

# Transparency of Audit Firms in Croatia

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**Abstract**—The aim of this paper is to raise general awareness of transparency importance for audit firms and for audit services' users. This paper analyzes transparency of audit firms that audited financial statements of listed companies, for year 2011 and 2012. We use this two years because in the meantime Code of Ethics for Professional Accountants has been adopted. This paper investigates whether transparency reports of audit firms are in accordance with the Croatian Audit Act and whether there is a difference on transparency in observed years. For this paper quality index of transparency report and financial indicators of audit firms are used to get conclusion about condition of audit firms transparency reporting. Results of our study indicate that audit firms are not fully transparent, looking for both years. Transparency of audit firms in 2012 has improved significantly, compared with transparency in 2011.

**Keywords**—Transparency report, Index quality of transparency report, Croatian Audit Act, Code of Ethics for Professional Accountants.

## I. INTRODUCTION

THE role of auditor is to reduce asymmetry of information between principal and agent. Principal cannot perfectly monitor or control agent, which results losses of company's values. In a situation where external users cannot rely on accuracy of transmitted information reporting, auditor has a big role. Auditors confirm or reject the value of provided information, which affects credibility of the same. Consequently, users of financial statements have a great benefit from audit firms. Certainly, they should have confidence in them. For this reasons, it is important transparency of audit firms. Transparency of information is related to an environment of accessible and understandable information to all market participants. The key subject in terms of greater transparency is the impact of information users' perception. What is really important is responsibility of audit firms, their transparency and full disclosure. Distrust of users in audit profession is created thanks to crises in capital markets and numerous corporate scandals. Therefore, transparency of audit firm is the best tool in prevention of disloyal conduct on capital and audit market. In order to increase liability of audit firms to the public, the Croatian Audit Act (Act) defines obligation of publishing transparency report for companies of public interest. Transparency report should present audit firm's operations and provide a transparent view of condition thereof. This paper investigates quality of audit disclosures through a system of transparent reporting. Primarily, it assesses the level of audit firm compliance with requirements of transparent reporting set by the Act. Secondly, it investigates quality of published reports

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for two years. Finally, quantitative and statistical analyses are used to make conclusions about transparency reporting of audit firms. The sample of this study is audit firms that audited Croatian listed companies for 2011 and 2012. The remainder of the paper is structured as follows. Section two provides brief literature review on the issue. Third section discusses about transparency report as a part of the Act. Importance of Code of Ethics for Professional Accountants (Code) is provided in section four. Section five describes construction of the quality index of transparency report for audit firms (IQTR). The results of empirical research are provided in the next section. The paper ends with concluding remarks.

## II. LITERATURE REVIEW

Auditor disclosure is critical for functioning of an efficient audit market. Audit firms provide disclosure through transparency report. In addition, some audit firms engage in voluntary communication. Transparency reporting by audit firms, such as envisaged by the 8th Directive, has a significant role to play in encouraging audit quality. It helps investors and the potential buyers of audit services to understand strengths of a particular audit firm [12]. Transparency may improve audit quality, yet transparency of audit firms alone may not exclusively improve audit quality. Audit quality is difficult to define and evaluating audit quality is subjective; therefore, disclosure of more information is not a guarantee that behavior will change. Nevertheless, additional disclosures may provide significant benefits and more objective information to investors, audit committees, regulators and other stakeholders when evaluating audit quality among audit firms and engagement teams while making decisions. Transparency may improve the availability and delivery of audit services, but other factors exist that transparency alone may not resolve. For example, other barriers to entry may prevent audit firms from acquiring the human resources and expertise necessary to offer the wide geographical reach, as well as the technical competences, required by larger public companies. As a result, additional transparency may confirm that larger audit firms are best suited to serve large public companies [13]. Increased transparency of audit firms will make it easier to identify potential problems and take corrective actions on time and thus enhance audit quality and ensure continuity of delivery of audit services [6]. Increased audit firm transparency will benefit all stakeholders, including investors, and increase their confidence in the current financial reporting regime [5]. Ehlinger investigated determinants of publication of transparency report for Austria, Germany and the Netherlands. For the empirical analysis, author estimated the extent of disclosure in 125 transparency reports based on a self-developed disclosure index. He focused on reports published by Austrian, German and Dutch auditors for reporting period

from 2007 to 2008 under the mandatory reporting regime introduced by Article 40 of the Directive as implemented in the respective jurisdiction's national law. He used OLS regressions in order to test whether the extent of disclosure in the transparency reports differs across abovementioned jurisdictions and reporting periods, and in order to test whether the extent of disclosure varies depending on the size of the reporting entity and membership in a network. Author also tested for variation in the extent of disclosure in transparency reports between non-'Big Four' and 'Big Four' audit firms. Finally, he tested for such variation depending on the degree of integration and the geographic spread of a disclosed network among reports that were published by network members. Using descriptive statistics and multivariate analysis, author observed following: difference between the observed countries in terms of quantity of the given information; difference between the annual periods in the quality of the information provided; positive correlation between company size and the extent of the information; differences between the 'Big Four' and other companies from releasing information; existence of a relationship between audit firm size and auditor independence; differences between companies that are members of the network and those that are not members of the network [4]. Pott, Mock & Watrin investigated effect of transparency report on auditor independence. Results of the research indicate that there is no significant perceived difference as to whether the transparency report is mandatory or voluntary or whether the report is audited or not. This is because most of the auditors did not look at the transparency report as a means of communicating with users of information, but as an obligation that they must fulfilled [11]. Deumes, Schelleman, Vander Bauwhede, Vanstraelen investigated whether audit firm governance disclosure is associated with actual audit quality. Based on a sample of transparency reports for 103 audit firms in a number of EU countries, they find that there is variation in the extent and type of governance disclosures across audit firms. They, however, do not find an association with actual audit quality, apart from a weak association with an audit firm's statement on the effectiveness of its internal quality control system [3]. Palmer examines relationships between the use of a higher quality ('Big Four') audit firms and the extent and quality of annual report disclosure. Results support the hypothesis that companies using a higher quality auditor will have more adoption information than clients of lower quality auditors [8]. Petersen and Zwirner make conclusion of research that if the amount of available information to the public increases, customer confidence also increases. Also, they noted that audit firms every year repeat last year's statement and this does not lead to any progress in information to any real control [7]. Pivac and Ćular conducted analysis of audit firms that perform audit of listed companies. They conclude that increase of information through voluntary disclosure is the only way for small audit firms to carry on with competition [10].

### III. TRANSPARENCY REPORT IN CROATIA

Transparency report is an attempt to approach audit profession to the public, especially for public interest companies. If transparency of audit firms is higher, confidence between auditors and users of audit services is higher. The audit firms and independent auditors that carry out audits of public-interest entities (companies whose securities are quoted on the stock exchange in the first quotation or in the public companies quotation; banks and other financial institutions; companies of the special state interest, the registered capital of which exceeds 300,000,000 kuna, in accordance with the decision of the Government of the Republic of Croatia on the listing of companies of the special state interest) shall publish on their websites or websites of the Croatian Audit Chamber (Chamber), within three months of the end of each business year, annual transparency reports that include the following [2]: a description of the organizational structure; a description of the ownership structure; a description of the network and the legal and structural arrangements in the network; a description of the governance structure of the audit firm; a description of the internal quality control system of the audit firm; an indication of when the last quality assurance review is referred; a list of public-interest entities; statement relating to the independence of auditors; a statement on the policy followed by the audit firm and the independent auditor concerning the continuing education of certified auditors; overall financial information; information concerning the basis for remuneration of certified auditors who sign audit reports on audits of public-interest entities.

The aim of this kind report publication is to improve transparency of auditing profession.

### IV. CODE OF ETHICS FOR PROFESSIONAL ACCOUNTANTS

Audit shall be carried out in an autonomous, independent and objective manner, in accordance with Audit Act, International Auditing Standards, translated and published by the Chamber, rules of the auditing profession and other rules and regulations, observing the Code of Professional Ethics for auditing profession [1]. In accordance with this Act, the Chamber published a revised Code of Ethics for Professional Accountants. The Code has been updated on the basis of the Code, issued by International Ethics Standards Board for Accountants, applied in January 2011. The importance of the Code is that introducing the ethical principles and rules of audit profession has improved audit profession and communication to users of audit services (in order to gain confidence in audit profession) [1]. The greatest innovation of the new Code for audit firms is in stricter independence requirements. Also, the Code defines protection measures of auditing profession and transparency of reporting to the public through: education, professional development, compliance with corporate governance rules, monitoring professions, external inspection of reporting and communication with public. As we can see, all of these elements are part of transparency report and point out the importance of the same. For the audit profession in Croatia is a great challenge to

accept presented ethical rules and guidelines. This is the only way to protect interests of professional accountants, their users and public interest. Code affects on the protection of public interest, through transparent reporting, that can be seen in the research results.

#### V. QUALITY INDEX OF TRANSPARENCY REPORT (IQTR)

Quality index of transparency report was created with a five stages [10]: evaluating the importance of transparency report (TR) element; calculating the importance of transparency report element; assessing the quality of transparency report; calculating overall quality of transparency report and creating IQTR of audit firms. First, the study is conducted to assess the importance of TR elements (score 1: transparency report element is not important; score 2: transparency report element is important), evaluated by relevant experts (certified auditors from Croatia and audit professors from Faculty of Economics in Zagreb and Split). In order to gain weight, it is necessary to compute the importance of each transparency report element (weight 1: element is not so important for the quality of transparency report; weight 2: element is extremely important for the quality of transparency report).

The weight of element importance is shown in Table V. After that it is important to know individual persistence of TR elements (value 1: TR element exists; value 0: TR element does not exist). Assessment of transparency report quality is obtained by the importance of TR element multiplied by the individual persistence of TR element. To reach the IQTR, it is necessary to calculate overall quality of transparency report, which is the sum of transparency report quality assessment.

Finally, the quality index of transparency report of audit firms is obtained by dividing the overall quality TR by the maximum value of the overall TR quality.

#### VI. COMPARATIVE ANALYSIS OF AUDIT FIRMS TRANSPARENCY IN CROATIA

The sample is audit firms who audited Croatian listed companies (looking for 190 listed companies in 2011 and 198 listed companies in 2012). First, we start with audit firms that must annually review and publish audit reports.

TABLE I  
'BIG FOUR' AND OTHER AUDIT FIRMS: WHO AUDITED FINANCIAL STATEMENTS IN 2011 AND IN 2012?

	No. 2011.	% 2011.	No. 2012.	% 2012.	
'Big Four'	54	28.4	57	28.8	Pearson Chi-Square (p-value)
Audit firms	128	67.4	137	69.2	
No information	8	4.2	4	2.0	
Total	190	100.0	198	100.0	

Looking at Croatian stock exchange, we conclude, that 54 companies in 2011 or 57 companies in 2012 are audited by 'Big Four'. Other companies are audited by other audit firms (67.4% in 2011 or 69.2% in 2012), registered on the Chamber. For 8 companies in 2011 (or for 4 companies in 2012) there is no information whether and by whom the audit is done.

Descriptive results about who audited financial statements for Croatian listed companies are presented in Table I. Also, using Pearson Chi-Square, we can conclude that there is no difference in segment who audited Croatian listed companies for both years (using p-value of 60.6%).

All listed companies are audited by 57 audit firms in 2011 or 54 audit firms in 2012. All audit firms who audited listed companies are obliged to publish transparency report, according to the Croatian Amended Audit Act. In 2011 64.9% audit firms created and publish transparency report (in 2012, we have 70.4% of available transparency reports), while 35.1% audit firms did not prepare and publish transparency report in 2011 (in 2012, we have 29.6% non-available transparency reports). Availability of transparency report in 2011 and 2012 are presented in Table II. Also, using Pearson Chi-Square we can conclude that there is no difference in availability for both years (using p-value of 29.1%).

TABLE II  
AVAILABILITY OF TRANSPARENCY REPORT FOR BOTH YEARS

	No. 2011	% 2011	No. 2012	% 2012	Pearson Chi-Square (p-value)
TR is available	37	64.9	38	70.4	0.291
TR is not available	20	35.1	16	29.6	
Total	57	100.0	54	100.0	

One audit firm, (includes 'Big Four' and other audit firms) in total average, audited 3.19 listed companies in 2011 (in 2012 audited 3.59 listed companies). 'Big Four' audited on average 13.50 listed companies in 2011 (in 2012 audited 14.25 listed companies). Other audit firms audited on average 2.41 listed companies in 2011 (in 2012 audited 2.74 listed companies). Average number of audited listed companies regarding total average, 'Big Four' average and other audit firms' average are presented in Table III.

TABLE III  
AVERAGE NUMBER OF AUDITED LISTED COMPANIES

	Average Total		Average 'Big Four'		Average Audit firms	
Year	2011	2012	2011	2012	2011	2012
N	57	54	4	4	53	50
Mean	3.19	3.59	13.50	14.25	2.41	2.74

Croatian Amended Audit Act defines that transparency report can be published on the website of audit firm or on Chamber website. Using this information, it is important to know how many audit firms issued their reports in one of two ways. Table IV shows that 73% of audit firms published their transparency reports on their websites in 2011 (in 2012, 68.4% of audit firms published their transparency reports on their websites). On the other side, 27% of audit firms published their transparency reports on the Chamber website in 2011 (in 2012, 31.6% of audit firms published their transparency reports on the Chamber website).

TABLE IV  
WHERE IS TRANSPARENCY REPORT AVAILABLE FOR BOTH YEARS, FOR 37 OR 38 AUDIT FIRMS?

	No. 2011	% 2011	No. 2012	% 2012	Pearson Chi-Square (p-value)
Website of audit firm	27	73.0	26	68.4	0.160
Website of Chamber	10	27.0	12	31.6	
Total	37	100.0	38	100.0	

Croatian Amended Audit Act defines transparency report elements. It is very important to see how many audit firms have the same transparency report element (Table V).

TABLE V  
NUMBER OF AUDIT FIRMS THAT DON'T HAVE TRANSPARENCY REPORT ELEMENT FOR BOTH YEARS WITH THE WEIGHT OF ELEMENT IMPORTANCE

TR element	I.E.j	No. 2011	%	No. 2012	%
1	1.43	1	3%	0	0%
2	1.66	8	22%	2	5%
3	1.54	11	30%	0	0%
4	1.54	5	14%	1	3%
5	1.71	1	3%	0	0%
6	1.66	15	41%	7	18%
7	1.49	0	0%	0	0%
8	1.71	2	5%	0	0%
9	1.54	4	11%	0	0%
10	1.49	3	8%	3	8%
11	1.37	5	14%	1	3%

Looking for TR elements, we can conclude that there is a better situation in 2012. In both years, we have especially problems with TR element No. 6 (an indication of when the last quality assurance review referred). Looking for the weight of element importance, the most important TR elements are (with weight of importance of 1.71): a description of the internal quality control system of audit firm (No. 5) and a statements relating to auditors independence (No. 8).

Looking for audit firms' transparency in Croatia for both years, we can conclude as follows (Table VI):

- 21.6% of audit firms have all important transparency report elements in 2011, i.e. we have 8 transparent audit firms;
- 68.4% of audit firms have all important transparency report elements in 2012, i.e. we have 26 transparent audit firms;
- 78.4% of audit firms do not have all important transparency report elements in 2011, i.e. we have 29 non-transparent audit firms;
- 31.6% of audit firms do not have all important transparency report elements in 2012, i.e. we have 12 non-transparent audit firms.

TABLE VI  
TRANSPARENT AND NON-TRANSPARENT CROATIAN AUDIT FIRMS FOR BOTH YEARS

	No. 2011	% 2011	No. 2012	% 2012
Transparent	8	21.6	26	68.4
Non-transparent	29	78.4	12	31.6
Total	37	100.0	38	100.0

Transparency of audit firms in 2012 has improved significantly, compared with transparency in 2011.

To make cluster analyze for both years, it is important to use some indicators from transparency report:

- Created index quality of transparency report;
- Income from audit services of audit firms;
- Total income of audit firms.

TABLE VII  
AVERAGE INCOME FROM AUDIT SERVICES, TOTAL INCOME OF AUDIT FIRMS AND PROPORTION FOR BOTH YEARS

2011	Income from audit services: 2011	Total income of audit firms: 2011	Proportion*
Average Total	5.071.171	8.278.916	61%
Average Audit firms	2.560.797	3.615.017	71%
Average 'Big Four'	28.467.715	52.507.908	54%
2012	Income from audit services: 2012	Total income of audit firms: 2012	Proportion*
Average Total	6.142.465	9.578.744	64%
Average Audit firms	2.964.881	3.835.970	77%
Average 'Big Four'	30.768.750	54.085.250	57%

\* share of income from audit services in total income of audit firms.

Looking at Table VII, we can generally conclude that there is no significant difference between both years. Important result is that share of income from audit services in total income of audit firms is significantly higher for audit firms than for 'Big Four' audit firms. We can conclude that auditing is not the only primary business activity for 'Big Four'.

The classification of selected audit firms is performed using non-hierarchical multivariate cluster k-means method [9]. We use mentioned financial indicators and IQTR.

The result of classification into two clusters is shown in Table VIII, for 2011. As we can see, the first cluster contains 4 audit firms and second cluster contains 33 other audit firms. It is important to note that in first cluster there are three 'Big Four' audit firms and one non-'Big Four' firm. In first cluster there is one 'Big Four' firm missing, because this firm does not have available transparency report, at the moment of writing this paper.

On the other side, Table IX shows result of classification into two clusters, for 2012. The first cluster contains 5 audit firms ('Big Four' and one non-'Big Four' firm) and the second cluster contains 34 other audit firms.

TABLE VIII  
CLASSIFICATION OF SELECTED AUDIT FIRMS IN 2011

**Cluster 1:** BTD d.o.o.; Deloitte d.o.o.; Ernst & Young d.o.o.; KPMG d.o.o..

**Cluster 2:** Audit d.o.o.; Auditus d.o.o.; Ažurnost d.o.o.; Bašrevizor d.o.o.; BDO d.o.o.; Concordia d.o.o.; DTTC d.o.o.; Grant Thornton d.o.o.; HLB d.o.o.; Hodicon d.o.o.; IB revizija d.o.o.; IHS d.o.o.; Invest-kontakt d.o.o.; Iris nova d.o.o.; KM Revizija d.o.o.; Konto-L d.o.o.; Kopun d.o.o.; List d.o.o.; Mervis d.o.o.; Reconsult d.o.o.; Remira d.o.o.; Rev-ri d.o.o.; Revconto d.o.o.; Revex d.o.o.; Revicon Zadra d.o.o.; Revicon Zagreb d.o.o.; Revidas d.o.o.; Revidens d.o.o.; RIR d.o.o.; Revizija Kutleša d.o.o.; Spremić, Kasapović, Teklić d.o.o.; Šibenski Revicon d.o.o.; TBB\*REV d.o.o.

ANOVA

INDICATORS	F-test p-value
Total income of audit firms	.000
Income from audit services	.000
I Q T R	.762

TABLE IX  
CLASSIFICATION OF SELECTED AUDIT FIRMS IN 2012

<b>Cluster 1:</b> Discordia d.o.o.; Deloitte d.o.o.; Ernst & Young d.o.o.; KPMG d.o.o.; PWC d.o.o.	
<b>Cluster 2:</b> Audit d.o.o.; Ažurnost d.o.o.; Bašrevizor d.o.o.; BDO d.o.o.; Budimir revizija d.o.o.; Consaltum Komparić d.o.o.; DTTC d.o.o.; Fair audit d.o.o.; Hodicon d.o.o.; IHS revizor d.o.o.; Interexpert d.o.o.; Invest-kontakt d.o.o.; Iris nova d.o.o.; KM Revizija d.o.o.; Konto-L d.o.o.; Kopun d.o.o.; List d.o.o.; Mervis d.o.o.; Prokura revizija d.o.o.; Reconsult d.o.o.; Refinal d.o.o.; Remira d.o.o.; Reveonto d.o.o.; Rev Ri d.o.o.; Revex d.o.o.; Revidas d.o.o.; Revidens d.o.o.; Revidicon d.o.o.; Revinvest d.o.o.; Revis d.o.o.; Revizija i računovodstvo d.o.o.; Spremić, Kasapović, Teklić d.o.o.; Šibenski Revicon d.o.o.	
ANOVA	
INDICATORS	F-test p-value
Total income of audit firms	.000
Income from audit services	.000
I Q T R	.178

For both years, ANOVA test result that income from audit services and total income of audit firms contribute significantly to differences between formed clusters (p-value of both indicators are about 0%). IQTR does not contribute significantly to difference between formed clusters (p-value of IQTR for 2011 is 76.2% and p-value of IQTR for 2012 is 17.8%).

## VII. CONCLUSION

The research provides a significant conclusion, looking for both years. In both years, it has been proven breach of legal provisions by audit firms. Analyzing who audited financial statements for Croatian listed companies, we can conclude that there is no difference in segment who audited these companies for both years. Also, approximately 1/3 companies are audited by 'Big Four', for both years. For 4.2% listed companies in 2011 there is no information whether and by whom the audit is done and what are the results of auditing. In 2012, for only 4 listed companies there is no information about auditor. Looking for number of audit firms, that audited listed companies, we use 57 audit firms in analyze in 2011 or 54 audit firms in 2012. In 2011, approximately 2/5 transparency reports are not available, or 1/3 in 2012. Looking for average number of audited listed companies, we can conclude that 'Big Four' audited significantly increasing number of Croatian listed companies. In 2011, only 1/5 audit firms were transparent, when observing transparency report elements. On the other side, we have a better situation in 2012, i.e. 68.4% audit firms are transparent. For this paper, we use quality index of transparency report to get conclusion about transparency of audit firms. This index we use in formed cluster analysis with other financial indicators, such as total income of audit firms and income from audit services. In both years, clusters are formed only for financial indicators. General conclusion is that in both years we have audit firms that are not in accordance with Croatian Audit Act. But, situation has changed after using Code of Ethics for Professional Accountants and we can conclude that audit firms are more transparent in 2012.

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