



The Relationship between the Audit Report Tone and Audit Market Competition

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ABSTRACT

Purpose – The primary purpose is to investigate the relationship between the tone of the audit report and the audit market competition.

Design/methodology/approach – A descriptive-correlational study is conducted based on the published information listed firms on the Tehran Stock Exchange during 2012-2019 with a selected sample of 128 firms. The method used for hypothesis testing is linear regression using panel data.

Findings -The results show a positive and significant relationship between the audit report tone and competition in the audit market based on two indicators of auditor's and client's concentrations. Moreover, to obtain better results using exploratory factor analysis of two variables, the relationship between the tone of the audit report and competition in the audit market was examined. The results showed a positive and significant relationship between the tone of the audit report and audit market competition with factor analysis.

Originality/value – Since the present study is conducted in an emerging financial market, like Iran, where the auditing market is highly competitive, determining the relationship between the tone of the audit report and audit market competition can provide useful information for readers.

Keywords: audit report tone, audit market competition

1. Introduction

The present study investigates the relationship between audit report tone and audit market competition in Iran. Regulators worldwide have expressed concern that the current structure of the audit market restricts effective competition among audit firms, which may lead to uncompetitive pricing or impaired audit quality. European Commission, 2010; Financial Reporting Council (FRC), 2018; the US's Government Accountability Office [GAO], 2003, 2008). Most recently, the UK's Competition & Markets Authority (CMA, 2019) argued that high concentration in the audit market is a significant and profound problem that leads to limited choice in the market. Hence, they proposed to create a market for audit firms to compete through audit licenses. CMA's conclusion is, at least to some extent, in line with the assumption that high market concentration leads to reduced audit quality, especially in the wake of recent accounting and audit scandals. Therefore, by default, CMA considers the change in the audit market structure as a necessary step to improve audit quality (Sikka et al., 2018; CMA, 2019).

The discussion around the tone of the audit firm, which is itself one of the most critical proxies of audit quality, and the audit market competition seems to revolve around two different perspectives (see, e.g., GAO, 2008; House of Lords, 2011). Accordingly, the high concentration of audit firm stocks in the market indicates a lack of competition and a potential threat to high-quality audits (van Raak et al., 2019). Therefore, this can reduce the audit quality. In the present study, it will be the case that the high concentration of audit firms in the market will negatively affect the audit report tone. As a result, the quality of the audit should be audited at the market level. The second view is that the degree of concentration of the audit market is due to the natural response to customer demand for audit quality. In particular, it is argued that a high concentration on the large client audit market is a necessity that helps audit firms achieve cost-efficiency and have the audit technology and resources needed to perform complex audits (e.g., Danos & Eichenseher, 1982; Dopuch & Simunic, 1980; Pound & Francis, 1981; Sirois & Simunic, 2011).

The increasing alignment of audit firm resources with big clients' needs can help audit firms obtain premiums (e.g., Numan and Willekens, 2012; Shapiro, 1989). Both perspectives show different implications

for the relationship between the tone of the auditor's report (a proxy for audit quality) and competition in the audit market. The former view shows that high concentration in the audit market negatively affects audit quality. The second view states that concentration is at least partially necessary for audit demand. This affects audit quality depending on the complexity of the audit (van Raak et al., 2019). Therefore, it can be concluded that improving audit firms' quality also increases competition in the audit market, so improving the tone of the auditor's report can increase the audit market competition.

Understanding the relationship between the auditor's report tone and the audit market competition can help improve the development of oversight regulations to promote competition in the audit market to enhance the quality of the financial statements (Huang et al., 2016). In recent years, significant changes have taken place in the economy and regulatory aspects of the audit environment in many countries, which have led to a substantial increase in the level of competition in the audit market. For example, in Iran and the formation of the official accounting community, the audit market has had a significant increase in the number of private audit firms licensed to perform audit services (Shafati et al., 2020). In other words, with the boom in Iran's audit services market, every audit firm has applied its policies in the competitive market to have more influence in the market and find and attract customers (Rezaei and Yaghoubnejad, 2017). Improving auditor's report tone from the audit firms' side in the auditing process that contributes significantly to the decisions of financial statement users can lead to a competitive advantage for the said firms. Moreover, in most of the conducted studies in this field, the role of auditor's report tone is one of the pillars of audit quality that is taken for granted, such that most of the previous studies in the field of competition in the audit market have examined the variable with a number of variables, like audit fee (Schliman & Lavson, 2017; Huang et al., 2016; Oradi et al., 2018), auditor's narcissism (Mohammadi et al., 2021), audit quality (Van Rock et al., 2020), internal control opinion shopping (Newton et al., 2018), audit fee stickiness (Chang et al., 2018), Auditor's independence and financial reporting quality (Soroushyar et al., 2014) and no study carried out on the effect of report tone on competition in the audit market in Iran. Hence, a gap

exists in the topical literature that should be filled, since the present study by presenting a bunch of empirical evidence from the Iranian auditing market aims to improve the existing literature on auditor's report tone and audit market competition. Further, as a scientific achievement, the findings of the present study can provide useful information for legislators of auditing standards and capital market and be important for the scholars and users of financial statements. Besides, the results pave the way for performing further research in the field of audit market competition.

Therefore, in the present study, our main concentration is the Iranian audit market. Past regulatory restrictions on the growth and development of Iranian audit firms have made the audit market in Iran less concentrated. Understanding the impact of the audit market structure is important because of the importance of private audit firms in the economy (Langli & Svanström, 2014; Wymenga, Spanikova, Barker, Konings, & Canton, 2011). The present study investigates the relationship between the auditor's report tone and the audit market competition in Iran.

Theoretical Principles

Changes in capital markets in recent years have increased the pivotal role of auditors in decision-making. Therefore, greater understanding and transparency of the operational nature and services that can be provided by audit firms and their costs, as a new issue and branch of capital market efficiency, is relevant in the world today. The most noticeable feature of the capital market is transparency, which can be achieved through accounting and auditing. (van Raak et al., 2019).

In other words, the role of auditing in reducing distortions is essential for audit research and has profound practical implications. Auditing emphasizes the cost-effectiveness of operations to save costs and reduce losses due to errors. However, the information provided by management may also be biased (Merkel-Davies, Brennan, and McLeay, 2011). For example, Davis et al. (2015) showed that gender, age, level of education, and work experience influence the optimistic tone of financial disclosure.

Reporting tone is the difference between the number of optimistic words (positive words) and pessimistic words (negative words) (Davis et al., 2014). Thus, the tone is measured as the frequency of

positive words minus negative words used in a report. Referring to Huang, Teoh, and Zhang (2014), Tan, wang, Zhou (2014) argued that the emotional effect of language is related to how positive and negative words are used. The linguistic nature of the tone of the messages conveyed in the company's annual reports tends to be accompanied by economic results (Henry, 2008; Huang et al., 2014; Yekini, Wisniewski, & Millo, 2016).

Optimistic disclosure language tends to be positively associated with stock prices (Lang & Lundholm, 2000). It also affects the current and future performance of the company (Lang & Lundholm, 2015).

Recent studies show that in addition to quantitative content, the qualitative content of reports and notably the tone of the reports can have positive effects on the various aspects of performance. For example, Melloni et al. (2016) and Davis et al. (2012) found that companies use a positive tone to reflect a desirable self-image.

Furthermore, the usefulness of audit reports by users of financial reporting information has always been particularly important to accounting and auditing researchers. Naturally, the purpose of the auditors' reports is to reassure financial reporting by adding credibility to the information reported. Therefore, auditors evaluate and judge the information contained in the financial statements by benchmarking accepted standards. The audit process is a combination of economic and social factors that helps the users of financial information that does not rely on financial means, which is an effective help in fulfilling the managers' accountability. The product of the audit process is the auditor's report, the usefulness of which requires attention to the fact that what the auditors are looking for is a good understanding for users. Hence, the audit quality and the tone in which the auditor issues the audit report are of special importance (van Raak et al., 2019).

On the other hand, the audit market has features that distinguish it from other markets related to business services. Watts and Zimmerman (1983) and Ball (2001) believe that the audit market plays a leading role in maintaining transparency and improving the performance of capital markets. The concentration on the audit market reflects the extent to which the power of audit firms is distributed in the market, which affects the competitiveness of these

units in attracting customers (Schaen and Maijor, 1997). In other words, effective competition requires a sufficient number of service providers to balance the market. When competition covers monopoly, the audit quality will decrease, profit motives will increase, and auditor independence will ultimately decrease. The concern is that over-concentration in the audit firm market reduces auditors' competitiveness and auditing quality (Court of Audit, 2008).

As mentioned in the previous paragraphs, the tone of the auditor's report is one example of audit quality. Therefore, we argue that improving the audit report's tone enhances the audit's quality, which addresses the need for users of financial statements for accurate and reliable information. Because users of financial statements expect auditors, in addition to commenting on the importance of the financial statements to be free of distortion, they also want to provide an understandable, explicit, and positive report. Therefore, it can be expected that improving the tone of the auditor's report will increase the audit market competition. Research on audit quality has shown a direct relationship between audit market concentration and audit quality. (Blankley et al., 2012; Chaney & Philipic, 2002; Chaney et al., 2003; Eshleman & Guo, 2014; Lobo & Zhao, 2013). According to Newton et al. (2013), increasing the concentration on the audit market reduces auditors' risk of a client being absent and assures auditors that they will perform audit activities with better quality. That will increase the independence of the auditor and the audit quality. Huang et al. (2016) show that audit market concentration increases audit fees and quality. Moreover, Numan & Willekens (2012) proved that increasing the audit market concentration reduces audit fees. Bengoriz et al. (2020), Gunn et al. (2019), and Van Raak et al. (2019) showed that the audit market concentration reduces audit quality.

Considering the significant market share of the audit organization, a recent increase in competition among other audit firms in the country, the existence of contradictory evidence about the effect of the audit market concentration on audit quality based on theoretical foundations, and research background in the present study, we examine the relationship between the tone of the auditor's report, which refers to the auditor's competence and competence regarding the audit quality expertise dimension, by competing in the audit market and formulate our hypothesis as follows:

Research Hypothesis: There is a significant relationship between the tone of the auditor's report and the audit market competition.

One potential factor is that auditors may reduce competition in the audit market by allocating fewer resources to the client in market segments (Dykes, & Turner, 1987; Kranton, 2003). This damages the auditor's competence and expertise and, in turn, reduces the audit quality when the market is less concentrated. This negative effect of competition on audit quality, especially if the audit quality is observed to be difficult, strengthens the relationship and destroys the auditor's independence. Therefore, regulations can potentially mitigate the impact of audit market competition on audit quality. For example, audit markets are regulated to provide the minimum level of quality using training conditions, licenses, and quality controls (Yardley, Kauffman, Cairney, & Albrecht, 1992) and, if effective, restrict standards and the scope of quality levels which auditors can provide.

Research Methodology

The statistical population of this paper includes all listed firms on the Tehran Stock Exchange during 2012-2019. The systematic elimination method is used for sampling, and the statistical sample is selected after applying the following conditions:

- 1) Companies must have been listed on the Tehran Stock Exchange by the end of 2011.
- 2) The companies in question have been continuously active during the research period, and their shares have been traded (the suspension of transactions has not been more than 6 months).
- 3) companies must have fully provided the financial information required to conduct this research during the research period.
- 4) 4. Companies must not be part of investment companies, banks, insurance, and financial intermediation.

Regarding the information gathered at the end of 2019, the final sample is obtained and depicted in Table 1.

Insert table 1 here

Data Collection Method

The required data of the study are collected based on their types from different resources. The information related to the study's literature and theoretical facts

was gathered from library resources, including Persian and Latin books and journals, and Internet websites. In addition, the information related to firms (balance sheets and profit and loss statements) is used as the research tool.

Raw information and data necessary to test the hypotheses were collected from the database of the Tehran Stock Exchange, including Tadbir Pardaz and Rahvard Novin, as well as reports published by the Tehran Stock Exchange Organization through direct reference to them (Which is done by reviewing the reports disclosed on the Codal website and then collected manually), which is presented as a CD by the Tehran Stock Exchange and also available on the www.rdis.ir website. Other necessary resources will also be collected.

Data Analysis

The data analysis method is cross-sectional and year-by-year (panel data). This paper uses the multivariate linear regression model for hypothesis testing. Furthermore, descriptive and inferential statistical methods are used for analyzing the obtained data. Hence, the frequency distribution table is used for describing data. At the inferential level, the F-Limer, Hausman test, test of normality, and multivariate linear regression model are used for hypothesis testing.

Research Model

The following model has been used to test the research hypothesis. To measure the dependent variable of research (competition in the audit market), two indicators of auditor concentration, client concentration, and factor analysis of these two indicators have been used. Therefore, the following model has been tested four times by the variables of auditor concentration, client concentration, and factor analysis of these two indicators.

Model 1

$$\begin{aligned} COM = a_0 + a_1TONE_{it} + a_2adchange_{it} + a_3AIS_{it} \\ + a_4AO_{it} + a_5ATENURE_{it} \\ + a_6fage_{it} + a_7fsize + a_8ind_{it} \\ + a_9lev_{it} + a_{10}lnafee_{it} \\ + a_{11}loss_{it} + a_{12}roa_{it} \\ + a_{13}roe_{it} + a_{14}year_{it} + \varepsilon_{it} \end{aligned}$$

Model (2) was used to test the relationship between the tone of the audit report and the concentration of the auditor:

Model 2

$$\begin{aligned} HHI = a_0 + a_1TONE_{it} + a_2adchange_{it} + a_3AIS_{it} \\ + a_4AO_{it} + a_5ATENURE_{it} \\ + a_6fage_{it} + a_7fsize + a_8ind_{it} \\ + a_9lev_{it} + a_{10}lnafee_{it} \\ + a_{11}loss_{it} + a_{12}roa_{it} \\ + a_{13}roe_{it} + a_{14}year_{it} + \varepsilon_{it} \end{aligned}$$

To test the relationship between the tone of the audit report and the concentration of the client, model (3) is used as follows:

Model (3)

$$\begin{aligned} CLINT_HHI_{it} = a_0 + a_1TONE_{it} + a_2adchange_{it} \\ + a_3AIS_{it} + a_4AO_{it} \\ + a_5ATENURE_{it} + a_6fage_{it} \\ + a_7fsize + a_8ind_{it} + a_9lev_{it} \\ + a_{10}lnafee_{it} + a_{11}loss_{it} \\ + a_{12}roa_{it} + a_{13}roe_{it} \\ + a_{14}year_{it} + \varepsilon_{it} \end{aligned}$$

where

Com: Competition in the audit market, which is obtained from the factor analysis of the two indicators of auditor concentration and client concentration; In this study, the following two indicators have been used to measure competition in the audit market.

Research Variables

Dependent Variables

Competition in the Audit Market:

To measure audit market competition, two indicators are used: the concentration of the auditor and the client's concentration. Finally, using exploratory factor analysis, we achieve a competition variable using the above two variables. Then, exponential factor analysis calculates the above variables' correlation matrix, extracts the coefficients and multiplies the resulting coefficients in the numerical value of each of the mentioned variables, and adds them together to calculate the competition variable in the audit market.

Indicator 1: Auditor concentration (AUDIT_HII)

This study, similar to the previous studies (Eshleman and Lawson, 2016; Huang et al., 2015; Newton et al., 2015; Newton et al., 2013; Kallapur et al., 2010;

Kallapur et al., 2008), auditor concentration index has been used. The lower the value of this index, the more concentration and competition in the market. Boone et al. (2012) and Kallapur et al. (2008) stated that the results of this index could be considered inversely for competition in the audit market. Choi and Zéghal (1999) concluded a significant negative relationship between concentration and competition in the audit market. As in Markus and Steven (1997), this index is used in the industrial section of this study. Also, similar to Kallapur et al. (2008), this index is multiplied by (1-) to use as an index to compete in the audit market and not concentration. This index is calculated as follows:

$$HHI = \left(\sum_{i=1}^k \left(\frac{S_{it}}{S_{jt}} \right)^2 \right) * (-1)$$

K: Is equal to the number of auditors in the relevant industry

s: Is equal to the sum of the audit fees received by the auditor in the relevant industry.

S: Is equal to the sum of the audit fees received by the auditors in the relevant industry.

Indicator 2: Client's concentration (CLIENT_HII)

Caves and Porter (1978) stated that subscribers could use their ability to increase competition to change auditors' market share. In other words, as Motta (2004)

Eq. (1)

$$\frac{\text{total assets of all employers of each special audit firm in special industry}}{\text{total assets of all employers in special industry}}$$

In this paper, those firms are considered as industry specialized that their market share, namely the so-called ratio, is more than [(total existing firms/1)*1.2]. After calculating the market share of an audit firm, should the obtained values be more than the value in the above equation, the audit firm is specialized in that industry. Hence, if an audit firm is industry specialized, 1 otherwise, 0 will be assigned (Habib and Bhuiyan, 2011).

AO: Type of auditor's opinion, if the auditor has given an acceptable comment number one, if conditional, number two if rejected, number three and if he/she has submitted a non-comment opinion, number four;

LEV: Financial leverage is equal to the sum of debts divided by the sum of assets;

states, owners create competition in the market by threatening auditors to change them with another auditor. Dekeyser et al. (2015) show that client concentration has caused instability in the audit market. As a result, competition in the audit market increases, the index of client concentration is as follows:

$$\text{Herfindahl Index} = (\sum k_i = 1 [s / S]^2) t-1$$

K: Number of auditors in the relevant industry.

s: Sum of audit fees received by the auditor in the industry and the previous year.

S: The sum of audit fees received by auditors in the industry and the previous year.

Independent Variables

Audit report tone (tone):

The tone of the auditor's report: Based on Carlson and Lametti (2015), is calculated as follows:

$$\text{Tone} = (\text{Negative words} + \text{positive words}) / (\text{Negative words} - \text{Positive words})$$

Control variables

AIS: auditor specialization in the industry i in the year t that in this paper the market share is used as an index for auditor industry specialization because it shows the priority for industry to other auditors. The more the auditor's market share, the more the industry specialization and auditor experience. Auditor market share is computed as follows:

AD tenure: The tenure of the auditor is equal to the number of years that the auditor has been continuously auditing the business unit the year under review;

Exchange: Change of auditor, if the auditor has changed in the year of review, 1, otherwise 0;

LnAfee: Natural logarithm of audit fees;

FSIZE: The size of the company is equal to the natural logarithm of the total assets of the company;

ROE: Return on equity is equal to the ratio of net profit divided by the book value of equity in the year under review;

FAGE: The life of the company is equal to the period from the date of establishment of the company to the year under review;

Loss: if the company in the year under review has been a loss firm 1, otherwise, 0;
Year: Dummy variable;
Industry: Dummy variable.

Data Analysis

The Results of F-Limer test, Breusch–Pagan test, Hausman test

According to the results of Table 2, it is argued that the F cross-sectional test examines the null hypothesis, that is, pooled cross-sectional effects against the alternative hypothesis, which is the fixed effects in the cross-section. Therefore, F-Test cross-section and a time test the assumption of zero integration of section and time against the substitute assumption that the panel model has fixed effects on cross-section and time, according to the relevant statistics and probability levels for all three models (0.00 less than 0.1 G), the null hypothesis is rejected.

According to Table 2, the cross-sectional pagan test tests the hypothesis that zero integration of the sections against the panel has random effects, according to the statistics and probability level obtained for all three models (0.00 is less than 0.1). The model has random effects on time, and cross-section and the panel are confirmed by random effects of section and time. According to the results of Table 2, it is argued that the assumption of combined effects in both tests is rejected, and given that the F-Limer test shows the hypothesis of substitution of fixed effects and the Pagan test shows the hypothesis of substitution of random effects, we use Hausmann test to determine the final model. This tests the null hypothesis with the random effects according to the statistics. The probability obtained for the first model is 0.09, for the second model, 0.00, and the third model is 0.00, which for all three models, the hypothesis is rejected. Hence, the final model for all three models is a panel model with fixed cross-sectional and temporal effects (two-sided).

Descriptive Statistics of the Model

In this study, we used the multivariate regression model to investigate the relationship between the tone of the auditor's report and competition in the audit market. In addition, the present study has included the panel data method including 128 Iranian companies from 2012 to 2019 in its database. To estimate the

models, the variables of auditor's report tone, competition in the audit market, auditor concentration, client concentration, and a number of control variables have been used.

Estimating the research model based on the auditor concentration index

According to Table 4, there is a positive and significant relationship between the tone of the auditor's report and competition in the audit market (auditor concentration index) because the p-value is 0.000, which is less than the significance level of 5% and a coefficient is a positive number of 0.128, which indicates a positive relationship between these two variables.

Estimating the research model based on the client concentration index

According to Table 5, there is a positive and significant relationship between the tone of the auditor's report and the competition in the audit market (client concentration index) because their p-value is 0.052, which is less than the significance level of 10%. Its coefficient is the positive figure of 0.077, indicating a positive relationship between the tone of the auditor's report and competition in the audit market (client concentration index). This means that as the tone of the audit report improves, so does the client's concentration.

Estimating the research model based on the client concentration index

According to Table 6, the tone of the auditor's report has a positive and significant relationship with competition in the audit market (factor analysis index of two variables of auditor concentration and client concentration). Because the p-value is 0.000, which is less than the significance level of 5%, and its coefficient is a positive number of 0.549, which indicates that the better the tone of the audit report, the more competition in the audit market.

Robust Least Squares

Estimation of research model based on exploratory factor analysis of auditor concentration and client concentration

Ordinary least squares estimators are sensitive to observations outside the norm for the regression model of interest. Thus, the sensitivity of conventional regression methods to these outlier observations can result in coefficient estimates that do not accurately reflect the underlying statistical relationship.

Robust least squares refer to various regression methods designed to be robust or less sensitive to outliers. EVIEWS offers three different methods for robust least squares: M-estimation (Huber, 1973), S-estimation (Rousseeuw and Yohai, 1984), and MM-estimation (Yohai, 1987). The three methods differ in their emphases:

- **M-estimation** addresses dependent variable outliers where the value of the dependent variable differs markedly from the regression model norm (large residuals).
- **S-estimation** is a computationally intensive procedure that concentrations on outliers in the regressor variables (high leverages).
- **MM-estimation** is a combination of S-estimation and M-estimation. The procedure starts by estimating and then uses the estimates obtained from S-estimation as the starting point for M-estimation. Since MM-estimation combines the other two methods, it addresses outliers in both the dependent and independent variables.

In this study, to achieve better results and confirm the study results, the Competitive in the Audit Market have been tested by Method's MM-estimation, S-estimation, and M-estimation. The results are as follows:

According to Tables 7, 8, and 9, the tone of the auditor's report has a positive and significant relationship with competition in the audit market (factor analysis index of two variables of auditor concentration and client concentration). Because their p-values are 0.000, 0.000, and 0.000, which is less than the significance level of 5%, their coefficients are a positive number of 0.511, 0.508, and 0.523, which indicates that the better the tone of the audit report, the more competition in the audit market. Moreover, since a positive relationship was observed based on the two indicators of auditor and client concentration, the positive and significant relationship between the tone of the auditor's report and his exploratory factor analysis indicates that the results of exploratory factor analysis confirm the results of the above two

indicators. Furthermore, according to the above tables, the significance value of all three models is 0.000, so all models have the necessary and sufficient significance.

Discussion and Conclusion

After establishing the Iranian Society of Certified Public Accountants earlier last decade, the monopoly of the auditing labour market was collapsed, intense competition arose among auditors, and the market share of the audit organization plummeted. The Iranian audit market's concentration on the audit organization and one or two other institutions will likely reduce competition among these large institutions, increase their market share, enhance their non-competitive audit fees, and ultimately reduce the audit quality. Hence, the present study analyzes all listed firms on the Tehran Stock Exchange audited by audit firms during 2012-2018. So, this paper is concerned about the effect of auditor's report tone on competition in the audit market by considering the current competitive status in the Iranian audit market. We define the audit markets from two geographical and customer size perspectives. We can also assess these markets in terms of efficiency or inefficiency of the financial markets, where we should focus on market concentration and client concentration. Moreover, among the main factors of audit quality, we can refer to motivational factors which have been less in vogue. One of the factors is that competition enhances the quality level, but the factor that arises the competition is the sense of supremacy seeking, whether economic, social, cultural, or intrinsic (Ismailzadeh & Tramshloveh, 2011). Kalpoor et al. (2008) show that audit market competition would lead to audit quality reduction. Besides, Kalpoor et al. (2010) figure out a significant positive relationship between audit market concentration and audit quality. Two approaches arise in this regard. First, improvement in auditor's report tone increases the concentration and reduces the competition in the auditing market (Kalpoor et al., 2010). Second, improvement in audit quality (auditor's report tone) would lead to increased self-satisfaction and the power of auditors' market and decline the audit quality (Bone et al., 2012; Francis et al., 2013; Huang et al., 2016). On the other hand, an increase in audit quality will, in turn, improve the auditor's report tone and readability. Thus, the quality increase is one of the examples of tone enhancement, and the high

level of tone and readability of auditor's reports are indices of audit quality. Hence, since no study was carried out on auditor's report tone and competition in the audit market, the studies on audit quality and market competition are used to compare the hypotheses results. The results of the hypothesis testing showed a positive and significant relationship between the tone of the audit report and competition in the audit market. Therefore, the present study examined the relationship between the tone of the audit report and competition in the audit market based on the three indicators of auditor concentration, client concentration, and exploratory factor analysis of two variables of auditor concentration and client concentration. The results of all three methods indicated a positive and significant relationship between the tone of the audit report and the auditor concentration, client concentration, and heuristic factor analysis of two variables (competition in the audit market).

In other words, we can say that improving its tone increases the quality of auditing, so due to the lack of similar background on tone and competition, audit quality research and competition in the audit market have been used to argue the research results. Therefore, the results of the present study are in line with that of Bengoriz et al. (2020), Gunn et al. (2019), and Van Raak et al. (2019). They stated a positive and significant relationship between competition and audit quality. The results are also in line with that of Danos and Eichenseher (1986), Gettler (2004), Numan and Willekens (2012), Pearson and Trumpeter (1994), and Francis et al. (2013). They stated a significant negative relationship between audit quality and competition in the audit market. According to the findings, the audit market concentration in Iran intensifies unhealthy competition among small audit firms, reducing audit quality in covering the risk of client loss. The competent authorities, such as the Iranian Society of Certified Public Accountants, are recommended to develop and implement plans for continuous monitoring to increase concentration on the audit market. Most audit firms in Iran are small firms. The intensification of competition in the Iranian audit market may threaten the independence of private audit firms. In line with the subject of this research, future researchers are also recommended to examine the effect of increasing or decreasing the concentration of the audit market on audit independence.

References

- 1) Boone, J.P. Khurana, I.K. and Raman, K. (2012), "Audit market concentration and auditor tolerance for earnings management", *Contemporary Accounting Research*, Vol. 29 No. 4, pp. 1171–1203. <https://doi.org/10.1111/j.1911-3846.2011.01144.x>
- 2) Ball, R. (2001), "Infrastructure Requirements for an Economically Efficient System of Public Financial Reporting and Disclosure", *Brookings-Wharton Papers on Financial Services*, Vol. 1 No. 1, pp. 127–69.
- 3) Blankley, A.I. Hurtt, D.N. and J. MacGregor. (2012), "Abnormal audit fees and restatements", *Auditing: A Journal of Practice and Theory*, Vol. 31 No. 1, pp. 79–96.
- 4) Bengoriz, F. Khosravipoor, N. and Noroolahzadeh, N. (2020), "Study the Effect of Audit Market Concentration on Auditors' Job Stress and Audit Quality of Tehran Stock Exchange (TSE) Listed Firms", *ADVANCES IN MATHEMATICAL FINANCE AND APPLICATIONS*, Vol. 5 No. 1, pp. 113-128. http://amfa.iauarak.ac.ir/article_666226.html
- 5) Chaney, P.K. and K. L. Philipich. (2002), "Shredded reputation: The cost of audit failure", *Journal of Accounting Research*, Vol. 40 No. 4, pp. 1221–1245.
- 6) Chaney, P.K. Jeter, D.C. and P. E. Shaw. (2003), "The impact on the market for audit services of aggressive competition by auditors", *Journal of Accounting and Public Policy*, Vol. 22 No. 6, pp. 487–516.
- 7) Choi, M.S. and Zéghal, D. (1999), "The effect of accounting firm mergers on international markets for accounting services", *Journal of International Accounting, Auditing and Taxation*, Vol. 8 No 1, pp. 1-22.
- 8) Caves, R.E. and Porter, M.E. (1978), "Market structure, oligopoly, and stability of market shares", *The Journal of Industrial Economics*, pp. 289-313.
- 9) Danos, P. and Eichenseher, J.W. (1982), "Audit industry dynamics: Factors affecting changes in client-industry market shares", *Journal of Accounting Research*, Vol. 20, pp. 604–616.
- 10) Dopuch, N. and Simunic, D. (1980), "The nature of competition in the auditing profession: A

- descriptive and normative view”, *Regulation and the Accounting Profession*, Vol. 34, pp. 283–289.
- 11) Davis, L.R. Ricchiute, D.N. and Trompeter, G. (1993), “Audit effort, audit fees, and the provision of nonaudit services to audit clients”, *The Accounting Review*, Vol. 68, pp. 135–150.
 - 12) Davis, A.K. Ge, W. Matsumoto, D. and Zhang, J.L. (2015), “The effect of manager-specific optimism on the tone of earnings conference calls”, *Review of Accounting Studies*, Vol. 20 No. 2, pp. 639–673. [https://doi.org/10. 1007/s11142-014-9309-4](https://doi.org/10.1007/s11142-014-9309-4)
 - 13) Davis, A.K. Ge, W. Matsumoto, D. and Zhang, J.L. (2014), “The effect of manager-specific optimism on the tone of earnings conference calls”, *Review of Accounting Studies*, Vol. 20 No. 2, pp. 639–673
 - 14) Davis, A. Piger, J. and Sedor, L. (2012), “Beyond the Numbers: Measuring the Information Content of Earnings Press Release Language”, *Contemporary Accounting Research*, Vol. 29 No. 3, pp. 845-868.
 - 15) Danos, P. and Eichenseher, J.W. (1982), “Audit industry dynamics: Factors affecting changes in client-industry market shares”, *Journal of Accounting Research*, Vol. 20, pp. 604–616.
 - 16) Dekeyser, S. Gaeremynck, A. Knechel, W.R., and Willekens, M. (2015), “Strategic Competition by Audit Firms (Master’s Thesis)”, Retrieved from <http://wp.unil.ch/>.
 - 17) Eshleman, J.D. and Lawson, B.P. (2016), “Audit market structure and audit pricing”, *Accounting Horizons*, Vol. 31 No. 1, pp. 57-81.
 - 18) European Commission. (2010), “Green paper: Audit policy, lessons from the crisis”, Brussels: European Commission.
 - 19) Eshleman, J.D. and P. Guo. (2014), “Abnormal audit fees and audit quality: The importance of considering managerial incentives in tests of earnings management”, *Auditing: A Journal of Practice and Theory*, Vol. 33 No. 1, pp 117–138.
 - 20) Francis, J.R. Michas, P.N. and Seavey, S.E. (2013), “Does audit market concentration harm the quality of audited earnings? Evidence from audit markets in 42 countries”, *Contemporary Accounting Research*, Vol. 30, pp. 325–355.
 - 21) Financial Reporting Council (FRC). (2018), “Developments in audit”, London: Financial Reporting Council.
 - 22) Gettler, L. (2004), “PwC exits NAB audit race, but stays close”, *The Age*(June 5). Available at:[http ://www .theage .com .au/articles /2004/06/04/1086203633877.html](http://www.theage.com.au/articles/2004/06/04/1086203633877.html).
 - 23) Government Accountability Office. (2008), “Audits of Public Companies: Continued Concentration in Audit Market for Large Public Companies Not Call for Immediate Action”, Report to Congressional Addressees.
 - 24) Gunn, J.L. and Kawada, B. and Michas, P.N. (2019), “Audit Market Concentration, Audit Fees, and Audit Quality: A Cross-Country Analysis of Complex Audit Clients”, Available at SSRN: <https://ssrn.com/abstract=3457551>
 - 25) Government Accountability Office (GAO). (2008), “Audits of Public Companies: Continued Concentration in Audit Market for Large Public Companies Does Not Call for Immediate Action”, Washington, DC: GAO.
 - 26) Huang, T.C. Chang, H. and J. R. Chiou. (2016), “Audit Market Concentration, Audit Fee, and Audit Quality: Evidence from China” *Auditing: A Journal of Practice and Theory*, Vol. 35 No. 2, Pp. 121 -145.
 - 27) House of Lords. (2011), “Auditors: Market concentration and their role”, Select Committee on Economic Affairs, 2nd Report of Session 2010–2011. London: The Stationery Office.
 - 28) Huang, X. Teoh, S.H. and Zhang, Y. (2014), “Tone management”, *Accounting Review*, Vol. 89 No. 3, pp. 1083–1113. <https://doi.org/10.2308/accr50684>
 - 29) Henry, E. (2008), “Are investors influenced by how earnings press releases are written?”, *The Journal of Business Communication*, Vol. 45 No. 4, pp. 363–407. <https://doi.org/10.1177/0021943608319388>
 - 30) Huber, P.J. (1973), “Robust Statistics: asymptotics, conjectures and Monte Carlo *Annals of Statistics*”, Vol. 1, pp. 799-821.
 - 31) Habib, A. and Bhuiyan, M.B. (2011). “Audit Firm Industry Specialization and The Audit Report Lag”, *Journal of International Accounting, Auditing and Taxation*, Vol. 20 No. 1, pp. 32–44. <https://doi.org/10.1016/j.intaccaudtax.2010.12.004>
 - 32) Huang, T.C. Chang, H. and Chiou, J.R. (2015), “Audit market concentration, audit fees, and audit quality: Evidence from China”, *Auditing: A*

- Journal of Practice & Theory, Vol. 35 No. 2, pp. 121-145.
- 33) Jeroen van Raak, J. Peek, E. Meuwissen, R. and Schelleman, C. (2020), "The effect of audit market structure on audit quality and audit pricing in the private-client market", *Journal of Business Finance & Accounting*, Vol. 47 No. 3-4, pp. 456-488. <https://doi.org/10.1111/jbfa.12414>
 - 34) Kranton, R.E. (2003), "Competition and the incentive to produce high quality", *Economica*, Vol. 70, pp. 385– 404.
 - 35) Kallapur, S. Sankaraguruswamy, S. and Zang, Y. (2010), "Audit market competition and audit quality", *Indian School of Business*.
 - 36) Kallapur, S. Sankaraguruswamy, S. and Zang, Y. (2008), "Audit Market Competition and Audit quality", www.ssrn.com.
 - 37) Langli, J.C. and Svanström, T. (2014), "Audits of private companies, In D. Hay, W. R. Knechel, & M. Willekens (Eds.)", *The Routledge companion to auditing* (pp. 148– 158). New York: Routledge.
 - 38) Lang, M. and Lundholm, R. (2000), "Voluntary disclosure and equity offerings: Reducing information asymmetry or hyping the stock?", *Contemporary Accounting Research*, Vol. 17 No. 4, pp. 623–662. <https://doi.org/10.1506/9N45F0JX-AXVW-LBWJ>
 - 39) Lobo, G. and Zhao, Y. (2013), "Relation between audit effort and financial reporting misstatements: Evidence from quarterly and annual restatements", *The Accounting Review*, Vol. 88 No. 4, pp. 1385– 1412.
 - 40) Melloni, G. Stacchezzini, R. and Lai, A. (2016), "The tone of business model disclosure: an impression management analysis of the integrated reports", *Journal of Management & Governance*, Vol. 20 No. 2, pp. 295-320.
 - 41) Merkl-Davies, D.M. and Brennan, N.M. (2011), "A conceptual framework of impression management. New insights from psychology, sociology and critical perspectives", *Accounting and Business Research*, Vol. 41 No. 5, pp. 415– 437
 - 42) Merkl-Davies, D.M. Brennan, N.M. and McLeay, S.J. (2011), "Impression management and retrospective sense-making in corporate narratives", *Accounting, Auditing & Accountability Journal*, Vol.24 No.3, pp. 315–344.
 - 43) Markus, S. and Steven, M. (1997), "The structure of the Belgian audit market: The effects of clients' concentration and capital market activity", *International Journal of Auditing*, Vol. 1 No. 2, pp. 151-162. DOI:10.1111/1099-1123.00019
 - 44) Motta, M. (2004), "Competition policy: theory and practice", Cambridge University Press.
 - 45) Newton, N. Persellin, J.S. Wang, D. and Wilkins, M.S. (2016), "Internal control opinion shopping and audit market competition", *The Accounting Review*, Vol. 91 No. 2, pp. 603-623.
 - 46) Newton, N.J. Wang, D. and Wilkins, M.S. (2013), "Does a lack of choice lead to lower quality? Evidence from auditor competition and client restatements", *Auditing: A Journal of Practice & Theory*, Vol. 32 No. 3, pp. 31– 67.
 - 47) Numan, W. and M. Willekens. (2012), "An empirical test of spatial competition in the audit market", *Journal of Accounting and Economics*, Vol. 53 No. 1 and 2, pp. 450– 465.
 - 48) Numan, W. and Willekens, M. (2012), "An empirical test of spatial competition in the audit market", *Journal of Accounting and Economics*, Vol. 53, pp. 450– 465.
 - 49) Pearson, T. and Trompeter, G. (1994), "Competition in the market for audit services: The effect of supplier concentration on audit fees", *Contemporary Accounting Research*, Vol. 11, pp. 115– 135.
 - 50) Pound, G. and Francis, J.R. (1981), "The accounting services market: Theory and evidence", *Journal of Business Finance & Accounting*, Vol. 8, pp. 353– 371.
 - 51) Rousseeuw P.J. and Yohai, J.V. (1984), "Robust regression by means of S-estimator", In *Robust and Nonlinear Time Series* (J. Franke, W. Härdle and D. Martin, eds) *Lecture Notes in Statist*, Vol. 26, pp. 256-272.
 - 52) Sikka, P. Haslam, C. Cooper, C. Haslam, J. Christensen, J. Driver, D.G. and Willmott, H. (2018), "Reforming the auditing industry", report commissioned by the Shadow Chancellor of the Exchequer, John McDonnell MP.
 - 53) Sirois, L.Ph. and Simunic, D.A. (2011), "Auditor Size and Audit Quality Revisited: The Importance of Audit Technology", Available at SSRN: <https://ssrn.com/abstract=1694613>

- 54) Schaen M. and S. Maijoor, (1997), "the Structure of the Belgian Audit Market: the Effects of Clients' Concentration and Capital Market Activity", *Internal Journal of Auditing*, Vol. 1 No. 2, pp. pp. 151- 162.
- 55) Shapiro, C. (1989), "Theories of oligopoly behavior. In R. Schmalensee & R. Willig (Eds.)", *Handbook of industrial organization* (1st ed.), Amsterdam: North-Holland.
- 56) US Government Accountability Office (GAO). (2003), "Mandated study on consolidation and competition", GAO Report 03-864. Washington, DC: Government Printing Office.
- 57) US Government Accountability Office (GAO). (2008), "Audits of public companies: Continued concentration in audit market for large public companies does not call for immediate action. Report to congressional addressees", GAO Report 08-163. Washington, DC: Government Printing Office.
- 58) Wymenga, P. Spanikova, V. Barker, A. Konings, J. and Canton, E. (2011), "EU SMEs in 2012: At the crossroads", *Annual report on small and medium-sized enterprises in the EU*, 2011/12.
- 59) Watts, R.L. and Zimmerman, J.L. (1983), "Agency problems, auditing, and the theory of the firm: Some evidence", *Journal of Law & Economics*, Vol. 26 No. 3, pp. 613–633 .
- 60) Willekens, M. and Achmadi, C. (2003), "Pricing and supplier concentration in the private client segment of the audit market: Market power or competition?", *The International Journal of Accounting*, Vol. 38, pp. 431– 455.
- 61) Yekini, L.S. Wisniewski, T.P. and Millo, Y. (2016), "Market reaction to the positiveness of annual report narratives", *The British Accounting Review*, Vol. 48 No. 4, pp. 415–430. <https://doi.org/10.1016/j.bar.2015.12.001>
- 62) Yardley, J.A. Kauffman, N.L. Cairney, T.D. and Albrecht, W. D. (1992), "Supplier behavior in the US audit market", *Journal of Accounting Literature*, Vol. 11, pp. 151– 194.
- 63) Yohai, J.V. (1987), "High Breakdown-Point and High Efficiency Robust Estimates for Regression", *Annals of Statistics*, Vol. 17 No. 4, pp. 1662-1683.