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DOES THE AUDITOR'S SIZE INFLUENCE THE GOING CONCERN ASSESMENT? – THE CASE OF CROATIA

From the beginning of the new millennium, a number of accounting scandals involving audit firms have occurred. The accounting scandals involving well known Big Four audit firms have particularly been echoing in the media, which puts pressure on them and can make them more conservative in their judgements. One of the significant assumptions that auditors must assess is that of going concern of the audited entity. Existing studies from different countries and conducted for different time periods on whether the size of the auditor affects going concern uncertainty statement, do not show unique results, which implies that there are time and location specifics. Since, to the best of our knowledge, there is no such research for Croatia, the purpose of this article is to analyse on a sample of Croatian companies whether there is a significant difference between the propensity of Big Four and non-Big Four auditors to express going concern uncertainty. A sample of large financially troubled, but not bankrupt manufacturing companies, is used. The findings of our study show that there is no significant difference in stating going concern uncertainty between large international audit firms (Big Four) and smaller auditors.

Keywords: audit, going concern assumption, Big Four, accounting

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1. INTRODUCTION

The going concern assumption is a basic assumption underlying mandatory financial reporting in many financial reporting frameworks. This is the case with International Financial Reporting Standards (IFRS) where the IFRS Conceptual framework (CF) states that, if this assumption cannot be applied, it should be explained on what other basis the financial statements have been prepared (IFRS Foundation, 2018, p.23). The going concern assumption is also part of International Accounting Standard 1 (IAS1) *Presentation of Financial Statements*, which explains how to assess whether this assumption is met. National standards also include such an assumption, for example the Croatian Financial Reporting Standards, paragraph 1.3.1.

An entity or organization is considered going concern if it will continue its operations into the foreseeable future at least, or in perpetuity. Going concern implies that the entity is not at risk of bankruptcy or even significantly reducing the scale of its operations, whether voluntary or involuntary. Although the theoretical concept of going concern is relatively easy to understand, it is often problematic to determine in practice when an entity's continued existence is under question. In this case the management should disclose that possibility in the notes to the financial statements. According to Eickemeyer & Love (2016, p.6), at the moment when questions about an entity's ability to continue to operate into the future start, there is a very real possibility of creating a self-fulfilling prophecy. Such a disclosure might lower the chance of getting loans and lead to the loss of customers, thus endangering the continuation of the entity. In the end, there is the possibility that the entity will have to dispose of its operating assets outside the normal course of business in order to meet its obligations, which will ultimately lead this entity out of business. That is why the management can be averse to admitting that an enterprise might not be able to continue as going concern. Ryu & Roh (2007, p. 99) explain the importance of auditors in such situations: "As an intermediary between prepares and users of financial statements, the auditor's most fundamental judgment is in the evaluation of a client's ability to continue to operate as a going concern".

According to International Standard on Auditing 570 (ISA 570), auditors must assess whether the company is going concern (going concern assumption), that is to say, whether they believe that the company will continue to operate in its current form in the future, with a minimum time frame of twelve months. If the auditor questions the company's ability to survive, they should express a going concern uncertainty (GCU) in the audit report, meaning that there is an increased risk of business failure on the part of their client (ISA 570). The going-concern assessment is a matter of auditors' professional judgment, and under IAS No. 570, auditors are required to report based on their knowledge of the client at the time

of reporting. Davis (2010, p.37) stresses the following problems the auditors face: "Auditors are placed at the center of a moral and ethical dilemma: whether to issue a going-concern opinion and risk escalating the financial distress of their client, or not issue a going-concern opinion and risk not informing interested parties of the possible failure of the company. Conversely, the lifting or resolution of a going concern condition should hopefully signal to the financial community that the company has resolved their financial difficulties." If the auditor fails to properly include relevant information in making this judgment, a Type I or Type II error is more likely to occur. A Type I error occurs when an auditor expresses GCU to a client that subsequently remains viable (i.e., does not declare bankruptcy), while a Type II error occurs when an auditor fails to express GCU to a client that subsequently declares bankruptcy. While there are costs to both types of errors, legislators have predominantly been concerned with Type II errors because in these cases, investors are not forewarned of impending business failure (Geiger, Raghunandan & Rama, 2006). From an auditor's perspective, the cost of making a Type II error can be quite high and the statement of a GCU to a financially distressed client may protect an auditor from these potential costs. However, "auditors' decision whether or not to issue a going concern opinion is a question of competence as well of independence, and can be characterized as a two-stage process" (Vanstraelen, 1999). First, auditors should have competence to identify a company with going concern problems, and secondly the auditors should be independent and report about these findings.

Previous studies claim that "professional auditor is indeed widely perceived as being competent, and regarding the potential going concern qualification there is experimental evidence to support this contention, but with respect to independence researchers are less sanguine: because auditing suffers from what may be described as 'built-in anti-independence factors'" (Citron & Taffler, 1992, p.337). Citron & Taffler (1992, p.337) select from the literature the following factors that may reduce independence in the case of GCU:

- the value of the auditor's economic interest in the client;
- the likelihood that this economic interest will be lost either due to the client switching auditors or the failure brought about by the GCU itself (self-fulfilling prophecy);
- the likelihood that the client will sue if the report is qualified and the client does not fail.

Large auditors are often perceived to be more credible and independent, thus being able to provide a better audit quality compared to their smaller competitors. The reasons for this conclusion are that "no single client is important to larger accounting firms and, hence, larger accounting firms are less likely than smaller accounting firms to compromise their independence" (Foroghi & Shahshahani,

2012, p. 1093). Another fact is that reputational damages caused by a substandard audit would be significantly larger for large public accountants. In spite of the existence of many previous studies which include an indicator variable to recognize whether the audit opinion is issued by a large audit firm (Big N) or by a smaller auditor, the results of these studies are rather mixed.

Larger audit firms are more profitable than smaller audit firms and that is the reason why they are more independent in their opinion decision. Sever Mališ and Brozović (2018) conducted an empirical research in which they tested the hypothesis that large audit firms in Croatia are more profitable than other audit firms. Out of 223 active audit firms in Croatia, the analysis included 218 audit firms for which financial statements were available. Since the six largest audit firms dominate the audit market in terms of the number of employees, total assets and total revenues, while other audit firms significantly lag behind, the population was divided into two groups. The profitability of large audit firms was compared to the profitability of other audit firms on the basis of standard financial indicators such as profit margin, return on assets and return on equity. Conclusions were made by comparing the median values of each group's indicators. The research has shown that the median of large audit firms' profitability indicators is significantly higher than the median of other audit firms.

In this study we investigate the auditors' tendency of stating GCU using a sample of large, financially troubled but not bankrupt companies (therefore, we are not checking if an auditor made Type II error). We want to explore what factors affect an auditor to state GCU: is it only the likelihood of failure based on financial and other data, or if auditor's size is one of the factors that increase the probability of stating GCU.

The remainder of this paper is organized as follows: the second section refers to the review of important existing studies about the topic, the third section explains the data, research design and results of our study, and the final section concludes.

2. LITERATURE REVIEW

Prior research generally concludes that the Big 4 (earlier Big 6 and Big 5) auditing firms differ from non-Big 4 firms in a variety of accounting and auditing decision contexts (Raghunandan and Rama 1999, Geiger et al. 2006).

Citron and Taffler (1992) found that altogether the probability of issuing GCU was very low, unless the likelihood of bankruptcy is very high. When it comes to

the size of an auditor, they found no significant difference in issuing GCU between small and large audit firms. One of the earlier studies was also by Mutchler, Hopwood, & McKeown (1997) who included a dummy variable that indicates whether the auditor was a Big 6 or non-Big 6 audit firm. They found no significant difference in going-concern reporting rates between Big 6 and non-Big 6 auditors.

Several studies (Behn, Kaplan & Krumwiede. 2001; DeFond, Raghunandan & Subramanyam 2002) have found that GCU is expressed more often to the clients of Big than to non-Big auditors' clients. According to Mo, Rui & Wu (2015) and brand-name reputation theory, Big audit companies act more conservatively because of their international reputation concerns (Mo et al. 2015, p 9). Francis and Yu (2009) argue that within the Big 4 firms, it is the larger audit offices that supply higher quality audits due to their greater in-house expertise. Using a sample of 6568 U.S. audits by 285 unique Big 4 offices, they find that larger offices are more likely to issue going concern opinions. This is consistent with their argument that larger offices are able to detect and report going-concern issues better.

Geiger and Rama (2006) find no significant Big 4 firm effect in testing for an association between the magnitude of audit and non-audit fees on auditor going concern decisions for financially stressed companies.

Carcello & Neal, 2000 find that the size of an audited company affects GCU, and large clients are less likely to receive GCUs. There are also several more recent studies stating that Big 4 clients are significantly less likely to receive going-concern opinions (DeFond and Lennox 2011; Numan and Willekens 2011). These latter authors attribute the negative relationship to the fact that Big 4 clients are in a better financial condition and are therefore less likely to warrant a going-concern modified report.

Berglund et al. (2018) find that Big 4 auditors are more likely than mid-tier auditors (Grant Thornton and BDO Seidman) to issue GCU to distressed clients. They also find that, compared to other auditors, the Big 4 are less likely to issue false-positive (Type I error) going concern opinions. According to their research there is no evidence that the Big 4 are more or less likely to fail to issue a GCU to a client that eventually files for bankruptcy (Type II error).

Mareque et al. (2017), on the sample of 2.935 audit reports of unlisted Spanish firms, analyse the impact of the financial crisis on the audit reports issued by auditors. They focus especially on those reports that contain questions relating to going concern situations. Their study reveals that as the crisis in Spain worsened, the proportion of reports that include references to going concern situations increased in comparison with 2007, when the financial crisis had not become manifest in Spain. Taking into account whether the audit firm issuing the report is Big-4 or Non-Big-4, no significant differences can be appreciated in the percentage

of reports issued with going concern qualifications before the start of the crisis (2007) and during the crisis (2008–2010).

The literature review does not show unanimous results, indicating that there are time and location specifics.

3. DATA AND RESEARCH METHOD

This research is based on a sample of financially unstable companies in the Republic of Croatia that incurred losses in the observed period, years 2011-2014. The focus is on distressed companies because auditors fundamentally never state going concern uncertainty to a financially healthy company. We exclude companies that went bankrupt during 2011-2014, since we do not consider Type II auditor's error in this study.

Additional criteria used for choosing the sample were the following:

- The company is obliged to have its financial reports audited, in accordance with the Accounting Act,
- The company is large, according to Accounting Act,
- The company operates in manufacturing industry.

The reasons for the third criteria are data availability in the FINA (Financial Agency) public database, a previous research based on samples containing manufacturing companies, and the relevance of the comparison of companies of the same size and the same operating field.

Entering the above mentioned criteria in the advanced search of the FINA-public database, it was found that 37 (2011), 40 (2012), 27 (2013) and 29 (2014) manufacturing companies incurred losses in the observed years. After excluding the same companies with losses in two or three consecutive years (duplicate) and bankrupt companies, 42 companies remained. Observations whose standardized values for numerical independent variables were lower than -3,29 or higher than 3,29 were removed from the analysis. After removing outliers, the final sample consists of 40 companies.

3.1 Research question

In this research we investigate the factors that affect an auditor to state GCU: is it only the likelihood of failure based on financial and other data, or is auditor's

size one of the factors that increase the probability of stating GCU. On a sample of large manufacturing firms, we empirically test whether Big 4 auditors in Croatia maintained a higher level of GC reporting conservatism.

Consistent with the conclusions of prior research that the Big 4 auditing firms differ from non-Big 4 firms in a variety of accounting and auditing decision contexts (Raghunandan and Rama 1999, Geiger et.al. 2006), our **research question** is:

Do Big Four audit firms in Croatia make GCU statements to financially troubled, but not bankrupt companies more often than non-Big Four audit firms?

3.2 Research design

In our analysis we construct regression models where the dependent variable $\mathbf{GC.f_i}$ is an indicator variable that equals 1 for companies receiving GCU statement, and 0 otherwise. We test several regression models and use the following independent variables:

- BIG4.f: 1 if the company is audited by Deloitte, E&Y, KPMG or PWC,
 0 otherwise
- PROP.f: Prior year's GCU indicator (1 if a firm received a GCU statement in a prior year and 0 otherwise).
- RLSS.f: Recurring loss from operations indicator (1 if net income was negative in both the current year and prior year and 0 otherwise).
- ChCR: One-year change in the current ratio.
- ZMIJ: Probability of bankruptcy using Zmijewski's model.
- CFTL is alternative to measuring liquidity risk, calculated as cash flow from operations divided by total liabilities.

Since we did not want to include too many variables due to the sample size, we used Zmijewski's probability of bankruptcy as one of the independent variables, like in Guo et al. (2020). Sormumen et al. (2013) and Arnedo et al. (2008). Zmijewski's model itself is based on logistic regression and in calculating the probability of bankruptcy uses the following financial ratios: current ratio as a measure of liquidity, net income to total assets (ROA) as a measure of profitability, and total debt/total assets as a measure of solvency. A firm with a probability greater than 0,5 is expected to go bankrupt, and a firm with a probability smaller than 0,5 is expected to continue its operations.

Previous studies have suggested that prior-year GCU statements are not easily removed unless major problems as reflected in prior opinions are resolved

(Mutchler, 1985; Mo et.al. 2015), and due to that fact we include (PROP) variable in our model. Prior studies show that as financial distress increases, so does the likelihood of an auditor stating GCU (Chen & Church, 1992). Consistent with previous studies we use financial variables ChCR and CFTL for control variables. Researchers who used these variables are Mutchler (1985.), Chen & Church (1992.), Behn et. al (2001.), Krishnan (2011.), Caserio, Panaro & Trucco (2014.). We also control for financial distress using the probability of bankruptcy by Zmijewski model (ZMIJ).

4. RESULTS

Table 1 shows the median, the mean and the standard deviation for numerical independent variables used in our analysis. The current ratio from the previous year to the year of observation decreased on average for 0,1373, but SD makes it clear that there were companies that faced much higher changes in current ratio. CFTL as a measure of liquidity shows that liquidity was problematic on average. Zmijewski's probability of bankruptcy is on average higher than 0,5, which is a cut-off point for expecting some company to go bankrupt.

Table 1:

DESCRIPTIVE STATISTICS FOR NUMERICAL INDEPENDENT

VARIABLES

	Median	Mean	SD
ChCR	-0.164	-0.1373	0.6288316
CFTL	0.0085	-0.01025	0.1860671
ZMIJ	0.548	0.5362	0.2858956

Source: authors

Table 2 shows the frequency of each category for categorical variables (coding is explained under Research design).

Table 2:

DESCRIPTIVE STATISTICS FOR CATEGORICAL VARIABLE

GC.f	BIG4.f	PROP.f	RLSS.f
0:21	0:19	0:30	0:21
1:19	1:21	1:10	1:19

Source: authors

The correlation matrix for numerical variables in Table 3 does not show strong correlations between independent variables (predictors), thus not requiring the exclusion of any of them from further analysis.

Table 3:

CORRELATION MATRIX FOR NUMERICAL INDEPENDENT VARIABLES

	ChCR	CFTL	ZMIJ
ChCR	1	-0.2925455	-0.07086426
CFTL	-0.29254555	1	0.1105902
ZMIJ	-0.07086426	0.1105902	1

Source: authors

Tables 4, 5, 6 and 7 show the results of logistic regression analysis. In regression 1 (Table 4) we assume that factors affecting stating GCU, beside the size of an auditor, are the previous year auditor's assessment of GC (PROP.f), the alternative measure of liquidity risk (CFTL) and the overall probability of bankruptcy (ZMIJ). However, the variable BIG4.f had no significant effect on the probability of stating GCU.

Table 4:

LOGISTIC REGRESSION 1

Regression 1: GC.f = BIG4.f + PROP.f + CFTL + ZMIJ							
	Estimate Std. Error z value Pr(> z)						
(Intercept)	-3,3891	1,3121	-2,583	0,00979	**		
BIG4.f1	-0,7995	0,9013	-0,887	0,37509			
PROP.f1	3,4145	1,5268	2,236	0,02533	*		
CFTL	-2,8641	2,3891	-1,199	0,23059			
ZMIJ	5,5761	2,1119	2,64	0,00828	**		

Null deviance: 55.352 on 39 degrees of freedom Residual deviance: 33.338 on 35 degrees of freedom

AIC: 43.338

Signif. codes: ***, **, * and . denote significance at 0.1%, 1%, 5% and 10%

Source: authors

In regression 2 (Table 5), we removed variable CFTL that had no significant effect in the previous regression, and included the variable ChCR. The result was a bit better, measured by residual deviance. However, both BIG4.f and ChCR had no significant effect on the probability of stating GCU.

Table 5:

LOGISTIC REGRESSION 2

Regression 2: $GC.f = BIG4.f + PROP.f + ChCR + ZMIJ$					
	Estimate	Std. Error	z value	<i>Pr</i> (>/ <i>z</i> /)	
(Intercept)	-3,1938	1,3051	-2,447	0,0144	*
BIG4.f1	-1,0154	0,9349	-1,086	0,27742	
PROP.f1	4,105	2,0938	1,961	0,04993	*
ChCR	1,0677	0,7349	1,453	0,14624	
ZMIJ	5,7794	2,2288	2,593	0,00951	**

Null deviance: 55.352 on 39 degrees of freedom Residual deviance: 32.606 on 35 degrees of freedom

AIC: 42.606

Signif. codes: ***, **, * and . denote significance at 0.1%, 1%, 5% and 10%

Source: authors

Since our main interest is to see the influence of auditor's size on the probability of GCU statement, we model the third regression (Table 6) using again BIG4.f and now two other categorical variables, PROP.f and RLSS.f, and ZMIJ as a composite measure of financial distress. The result was now better than in 2nd regression, measured by residual deviance. Yet all the other variables except BIG4.f showed significant effect on the probability of issuing GCU.

Table 6:

LOGISTIC REGRESSION 3

Regression 3: GC.f = BIG4.f + PROP.f + RLSS.f + ZMIJ					
	Estimate	Std. Error	z value	<i>Pr</i> (> z)	
(Intercept)	-4,426	1,7137	-2,583	0,0098	**
BIG4.f1	-0,3637	0,9883	-0,368	0,7129	
PROP.f1	3,9257	1,807	2,172	0,0298	*
RLSS.f1	1,8556	1,0083	1,84	0,0657	
ZMIJ	5,303	2,3117	2,294	0,0218	*

Null deviance: 55.352 on 39 degrees of freedom Residual deviance: 30.877 on 35 degrees of freedom

AIC: 40.877

Signif. codes: ***, **, * and . denote significance at 0.1%, 1%, 5% and 10%

Source: authors

Based on the first three regressions, we conclude that Big Four audit firms in Croatia are not more likely to state GCU to financially troubled but non-bankrupt large companies, than non-Big Four. Therefore, the size of an audit company does not explain the probability of stating the GCU.

Since we find no effect of BIG4.f, we exclude it from our final regression. Regression 4 (Table 7) includes two categorical variables, PROP.f and RLSS.f, and ZMIJ, since all of them proved significant in previous regressions. The coefficient for PROP.f and ZMIJ is significant at 5% respectively and for RLSS.f. is significant at 10% significance level. The p-value is the lowest for ZMIJ, which shows that this variable has the greatest effect on GC.f, i.e. on the probability that the auditor states GCU. All the coefficients are positive meaning that:

• if there was GCU the previous year, all other things being equal, it is more likely that GCU will be stated (increased log odds by 4.0384)

- if there was loss in both the previous and the current year, all other things being equal, it is more likely that GCU will be stated (increased log odds by 1.9253)
- a unit increase in probability of bankruptcy ZMIJ increases the log odds of stating GCU by 5.0877

To test the goodness of fit for regression 4, we performed Hosmer and Lemeshow goodness of fit (GOF) test. Since there is no significant difference between the model and the observed data (i.e. the p-value is above 0.05), our model appears to fit well.

Table 7:

LOGISTIC REGRESSION 4

Regression 4: GC.f = PROP.f + RLSS.f + ZMIJ							
	Estimate Std. Error z value Pr(> z)						
(Intercept)	-4,5236	1,6691	-2,71	0,00672	**		
PROP.f1	4,0384	1,7852	2,262	0,02369	*		
RLSS.f1	1,9253	0,9887	1,947	0,05149			
ZMIJ	5,0877	2,1915	2,322	0,02026	*		

Null deviance: 55.352 on 39 degrees of freedom Residual deviance: 31.013 on 36 degrees of freedom

AIC: 39.013

Hosmer and Lemeshow goodness of fit (GOF) test:

X-squared = 5.6629, df = 8, p-value = 0.6849

Signif. codes: ***, **, * and . denote significance at 0.1%, 1%, 5% and 10%

Source: authors

We also analysed the deviance for the regression 4. Table 8 shows how the model is performing against the null model, which includes only intercept. Each variable added, a significant drop in residual deviance is induced.

Table 8:

ANALYSIS OF DEVIANCE FOR REGRESSION 4

	Df	Deviance Resid.	Df	Resid. Dev	Pr(>Chi)	
NULL			39	55.352		
PROP.f	1	10.6592	38	44.693	0.001095	**
RLSS.f	1	5.8508	37	38.842	0.01557	*
ZMIJ	1	7.8291	36	31.013	0.005141	**

Signif. codes: ***, **, * and . denote significance at 0.1%, 1%, 5% and 10%

Source: authors

Finally, we can summarize our results by saying that among large manufacturing companies in Croatia the probability of receiving a GCU statement depends primarily on financial indicators of distress.

5. CONCLUSION

If the auditors question the companies' ability to continue their operation, they should issue a going concern opinion in the audit report (ISA 570). However, the question whether or not auditor will issue a going concern opinion depends on two factors: competence and independence. The auditing literature generally concludes that Big Four auditors are more competent and independent than non-Big Four auditors.

Because of all the above mentioned, we conducted our study with the purpose to examine differences between Big Four and other audit firms in their propensity to state going concern uncertainty (GCU) to their clients. Our research is based on a sample of financially unstable companies in the Republic of Croatia that incurred losses in the observed period. The bankrupt companies were excluded since we do not consider Type II auditor's error in this study. In our research we have focused on distressed companies because auditors fundamentally never issue going concern opinion to healthy companies.

The results of logistic regression analysis show that Big Four audit firms in Croatia are not more likely to state GCU to financially troubled but non-bankrupt large companies than non-Big Four. The answer to our research question is that the size of an audit company does not explain the probability of stating the GCU.

There is the possibility that our results are partly driven by the fact that our sample consist of only financially troubled large manufacturing companies. That leaves room for further research that could involve medium-size companies and companies from other industries.

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UTJEČE LI VELIČINA REVIZORA NA OCJENU VREMENSKE NEOGRANIČENOSTI POSLOVANJA? – SLUČAJ HRVATSKE

Sažetak

Od početka novog tisućljeća dogodili su se brojni računovodstveni skandali koji uključuju revizorska društva. Računovodstveni skandali koji uključuju poznata revizorska društva Velike četvorke posebno odjekuju u medijima, što na njih vrši pritisak i može ih učiniti konzervativnijima u njihovim prosudbama. Jedna od značajnih pretpostavki koju revizori moraju ocijeniti jest ona o vremenskoj neograničenosti poslovanja poduzeća koje je predmet revizije. Studije o tome da li veličina revizora utječe na ocjenu vremenske neograničenosti poslovanja, iz različitih zemalja i provedene za različita vremenska razdoblja ne pokazuju jedinstvene rezultate, što implicira da postoje vremenske i lokacijske specifičnosti. Budući da, prema našim saznanjima, za Hrvatsku ne postoji takvo istraživanje, svrha ovog članka je analizirati na uzorku hrvatskih poduzeća postoji li značajna razlika između sklonosti revizora Velike četvorke i ostalih da izraze sumnju u vremenski neograničeno poslovanje. U istraživanju se koristi uzorak velikih proizvodnih poduzeća koja su u financijskim problemima, ali nisu u stečaju. Rezultati ovog istraživanja pokazuju da ne postoji značajna razlika u isticanju sumnje u vremenski neograničeno poslovanje između velikih međunarodnih revizorskih društava (Velika četvorka) i manjih revizora.

Ključne riječi: revizija, pretpostavka vremenske neograničenosti poslovanja, Velika četvorka, računovodstvo