



The Effect of Auditor Rotation on the Relationship between Financial Manipulation and Auditor's Opinion

Ivica Filipović, Toni Šušak, Andrea Lijić

University of Split, University Department of Forensic Sciences, Croatia

Abstract

Background: Since external auditors possess the expertise necessary for detecting manipulations in financial statements, they should also take into account earnings management that could lead to it. In that context, auditor's independence, which can be affected by auditor's rotation, is of utmost importance. **Objectives:** This paper aims to examine the moderating effect of auditor rotation on the relationship between the extent of financial manipulation and the type of auditor's opinion for companies listed on the Zagreb Stock Exchange in the Republic of Croatia. **Methods/Approach:** A panel analysis with logistic regression is conducted to test the research hypothesis. The sample consists of 210 observations during the three years from 2015 to 2017. **Results:** Results show a significant positive relationship between auditor rotation in a current financial year and auditor's opinion. Furthermore, there is a negative, but the statistically insignificant moderating effect of auditor rotation in a current financial year on the relationship between financial manipulation and auditor's opinion, as well as the statistically insignificant moderating effect of auditor rotation frequency over five years on the relationship between financial manipulation and auditor's opinion. **Conclusions:** It is not likely that auditors take earnings management into account when generating their opinion on financial statements, and auditor rotation is not proven to be an adequate stimulus in that context.

Keywords: auditor's opinion; auditor rotation; earnings management; financial manipulation

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Introduction

The beginning of the current century was extremely challenging for the corporate sector because of numerous accounting scandals (Bajra et al., 2018) which have drawn attention to earnings management practices worldwide (Idris et al., 2018). Accounting irregularities were discovered in companies such as Enron (the U. S.), Olympus (Japan), Tesco (the U. K.), One Tel (Australia) (Enomoto et al., 2018), evidencing their geographical comprehensiveness. The cardinal issue in those cases was "a discrepancy between real earnings and reported earnings in financial statements" (Nezami, 2011, in Moazedi et al., 2016, pp. 113). Legislative responses were timely and included "many stringent regulations to strengthen financial disclosures and improve corporate governance practices" (Gounopoulos et al., 2018, pp. 13).

Given that external auditors can be classified among the fundamental mechanisms for alleviating information asymmetry between management and investors (Rusmanto et al., 2014), it is presumable that they will successfully detect and report earnings management practices (Butler et al., 2004). The importance of auditor's consideration of earnings management activities was also emphasized in the International Standard on Auditing 240: The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements, which has been effective since 15th December 2009. This standard stipulates that "discussion among the engagement team may include a consideration of circumstances that might be indicative of earnings management and the practices that might be followed by management to manage earnings that could lead to fraudulent financial reporting" (IAASB, 2009, pp. A11).

Unlike theoretical assumptions, the situation in corporate practice indicates that "it is not obvious that earnings management will typically lead to a modified audit opinion" (Butler et al., 2004, pp. 140). Among the reasons used to explain suboptimal audit reporting, auditor's independence may be indicated as of utmost importance. In support of this notion, the external audit was seriously questioned after the collapse of Arthur Andersen (Jamal, 2006) whose close relationship with the Enron Corporation was highlighted as a possible reason for their compromised objectivity (Herrick et al., 2002, in Kerler et al., 2009) and lack of professional skepticism (Johnstone et al., 2001:5, in Kerler et al., 2009).

Thus, auditor's independence was one of the issues affected by the aforementioned legislative actions which could be improved in a variety of ways. One of them is shortening auditor tenure "so that the engagement can be viewed with fresh and skeptical eyes" (SOX, 2002, in Anis, 2014, pp. 105). There are also certain negative effects on auditor's competence which can be caused by more frequent auditor rotation.

In light of those considerations, the purpose of this paper was to examine the moderating effect of auditor rotation on the relationship between the extent of financial manipulation and the type of auditor's opinion. Results of this research add evidence to intensive scientific and professional discussions on the usefulness of auditor rotation but from the standpoint of auditor's reporting decisions regarding earnings management.

As far as the authors are aware, previous research (e.g. Herbohn et al., 2008; Garcia Blandon et al., 2013; Omid, 2015; and Alhadab, 2016) hadn't addressed that question and, therefore, it is the scientific contribution of this paper. Prior studies have been focused on the relationship between earnings management and independent auditor opinion. Having regard to the long-standing debate about the effects of auditor rotation, which makes the anticipation of its impact on the relationship

between financial manipulation and auditor's opinion very complex, the statistical significance of mentioned variable's moderating effect was tested in this research.

Research results provide important practical implications and may be insightful for a variety of stakeholders. Contrary to the expectations, research results indicated that auditors tend to not consider earnings management activities and that could be due to the absence of legal coercion to do so. Auditor rotation, as a way to ensure greater auditors' effort regarding the inclusion of earnings management information, did not prove to be an effective mechanism implying that there is no need to shorten the auditor's tenure.

The remainder of the paper is organized as follows – in the second section results of relevant previous research were provided. The third section presents statistical methodology and models applied for hypothesis testing, the fourth section comprises results of analysis, the fifth section provides theoretical and practical implications of the research, and the sixth section contains the explanation of results as well as final remarks.

Literature Review and Hypothesis Development

As indicated in the previous section, auditors should have an important role regarding earnings management in the financial statements of their clients. Francis et al. (1999) founded that U. S. companies with higher accruals were more likely to be provided with a modified audit report, as well as companies with income-increasing accruals. Based on the results of their research, they highlighted the “potentially important role played by accounting accruals in audit report formation process” (Francis et al., 1999, pp. 135). In that context, Herbohn et al. (2008, pp. 576) noticed that “prior research has considered the possibility that auditors modify their opinions to communicate information about potential earnings management by firms with large accruals”. Alhadab (2016) determined a positive association of qualified audit opinion with both real and accrual earnings management, while Omid (2015), who also analyzed both of these activities, founded a relationship exclusively with accrual earnings management which doesn't affect cash flows.

Not all researches have proven the relationship between earnings management and auditor's opinion. For instance, Garcia Blandon et al. (2013, pp. 36), besides reporting failure to find a significant relationship between audit report qualification and earnings management, stated that previous research on the relationship between aforementioned variables was “scarce and almost limited” and “lacks agreement on whether external auditors are aware of earnings management when issuing a report”. A similar conclusion was reached by Butler et al. (2004, pp. 162) for companies with modified audit opinions, who did not found “evidence that auditors use their opinions to alert financial statement users of either excessive earnings management or the consequences of high positive accruals” and Bradshaw et al. (2001, pp. 45) whose research did not result with “evidence that auditors signal the future earnings problems associated with high accruals through either their audit opinions or through auditor changes”.

This was explained by the remark that “earnings quality issues are beyond the scope of the audit” because auditors “are not required to share this information by investors through their audit opinions” (Bartov, 2001, in Omid, 2015, pp. 49). Tsipouridou et al. (2014) have investigated the same relationship for companies listed on the capital market in Greece and founded no relationship between qualified audit opinions and earnings management. They have divided audit reports into categories considering reasons for their qualification and analyzed the basic

relationship in an environment with strong incentives to manage earnings, i.e. financial distress.

Herbohn et al. (2008, pp. 575) have extended the previous research by considering the possibility that “managers adjust accruals to report earnings that better predict future firm performance, which has the side-effect of placing them in conflict with their auditors” and concluded that there is “no evidence of earnings management leading to an audit opinion modification” among listed companies in Australia.

One of the variables with a potentially significant effect on the relationship between auditor's opinion and extent of earnings management is the auditor rotation which could be an indication of both audit efficiency, because “long audit tenures gain value and knowledge about the client since an audit firm can better evaluate the risk of material misstatements, gain more experience and have better insights into client's operations and business strategies as well as internal controls over financial reporting” (Yet et al., 2013, in Alvarado et al., 2019, pp. 15), or auditor independence which is considered “one of the key factors in increasing the quality of audited accounting statements” (Kim et al., 2015, in Silvestre et al., 2018, pp. 412) and goes in line with the statement that “when a company practices earnings management it does not necessarily mean they are likely to receive a qualified opinion from their auditors” (Rusmanto et al., 2014, pp. 1).

This has resulted in a permanent conflict of opinions between supporters and opponents of mandatory audit rotation (Silvestre et al., 2018). Despite the recent implementation of mandatory audit rotation in European legislation (Silvestre et al., 2018), some countries, which had done so earlier, abandoned it after identifying an absence of expected benefits (Raiborn et al., 2006, in Ryken et al., 2007). The Big Four audit companies Ernst & Young and PricewaterhouseCoopers are opponents of mandatory auditor rotation and believe that “costs of mandatory audit firm rotation would outweigh the perceived benefits of a required “fresh look” at the financial statements by a new audit firm” (PricewaterhouseCoopers, 2012, in Bamahros et al., 2015:146) and that mandatory audit partner rotation is more effective alternative (Ernst & Young, 2013, in Bamahros et al., 2015). In line with that idea are results of research conducted by Firth et al. (2011), what cannot be stated for Gates et al. (2007, pp. 5) who founded that “even in an environment of strong controls for corporate governance, audit firm rotation incrementally influenced individuals' confidence in financial statements” and “audit partner rotation did not have a similar effect”.

Taking into account the discussion in this chapter, research hypothesis can be formulated as follows:

H1: There is a statistically significant moderating effect of auditor rotation on the relationship between financial manipulation and auditor's opinion.

Methodology

The research sample comprises large nonfinancial companies listed on the Zagreb stock exchange in the Republic of Croatia (210 observations during the three years from 2015 to 2017). Financial companies were excluded because of their accounting and legal specificities such as “the differences in the accrual process” (Johl et al., 2007, pp. 713), tax rules (Kang et al., 2019), auditing process (Desender et al., 2013) and the strict oversight by Croatian National Bank. The data was collected from financial statements and independent auditors' reports publicly available for companies whose shares were listed on the Zagreb Stock Exchange. The extent of financial manipulation was estimated using the Dechow & Dichev model which

quantifies earnings management with discretionary accruals (Peni et al., 2010). The model is specified as follows (Kallapur et al., 2008):

$$\Delta WC_{it} = \beta_0 + \beta_1 * CFO_{i,t-1} + \beta_2 * CFO_{i,t} + \beta_3 * CFO_{i,t+1} + \varepsilon_{i,t} \quad (1)$$

where:

ΔWC = change in the value of net working capital

CFO = operating cash flows

ε = residual value (Kallapur et al., 2008).

The standard deviation of three-year period residuals from Dechow & Dichev model was utilized as a measure of accruals quality (Kallapur et al., 2008). Content analysis was applied to determine the information contained in independent auditors' reports, such as auditor's opinion, auditor's size, and auditor rotation, while financial data was gathered from annual financial statements. Furthermore, correlational analysis and panel analysis with logistic regression were applied for statistical analysis which was conducted in Stata 13.1. (StataCorp, 2013). Hausman test was conducted "to determine which model is best suited to ... data (the fixed effects ... or random effects)" (Hausman, 1978, in Saenz Gonzalez et al., 2014, pp. 427-429). The mentioned test indicates random effects as more appropriate for both models. Also, panel data was used because it is "appropriate for treating the unobserved heterogeneity problem that often appears in the cross-sectional data analysis" (Yasser et al., 2017, pp. 186) and it "may offer a solution to the problem of bias caused by unobserved heterogeneity and reveal dynamics that are difficult to analyze with cross-sectional data" (Cerqueira et al., 2013, pp. 42-43). Breusch-Pagan Lagrange multiplier (Wooldridge, 2009, in Flores et al., 2016, pp. 191) "indicated the presence of unobserved heterogeneity" and thus random effects were used (Flores et al., 2016, pp. 191). Given that two research variables were used for testing the established hypothesis, two statistical models were specified:

$$IAO_{i,t} = \beta_0 + \beta_1 * MNP_{i,t} + \beta_2 * ROT_{i,t} + \beta_3 * MNP \times ROT_{i,t} + \beta_4 * BIG4_{i,t} + \beta_5 * ROA_{i,t} + \beta_6 * LBL_{i,t} + \beta_7 * SIZ_{i,t} + \beta_8 * IND_{i,t} + U_{i,t} \quad (2)$$

$$IAO_{i,t} = \beta_0 + \beta_1 * MNP_{i,t} + \beta_2 * ROT_5_{i,t} + \beta_3 * MNP \times ROT_5_{i,t} + \beta_4 * BIG4_{i,t} + \beta_5 * ROA_{i,t} + \beta_6 * LBL_{i,t} + \beta_7 * SIZ_{i,t} + \beta_8 * IND_{i,t} + U_{i,t} \quad (3)$$

where:

Dependent variable:

IAO = independent auditor's opinion (1 = positive auditor's opinion, 0 = modified auditor's opinion)

Test variables:

MNP = financial manipulation estimated with earnings management measure – Dechow and Dichev model

ROT = auditor rotation in a current financial year (1 = different audit company appointed in comparison to previous financial year, 0 = the same audit company appointed as the previous year)

ROT_5 = number of auditor rotations over five years

MNP x ROT = interaction between financial manipulation and auditor rotation in a current financial year

MNP x ROT_5 = interaction between financial manipulation and number of auditor rotations in five years

Control variables:

BIG4 = type of auditor (1 = Big Four, 0 = not Big Four)
 ROA = return on assets
 LBL = total liabilities to total assets
 SIZ = natural logarithm of total assets
 IND = industry

u = model error.

The dependent variable is the independent auditor's opinion (IAO) which denotes if an auditor has given a positive or modified opinion. Test variables are financial manipulation (MNP), auditor rotation in a current financial year (ROT), number of auditor rotations in five years (ROT_5), and the interaction between those variables (MNP x ROT and MNP x ROT_5). The latter variables are the most important in the context of this research for hypothesis testing. To provide more accurate results, several control variables defined in previous researches were included in the models. These include the size of a company (SIZ) (Rusmanto et al., 2014), financial health variables (Tsipouridou et al., 2014) such as return on assets (ROA), and total liabilities to total assets (LBL), as well as auditor characteristics (BIG4).

The effect of company size is complex to predict because, on the one side, there could be a higher propensity to issue a qualified opinion because of higher litigation costs for larger companies (Lys & Watts, 1994; Shu, 2000, in Garcia Blandon et al., 2013), but on the other side "auditors could be less independent when auditing large clients and, therefore, less willing to issue a qualified report to large than small clients" (DeAngelo, 1981, in Garcia Blandon et al., 2013:42). A positive relationship is expected between the qualification of an audit report and the ratio of total liabilities and total assets because "high levels of debt increase the probability of bankruptcy, and consequently increase litigation risk" (Garcia Blandon et al., 2013:42). Profitability measure is included because losses could "indicate ... poor financial health" (Monroe et al., 1993, in Johl et al., 2007:695), while variable denoting audit company's affiliation to the Big Four was included because "these auditors are expected to qualify more frequently" (Johl et al., 2007:695).

Results

Correlation analysis (Table 1) was applied to test the existence of the multicollinearity issue.

Table 1
 Correlation Coefficients between Research Variables

	MNP	ROT	ROT_5	BIG4	ROA	LBL	SIZ	IND
MNP	1							
ROT	-0.06	1						
ROT_5	-0.10	0.5*	1					
BIG4	-0.04	0.08	0.07	1				
ROA	-0.20*	-0.01	-0.04	-0.14*	1			
LBL	0.02	-0.01	-0.01	0.09	-0.4*	1		
SIZ	0.01	-0.01	-0.13	0.41*	-0.03	0.15*	1	
IND	0.05	0.12	0.09	-0.08	0.11	-0.18*	-0.06	1

Note: * Correlation coefficient is statistically significant (5 percent threshold).

Source: Authors' analysis using data available at the official website of the Zagreb Stock Exchange and the Stata software – StataCorp (2013). Stata Statistical Software: Release 13. College Station, TX: StataCorp LP.

A relevant correlation was detected only between auditor rotation in the current financial year and the number of auditor rotations in five years. The remaining coefficients in Table 1 prove the absence of a strong correlation between explanatory variables, i.e. absence of the multicollinearity issue. Table 2 presents the descriptive statistics of relevant variables.

Table 2
Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
MNP	0,067	0,090	0,003	0,749
ROT	0,152	0,360	0,000	1,000
ROT_5	0,652	0,835	0,000	4,000
BIG4	0,500	0,501	0,000	1,000
ROA	-0,026	0,232	-2.221.928	0,226
LBL	0,448	0,274	0,040	2.366.989
SIZ	8.757.801	0,514	7.730.895	1.030.925

Source: Authors' analysis using data available at the official website of the Zagreb Stock Exchange and the Stata software – StataCorp (2013). Stata Statistical Software: Release 13. College Station, TX: StataCorp LP.

As it is apparent from Table 3, the average values of the financial manipulation variable did not vary significantly from 2015 to 2017. Average values decreased in 2016, but in 2017 their extent was similar to in 2015. Logistic regression analysis was used to estimate test variables' coefficients (auditor rotation in current financial year and number of auditor rotations in five years). For each of these variables, a separate model was created.

Table 3
Descriptive statistics – variable financial manipulation (MNP)

Year	Mean	Std. Dev.	Min	Max
2015	0.073	0.100	0.003	0.736
2016	0.053	0.099	0.003	0.749
2017	0.073	0.066	0.006	0.329

Source: Authors' analysis using data available at the official website of the Zagreb Stock Exchange and the Stata software – StataCorp (2013). Stata Statistical Software: Release 13. College Station, TX: StataCorp LP.

In Model 1 (Table 4), which was used to test the first hypothesis, the coefficient of auditor rotation in a current financial year is positive and statistically significant at 10 percent threshold denoting its positive association with the opinion given by the independent auditor, indicating that the negative effect of reduced auditor's knowledge on their clients' operations (Yet et al., 2013, in Alvarado et al., 2019) may prevail over the positive effect of increased auditor's independence.

Despite the negative relationship between auditor rotation in a current financial year and the relationship between financial manipulation and auditor's opinion, which indicates the strengthening of an initial effect, there was no statistical significance.

Table 4

Coefficients of Variables included in Logistic Regression Model – Auditor Rotation in Current Financial Year (Model 1)

	Coefficient	Std. Err.	Z	P > z
MNP	-6.148	5.702	-1.080	0.281
ROT	3.038	1.798	1.690	0.091
MNP x ROT	-32.708	23.340	-1.400	0.161
BIG4	-0.129	0.894	-0.140	0.885
ROA	1.404	1.608	0.870	0.383
LBL	-5.540	2.247	-2.470	0.014**
SIZ	4.182	1.372	3.050	0.002***
IND	0.172	0.286	0.600	0.547
Constant	-31.917	11.172	-2.860	0.004***

Source: Authors' analysis using data available at the official website of the Zagreb Stock Exchange and the Stata software – StataCorp (2013). Stata Statistical Software: Release 13. College Station, TX: StataCorp LP.

Note: ** statistically significant at 5%; *** 1%

Similar to Model 1, the results of Model 2 (Table 5), which were used to test the second hypothesis, show an insignificant negative relationship between auditor rotation frequency during the considered period and the relationship between financial manipulation and auditor's opinion. Also, the coefficients of control variables LBL and SIZ have been proven to be statistically significant in both Model 1 and Model 2. The value of variable SIZ is positive and in line with the prediction that "auditors could be less independent when auditing large clients and, therefore, less willing to issue a qualified report to large than small clients" (DeAngelo, 1981, in Garcia Blandon et al., 2013:42). The coefficient of LBL was negative, indicating an inverse relationship between total liabilities to total assets and issuing positive auditor's opinion, i.e. a greater likelihood of providing highly leveraged companies with qualified auditor's opinion according to the notion that "high levels of debt increase the probability of bankruptcy, and consequently increase litigation risk" (Garcia Blandon et al., 2013:42).

Table 5

Coefficients of Variables included in Logistic Regression Model – Number of Auditor Rotations in Period of Five Financial Years (Model 2)

	Coefficient	Std. Err.	Z	P > z
MNP	-6.672	6.415	-1.040	0.298
ROT_5	0.289	0.680	0.430	0.670
MNP x ROT_5	-2.090	10.116	-0.210	0.836
BIG4	0.416	0.826	0.500	0.615
ROA	1.343	1.648	0.810	0.415
LBL	-5.287	2.097	-2.520	0.012**
SIZ	3.931	1.277	3.080	0.002***
IND	0.205	0.271	0.760	0.450
Constant	-30.239	10.493	-2.880	0.004***

Source: Authors' analysis using data available at the official website of Zagreb Stock Exchange and Stata software – StataCorp (2013). Stata Statistical Software: Release 13. College Station, TX: StataCorp LP.

Note: ** statistically significant at 5%; *** 1%

Discussion

Theoretical Contributions

Financial statement manipulation is one of the most important issues in a contemporary business environment that undermines stakeholders' trust and, consequentially, hinders investment activities. There is a significant number of papers that analyze different forms of this phenomenon in various situations. The primary aim of these efforts is directed towards finding the most efficient solutions to deter or decrease the occurrence of manipulative activities.

External auditing can be classified among mechanisms with the greatest untapped potential to do so. An external auditor usually possesses expert knowledge and skill set relevant for detecting manipulative activities in their clients' financial statements. In that context, their most efficient tool for enhancing financial reporting quality is an independent auditor's report which they use as a medium for disclosing their opinion.

As stated in the section Literature Review and Hypothesis Development, previous research conducted in other countries yielded mixed results in an analysis of the relationship between earnings management and auditor's opinion. This research paper gave an insight into Croatian business practice regarding the inclusion of earnings management information in independent auditors' reports. Research results did not confirm that auditors took into consideration earnings management activities in their clients' financial statements most probably due to insufficient regulatory pressure.

Although prior studies have been focused on the relationship between earnings management and independent auditor opinion, research efforts should be focused on discovering factors that could potentially strengthen that association. Auditor rotation may result in increased auditors' independence and their higher objectivity. Subsequently, the primary theoretical contribution of this paper was expanding the previous knowledge on the basic relationship by constructing the model for analysis of the moderating effect that auditor rotation has on the relationship between financial manipulation and auditor's opinion.

Practical Implications

Research results provide important practical implications and may be insightful for a variety of stakeholders, such as regulatory bodies, audit companies, auditees, forensic accountants and other financial investigators, investors, creditors, and academics.

The role of regulatory bodies is crucial given that they provide a framework for corporate activities. As stated in the previous subchapter and contrary to the expectations, research results indicated that auditors tend to not consider earnings management activities and that could be due to the absence of legal coercion to do so. The identification of earnings management practices requires additional time and effort, which are scarce resources in a competitive business environment, and auditors predominantly opt not to do facultative activities.

Financial fraud related to tax evasion is incriminated with legal provisions of the Croatian Criminal Code (Official Gazette, 2011) but earnings management, due to its lower intensity, vagueness, and lower-level repercussions for the national budget, is regulated on the level of a principle. The important issue is that, as stated in the International Standard on Auditing 240: The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements, "... earnings management ... could lead to fraudulent financial reporting" (IAASB, 2009, pp. A11). These potential threats

indicate that earnings management, although less harmful to society than fraudulent activities, shouldn't be neglected.

Subsequently, mentioned bodies should revise existing regulations and incorporate certain provisions in a legal system which will be more binding than mere recommendations and stimulate auditors to increase their professional effort. This is also important because it is presumable that auditees adjust their accounting activities and decisions according to expectations based on previous audit engagements. If auditors do not have a rigorous approach regarding earnings management, the level of financial manipulation will likely be high. Thus, auditors should be stimulated to take earnings management into account.

Given that the large companies listed on the national stock exchange were the subject of research, additional legal efforts towards ensuring the consideration of earnings management could contribute to restoring investors' trust indispensable to the proper functioning of financial markets and increasing the quality of their decision making. Besides investors, creditors are also interested in that information when deciding on the creditworthiness of a client, because they seek to secure repayment of loan installments and steady cash flows in the future what could be jeopardized if a company did not disclose reliable financial information.

On the other side, in certain cases, these results could also be attributed to the lack of specialized forensic accounting knowledge relevant for identifying earnings management. This issue can be effectively addressed by providing professional training on forensic accounting techniques.

Given the insufficient inclusion of earnings management by auditors in the Republic of Croatia while generating their reports, audit companies that do so could gain a competitive advantage over other audit companies. Accordingly, they would provide more reliable information on the auditee's financial reporting informativeness and quality and, consequently, establish their reputation among potential clients.

Besides that, several directions could ensure greater auditors' effort regarding the inclusion of earnings management information while deciding on their opinion. One of them is auditor rotation which was analyzed in this paper, but the results imply that it did not prove to be an effective mechanism for improving auditor's independence and, consequentially, the level of reporting on earnings management.

Correspondingly, there is no need to act in the direction of shortening the auditor's tenure. Also, research results reduce the importance of auditor reports as a reliable information source in forensic investigations conducted by forensic accountants and other financial investigators such as tax professionals and police inspectors who could use them for preliminary screening of manipulation extent in financial statements of a company that is subject of their investigation.

Conclusion

Relations to previous findings

Auditors are perceived as the essential mechanism for alleviating the agency problem between managers and investors. Their efforts in reducing information asymmetry are, among others, focused on analyzing and communicating the presence of financial manipulation in their client's financial statements. Results did not indicate that auditors in the Republic of Croatia take into account the recommendation provided in International Standard on Auditing 240 on "consideration of circumstances that might be indicative of earnings management" (IAASB, 2009:A11), so they could not be of use for financial statement users in this

regard. This is also in line with the findings of Bradshaw et al. (2001), Butler et al. (2004), and Garcia Blandon et al. (2013).

Auditor rotation has been a controversial issue that started the long-standing debate on the cost-effectiveness of its implementation in an auditing system. This study analyzed the moderating effect of auditor rotation on the relationship between financial manipulation and auditor's opinion. Since results had not been statistically significant, the research hypothesis was not accepted corroborating remarks by opponents of mandatory auditor rotation quoted in previous sections of the paper (PricewaterhouseCoopers, 2012, in Bamahros et al., 2015 and Ernst & Young, 2013, in Bamahros et al., 2015).

Results of the research have shown a positive effect of auditor rotation in a current financial year on auditor's opinion which could be attributed to decreased knowledge about business operations of a client (Yet et al., 2013, in Alvarado et al., 2019). Presumably, this detrimental effect is much stronger than increased auditor's independence resulting from the appointment of a new auditor.

Finally, it can be concluded that it is not likely that auditors will incorporate information on earnings management in their reports, probably because International Standard on Auditing only recommends consideration of earnings management, and thus auditors are not obliged to do so. This is in line with remarks stated by Bartov (2001, in Omid, 2015). As far as the authors are aware, this paper is the first empirical attempt to analyze the moderating effect of auditor rotation on the relationship between financial manipulation and auditor's opinion. Results of this research provide a basis for regulative actions regarding auditor rotation and they could also be useful for investors, auditors, and other stakeholders.

Research Limitations and Future Research

Possible limitations of the study also have to be considered – the Dechow & Dichev model, as all other earnings management measures, has potential shortcomings, and the fact that the research sample is focused exclusively on large companies in the Republic of Croatia implies that results may not be generalizable. Also, researching other countries could provide an opportunity for testing those relationships on larger samples given that the Croatian stock market is relatively small and inefficient. Despite the authors' efforts to increase the precision of model estimation, there is always a possibility that not all variables with a significant impact were included in the model. Future research should consider factors that could stimulate the inclusion of earnings management information in independent auditor's reports. The aforementioned research limitations are also features that could be improved in future studies.

References

1. Alhadab, M. (2016), "Auditor report and earnings management: Evidence from FTSE 350 companies in the UK", *Risk Governance and Control: Financial Markets & Institutions*, Vol. 6 No. 4, pp. 334-344.
2. Alvarado, N. R., de Fuentes, P., Laffarga, J. (2019), "Do auditors mitigate earnings management during economic crisis?", *Revista de Contabilidad-Spanish Accounting Review*, Vol. 22 No. 1, pp. 6-20.
3. Anis, A. (2014), "Auditors' perceptions of audit firm rotation impact on audit quality in Egypt", *Accounting & Taxation*, Vol. 6 No. 1, pp. 105-120.
4. Bajra, U., Cadez, S. (2018), "The impact of corporate governance quality on earnings management: Evidence from European companies cross-listed in the US", *Australian Accounting Review*, Vol. 28 No. 2, pp. 152-166.

5. Bamahros, H. M., Wan-Hussin, W. N., Abdullah, A. (2015), "Non-audit services, audit firm tenure and earnings management in Malaysia", *Asian Academy of Management Journal of Accounting and Finance*, Vol. 11 No. 1, pp. 145-168.
6. Bradshaw, M. T., Richardson, S. A., Sloan, R. G. (2001), "Do analysts and auditors use information in accruals?", *Journal of Accounting research*, Vol. 39 No. 1, pp. 45-74.
7. Butler, M., Leone, A. J., Willenborg, M. (2004), "An empirical analysis of auditor reporting and its association with abnormal accruals", *Journal of Accounting and Economics*, Vol. 37 No. 2, pp. 139-165.
8. Cerqueira, A., Pereira, C. (2013), "Financial reporting quality and information asymmetry in Europe". In Polouček, S., Stavárek, D. (Ed.), *Financial regulation and supervision in the after-crisis period*, 14th International Conference on Finance and Banking, Ostrava, Czech Republic, 16-17 October 2013, Silesian University, School of Business Administration, pp. 32-51.
9. Desender, K. A., Aguilera, R. V., Crespi, R., García-cestona, M. (2013). "When does ownership matter? Board characteristics and behaviour", *Strategic Management Journal*, Vol. 34 No. 7, pp. 823-842.
10. Enomoto, M., Kimura, F., Yamaguchi, T. (2018), "A cross-country study on the relationship between financial development and earnings management", *Journal of International Financial Management & Accounting*, Vol. 29 No. 2, pp. 166-194.
11. Firth, M., Rui, O. M., Wu, X. (2011), "How do various forms of auditor rotation affect audit quality? Evidence from China", available at <https://ssrn.com/abstract=1830741> (8 February 2021).
12. Flores, E., Weffort, E. F. J., da Silva, A. F., Carvalho, L. N. G. (2016), "Earnings management and macroeconomic crises: Evidences from Brazil and USA capital markets", *Journal of Accounting in Emerging Economies*, Vol. 6 No. 2, pp. 179-202.
13. Francis, J. R., Krishnan, J. (1999), "Accounting accruals and auditor reporting conservatism", *Contemporary accounting research*, Vol. 16 No. 1, pp. 135-165.
14. Garcia Blandon, J., Argiles Bosch, J. M., Martinez Blasco, M. (2013), "Earnings management and audit qualifications: A non-matched sample approach", *Research in Finance*, Vol. 29, pp. 29-62.
15. Gates, S. K., Jordan Lowe, D., Reckers, P. M. J. (2007), "Restoring public confidence in capital markets through auditor rotation", *Managerial Auditing Journal*, Vol. 22 No. 1, pp. 5-17.
16. Gounopoulos, D., Pham, H. (2018), "Financial expert CEOs and earnings management around initial public offerings, available at <https://ssrn.com/abstract=3177760> (8 February 2021).
17. Herbohn, K., Ragunathan, V. (2008), "Auditor reporting and earnings management: Some additional evidence", *Accounting & Finance*, Vol. 8 No. 4, pp. 575-601.
18. Idris, M., Siam, Y. A., Nassar, M. (2018), "Board independence, earnings management and the moderating effect of family ownership in Jordan", *Management & Marketing. Challenges for the Knowledge Society*, Vol. 13 No. 2, pp. 985-994.
19. International Auditing and Assurance Standards Board – IAASB (2009), "The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements", *International Standard on Auditing 240*.
20. Jamal, K. (2006), "Mandatory audit of financial reporting: A failed strategy for dealing with fraud", Available at <https://ssrn.com/abstract=914156> / (8 February 2021).
21. Johl, S., Jubb, C. A. and Houghton, K. A. (2007), "Earnings management and the audit opinion: evidence from Malaysia", *Managerial Auditing Journal*, Vol. 22 No. 7, pp. 688-715.
22. Kallapur, S., Sankaraguruswamy, S., Zang, Y. (2008), "Audit Market Concentration and Audit Quality", available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.628.5104&rep=rep1&type=pdf> (8 February 2021).
23. Kang, S. M., Hwang, I. T., & Hur, K. S. (2019), "Non-audit services and auditor independence depending on client performance", *Australian Accounting Review*, Vol. 29 No. 3, pp. 485-501.

24. Kerler, W. A., Killough, L. N. (2009), "The effects of satisfaction with a client's management during a prior audit engagement, trust, and moral reasoning on auditors' perceived risk of management fraud", *Journal of Business Ethics*, Vol. 85 No. 2, pp. 109-136.
25. Moazedi, E., Khansalar, E. (2016), "Earnings management and audit opinion", *International Journal of Economics and Finance*, Vol. 8 No. 4, pp. 113-122.
26. Official Gazette of the Republic of Croatia (2011), *Criminal Code*, Zagreb: Narodne Novine, d. d., 125/11, 144/12, 56/15, 61/15, 101/17, 118/18, 126/19.
27. Omid, A. M. (2015), "Qualified audit opinion, accounting earnings management and real earnings management: Evidence from Iran", *Asian Economic and Financial Review*, Vol. 5 No. 1, pp. 46-57.
28. Peni, E., Vahamaa, S. (2010), "Female executives and earnings management", *Managerial Finance*, Vol. 36 No. 7, pp. 629-645.
29. Rusmanto, T., Djamil, A. B., Salim, Y. (2014), "The effect of earnings management to issuance of audit qualification: Evidence from Indonesia", *Journal of Business Studies Quarterly*, Vol. 6 No. 1, pp. 1-28.
30. Ryken, K., Radich, R., Fargher, N. L. (2007), "Audit partner rotation: Evidence of changes in audit partner tenure as the result of mandatory regulation in Australia", *Current Issues in Auditing*, Vol. 1 No. 1, pp. A28-A35.
31. Saenz Gonzalez, J., Garcia-Meca, E. (2014), "Does corporate governance influence earnings management in Latin American markets?", *Journal of business ethics*, Vol. 121 No. 3, pp. 419-440.
32. Silvestre, A. O., Costa, C. M., Kronbauer, C. A. (2018), "Audit Rotation And Earnings Quality: An Analysis Using Discretionary Accruals", *BBR. Brazilian Business Review*, Vol. 15 No. 5, pp. 410-426.
33. StataCorp (2013), "Stata Statistical Software: Release 13", College Station, TX: StataCorp LP.
34. Tsiouridou, M., Spathis, C. (2014), "Audit opinion and earnings management: Evidence from Greece", *Accounting Forum*, Vol. 38 No. 1, pp. 38-54.
35. Yasser, Q. R., Al Mamun, A., Hook, M. (2017), "The impact of ownership structure on financial reporting quality in the east", *International Journal of Organizational Analysis*, Vol. 25 No. 2, pp. 178-197.

About the authors

Ivica Filipović, Ph.D. is a Full Professor at the University of Split, University Department of Forensic Sciences. He received a Ph.D. in Economics at the Faculty of Economics Split. His main research interests are accounting and audit. The author can be contacted at ivica.filipovic@unist.hr.

Toni Šušak, M. Econ., M. Law is a Research and Teaching Assistant at the University of Split, University Department of Forensic Sciences. He received his Master's degree in Economics from the Faculty of Economics Split, as well as a Master's degree in Law from the Faculty of Law Split and is currently a Ph.D. candidate at Faculty of Economics Split. His main research interests are forensic accounting and audit. The author can be contacted at toni.susak@unist.hr.

Andrea Lijić, M. Forens. received her Master's degree in Forensics from the University of Split, University Department of Forensic Sciences. Her previous work experience was in private companies and includes areas such as accounting and finance. Her main research interests are accounting, audit, forensic accounting, and forensic audit. The author can be contacted at andrea.lijic2011@gmail.com.