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Analysis of annual report disclosure quality for listed companies in transition countries

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ABSTRACT

High quality annual reports can contribute significantly to a company's success. The main aim of this article is to analyse and compare the level of annual report disclosure quality for listed companies in selected European transition countries (Croatia, Montenegro, Romania, Serbia and Slovenia) using a constructed disclosure quality index (DQI). Obtained results suggest that Slovenian companies have the greatest level of disclosure quality and that there are significant differences in disclosure quality of annual reports between the observed countries. These findings could be of interest to potential investors, management and other users of corporate disclosure, namely regulators in the process of financial reporting quality improvement.

1. Introduction

Disclosure of accurate, comprehensive and timely information is critical for the functioning of an efficient capital market. The quality of information presented in annual reports influences investors' and other stakeholders' decisions by mitigating information and incentive problems, as explained in agency theory (Healy & Palepu, 2000).

The aim of annual reports is to provide a fair review of the development of a company's business and its position. Transparent presentation of information in annual reports is especially important for listed companies. The general consensus among financial economists is that a rich disclosure environment and low information asymmetry have many desirable consequences, such as efficient allocation of resources, capital market development, market liquidity, decreased cost of capital, lower return volatility and high analyst forecast accuracy (Kothari, Li, & Short, 2009).

An annual report is an integrated report covering different aspects of a company's financial and non-financial performances. Typically, the report consists of accounting policies, financial statements, chairman's letter, auditor's report and the company's business vision for the future. While the traditional business reporting model emphasised backward-looking and quantified financial information, qualitative and forward-looking non-financial information has generally been ignored (Beattie, McInnes, & Fearnley, 2004). However,

such narrative sections of annual reports increase the overall quality of corporate reporting and have considerable value for their users (Chatterjee, Tooley, Fatseas, & Brown, 2011).

The remainder of the article is structured as follows. Section 2 provides a brief literature review on the issue. The third section discusses the institutional and economic background that is considered relevant for understanding the practice of annual reporting among transition countries. Section 4 describes the construction of a disclosure index used for annual report disclosure quality assessment. The results of empirical research are provided in the fifth section. The article ends with concluding remarks.

2. Literature review and hypothesis development

Previous studies on corporate disclosure practice are extensive, cover a wide range of issues and use a variety of potential proxies for measuring disclosure quality. The focus of this study is to analyse and compare the level of annual report disclosure quality for listed companies in selected European transition countries using a constructed disclosure quality index. Annual reports aim to communicate with users and in an easy and understandable way provide timely, reliable and relevant information on past, current and future organisational activities (Breton, 2009). Many authors emphasise the importance of the annual report elements (Cohen, 2002; Coy & Dixon, 2004; Li, 2008; Linsley & Shrives, 2006; Santema & van de Rijt, 2001). Cerf (1961) constructed the first disclosure index and the idea has been used extensively ever since (for example: Ali, Ahmed, & Henry, 2004; Coy & Dixon, 2004; Depoers, 2000; Hassan, Romilly, Giorgioni, & Power, 2009; Firth, 1984; Singhvi & Desai, 1971; Wallace & Naser, 1995). Disclosure indexes are commonly based on a text analysis conducted through an a priori defined list of items. They can include voluntary and/or mandatory information and the items included in the index can be weighted differently. While research on corporate disclosure has received a great deal of attention from academics in developed countries, there are only a few studies regarding this issue in transition economies. For example, Garrod and Turk (1995) pointed out that companies in Slovenia should present both financial and non-financial elements in their annual reports. Mušura (2006) analysed the reporting practice of Croatian listed companies and accentuated the importance of the following elements of annual reports: management structure, auditors, shareholders' rights, code of corporate governance, business ethics, environmental management and social policy governance. Pervan (2006) investigated the voluntary financial reporting practice of Slovenian and Croatian listed companies. The research showed that the average level of voluntary financial reporting for the Croatian sample was almost three times lower than for the Slovenian sample. The reasons for this difference and the backwardness of the Croatian companies are probably to be found in the overall business environment, particularly in the demand for financial information and the level of corporate governance in companies.

Pervan, Horak, and Vasilj (2010) made a comparative analysis of the financial reporting practice of listed companies in six Eastern European countries. They found significant differences in the regulation and practice of mandatory financial reporting. The empirical analysis of the current regulations revealed that Slovenia and Croatia have more harmonised financial reporting regulations with current EU requirements in comparison to the other countries from the sample, potential candidate countries (Serbia and Montenegro). Pivac and Čular (2012) analysed the quality of annual reports from Croatian listed companies in

two different periods. The results showed that a large number of key elements are missing and that annual reports in Croatia measured by a disclosure quality index are of average quality. The results did not change significantly in the review period. Pivac, Vuko, and Čular (2013) also conducted a comparative analysis of annual report disclosure practice for Croatian and Slovenian listed companies. They concluded that Slovenian companies have better disclosure quality than Croatian companies, evaluating the existence of individual elements inside the annual report.

In this article, based on existing research and data availability, the sample of the transition countries is selected from the group of Southeast European countries that geographically belong to the region of the Balkans. Of the considered countries, Croatia, Slovenia and Romania are EU members and Montenegro and Serbia are EU candidate countries. They constitute a homogeneous group of countries with similar financial sectors. In the area of financial reporting and auditing, all selected countries have implemented the Fourth, Seventh and Eighth EU Directives. The homogeneous group of countries allows analysis of annual report disclosure quality for listed companies, which is adapted to the characteristics of each country, and conclusions reflect the actual properties of each of the observed countries.

We hypothesise that the level of annual report disclosure measured by a constructed disclosure quality index is not sufficient in selected transition economies because of their specific economic and institutional background.

3. Economic and institutional background

The financial sectors of the selected transition countries are similar and bank-based. If we compare these countries with developed market economy countries, it can be concluded that the capital markets in transition countries are still fairly undeveloped. But if we compare these countries with Central and Eastern European transition countries, Slovenia, Romania and Croatia are developed, mainly due to the strengthening of the role of institutional investors; on the other side, Serbia and Montenegro are undeveloped (Tomic-Plazibat, Aljinovic, & Pivac, 2010). In the area of financial reporting and auditing, all selected transition countries have implemented the Fourth, Seventh and Eighth EU Directives. The Company Act in Slovenia requires that all companies, including banks, insurance and listed companies, prepare basic and consolidated financial statements in conformity with Slovenian accounting standards (World Bank, 2013), while in Romania they must comply with Romanian accounting standards (World Bank, 2013). Besides the Capital Markets Act (in Slovenia), there is a regulation on the disclosure of regulated information, which requires publishing annual business reports, auditor reports, semi-annual business reports and quarterly business reports (Pervan et al., 2010).

In Croatia, small and mid-sized companies must apply Croatian financial reporting standards, while other companies (listed companies, financial institutions, large companies) use international financial reporting standards. Applicable financial reporting frameworks and the preparation of financial statements are regulated by the Accounting Act (World Bank, 2013). The Companies Act has some financial reporting requirements for listed companies, requiring the presentation of annual business reports and consolidated annual business reports to the supervisory board and general assembly (Pervan et al., 2010). The Law on Business Companies regulates business activities in Serbia. Financial reporting of

Serbian enterprises is governed by various laws and regulations. All companies in Serbia use international financial reporting standards in accordance with the Accounting and Auditing Act (World Bank, 2013). The Business Organization Law and the Law on Accounting and Auditing define the types of entities that may conduct economic commercial activities in Montenegro and the basic requirements for financial reporting. Preparation of financial statements is in accordance with international financial reporting standards (World Bank, 2013).

Additional reporting regulations for listed companies are: the Capital Market Act and the Decision on the presenting of regulated information (Slovenia and Romania); the Capital Market Act and the Decision on the format and content of issuer interim reports (Croatia); the Securities Act Regulation for reporting of public companies (Serbia); and the Securities Act Rules for financial reporting of issuers (Montenegro). Slovenia, Romania and Croatia have the obligation to provide full annual reports as required by regulations, while Serbia and Montenegro have no such obligation.

4. Methodology

A disclosure quality index for annual reports (DQI) is constructed in five stages (Pivac & Čular, 2012) as follows: (1) evaluating the significance of annual report (AR) elements; (2) calculating the importance coefficient of AR elements ($C.I._{\cdot j}$); (3) calculating the assessment quality of the AR ($A.Q._{\cdot j}$); (4) calculating the overall quality of the AR; and (5) creating the disclosure quality index for annual reports (DQI).

The first stage is based on the survey responses from accounting and financial expert groups about the importance of AR elements.[1] The research is conducted in order to *(1) evaluate the significance of AR elements*. Scores range from 1 (AR element is not important) to 5 (AR element is extremely important). In order to define the DQI, it is necessary to calculate *(2) the coefficient of AR elements' importance ($C.I._{\cdot j}$)*. To make the process of constructing the DQI easier, it is necessary to calculate the weight factor that will be in the interval $[1, 2]$, where 1 means that element is not significant to the AR quality and 2 means that element is extremely significant to the AR quality. The importance coefficient of the AR elements ($C.I._{\cdot j}$) is presented by:

$$C.I._{\cdot j} = \frac{\sum_{i=1}^{n} x_{ij}}{\dfrac{\max_{j}(\sum_{i=1}^{n} x_{ij})}{2}} \tag{1}$$

where $\sum_{i=1}^{n} x_{ij}$ is the total score of each element's importance; x_{ij} the experts' assessments of each element's importance (1–5); n the number of experts (40); i an expert; j an element of the AR; $C.I._{\cdot j}$ the importance coefficient of the AR elements (for Croatian companies there are 44 AR elements, while for companies in other countries there are 43 AR elements). For example, in the research conducted by Pervan (2006), each of the AR elements has equal importance or there are some other subjective approaches. More appropriate is that importance coefficients for AR elements are defined according to the expert opinion, because it is considered a more objective criterion.

The next step in calculating the DQI refers to *(3) calculating the assessment quality of the AR (A.Q.ⱼ).* To obtain $A.Q._j$, it is necessary to know the individual existence of AR elements (1 = element exists in AR; 0 = element does not exist in AR):

$$A.Q._j = C.I._j \cdot the\ existence\ of\ element\ j \qquad (2)$$

where is: *the existence of element* $j \in \{0, 1\}$.

Next, to construct the DQI, it is necessary to calculate *(4) the overall quality of the AR*, which is the sum of the assessment quality of the AR. Finally, *(5) the disclosure quality index for annual reports (DQI)* is defined by the following expression:

$$DQI = \frac{[OVERALL\ QUALITY\ OF\ AR]}{[\max\ OVERALL\ QUALITY\ OF\ AR]} \cdot 100. \qquad (3)$$

The AR quality measures are: poor quality AR (DQI 0–20), low quality AR (DQI 21–40), average quality AR (DQI 41–60), sufficient quality AR (DQI 61–80) and high quality AR (DQI 81–100).

Afterwards, the nonparametric Kruskal-Wallis test is used to find the differences in ranks between listed companies in all countries measured by the DQI and relevant financial performance indicators.

Binary logistic regression is also estimated for each country in order to investigate if there is a dependence between the DQI and companies' financial performance indicators. Parameters are evaluated by iterative maximum-likelihood estimation (MLE) and Spearman correlation coefficients are calculated to find if there are significant correlations between the DQI and selected financial performance indicators for companies in all observed countries.

Further, the companies are ranked according to the DQI and selected financial performance indicators by applying the multi-criteria PROMETHEE method. Six possible types (usual, U-shape, V-shape, level, linear and Gaussian) of this preference function are proposed to the decision-maker (Brans & Mareschal, 1989; Brans & Vincke, 1985). The effective choice is made interactively by the decision-maker and the analyst according to the relevant literature and their evaluation of the intensities of preference. For each criterion, one of the six offered preference function types and their thresholds have been chosen according to their theoretical validity. In this way, the problem is completely prepared for the implementation of the PROMETHEE, as an appropriate method for such a multi-criteria and relatively weakly structured problem. Its advantages are in the possibility to define indifference and preference thresholds that have real economic importance. The final ranking is obtained by cumulating mutual comparisons of alternative pairs, according to all the criteria, into final leaving and entering flows, i.e., the final rank of alternatives.

After the companies' ranking is completed, the percentages of companies from each country are counted in 0–20 percentiles and in 80–100 percentiles.

5. Empirical results

The sample for evaluation includes randomly selected annual reports of companies from the Belgrade Stock Exchange (2013) (n = 30), Bucharest Stock Exchange (2013) (n = 30), Ljubljana Stock Exchange (2013) (n = 30), Montenegro Stock Exchange (2013) (n = 30) and Zagreb Stock Exchange (2013) (n = 30) Stock Exchanges. The disclosure quality index is used

Table 1. Important elements of annual reports with the importance weights and the number of companies that have appropriate annual report elements for transition companies.

| Elem.* | $C.I._j$*** | % of companies** | | | | | Elem.* | $C.I._j$*** | % of companies** | | | | |
		CRO	MNG	SERB	SLO	ROM			CRO	MNG	SERB	SLO	ROM
1	1.64	53	93	53	100	53	23	1.46	17	27	57	97	33
2	1.36	70	60	97	100	70	24	1.26	23	17	23	93	33
3	1.48	43	17	100	100	83	25	1.36	10	7	17	67	23
4	1.02	30	23	80	57	80	26	1.36	7	10	10	63	10
5	1.46	67	57	33	100	40	27	1.38	13	7	3	60	33
6	1.58	10	7	17	90	37	28	1.48	13	10	7	63	53
7	1.48	13	17	0	70	30	29	1.46	10	10	17	77	33
8	2	17	20	0	93	10	30	1.52	7	7	0	57	23
9	1.22	33	10	33	70	7	31	1.5	3	7	7	80	30
10	1.18	10	*	*	*	*	32	1.6	67	7	43	97	23
11	1.18	63	67	47	97	47	33	1.6	23	7	53	90	27
12	1.22	63	63	27	90	40	34	1.7	63	23	80	97	27
13	1.24	23	3	7	100	20	35	1.8	83	10	57	97	70
14	1.34	10	10	10	83	30	36	2	93	97	100	100	87
15	1.48	13	10	60	87	20	37	2	93	100	100	100	87
16	1.34	3	10	13	73	40	38	2	97	87	97	100	83
17	1.54	3	7	53	70	33	39	2	97	73	97	93	77
18	1.52	0	3	50	77	43	40	2	83	53	97	100	30
19	1.6	0	3	20	83	40	41	1.68	83	100	87	87	23
20	1.4	47	63	50	87	37	42	2	70	20	90	100	10
21	1.64	20	57	60	87	23	43	1.66	40	7	67	90	30
22	1.44	7	20	50	50	47	44	1.16	60	80	87	100	100

*Elements: 1-Executive summary and key financial indicators; 2-Company profile; 3-Business activities; 4-Short company review; 5-The most important achievements in the reporting year; 6-Position on the business market; 7-Report by the supervisory board; 8-Report by the management board; 9-Code of Corporate Governance (CCG); 10-Annual survey of the CCG; 11-Management board members; 12-Members of the supervisory board; 13-The authority of company bodies; 14-Organisational structure; 15-Expectations for future periods; 16-The mission and vision of the company; 17-Corporate strategy; 18-Relationship to stakeholder group - customers; 19-Relationship to stakeholder group - shareholders; 20-Major shareholders; 21-The report on the movement of company shares; 22-Relationship to stakeholder group – suppliers; 23-Relation to employees; 24-Structure of employees; 25-Corporate social responsibility; 26-Company contributions to economic prosperity; 27-Environmental protection; 28-Quality management; 29-Business environment risk; 30-Competition risk; 31-Industry risk; 32-Liquidity risk; 33-Business risk; 34-Accounting policies; 35-Financial indicators; 36-Balance sheet; 37-Income statement; 38-Cash flow statement; 39-Statement of changes in equity; 40-Notes in financial statements; 41-Responsibility for the financial statements; 42-Independent auditor's report; 43-Events after the balance sheet date; 44-Contact information.
**CRO-Croatia; MNG-Montenegro; SERB-Serbia; SLO-Slovenia; ROM-Romania.
***$C.I._j$- The importance coefficient of the annual report elements.
Source: Calculated according to data from: http://www.belex.rs; http://www.bvb.ro; http://www.ljse.si; http://www.montenegroberza.com; and http://www.zse.hr.

for comparative analysis of annual report disclosure quality of listed companies in transition countries (Croatia, Montenegro, Romania, Serbia and Slovenia). For listed companies in transition countries, all important annual report elements are observed. The observed elements are presented in Table 1. Table 1 also shows the importance of observed elements and their existence reported in relative values (% of companies with observed element). The results indicate that the existence of elements within the annual report in transition countries, except Slovenia, is not sufficient and that presented annual reports are not transparent enough to provide essential information about the company's performance. Based on the quality of information presented in the annual reports, users of annual reports in Croatia, Montenegro, Romania and Serbia cannot make adequate decisions about company performance. Companies in Slovenia have all annual reports of sufficient or high quality (Table 2).

The average disclosure quality of annual reports for Slovenian companies is 85, so it can be concluded that Slovenian companies have a high quality of annual reports. Croatian

Table 2. Quality of annual reports for listed companies of transition companies.

DQI	Quality of annual report	Croatia		Montenegro		Serbia		Slovenia		Romania	
		No	%	No	%	No	%	No	%	No	%
0–20	Poor	3	10	4	13	0	0	0	0	9	30
21–40	Low	8	27	22	73	5	17	0	0	7	23
41–60	Average	16	53	1	3	21	70	0	0	7	23
61–80	Sufficient	3	10	3	10	4	13	10	33	4	13
81–100	High	0	0	0	0	0	0	20	67	3	10
Total		30	100	30	100	30	100	30	100	30	100

Source: Calculated according to data from: http://www.belex.rs; http://www.bvb.ro; http://www.ljse.si; http://www.monte-negroberza.com; and http://www.zse.hr.

Table 3. Results of the Kruskal-Wallis test for listed companies in the selected countries.

Test variable	Mean ranks					Kruskal-Wallis test p-value
	Croatia	Montenegro	Serbia	Slovenia	Romania	
Disclosure quality index	65.60	41.13	79.95	132.25	58.57	<0.001
Return on assets (ROA)	66.47	65.17	93.42	65.00	72.89	0.057
Return on equity (ROE)	60.93	54.30	94.15	69.80	86.93	0.001
Debt ratio	84.13	55.67	78.31	51.63	102.29	<0.001
Coefficient of own funding	66.17	105.33	75.63	64.87	65.50	0.001
Net profit margin	77.77	71.55	60.26	69. 39	72.77	0.591

Source: Tested according to data from: http://www.belex.rs; http://www.bvb.ro; http://www.ljse.si; http://www.monte-negroberza.com; and http://www.zse.hr.

(average DQI = 43), Romanian (average DQI = 41) and Serbian (average DQI = 49) companies have an average quality of annual reports, measured by the disclosure quality index. Companies from Montenegro have on average a low quality of annual reports (average DQI = 33). A low level of annual report disclosure quality has a significant influence on investors' decisions, since the lack of relevant information increases the risk of investing in a particular company. Moreover, low quality of annual reports will discourage investors from investing 'fresh' capital, which may lead to business viability issues for the companies. Although the task of the annual report is to reduce the negative effects of information asymmetry, according to these results this is not achieved in the case of Croatian, Montenegrin, Romanian and Serbian companies.

Voluntary disclosure is usually explained by signalling theory. The theory argues that the most profitable companies provide the market with more and better information. Voluntary disclosure signals the management's desire to disclose its superior performance to external parties, because it will enhance the reputation of the company and its position in the market. Therefore, the selection of profitability indicators is based on the expected positive relationship between profitability and quality of disclosed information (Pervan, 2006). Similarly, the leverage ratios are used since, considering the economic situation in the transition countries, it is expected that companies, which are indebted, publish less information (Einhorn, 2007). The nonparametric Kruskal-Wallis test is used to test the differences between listed companies according to the calculated DQI and relevant financial indicators: return on assets (ROA), return on equity (ROE), debt ratio, coefficient of own funding and net profit margin. Table 3 shows that there are significant differences in ranks between listed companies in all countries measured by the DQI, return on equity, debt ratio and coefficient of own funding.

Table 4. Types of preference function, weights and companies' ranking according to the DQI and selected financial performance indicators by the multi-criteria Promethee II method.

CRITERIA				Criteria		
	ROA	ROE	Debt ratio	Coefficient of own funding	Net profit margin	Disclosure quality index
Min/Max and Type	max**	max**	min*	min*	max**	max**
Indifference/Gaussian Threshold	0.05	0.01	0.50	0.50	0.50	0.50
Weight	16.3	16.3	16.3	16.3	16.3	18.5
				Number of companies in %		
		Croatia	Montenegro	Serbia	Slovenia	Romania
Percentiles 0–20:		3	7	10	73	7
Percentiles 80–100:		17	13	17	0	53

**Gaussian preference function; *U-shape preference function.
Source: Calculated according to data from: http://www.belex.rs; http://www.bvb.ro; http://www.ljse.si; http://www.montenegroberza.com; and http://www.zse.hr.

Also, the difference measured by return on assets is significant at the 0.10 level. Slovenian listed companies have the highest disclosure quality index. Serbian listed companies have the highest return on assets and return on equity, while Romanian listed companies are the most indebted. Companies in Montenegro have the largest coefficient of own funding.

Binary logistic regression for each country is also estimated in order to investigate if there is a dependence between the DQI and companies' financial performance indicators. The analysis indicates that there are no significant odds ratios, so the parameters that are not significant are not presented. Only Slovenian companies' profitability odds ratios are significant at p-value 0.10, i.e., Slovenian companies with high profitability have a greater probability of high DQI. These results are confirmed by Spearman correlation coefficients. It is concluded that there are no significant correlations between the DQI and selected financial performance indicators for companies in all countries, except in Romania where there is a negative and significant correlation (p-value 0.045) between ROA and DQI.

Further, the companies are ranked according to DQI and selected financial performance indicators by the multi-criteria PROMETHEE method. The group of alternatives consists of 150 companies in five transitional countries which are compared according to the five observed financial criteria and DQI. The types and weight values of all indicators are shown in Table 4. The sum of all criteria values is equal to 100. The disclosure quality index dominates over the financial criteria. Other criteria are at similar weights. Such criteria weights reflect the fact that high quality annual reports and their good presentation to users can contribute significantly to a company's success and interest from potential investors. After the analysis has been carried out, the final ranking of alternatives is conducted, based on the indicators and percentages of companies from the analysed countries, in 0–20 percentiles and in 80–100 percentiles. These are given in Table 4. It can be noticed that up to the 20th percentile, Slovenian companies (73%) dominate.

On the other hand, companies with lower performance indicators and DQI (80th–100th percentile) are mainly from Romania (53%). In this group, there are no Slovenian companies.

6. Conclusion

The main purpose of the article has been to analyse the disclosure quality of annual reports for listed companies in selected European transition countries. This has been achieved by

constructing a specific disclosure quality index and by conducting a comparative analysis of annual report disclosure quality for listed companies in transition countries. A ranking method represented by the multi-criteria PROMETHEE method is also used. By combining the existing ranking methodologies, originating from different quantitative disciplines, a new approach is presented that provides an excellent basis for comparative analysis of annual report disclosure quality for listed companies, which is quite important for potential investors. The quality of annual reports for Slovenian listed companies is estimated as sufficient and high, measured by the disclosure quality index. Croatian and Serbian listed companies have an average quality of annual reports, Montenegrin listed companies have a low quality, while Romanian listed companies have a poor quality of annual reports on average. Based on the nonparametric Kruskal-Wallis test, it is concluded that there are differences between selected listed companies in transition countries regarding the disclosure quality index and appropriate financial performance indicators. Slovenian companies have the highest DQI, while Romanian companies use the highest financial leverage.

Company ranking by the PROMETHEE method according to the disclosure quality index and relevant financial performance indicators shows that the most successful and transparent companies are in Slovenia. Romanian companies have the poorest performance and the poorest quality DQI. In Slovenia, the disclosure quality of financial reporting (using annual reports) is more harmonised with EU requirements than in other analysed EU member countries (Croatia and Romania) as well as other potential candidate countries (Montenegro and Serbia). Companies should pay more attention to elements within the report and the amount of information they provide. The most important information that companies from Croatia, Montenegro, Romania and Serbia did not provide in the annual reports consists of: position on the business market; reports of supervisory and management boards; organisational structure; expectations for the future; relations to employees; structure of employees; corporate social responsibility; company contributions to economic prosperity; environmental protection; business risks; and independent auditor reports. Also, events after the balance sheet date for Montenegrin and Romanian companies have not been published. Regardless of the fact that in the area of financial reporting and auditing all countries have adopted appropriate accounting acts and standards, the obtained results showed that there are significant differences in the disclosure quality of annual reports between the observed countries. The reasons for this difference can be found in the overall business environment, as well as in the difference in EU membership status and socio-political characteristics. Namely, Slovenia has the longest EU membership and has the greatest democracy score level (1.39) measured by Freedom House for Nations in Transit (the democracy scores represent the socio-political characteristics and are based on a scale of one to seven, with one representing the highest level of democratic development, and seven representing the lowest), while others countries have similar score levels, ranging from 3.46 to 3.89 (Freedom House, Nations in Transit, 2014) (correlation coefficient between DQI and democracy score level is -0.971; p-value 0.006). These findings could be of interest not only to potential investors but also to the management and regulators in the process of financial reporting quality improvement.

In order to make an in-depth analysis of annual report disclosure elements, the data-set was restricted to 30 companies from each transition country. Although this restriction is made, the results are considered to be relevant because the sample selection was random. Also, future research could be extended by including other transition countries in the analysis, a larger number of listed companies and some other potentially relevant variables.

In order to increase capital market efficiency, it is certainly time for Croatian, Montenegrin, Romanian and Serbian companies to better consider annual report disclosure quality for potential investors. Therefore, in the future, more effort should be spent on improving the quality of annual reports and enhancing their transparency level.

Note

1. The research was conducted in 2012 and it included a written survey distributed to the sample of 40 accounting and finance experts and scientists from Croatian universities. In Croatia, there were 42 institutions providing an Economics programme. Among them there were 15 faculties of economics (with appropriate Departments of Accounting and/or Finance) where the sample size of 40 scientists assures a margin of error less than 0.05. Respondents were evaluating particular aspects using a 1–5 Likert scale (1 = negative grade; 5 = excellent grade), as is usual in all levels of the Croatian education system and for social research.

Disclosure statement

No potential conflict of interest was reported by the authors.

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