) were correlated to identify the influence of reporting rules on profit manipulation (De Simone, 2016).

Clausing (2000) tries to test the Trade Balance of the company (difference between the volume of exports and the volume of imports in relation to the total volume of foreign trade) based on the effective rate of profit tax, profit growth, external trade balance, volume of RPT. Swenson (2001) analyzes the variation of TP according to the differences between the corporate tax rates identified at the level of the countries where the transactions take place, and Cristea and Nguyen (2016) use TP for exports in relation to the Corporate Tax Rate, Number of employees, Quantity of production sold, respectively Revenue from sales. To reflect the ways in which companies manipulate profits, variables such as Property, plant and equipment/Total assets (Azemar and Corcos, 2009; Beer and Loeprick, 2015; Dischinger and Riedel, 2011) and patents (Karkinsky and Riedel, 2012) are introduced. To observe the effect of taxation on profit decisions, Azemar (2010) studies the correlation between Gross Profit, Dividends Paid and Reinvested Profit, as dependent variables and the Average Income Tax Rate. The variables GDP and GDP per capita, present in most models, are used to test the characteristics of the host country. In the case of panel analysis, the authors include dummy variables such as: Reporting Year and Country etc.

Grubert and Mutti (1991), Jacob (1996), and Bartelsman and Beetsma (2003) note the strong correlation between Income Tax Rates and Net Income, confirming that companies report higher profits in countries with low income tax rates. Profit manipulation in this case explains the increased volume of foreign direct investment and exports to low-tax countries (Grubert and Mutti, 1991). To explain profit manipulation, Clausing (2000) attempts to test the influence of taxation on related party trade, concluding that there is a close correlation between the effective corporate tax rate and the volume of sales to related parties in countries with low tax rates. TP increases insignificantly if there are differences between corporate tax rates between countries (Swenson, 2001; Clausing, 2003), proving that this is not the only responsible factor in the process of shifting profits for tax purposes to related parties located in low-tax jurisdictions (Bartelsman and Beetsma, 2003; Swenson, 2001). Later, Cristea and

Nguyen (2016) obtain evidence showing that TP related to exports of products from overcharged countries to low-priced countries differ significantly from the prices used under market conditions. Other evidence has shown that the adoption of IFRS in the financial reporting in countries with reduced taxation provides opportunities for shifting profits through TP transactions (De Simone, 2016), which are also used in the case of non-profit related parties (De Simone *et al.,* 2017).

In addition to the fact that differences in profit tax rates between countries serve as a reason for making foreign direct investment, they are an important factor in decisions related to profit reporting, reinvestment or dividend distribution (Azemar, 2010). Azemar and Corcos (2009) identified an increased volume of foreign direct investment, especially research and development expenditure, in fully controlled companies located in countries with lower taxation, which were made in order to create opportunities for TP manipulation. Tangible assets are, in this way, a tool for manipulating TP within multinational companies, by locating these types of assets in countries with low taxation (Beer and Loeprick, 2015; Dischinger and Riedel, 2011; Karkinsky and Riedel, 2012).

Controlled transactions in tax havens are a special issue of profit manipulation. Due to the tax facilities offered by states considered tax havens, which are much more attractive than those in states with low corporate tax rates, more and more companies are joining them in order to increase global profits due to the avoidance of paying corporate tax. Studies that have focused on this topic are based on statistical models based on linear regression (Klassen *et al.,* 2017; Richardson and Taylor, 2015; Taylor *et al.,* 2015a; Taylor *et al.,* 2015b), panel data analysis (Davies *et al.,* 2018; Dyreng and Markle, 2016) and financial analysis (Stewart, 1989).

In an imperfectly competitive market, a company may manipulate production and sales to obtain tax advantages under a regime based on the arm's length principle (Samuelson, 1982). Ali-Yrkko and Rouvinen (2015) observed that TP have a significant impact on the value added of the entire economy, and their non-compliance with tax legislation distorts the real value of this indicator. Given that GDP is the sum of value added generated by each company in a country, it has been shown that TP have an impact on it, as the geographical distribution of value added is influenced by this macroeconomic indicator (Seppala *et al.,* 2014). Between 1988 and 1994, GDP in Ireland increased considerably due to economic growth in the manufacturing industries. This was largely due to TP transactions, with an impact on GDP of around 8% (Birnie and Hitchens, 1998). The results given are not accidental, as evidence has shown that multinationals use TP transactions to move profits to savings with low corporate tax rates (Stewart, 1989).

In another study, Yakovlev (2000) speaks of barter as a negative factor in RPT in the Russian Federation. The insufficiency of regulations related to RPT and the mechanisms for presenting information about them facilitate the fraudulent application of barter operations, becoming a profitable business for a considerable number of entrepreneurs, including financial intermediaries affiliated with managers from high-performing private companies and those from government companies. Other studies are focused on the transactions audit. Chan and Chow (1997) consider that the companies in focus of tax audit are those that report losses, low profitability and are not monitored by local partners. At the same time the inconsistency of the regulations regarding TP transactions leads to a robust and thorough tax audit. (De Waegenaere *et al.,* 2006).

5. Conclusions

The TP issue is a relevant area in contemporary research. This fact was also confirmed by literature review, using as a reference a sample of 172 WOS publications, according to 1975-2018 time period. Analyzing research works, we noticed that over several decades, TP topic has been widely debated, outlining two major directions in research field: TP in managerial accounting and TP taxation. The tax side includes most studies, both in terms of regulations and tax fraud through TP. The aspect related to managerial accounting is equally important, due to the fact that TP is the tool through which resources are efficiently allocated within a set of related parties, being used successfully in decision-making process, both for entities with centralized management system, as well as decentralized.

Results obtained by researchers confirmed that TP are indispensable in conditions of globalization. First, they are needed to evaluate transactions at cost level or profit centers, in order to efficiently allocate resources. It is therefore necessary to use appropriate methods for TP identification. Economic-mathematical models, statistical models, experiments and case studies were built to identify methods for determining optimal prices, so that they lead to maximizing profits. The major objective of any company is to make a profit and therefore the efficient use of TP, by establishing profitability-oriented policies, will have the effect of achieving it. Looking at things from a different perspective, the researchers observed that TP affects tax and duties volume, with entities distributing part of their profits from countries with high corporate tax rates to low-taxing countries. In this situation, the regulatory bodies intervene, thus being aimed to impose rules to limit such activities, but are not always efficient (Fischer, 2006). The arm's length principle is one of the measures adopted at country level, that proved to be far from effective, especially in case of cross-border transactions. The formula for consolidated tax base allocation seems to solve the problem of profit shifting, but due to adverse effects that could cause them, such as double taxation, it has not been adopted so far, being proposed at the level of OECD countries since 2001.

Corporate scandals in the early 2000s highlighted unfavorable issues resulting from TP transactions, so that stricter rules for information disclosure about these transactions in financial reporting and the implementation of stricter corporate governance rules were imposed. However, RPT continue to manifest themselves as a tax evasion practice, although they are conducted under legal conditions. Recently, researchers have distinguished between RPT in low-tax countries and those with countries considered tax havens. The impact of transactions with companies in tax havens is much more significant than in case of those with reduced taxation, because, in addition to tax facilities offered, tax havens do not disclose information about these transactions, so they are impossible to track.

Summarizing results of TP research, this issue could be further studied, as economic transactions evolve and new factors emerge that determine them. At the same time, it is possible to analyze the issue of TP from a tax perspective, in order to follow the behavior of the related parties regarding the opportunities for TP transaction manipulation. We intend to study this subject on samples of Romanian companies, because it is a relatively new one and very few explored. The research results will help us to outline an overview of TP practices and to evaluate the TP rules application within Romanian related parties.

The limitations of the study result in impossibility of exhaustive analysis of scientific papers that refer to the TP issue, because it involves a high consumption of time and intellectual resources. As a result of a long process, in terms of listing publications in WOS, the works related to 2016-2018 years are reduced in number, the knowledge in the field being limited by this aspect. Another limitation of the study is the subjectivity of the analysis. The paper was conducted from the point of view of a group of people, it contains information, considered relevant from the point of view of the authors, being possible to omit important aspects for other researchers.

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Is the Regulation on Stimulating Employment in Romania in the Context of the COVID-19 Pandemic Effective?

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Abstract: *The world is marked by global social and economic disruption, generated by the COVID-19 pandemic. The response of the countries materialized in the implementation of measures to mitigate the economic and social impact induced by this health crisis and to support the recovery, with particularizations in Romania depending on the specifics of the economy, pandemic manifestations and reaction capabilities of the system. Given the interconditionalities with a significant multiplier effect of unemployment, the purpose of our approach consist in analysis of the measures taken by the legislator regarding employment in the context of the COVID-19 pandemic and to assess their effectiveness. We have identified the limits in the implementation of the measures and the partial lack of coherence of the legislative act.*

Keywords: *Unemployment, regulation, COVID-19 pandemic.*

1. Introduction

The three problems that macroeconomics strives to understand are modest economic growth, unemployment, and persistent inflation (Stiglitz and Walsh, 2005: 426). The aggregate behavior of the economy is the consequence of variations in production, the average level of wages and interest rates; all markets being interdependent, these variables adjust dynamically to generate equilibrium in each of the markets and as a whole. Unemployment is a permanent challenge, which threatens the economic and social balance of all countries and wastes the most precious resource, the only creative, self-perfecting and renewable. Labor market deficiencies, manifested by high rates of long-term unemployment have direct consequences on individuals, families, and communities, on living standards. Persistent unemployment not only depletes valuable human resources, but also leads to a decrease in their future productivity (Stiglitz and Walsh, 2005: 437). This is the case of the Romanian economy, deindustrialized, which has lost its qualified and highly qualified labor force, amplifying its problems through the emigration of the unskilled one, becoming mainly a sales market, with major difficulties in rebalancing. Globally, concerns in the field aim to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (UN, SDG 8 - Decent work and economic growth). Interconditionalities can be detected with a multiplier effect on the economy induced by maintaining high employment rates. The employment of the labor force will be reflected in the increase of the demand for goods and services (figure 1), and, therefore, in the increase of the production which will lead to the creation of new jobs and to the amplification of the

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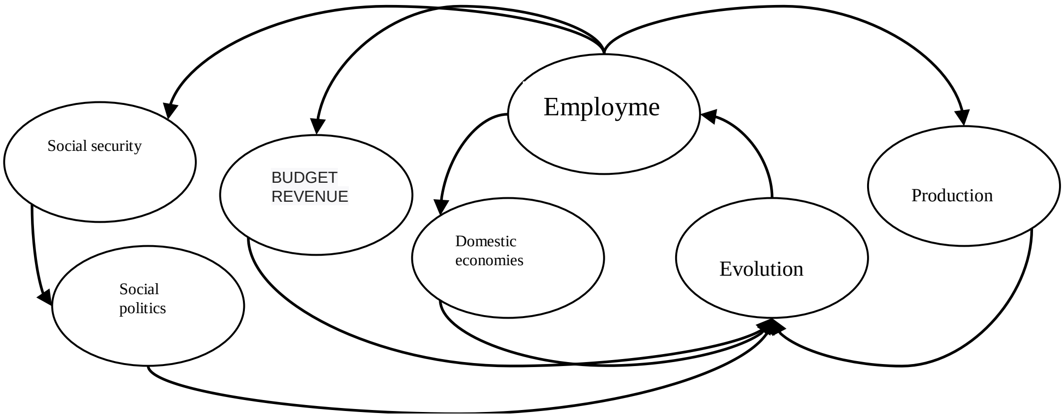
liquidity flows for investments and development. At the same time, it will have a positive effect on increasing household incomes and their ability to save and invest. On the other hand, employment will generate additional revenues to the state budget and the social insurance budget for economic and social policies, for the development and creation of new jobs.

Figure 1. **The multiplier effect of employment**



(Source: Elaborated by the authors)

We also mention that the analyzes on the salary evolutions revealed that the real salary rate increases in the vicinity of the full use of the labor force. The pre-pandemic situation showed that the “degree of employment depends not only on the absolute level of wages and the absolute level of unemployment on the domestic market, but also on the relative rate of wages and employment opportunities on the foreign market" (Scarlat and Chiriţă, 1997: 115). The tensions created on the labor market by the imbalances induced by regulations on salary incomes, over a long period of time, between the private and the public sector, between different types of professions with similar qualification level, the extraordinarily extensive scale of salaries with indecent differences between minimum and maximum have boosted migration to foreign markets. It is noteworthy that this migration included the highest categories of qualification without impediments related to the accentuated specificity of national regulations (doctors, engineers, IT, etc.) as well as the unskilled with limited possibilities in sector and time. The latter can be considered unemployed who travel to various markets depending on time-limited opportunities, seasonal activities remaining attached to places of origin.

The world is marked by global social and economic disruption, generated by the COVID-19 pandemic. There is a strong economic recession worldwide, with wide incidences on the labor market. The restrictions implemented, as well as the attitude of consumers, circumscribed by financial constraints and reluctance generated by awareness of exposure to the risk of contamination, significantly affect demand, estimating high unemployment rates. The coordinated response of the countries to the COVID-19 epidemic has resulted in the implementation of measures to mitigate the economic and social impact induced by it and to support the recovery, given the consolidation of national health systems and limiting the spread of the virus. Romania has adopted a set of measures that are part of the guidelines of the policies promoted by the EU, with particularizations depending on the specifics of the economy, the pandemic manifestations and the reaction capabilities of the system. The pressures exerted by these measures on the budget deficit aggravate existing situation at the beginning of the crisis. Romania has applied one of the most pro-cyclical fiscal policies at European level, accumulating growing deficits in the ascending phase, affecting the effectiveness of the application of a countercyclical policy in the descending phase. The procyclicality of fiscal policy causes high volatility in economic growth, inhibiting the long-term convergence process. At the beginning of March 2020, the European Commission launched the excessive deficit procedure for Romania, whose budget deficit exceeded the maximum limit in the EU Treaty. In this context, the measures adopted in Romania against the background of the problems induced by the COVID-19 epidemic must aim at economic stabilization and recovery, but at the same time with the adjustment of the budget deficit.

The motivation for the chosen research topic lies in the importance of the employment issue at the level of the economy, strongly affected by the additional imbalances induced by the health crisis. In this paper we will present the purpose and effects of measures adopted in Romania, from the onset of the crisis until the date of this research, mentioning the possibilities of avoiding situations of moral hazard and the need to streamline the fiscal-budgetary approach, detecting the limits in their implementation and the partial lack of coherence of the legislation. The specificity of the approached topic requires a qualitative research methodology, in which the comprehensive treatment is correlated with the phenomenology, through deductive reasoning on the concrete application mode and the consequences of the adopted measures. The results reveal the inconsistency, the presence of the limitation in the coverage area, ambiguities, as well as the lack of valences necessary in the process of economic recovery of these measures.

2. Unemployment and the efficiency of regulation

2.1. Literature review

The volume and structure of the labor force, the unemployment rate are important indicators in assessing the economic performance of a country. Historical information and trends in the labor market, wage levels or the existence of regulations, analyzed in conjunction with ongoing economic and social phenomena, are essential levers in predicting the evolution and development of macroeconomic policies.

The link between unemployment and GDP is a topic of interest in the literature, with the revelation of multiple aspects. Regarding the relationship between unemployment and the loss of GDP, we mention as a reference Okun's law, empirically results reveal that for every 1% increase in the unemployment rate, there will be a 2% decrease in the potential GDP of a country. A mismatch of the personnel policy with the investment one, as well as with the size and dynamics of the demand generates inefficiencies at microeconomic level, with macroeconomic consequences. Maintaining a higher number of employees can decrease labor productivity, which in conditions of wage pressure in the context of reducing the number of employees, will decrease the profitability of companies and the volume of taxes collected. The macroeconomic pressure is also amplified by the social protection policies involved by the increase of unemployment. In the hypothesis of unemployment hysteresis, the dynamics of unemployment tend to be a non-stationary root process that does not return to its long-term equilibrium (Liew et al., 2009). Thus, unemployment has negative impacts on economic growth, social stability and income distribution. Taking into account the reality of perpetuating macroeconomic instability, with smaller or larger amplitudes over time, determines changes in the link between GDP and employment. Over time, the linear relationship between employment and growth is not stable, the changes may be lasting or only transient. Studies by Klinger and Weber (2020) show that employment has continued to grow despite low GDP growth. They find that the GDP-employment linkage has permanently loosened mainly because of sectoral change, and that the employment growth corresponding to labor market tightness, labor supply, wages and working time increased remarkably. Regarding the short and long term relationship between economic growth and unemployment, the results of empirical studies are contradictory. Thus, some studies do not highlight the existence of a cointegration relationship between unemployment variables and GDP, which specifically implies that there is no long-term relationship between variables, while in the short term, a direct causal relationship between unemployment rate and economic growth is mentioned (Alhdiy et al., 2015). According to other studies, the tests of cointegration revealed long-run association between unemployment and economic growth (Kreishan, 2011). The consideration of the cyclicality of the activity reveals an asymmetry regarding the periods of economic expansion, longer, and those of economic decline, shorter, but with more severe consequences. In periods of recession, the dynamics of unemployment is wider, the increases being higher than the reductions specific to the periods of expansion. Nonlinearity of unemployment rates is specified (Rothman and Stock, 1997).

Increases in structural unemployment have a substantial aggravating impact on income inequality. If marginal workers with relatively low skills are the ones who are laid off first during an economic downturn, and if these workers are at the bottom part of the income distribution, temporary increases in unemployment are expected toworsen income inequality (Mocan, 1999: 125).

Another significant aspect in the analysis of the impact of unemployment is the evolution of future incomes. Job loss structurally affects the income of individuals. Thus, complementary to the loss of income during periods of joblessness they are also further scarred by these experiences when they find employment, accepting much diminished salaries. A wage penalty of about 6% on re-entry into Britain and a decrease in earnings after three years by 14%, compared to what they would have received in the absence of unemployment can be found (Arulampalam, 2001). Post-unemployment earnings losses to be largely permanent and particularly significant for high-wage and older workers as well as for women (Gangl, 2006).

Unemployment can generate negative effects on the individual's psyche with multiple significant consequences, amplified in the case of a long period needed to re-employment. Unemployment adds an adverse impact on psychological function (anxiety, depression), symptoms associated with job loss rather than pre-existing psycho-logical symptoms (Linn et al., 1985). Complementary, psychological or physical health problems may reduce the chances of finding a new job if one has become unemployed (Mastekaasa, 1996).

Another effect of unemployment is the loss of skills, competencies, the incidence being higher the longer the unemployment period is, chronicling the status of unemployed.

We can talk about a depreciation of human capital. Unemployment also degrades individuals' social relationships, signalling a loss of social capital, which affects both the psyche and the ability to find a new job.

An important aspect of unemployment is the impact of strict regulation. Generally, stricter regulation increases unemployment, especially among young workers (Feldmann, 2009). Also, developing countries with rigid employment laws have larger informal sectors and higher unemployment, especially among young people (Djankov and Ramalho, 2009). The implications of regulating the minimum wage on employment or unemployment must be considered either when regulations do not cover all economic sectors or when demand in the labor market is not perfectly inelastic. When the minimum wage is regulated throughout the economy and the volume of labor is constant, only algebraic sign can make the difference between employment and unemployment (Mincer, 1976). Imposing a minimum wage can have negative consequences for some companies, but, on the whole, in time, it will determine the search for new ways to increase productivity and the adequate remuneration of capital. In the conditions created by the pandemic, the most affected companies are the small ones with reduced possibilities to support the minimum wage and which will give up part of the workforce or even disappear if they do not have the opportunity to counteract the delays and inconsistency of government measures.

The social protection policy in the field affects the behavior of the active population. A marginal increase in compensation reduces the escape rate from unemployment significantly, irrespective of business cycle condition (Røed and Zhang, 2003). The intervention of the governors must take into account the correlation of the aspects regarding the assurance of a standard of living corresponding to the unemployed, without affecting the interest to work. Although policies that aim to prevent a worsening in income inequality by combating cyclical downturns have validity, a sustained growth in real output cannot improve income inequality if it is not accompanied by a reduction in long-term unemployment (Mocan, 1999: 133).

The introspection of the specialized literature reveals the importance of the employment issue. Our approach aims to identify the effectiveness of the measures adopted in the field in order to counteract the effects induced by the health crisis, a subject less treated in the literature.

2.2. Research methodology

The level of the targeted reality is mainly macroeconomic, global, formal and the orientation of the research is consequently phenomenological-comprehensive. The research methodology is of a qualitative nature, involving documentation through repetitive processes and establishing areas of interest in accordance with the research objectives, analysis of regulations in the researched field, their purpose and limits, in a space that allows heuristic rather than algorithmic constructions. For this reason, the comprehensive approach is correlated with the phenomenology as it is deduced from the concrete application of the decided measures. The subjectivism inherent in qualitative methods requires correlation with causal schemes, inductive, deductive and comparative methods of interpreting data and information.

2.3. The evolution of unemployment in Romania. Indications of the indicator in the context of COVID-19 pandemic

In the period 2006-2019, unemployment rate and economic growth presented the following values (table 1):

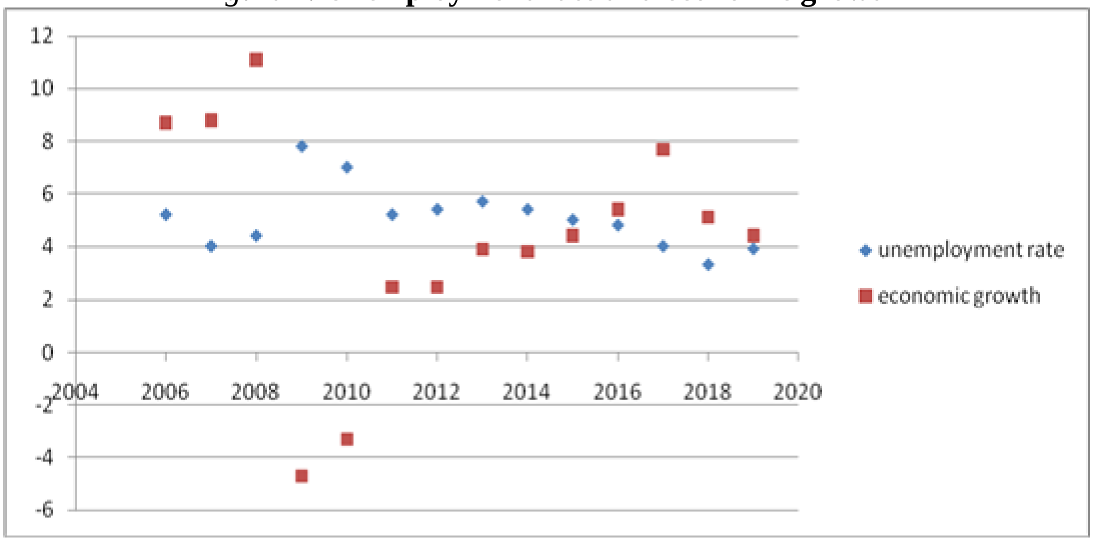
Table 1. **Unemployment rate and economic growth**

Year	Unemployment rate (%)	Economic growth (%)	Year	Unemployment rate (%)	Economic growth (%)
2006	5.2	8.7	2013	5.7	3.9
2007	4	8.8	2014	5.4	3.8
2008	4.4	11.1	2015	5	4.4
2009	7.8	-4.7	2016	4.8	5.4
2010	7	-3.3	2017	4	7.7
2011	5.2	2.5	2018	3.3	5.1
2012	5.4	2.5	2019	3.9	4.4

(*Source:* INSSE)

During 2006-2019, the unemployment rate varies between a minimum of 3.3% and a maximum of 7.8% (figure 2).

Figure 2. **Unemployment rate and economic growth**



(*Source:* Table 1)

This figure reveals that unemployment is a nonlinear phenomenon. An investigation of the two indicators highlights that a level of unemployment always exists regardless of economic growth (natural unemployment rate related to various discrepancies between supply and demand). As the economy goes through a long expansion (2015-2019), unemployment will stabilize at a lower level, and additional growth may not necessarily generate additional reductions in the unemployment rate.

The estimates regarding the evolution of the unemployment rate and of the GDP in Romania are presented in table 2.

Table 2. **Estimating the evolution of the unemployment rate and economic growth**

Indicator	Institution	**2020**	**2021**
Economic growth	The European Comission	-6	4.2
	FMI	-5	3.9
Unemployment rate	The European Comission	6.5	5.4
	FMI	10.1	6

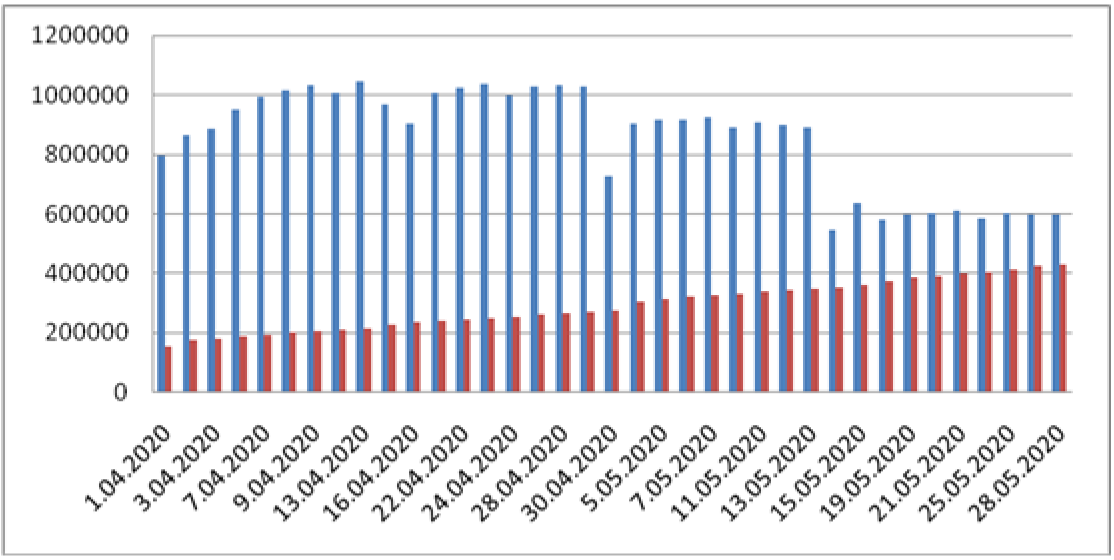
(*Source:* https://ec.europa.eu/romania/news/20200506_previziuni_economice_primavara_ro, https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/EU/EURO/EUQ)

For 2020, the European Commission anticipates an economic decline of 6% and an unemployment rate of 6.5%, while the IMF predicts an economic decline of 5% and an unemployment rate of 10.1%. For 2021, the European Commission forecasts an increase in GDP of 4.2% and an unemployment rate of 5.4%, while the IMF estimates economic growth of 3.9% and unemployment of 6%. There is a deviation from the average correlations recorded in the period 2006-2019 due to the specificity of the current context, in which the medical and, collateral, social crisis, by suspending or restricting activities, by the high costs involved in prevention, treatment and support as and by reducing consumption have major implications for economic depreciation and restricting recovery opportunities. In addition, we mention that the global recession could affect the workforce employed abroad, which will create major difficulties in its absorption and support.

2.4. Legislative measures in the field of employment

The drastic decrease in the volume of activity during the state of emergency and during the state of alert generated a prompt response of the business environment in terms of employment: suspension and termination of individual employment contracts (figure 3).

Figure 3. **The number of suspended and terminated individual employment contracts**



(*Source:* MMPS)

The maximum number of suspended individual employment contracts was 1,046,527 on 13.04.2020. There is an increasing trend of individual employment contracts terminated in April and May, evolving from 155,675 on 1.04.2020 to 429,585 on 28.05.2020. Despite measures to stimulate job retention, the number of terminated individual employment contracts increased at the same time as the number of suspended ones was reduced.

In order to mitigate the adverse effects induced by rising unemployment, the governments have adopted a series of normative acts on labor support during the period when companies reduce or temporarily interrupt the activity totally or partially due to the effects of the SARS-CoV-2 coronavirus epidemic.

Emergency Ordinance no. 30 of March 18, 2020 for amending and supplementing some normative acts, as well as for establishing measures in the field of social protection in the context of the epidemiological situation caused by the spread of SARS-CoV-2 coronavirus, published in the Official Gazette number 231 of March 21, 2020, as well as the Emergency Ordinance no. 32 of March 26, 2020 on amending and supplementing the Government Emergency Ordinance no. 30/2020 for amending and supplementing some normative acts, as well as for establishing measures in the field of social protection in the context of the epidemiological situation determined by the spread of SARS-CoV-2 coronavirus and for establishing additional social protection measures, published in the Official Gazette with 260 of March 30, 2020 stipulate the state to bear an indemnity of 75% of the basic salary, but not more than 75% of the average gross salary provided by the State Social Insurance Budget Law for 2020.

Consideration was given to relieving employers of high expenses, with direct effects on profitability and liquidity. The task of suspending individual employment contracts was taken over partly by the state, partly by employees insofar as the difference in income in the case of employees with incomes above the average gross earnings provided by the State Social Insurance Budget Law is voluntarily offset by employer.

This measure has been adopted by all EU countries, with a guaranteed minimum income that differs from country to country depending on the specific references of the labor market. As a limit in the application of the regulation in Romania, we mention the deficiencies of the settlement system, registering long delays in payment at the start of the mechanism, as well as difficulties in declaring the related contributions and taxes. We consider it opportune to pay net allowances, ensuring both an increase in efficiency and a decrease in bureaucracy, as well as an efficient use of public money in the conditions of a low degree of collection of taxes during this period. Countries such as Greece and France have adopted the model of exemption from social security contributions.

Emergency Ordinance no. 92 of 28 May 2020 for the establishment of active support measures for employees and employers in the context of the epidemiological situation caused by the spread of SARS-CoV-2 coronavirus, as well as for the amendment of normative acts, published in the Official Gazette No. 459 of 29 May 2020 stipulates that employers whose employees have had their individual employment contracts suspended for a minimum of 15 days during the state of emergency or alert and who have benefited from indemnities paid from the unemployment insurance budget according to the provisions of GEO 30/2020 or have had work contracts suspended in accordance with the provisions of art. 52 para. (1) lit. c) of Law no. 53/2003 - Labor Code, and did not benefit from indemnities paid from the unemployment insurance budget according to the provisions of GEO 30/2020, benefit, in case of maintaining employment relations after resuming the activity, from the settlement for a period of three months of part of salary, from the unemployment insurance budget, within the approved budget, representing 41.5% of the gross basic salary corresponding to the job, but not more than 41.5% of the average gross salary provided by Law 6/2020.

We consider it appropriate to make the granting of this support conditional on the obligation of employers to maintain the employment relationships of employees until December 31, 2020, except for seasonal workers and the situation in which the termination of the employment contract occurs for reasons not attributable to the employer. This ensures the involvement of employers in assuming responsibility towards employees, towards the community.

As a limit of this measure we mention the disadvantage of companies whose activities are still restricted on 1.06.2020, in that the ordinance stipulates that companies with portfolios of activities, at least one of which is subject to restrictions set by the competent authorities, will choose either for the application of the active measure of settlement of a part of the salary, or for the payment of the technical unemployment indemnity from June 1, 2020, until the lifting of these restrictions. This is the case, for example, of companies in the hotel industry whose activity has been severely affected by this pandemic. The restriction of the balneary treatment activity until 14.06.2020 and of the restaurant activity, still in force, will diminish the amount of support that the hotels that have resumed their accommodation activity can benefit as a result of expressing the option for one form of support or another.

With regard to the settlement of these amounts from the unemployment insurance budget, the ordinance stipulates that employers fully bear the equivalent value of employees' salaries and subsequently, from the first to the 25th of the month following the reporting period to which they are entitled, they require the related amounts. These will be transferred within maximum 10 days from the date of fulfillment by the employers, according to the law, of the declarative and payment obligations related to the incomes from salaries and assimilated to the salaries from the reporting period for which the request is made. An ambiguity of the legislative act is the specification regarding the granting of these amounts within the approved budget.

At the same time, according to the Emergency Ordinance no. 92, in order to stimulate the employment of certain categories of persons (persons aged between 16 and 29 registered as unemployed in the records of employment agencies, persons over 50 years of age whose employment relationships have terminated for reasons not attributable to them, during the state of emergency or alert, registered as unemployed in the records of employment agencies, as well as Romanian citizens whose employment with foreign employers in the territory of other contries for reasons not attributable to them, by dismissal), between 1 June 2020 and 31 December 2020, for an indefinite period and on a full-time basis, it is paid monthly to the employers, from the unemployment insurance budget, for a period of 12 months, 50% of the employee's salary, but not more than 2,500 lei. It mentions the obligation to maintain employment relations for a further period of 12 months from the end of the 12-month period for which the support is granted, as a condition of the sustainability of the measure on the labor market.

Emergency Ordinance no. 70 of 14 May 2020 on the regulation of certain measures, starting with 15 May 2020, in the context of the epidemiological situation determined by the spread of SARS-CoV-2 coronavirus, for the extension of certain terms, for the amendment and completion of Law no. 227/2015 on the Fiscal Code, of the National Education Law no. 1/2011, as well as other normative acts, published in the Official Gazette with number 394 of May 14, 2020 stipulates that the period of suspension of employment during the state of emergency and alert is taken into account when establishing the contribution period of at least 12 months in the last 24 months preceding the date of registration of the application for unemployment benefit. This measure ensures the maintenance in the social protection system of the employees who systematically carry out activities subject to seasonality, which was interrupted or diminished during this period. As a limit of the regulation, we mention the exclusion of the unemployed persons at the decree of these states (especially those employed in the touristic structures on the coast), who cannot benefit from this provision and who will be affected. This will determine the reorientation towards other sectors of activity, the sharpening and deepening of the imbalances on the labor market in the coastal tourism, with effects on the quality of the services provided.

Complementary to the assumption of social responsibility at the state level, we consider necessary the active involvement of employers by conditioning the beneficiary of the support measures by non-distribution and payment of dividends in order to support the payment capacity of companies. The lack of a responsible civic attitude at the level of Romanian investors, the voluntary non-assumption of responsibilities for overcoming difficulties would have imposed legislative measures in this regard. Countries such as Belgium, France, Germany and Italy have expressly provided for this condition in order to be eligible for support in various areas of interest.

3. Conclusions

Unemployment is one of the worst problems of any society through the negative, remnant, economic, social and psychological impact. The regulations introduced to support employment, reward certain professions and combat unemployment have distorted the domestic labor market. Against this background, the medical crisis generated by the pandemic, which led to the suspension or reduction of many activities, especially in the tertiary sector characterized by a large workforce, severely affected this market and led to a worrying increase in unemployment.

The regulations adopted by the authorities, through the stipulated provisions, are likely to counteract the effects of the pandemic crisis on the maintenance of employees and the continuity of activities provided that the measures are implemented efficiently and in time. The efficiency of the regulations should have materialized in maintaining the standard of living of those with low incomes and an average one for the other categories, by suspending the debts of employees to all creditors without significant pledging of future incomes and ensuring timely allowances to cover the daily basket of families. In addition, the implementation of the regulations revealed some deficiencies, many of which were not corrected along the way. Among the main deficiencies reported by companies we mention the lack of clarity of measures, extremely cumbersome start, with long delays in payment, excessive bureaucratization of implementation, maintaining a degree of uncertainty on access to funds, exclusion of certain categories of people, difficulties in declaring contributions and taxes and even making the issuance of allowances conditional on the payment of contributions in the conditions in which the companies have no income or they are severely diminished, the obligation to opt either for the application of the active measure of settlement of part of the salary or for the payment of unemployment indemnity before to be able to correctly evaluate the appropriate system, etc.

Impediments in ensuring the income of employees, especially in the service industry, with high versatility in choice, are likely to make it difficult for companies to retain employment and compromise business continuity. In the case of employees, the loss of income accumulated so far will cause them to compensate as soon as possible, identifying opportunities that generate higher salaries, with repercussions on migration. The effects of income and substitution work in different ways and their aggregate influence remains uncertain at the individual level. On the other hand, firms will negotiate low wage levels as there are high uncertainties about future developments. All these conditions fuel a significant decrease in the demand for goods and services that is not likely to boost production. Investments in large-scale works supported by European funds that absorb massive labor and state support of entrepreneurship are ways of economic recovery.

This research is a starting point in the analysis of the effectiveness of the measures adopted in the field of employment, being elaborated in the relatively incipient phase of the health crisis. The limit of this study is determined by the parsimony of the information available at that time at the micro and macroeconomic level. The study will be developed by analyzing the indicators as the relevant information is reported by various entities.

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Consequences of Exits from Political Unions on Dividend Policy: The Case of Ethiopian Split

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Abstract: *This paper examines the consequences of exits from political unions or the split of countries on dividend policy decision, taking the Ethiopian split as a practical case, which considered as a major factor in the increase of political tension with Eritrea especially after the secession, which led to the increase in successive political conflicts and dispute over the past years till now. This paper studies the impacts of political conflicts that has been companied with split to this day especially during the period between (2010-2019), using a database of six companies from different sectors, from Ethiopia. The results show that the political conflicts such as split has a direct impact on the dividend policy.*

Keywords: *Dividend policy; political exits; Ethiopian split; corporate financial policies.*

1. Introduction

There is a significant correlation between politics and economics as it has a major impact on the economy and the financial policy of any country. Gupta (2018) assures that economics and politics are co-determined, especially with regard to fiscal policy where politics has a strong influence on the national economy and the fiscal policy of any country. Moreover, Osterloh (2010) mention that a country's political environment can affect its economic performance in several ways, taking into account the determinants of economic growth, such as the level of public spending and the structure of the economy, so that the effects of policy on growth rates in the econometric analyses are more clearly examined.

In recent years, we have witnessed the split of many countries around the world, the most important example of which was the split of South Sudan from Sudan 2011, and Eritrea's split from Ethiopia 1993 and recently the UK's exit from the European Union 2020, which is known as Brexit. With respect to Acemoglu and Robinson (2012) "States don't fail overnight. The seeds of their destruction are sown deep within their political institutions." Usually, most of the separated or collapsed states, who lived in a state of war and violence, face many challenges such as their inability to fully take advantage of the enormous potential of their society to grow, which makes citizens suffer from social and economic problems such as unemployment and poverty.

In this context, many researchers made a lot of studies about the dividend policy and its theories. Frankfurter and Wood (2002) stated that over the past five decades of this century, corporate dividend policy has gained much attention among economists as it has been the subject of extensive theoretical modeling and empirical examination.

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There are many conflicting theoretical models where all of which lack strong empirical support that define current attempts to explain dividend policy behavior. Three schools of thought have emerged over the past century. The first point of view adopts the idea that stock dividends are attractive and have a positive effect on price stocks, (Boyte-White, 2020), (Allen and Rachim, 1996). The second group believes that share prices are negatively correlated to dividend payout (Nguyen et al. 2019), (Asghar et al. 2011). The third bloc of theories confirm that the dividend policy is not related to the evaluation of the share price, (Baskin, 1989).

Moreover, Frankfurter and Wood (2002) mention that the classification of theoretical and empirical models of the recent corporate dividend policy varies separately according to several criteria and separate into a different taxonomy. In this classification, the qualifying criterion is the nature of the market structure and/or the underlying rationale of the investor. Also, modern models are broadly segregated based on their rationale, in state-form models with complete information, models in states with asymmetries information and models depending behavioral principles.

In this paper, I address the issue of the impact of political exits on the corporate financial policies especially the dividend policy taking the Ethiopian split as a practical case, while other articles just mention the impact of politics on the economy and financial policies generally, where the issue was not discussed in detail. Therefore, this paper show how this split affect the corporate financial policy, through studying the determinants of the dividend policy during a period of political conflicts between the two parties and noticing the changes resulted from it.

According to the nature of the topic, this paper is useful for academics specializing in financial and economic studies, as this study shows the impact of politics on corporate financial policies, especially the dividend policy, and the results of this study can be adopted in subsequent studies for those interested in this field. Moreover, this study can help financial and economic analysts by adopting the results of this study in analyzing similar cases later. It is also beneficial to the government of Ethiopia and Eritrea for knowing that taking any political decision in the future may have consequences on the economic and the financial policy therein, which will be reflected on the companies operating in these two countries.

The rest of the paper is structured as follows. Chapter 2, describe briefly the reasons and results of split between Ethiopia and Eritrea. Chapter 3 express previous studies about the dividend policy, and presenting the tested hypothesis. Chapter 4 describe the data and methodology, that include the regression models. Chapter 5 show the results and discussion of the study. Chapter 6 includes the conclusions and limitations.

2. The Split Between Ethiopia and Eritrea

As for Eritrea's split from Ethiopia, the recent conflict is seen as relating to slices of disputed territories along the thousand kilometer border between the two countries, which were not demarcated correctly, more than a century ago by the Ethiopian Empire and Italy. According to Barry and Gilkes (2005), the origin of the dispute between the two parties, were due to the differences between the Eritrean and Ethiopian leadership that started in the eighties. Although they both obtained the support of the same ethnic group from similar peasant societies, and from Marxist ideology, they differed in their goals and aspirations. Therefore, the Popular Front for the Liberation of Eritrea decided that Eritrea would be liberated from Ethiopian rule as one unified country, despite being made up of nine language groups and two main religions, Islam and Christianity.

Barry and Gilkes (2005) added that in 1991, both movements seized power as they pursued varying agendas on the national issue. The Tigrayans, however, remained intent on promoting Tigrayans nationalism, placing a federal structure for the Ethiopian state based on nationalism. As a result, the boundaries of the provinces were redrawn to reflect the ethnic divisions in the region. The Popular Front for the Liberation of Eritrea (TPLF) began to adopt the policy of rapid economic growth and the establishment of several companies that formed direct competition with developments across the border. In 1997, Eritrea issued its own currency, which hampered trade with Ethiopia. At the international level, Eritrea has demonstrated its national identity with a prominent force through diplomatic relations and military confrontations with neighbouring countries, especially Sudan, Djibouti and Yemen.

Furthermore, Barry and Gilkes (2005) added that on Nov. 1997 a border commission was established between the two countries, which met only once and made no progress before the outbreak of the conflict. The fighting began tragically in May 1998, resulting in the death of many Eritreans, despite attempts to calm the two sides down, but the crisis was not resolved and the fighting continued to escalate, and Eritrea captured three areas administered by Ethiopia. In Feb. 1999, Ethiopia captured the border region of Badme, after five months of heavy fighting. After the talks collapsed in May 2000, Ethiopia retake the rest of the regions that Eritrea captured in 1998. But in June 2000, under pressure from the United States and the international community, both sides agreed on peace proposals presented by African unity. These included providing a 25 km security zone to facilitate Eritrea's withdrawal from the previous borders, the introduction of a United Nations force, and the demarcation of the border between the two countries.

In addition, Stigant and Phelan (2019), mention that during 2018, Ethiopia and Eritrea signed a peace agreement to end two decades of "frozen war". The agreement resolved an intractable border dispute after Ethiopian Prime Minister Abi Ahmed took office and approved the decision of the Independent Border Commission for 2002, which sparked tremendous optimism between the two countries and international observers. As the peace agreement had important consequences in the consolidation of bilateral relations between the two countries, and its impact well on domestic politics and economic development. Resolving regional conflicts between Ethiopia and Eritrea with neighboring countries such as Djibouti and Somalia has resolved some regional tensions that have contributed to improving trade and increasing investment with many African countries and the Gulf, as well as China, Russia and Turkey. Therefore, Eritrea and Ethiopia were ready to work together to resolve regional tensions, and make the Horn of Africa more stable, which would boost investor confidence and attract capital.

However, there are a lot of impacts of Ethiopian split on the economic and financial policies. According to Devarajan et al. (2001) they stated that Ethiopia has entered into a protracted civil war along with a bold program to build a socialist economy. At the beginning of 1990, market-oriented reforms were launched in response to deep economic and political crises. As a result of the civil war and internal conflicts, the local economy deteriorated and was significantly affected, especially after Eritrea's split from

Ethiopia in 1993. In addition, Nyasha et al. (2016) stated that although it is now known that the financial system consists of sectors based on banks, the market and companies, most of the previous studies focused on the relationship between economic growth and financial development in general. This means that there is a historical relationship between economic growth and financial development, so any change in economic policy as a result of many reasons, the most important of which is political, may lead to an impact on the financial system that is based in turn on banks and companies.

3. Theoretical Background and Tested Hypothesis

Political decision such as exits from political unions or the split of countries often has many implications on economic and financial policy Osterloh (2010). However, the question remains, does politics affects the corporate finance policy, and to what extent this may affect the Firm's dividend policy?

There are many studies that investigates about the impact of the politics on the dividend policies. For example, Lei et al. (2015) addressed how the political uncertainty and political decisions can affect the firm's dividend decisions by mentioning that corporate behavior is subject to the institutional environment, especially the political environment. North and Thomas (1973) addresses that an uncertain political environment may also have a greater influence over business in all over the world especially in countries that suffered from civil war and political conflicts which lead to split.

In addition, Farooq and Ahmed (2019), study the relation between the politics and dividend policy, and the impacts of political decisions on the payout policies. They stated that the corporate dividend policies are linked to political systems. To prove their point of view, they made a study about American companies which are sensitive to the presidential elections by using a large data set covering six presidential elections extending between 1996 and 2016, where it was found that companies pay a higher percentage of their profits as profits during election years, while these percentages decrease in non-election years.

Moreover, Zhang et al. (2015), examine the impact of political risks on the corporate compensation policy by studying a sample consisting of 35 countries around the world during the period (1990 - 2008). By using crisis events as an alternative to political risk, it can be said that the past payers are more likely to end share dividends in the future, non-payers are less likely to start dividends during periods of high political risk.

In this context there are many theories about the dividend policies, but here I will mention the major three theories of dividend in financial management which are Walter's model (1963), Gordon's model (1963) and Modigliani and Miller's hypothesis (1961).

According to Prabakaran (2019) Walter's model referred to Prof. James Walter argues which think that the choice of dividend policies always affects the value of the enterprise. The model shows the importance of the relationship between the firm's internal rate of return (r) and its cost of capital (k) in determining the dividend policy that will maximise the wealth of shareholders. Walter's formula is as follows:

$$P = \frac{D}{K} + \frac{r(E-D)/\mathrm{K}}{K}$$

The above equation clearly reveals that the market price per share is the sum of the present value of two sources of income: The present value of an infinite stream of constant dividends (D/K), and the present value of the infinite stream of stream gains. (P) market price per share, (D) Dividend per share, (r) internal rate of return, (E) earnings per share and (K) cost of equity capital.

The second model is Gordon's model referred to Myron Gordon which is very known model explicitly relating the market value of the firm to dividend policy. Al-Malkawi et al. (2010) mention that Gordon's model is based on the company's dividend payout policy and the relationship between its rate of return (r) and the cost of capital (k) which influence the market price per share of the company.

The growth rate (g) = br is constant forever; K > br = g if this condition is not fulfilled, we can't get a meaningful value for the share. In Gordon's model, the market value of a share (Po) is equal to the present value of an infinite stream of dividends to be received by the share. Gordon's formula is as follows:

$$Po = \frac{E\iota\,(1-b)}{K-br}$$

The above equation clearly shows the relationship between current earnings (E), dividend policy (b), internal profitability (r), and all the equity firm's cost of capital (K), in the determination of the value of the share (Po).

Furthermore, the third model is Modigliani and Miller's hypothesis which referred to Franco Modigliani and Merton Miller (M-M). According to Prabakaran (2019), Modigliani and Miller think that dividend policy of a firm is irrelevant as it does not affect the wealth of the shareholders. They argue that the value of the firm depends on the firm's earnings which result from its investment policy.

Thus, when investment decision of the firm is given, dividend decision the split of earnings between dividends and retained earnings is of no significance in determining the value of the firm. So, investors are able to forecast future prices and dividends with certainty and one discount rate is appropriate for all securities and all time periods. Thus, $r = K = K_t$ for all t.

The (M–M) hypothesis assumes that, r will be equal to the discount rate and identical for all shares. So, the price of each share must be adjusted and the rate of return, which is composed of the rate of dividends and capital gains on every share will be equal to the discount rate and should be identical for all shares. Thus, the rate of return for a share held for one year can be calculated as follows:

$$r = \frac{D + (P\iota + Po)}{Po}$$

Where, Po is the market price per share at time 0 and P is the market price per share at time 1 where D is dividend per share at time 1. As hypothesised by (M-M), r should be equal for all shares. If it's not so, the low-return yielding shares will be sold by investors who will purchase the high return yielding shares.

Applying this process will help to reduce the price of the low-return shares and to increase the prices of the high-return shares. This switching will continue until the differentials in rates of return are eliminated. Under (M-M) assumption, the discount rate will be equal for all firms becuase there are no risk differences.

Several studies used dividend per share as dependent variable to study the determinants of the dividend payout policy. For example, Bostanci et al. (2018) analyze the factors that affect the dividend payout decisions of the companies whose shares are traded on the Istanbul stock exchange. Applying the panel regression analysis shows a significant positive relationship between the dividend payout of the previous year, the company's return on equity and the market value and the book value ratio, liquidity and the company's size. Moreover, Chauhan et al. (2019) evaluate the impact of dividend policy on profitability of Indian Information Technology companies listed on Bombay Stock Exchange, where they used dividend payout per share as a dependent variable. They apply correlation matrix and panel regression model and they found that there is a strong relation between ROE and ROA. Furthermore, Porwal and Singh (2018) addressed a study about the determinants of the dividend policy by highlighting about the impact of earnings per share, financial leverage, maturity of Indian businesses, net cash flow of investment, current ratio and total assets on dividend payments, where they use the dividend per Share (DPS) as a dependent variable in their study. Moreover, Dragotă et al. (2019) addresses a study about the dividend payout policy through analyzing the dividend payout ratio as a main indicator of the dividend policy, where they found that the most appropriate distribution for modelling dividend payout ratio is the Tweedie distribution and its version Scaled Tweedie Distribution.

Many researches and analysts in various countries of the world study and observe the relationship between dividend policy and the fundamental variables affecting it. These studies have analyzed the factors that affect the dividend payout policy, and its determinants. For example, Baker and Powell (1993) study the results of a 1997 survey of NYSE listed US firms which reflects the views of managers of what factors determine dividend policy. The results show that the most important determinants of a firm's dividend policy are the level of current and expected future earnings and continuity of past dividends. There are also many considerations that can affect the dividend policy, such as the type of industry that respondents give to some of the determinants of the dividend policy. In addition, Jóźwiak (2015) study the dividend policies of firms from developed countries, where the main goal was to study the determinants of the dividend policy by examine cash dividend payments of Polish listed companies. A panel data analysis was applied to examine whether the same factors such as profitability, liquidity, size and leverage could affect the dividend payout decisions on Polish market as on developed countries.

3.1 Tested Hypothesis

There are some authors and analysts who consider that the politics and political decisions have a weak impact on corporate financial policy, especially with regard to the dividend policy, as they rely in their theory on that principle that these issues are internal issues decided by firms, as it is not possible to determine whether there is a direct impact of politics on the corporate financial policy or not even in case that there is a limited impact for politics on the dividend policy.

According to Feltri et al. (2017), until the past two and a half decades, finance researchers did not pay much attention to political economy until the impact of politics on the economy began to emerge. At that time, analysts didn’t study the impact of politics on the economy especially the performance of companies and their policies, thinking that there was no close relationship between them. In addition, Roe and Siegel (2011) mention that the majority of prior research and studies has ignored the effects of political factors on corporate financial decision-making. Moreover, Faccio (2006) mention that the impact of political ties mostly depends on the level of the institutional and economic development of the country, where the impact varies from one country to another which mean that in some cases there will be no impact on a corporate financial policy. This theory is adopted by some experts and analysts, because they believe that politics charts the general framework of economic and financial policy, but it does not interfere in the corporate financial policies, especially the distribution of the dividends and profits because it is an internal matter for companies (Huang et al., 2015).

H0: The Ethiopian split has no impact on the dividend policy.

On the other hand, there are many researchers who state that politics has a direct impact on economic and financial policies. According to Julio and Yook (2012), they assure that there is a lot of debate on the relationship between politics and economic outcomes along history. They assumed that politics often stand behind the decisions that cannot be predicted and that would create companies with a state of uncertainty and instability. They added, that there is correlation and linkage between government decisions and economic and financial policy in the long term and politics have a lot of implications on the behaviour of all companies. Moreover, Lei et al. (2015) mention that the cash dividend policy is one of the major corporate financial decisions that are influenced by political factors. In addition, Frederikslust et al. (2008), mention that "the perceived “excess of the 1980’s” produced a major regulation of US financial markets that affects the control market, credit markets, and the market structure. These changes have highlighted the importance of the political environment and its impact on financial policies. This theory is adopted by many analysts in the political and economic field, where they believe that the political decisions have a lot of impacts on the corporate financial policies, especially when discussing about the dividend policy.

H1: The Ethiopian split has a direct impact on the dividend policy.

4. Data and Methodology

This study depends on financial indicators and variable collected from six companies at Ethiopia from different sectors during the period between (2010-2019), which reflect a period of political conflicts and instability between Ethiopia and Eritrea that resulted from the beginning of split between Ethiopia and Eritrea at 1993 till now, where a regression analysis were applied to analyse and interpret the financial data for the firms, to notice the impact of the split and the political conflicts on the corporate financial policies, especially the dividend policy by noticing how much the political decisions affecting the variables and how did they change by addresses the variation in the ratios of the variables during this period, to know if there is a consequences of the split on these variables.

In order to study the indicators and variables of the firms to analyze the consequences of Ethiopian split on corporate financial policy and especially the dividend policy, it had to be mentioned the determinants and indicators of the dividend payout that will used in this study where dividend per share was used as a dependent variable since it is an important metric for the dividend policy and it is a widely used indicator for many studies, and the independent variables are as follows: leverage, profitability, liquidity and size. Several studies used dividend per share as dependent variable to study the determinants of the dividend policy such as Bostanci et al. (2018) who analyze the factors that affect the dividend payout decisions of the companies whose shares are traded on the Istanbul stock exchange. In addition to Chauhan et al. (2019) and Porwal and Singh (2018) made a several studies about the determinants of the dividend policy. In this section, these variables will be very important to the research in order to analyze the impact of the split on the dividend policy.

Table 1 shows the variables, symbols, proxies, and the variable type of the study.

Table 1. **Variables, Symbol, Proxies and Variable Type**

Variable	Symbol	Proxy	Variable Type
Dividend per Share	DPS	Dividend Paid / Shares Outstanding	Dependent
Leverage	LEV	Total Debt / Total Asset	Independent
Profitability	PROF	Net Income / Total Asset	Independent
Liquidity	LIQ	Current Asset/Current Liability	Independent
Size	Sz	Natural Log (Total Assets)	Independent

(Source: Own work, 2020 / based on Cevheroglu-Acar, 2018.)

This study addresses the firm’s specific determinants of dividend policy for six companies from Ethiopia during the period between (2010-2019). I obtain all data from annual reports of the companies from their official websites and some data from scientific websites. Therefore, this sample includes six known firms from different sectors such as “Ethiopian Air, NBE, Harar Brewery, SAP, Nestle in Ethiopia, NICE’’. Consequently, our sample consists of different variables and indicators of dividend policy, of six firms over a period of ten years, which makes 60 firm-year observations in total.

Proxy of the Dividend Policy:

Dividend per Share (DPS): Chen (2019) define it as the total amount of dividends referred to each individual share outstanding of a company based on the number of shares they hold. It can be calculated by dividing the total dividend paid over the shares out standing to allow the investor to determine how much income from the company he or she will receive on a per-share basis.

Determinants of Dividend Policy:

Leverage: According to Hayes (2019), Leverage results from the use of borrowed capital as a source of financing when investing to expand the company's asset base and achieve return on risk capital. It was measured through dividing the total debt/total assets. Jóźwiak (2015) mention that the firms with high leverage ratio have high fixed payments for using external financing. Therefore, the higher the leverage ratio, the lower the chance for dividend as a consequence leverage is negatively related to dividends.

Profitability: Profitability is the ability of a business to earn a profit. Grimsley (2019) define profit as what is left of the revenue a business generates after it pays all expenses directly related to the generation of the revenue, and other expenses related to the conduct of the business activities. The pecking order theory explains how companies prioritize their financing sources, where firms prefer to use internal funds. Myers (1984) believe that this behavior may be due the cost of issuing new equity. This theory predicts that the relationship between profitability and leverage is negative. Firms with higher profitability generate sufficient amount of earnings and are able to have retained earnings. So, according to pecking order theory, the firms with higher profitability, which use retain earnings as capital sources would pay less dividends.

Liquidity: According to the study of Šarlija et al. (2012),"Williamson (1988) argued that the optimal level of debt of the firm is limited by the liquidity of the assets and it depends on the average usage of the debt in the particular industry. Ho, (2003) state that firms with higher cash availability are more likely to pay dividends than firms with insufficient level of cash. Therefore, the likelihood a firm will pay cash dividends is positively related to liquidity.

Size: Deverill (2017) mention that the size of the company is based on either the number of employees or the amount of capital employed, or usually both. Sometimes, it's also based on the size of the assets mentioned on the company’s balance sheet. According to Redding (1997) the size of the firm play a key role in the dividend policy where the large corporations choose to pay dividends, while the small corporations that owned by individuals, do not.

Several authors addressed a lot of studies about the dividend policy and its determinants. For example, Jóźwiak (2015) study the dividend policies of firms in developed countries, where a panel data analysis was applied to investigate the determinants of dividend policies by examine whether the following factors (profitability, liquidity, size, leverage of the firm) affect dividend payout decisions on Polish market as on developed countries. In addition, Chauhan et al. (2019) addressed a study about the determinants of the dividend payout policy, through adopting a Correlation matrix and panel regression model, where they found that the selected companies don’t follow consistent pattern of dividend payments and the association between price earnings ratio and dividend payout ratio is low positive, while there is a strong relation between ROE and ROA. Moreover, Bostanci et al. (2018) analyzes the firm-specific factors affecting the dividend payout decisions of the companies by applying a panel regression for 106 companies in Turkey between 2009 and 2015, where they found a statistically significant positive effect on dividend payout in the relationship between the dividend payout of the previous year, the company’s return on equity and the market value ratio, liquidity and the company’s size.

4.1 Regression Model

Since we have panel data and time series format which includes both cross section and time dimension, we will adopt regression as econometric analysis. Therefore, the empirical expression of the main model in Table 1 is as in equation 1. In this model, i corresponds the number of firms and t corresponds the year.

$$\boldsymbol{Equation\ 1}: \quad DPS_{it} = \beta_0 + \beta_1 Lev_{it} + \beta_2 Prof_{it} + \beta_3 Liq_{it} + \beta_4 Sz_{it} + \varepsilon_{it}$$

According to the above model, we get the following equation, where in Eq. 1 the dependent variable is the Dividend per share, where Leverage, profitability, liquidity and size are the independent variables, i represent each company, t represents the year, β_0 represent the constant coefficient, where β_1, β_2, β_3 and β_4 represents the coefficients of the independent variables. This model will take into consideration the proxy of each variable, and will analyze the correlation between the dependent variable "DPS" with all the other independent variables.

5. Results and Discussion

After examining the variables and indicators and set the regression model, table 2 indicates the descriptive statistics for proxies using the regression analysis in order to understand the consequences of the Ethiopian split and political exits on the corporate financial policies, through analyzing the variables of the dividend policy during the period (2010-2019).

Table 2 indicates the descriptive statistics for proxies of dependent and independent variables.

Table 2. **Statistics**

		DPS	Leverage	Profitability	Liquidity	Size
N	Valid	60	60	60	60	60
	Missing	0	0	0	0	0
Mean		1.4435	.5103	.4177	.9230	9.4548
Median		1.6100	.5100	.4050	.8800	10.3700
Std. Deviation		.59183	.09877	.16736	.23308	1.98912
Skewness		-.316	.247	.361	.653	-.257
Std. Error of Skewness		.309	.309	.309	.309	.309
Kurtosis		-1.273	.345	-1.033	-.432	-1.627
Std. Error of Kurtosis		.608	.608	.608	.608	.608
Range		1.95	.47	.58	.94	6.33
Minimum		.40	.29	.18	.56	6.12
Maximum		2.35	.76	.76	1.50	12.45

(Source: SPSS Software, 2020)

The descriptive statistics of table 2 shows that the average of DPS for firms in Ethiopia was 1.44 per share. The average of the Leverage used for the firms at Ethiopia was 51% where the average of the profitability is around 41.7% when measured by NI/TA (Net Income/Total Asset). However, the average of liquidity is about 0.92 when measured by CA/CL (Current Assets/Current Liabilities). We also notice that the average size of the companies was 9.45 when measured using the Logarithm of the Total Assets. These descriptive statistics examines the impact of Ethiopian split and the political conflicts between Ethiopia and Eritrea on the dividend policy during the period (2010-2019) by analysing the impact of the political conflicts on the following variables of the dividend policy.

After examining the descriptive statistics, next we interpret the results of the correlations below.

Table 3: show the correlations between the variables over the period between (2010-2019).

Table 3. **Correlations**

		DPS	Leverage	Profitability	Liquidity	Size
DPS= Dividend Paid / Shares Outstanding	Pearson Correlation	1	.471**	.559**	-.299*	.720**
	Sig. (2-tailed)		.000	.000	.020	.000
	N	60	60	60	60	60
Leverage= TD/TA	Pearson Correlation	.471**	1	.247	-.319*	.475**
	Sig. (2-tailed)	.000		.057	.013	.000
	N	60	60	60	60	60
Profitability= NI/TA	Pearson Correlation	.559**	.247	1	-.255*	.248
	Sig. (2-tailed)	.000	.057		.050	.056
	N	60	60	60	60	60
Liquidity = CA/CL	Pearson Correlation	-.299*	-.319*	-.255*	1	-.158
	Sig. (2-tailed)	.020	.013	.050		.228
	N	60	60	60	60	60
Size= Log (TA)	Pearson Correlation	.720**	.475**	.248	-.158	1
	Sig. (2-tailed)	.000	.000	.056	.228	
	N	60	60	60	60	60

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

(Source: SPSS Software, 2020)

Correlation R:

After applying the regression analysis which shown at the table 3, and if we look at the Pearson Correlation, we can notice that some variables such as Leverage, Profitability and Size has a positive relationship with DPS. On the other side, liquidity has a negative relationship with DPS. In this part the most important factor is the Pearson Correlation, where this factor decides whether if there is a positive or negative relationship between the variables, and the value always between [-1 & +1]. While if the value of the Pearson Correlation is zero or near to zero so there is no relation.

So, if we want to analyze the relation between the variables we will find that there is a strong relationship between the variables, whether positive or negative. As for the study, it was important to find a relationship between these variables that prove that the Ethiopian split and political conflicts has a direct impact on the corporate financial policy, especially the dividend policy of the studied firms.

Table 4: show the correlation coefficient between the dependent variable and independent variables, for equation 1 during the period (2010-2019).

Table 4. **Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.759	.384		-1.975	.053
	Leverage= TD/TA	.459	.538	.077	.854	.397
	Profitability= NI/TA	1.324	.284	.375	4.663	.000
	Liquidity= CA/CL	-.224	.206	-.088	-1.089	.281
	Size= Log (TA)	.172	.026	.576	6.637	.000

a. Dependent Variable: DPS= Dividend Paid / Shares Outstanding

(Source: SPSS Software, 2020)

According to the above table, we can notice that Profitability & Size have a Sig = 0.000 < 0.05; so, these two variables have the most efficiency on the dependent variable (DPS). After applying the correlation coefficient, we can find the value of the variables in the model, at the below equation. As we mention before, some of variables have a negative relationship with the DPS, while others have a positive relationship. But what is important that there is direct impact on DPS from other independent variables.

$\boldsymbol{Eq.1}$: $DPS_{it} = \beta_0 + \beta_1 Lev_{it} + \beta_2 Prof_{it} + \beta_3 Liq_{it} + \beta_4 Sz_{it} + \varepsilon_{it}$

According to the correlation model, we will get the following equation:

Equation (1): DPS_{it} *= -.759 + .459 + 1.324 + (-.224) + .172 + ε it*

Table 5: show the regression analysis results according to the hypothesis.

Table 5. **ANOVA[a]**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.189	4	3.547	30.127	.000[b]
	Residual	6.476	55	.118		
	Total	20.665	59			

a. Dependent Variable: DPS= Dividend Paid / Shares Outstanding
b. Predictors: (Constant), Size= Log (TA), Liquidity= current ratio = CA/CL, Profitability= NI/TA, Leverage= TD/TA

(Source: SPSS Software, 2020)

α= 0.000 < 0.05 or 5% ⇒ There is a low probability that H0 is true, so reject H0 (data are significant)

H0: not significant; H1: significant

Table 6: shows the model summary for the study.

Table 6. **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.829[a]	.687	.664	.34314	.687	30.127	4	55	.000	1.78

a. Predictors: (Constant), Size, Liquidity, Profitability=, Leverage
b. Dependent Variable: DPS= Dividend Paid / Shares Outstanding

(Source: SPSS Software, 2020)

Testing the overall significant: R-squared measures the strength of the relationship between the model and the dependent variable. R-squared is always between 0 and 100 %. Usually, the larger the R^2 the better the regression model fits the with the observations.

R^2=0.829 ⇒ Lev, Pro, Liq, Sz explain the variation in DPS by 82.9%.

So, we can conclude that the model is significant.

Durbin-Watson: The Durbin Watson statistic is a test for autocorrelation in the residuals from a statistical regression analysis. It is between 0 and 4. A value of 2 indicates that there is no autocorrelation detected in the sample. Values from 0 to less than 2 indicate positive autocorrelation while values from from 2 to 4 indicate negative autocorrelation. In this model, Durbin-Watson = 1.78, which is is near 2 but this does not eliminate the presence of a positive autocorrelation in the sample.

6. Conclusions and Limitations

This paper examines the impacts of the political conflicts in Ethiopia on the corporate financial policies, especially the dividend policy. The political conflicts and the internal fighting that the split between Ethiopia and Eritrea generated in 1993 to the present day have had many repercussions and consequences on the two countries, especially the performance of the companies operating there, through this atmosphere, which effect on the corporate financial policies and especially the dividend policy.

A regression analysis was adopted to study the impact of political decisions on the dividend policy determinants. A regression model was build based on the following proxies, and variables to analyze the results and notice the change in the ratios of DPS, leverage, profitability, liquidity and size. Our results show that profitability and size are significant determinants of the dividend policy while leverage, liquidity are not significantly affect the dividend per share. Besides, we find that liquidity is negatively associated with DPS. However, we find that leverage, profitability and size have a positive relationship with DPS.

Finally, after presenting the financial ratios and the regression analysis for the variables, it's clear that the impact of the split and the political issues differs from one company to another, and this is the case with regarding to the variables of the dividend policy. As the impact of political conflicts varies on the indicators, but still have its impact on the variables, which assure that the political issues between Ethiopia and Eritrea has a lot of impacts on the corporate financial policy that supports the H1 Hypothesis, which assure that the Ethiopian split has a direct impact on the corporate financial policies.

This paper has two main limitations. First, this paper required a lot of time and effort due to the lack of data for many companies, especially previous studies related to the topic are little, so it required to access the annual reports of companies and some reliable sources in order to extract most of the financial ratios. Second, the study excludes firms having missing data on any variable in years between 2010 and 2019. These limitations prevent us from providing a comprehensive picture of the dividend policy in Ethiopia.

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