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The Effect of Auditors' Characteristics on Relationship between Geographical Diversification and Real Earnings Management

Amir Ghafourian Shagerdi

Faculty of Administrative Sciences, Imam Reza International University, Mashhad, Iran

Seyed Hojjat Saberi Postchi

Department of Accounting, Imam Reza International University, Mashhad, Iran

Abstract

the study investigates the effect of auditors' characteristics on the relationship between geographical diversification and real earnings management in the listed companies on the Tehran Stock Exchange. Thus, 204 companies listed in Tehran Stock Exchange were systematically selected between 2012-2017, and the data were analysed using SPSS 24. This research is applied, and in terms of nature, it is an ex-post-facto research, namely, it is based on past (corporate financial statements) analysis. In this study, examining the positive relationships between geographical diversification and real earnings management were shown, respectively. By measuring the effect of auditor's specialisation on the relationship between geographical diversity and real earnings management, the auditor's expertise's impact has been considered significant, and the second hypothesis was confirmed.

Keywords: Auditor Characteristics, Geographical Diversification, Real Earnings Management

Corresponding author: Amir Ghafourian Shagerdi
Email: *ghafourian@imamreza.ac.ir*

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1. Introduction

Judgments made by managers and their authority in the financial reporting process is called earnings management. Accounting studies have paid special attention to earnings management and its consequences for many years(Etemadi, Azar and Nazemi Ardakani, 2010). However, the question raised here is whether earnings management improves the quality characteristics of accounting information or reduces its information content. Earnings management literature does not help determine earnings management's desired or undesired effect on the usefulness of accounting information and provides no clear answer(Etemadi, Azar and Nazemi Ardakani, 2010) .The present evidence is contradictory and unsatisfying. One of the main reasons is the lack of research on the various dimensions of the quality of accounting information. Earnings management literature has not provided an accepted definition of earnings management(Etemadi, Azar and Nazemi Ardakani, 2010). Arthur Levitt, the former chairman of the US Securities and Exchange Commission, has defined earnings management in this way: it is an action that makes the reported earnings reflect more the management desires than the company's fundamental financial performance. Schipper (1989) defines earnings management as a purposeful financial reporting intervention to acquire personal benefits. The two definitions focus on the opportunistic aspects of management. It means that management manages the earnings with profit-seeking motivations(Etemadi, Azar and Nazemi Ardakani, 2010). They implicitly suggest that earnings management reduces the information content of accounting numbers. Also, some researchers have an awareness-raising outlook on earnings management and define it as manipulation of earnings numbers by managers through which private and personal information of management on the future company performance is transferred to investors(Etemadi, Azar and Nazemi Ardakani, 2010). We expect that earnings management reduces the information content and helps investors interpret the reported figures better by accepting this definition. However, the opportunistic nature of earnings management is more acceptable in the literature (Jiraporn et al., 2008; Etemadi, Azar and Nazemi Ardakani, 2010).

A diversification strategy is a strategy that causes changes in the products, services, and areas of activity at present. Diversification occurs when the company expands to produce and sell products or launch production lines that have no association with other products in terms of the market (Rumelt, 1982). Dadbeh and Mirzaei Goodarzi(2021) examined the moderating effect of CEO duality on the relationship between geographic diversification and firm performance. They found a positive and significant relationship between geographical diversification and company performance. Due to the increasing complexity of operations and management structure (Nam et al. 2006; 779) and ownership structure (Denis, Denis and Sarin, 1997; 158) and information asymmetry, diversified companies have higher information asymmetry than focused companies. In addition, investigating the earnings report in diversified companies is difficult and requires more expertise and resources for investors and analysts (Thomas, 2002). Increasing asymmetric information prevents investors from discovering manipulated earnings, so managers in diversified companies are more motivated to manipulate the earnings. However, according to the commitment compensation hypothesis, some researchers (such as Jiraporn et al., 2008) argue that in the diversified companies, the accruals resulting from different segments of business have a weak correlation with each other, and this reduces managers' ability to manage earnings (Bustani, 2019). The financial scandals of large companies like Enron, Arthur Anderson, and WorldCom have greatly reduced the users' trust in financial statements. Such scandals and their consequences are the main reason for the quality of the financial statements. Also, the recent

financial crises have led to an increased demand for high-quality auditing. These results may indicate that auditors need to be more vigilant after the recent crises. Auditors are required to respond to events that increase the likelihood that the financial statements will be materially misstated and to conduct the audit in a manner that reduces the audit risk to an appropriately low level (Cassell et al., 2019).

Therefore, audit quality is one factor that enhances the credibility of financial information (Jaggi, Gul and Chiu Lau, 2012). Jensen and Meckling (1976) stated that auditing is crucial in reducing agency costs among managers and shareholders. Auditing is considered a supervisory tool for shareholders because auditors report incorrect cases such as earnings management. Indarti and Widiatmoko(2021) believe that earnings management positively affects the cost of equity capital. Conversely, companies with good audit quality will bear a lower cost of equity capital. In general, auditing is a means for linking auditors and shareholders to show that managers are not looking for opportunistic behaviours. Piot and Janin (2007) argue that auditing is one of the ways to prevent and reduce earnings management because companies believe that the earnings and information content of companies presenting audited financial statements have high quality(Badavar Nahandiand and Taghizadeh, 2013).

Due to the increasing application of various strategies such as diversity strategy in the contemporary period and the importance and results for companies at the international level and the complexity and expansion of transactions due to diversification of the organisation, the position and desire to earnings management and their effects(In diversified companies) have increased. Diversification is a factor to increase information asymmetry and create the tendency for earnings management and any activity that lead to conflicts of interest between management and owners. Auditors play a crucial role in identifying earnings management and increasing the reliability of financial information. The basis of the audit measurement and the level of auditors' activities can be determined according to the audit quality and its relative measurement. Among the factors that affect the quality of the audit and the degree of trust in the financial statements can be the auditor's expertise, tenure and the size of the audit firm. In the field of Geographical Diversification, little researches have been done in Iran. Unfortunately, many studies conducted in Iran have only examined the relationship between diversity and financial variables. Earnings management is also one of these variables that have been researched. What matters is how an auditor's characteristics can affect earnings management in a diversified company; in other words, Can auditors be a deterrent to earnings management in diversified companies? In the present study, we seek to answer two general questions: First, is there a significant relationship between real management and geographical diversification? Awareness of this issue can determine how companies' degree of geographical diversification will affect their real earnings management. Also, in the second question of this study, we examine the impact of auditor’s characteristics on the real earnings management in diverse companies. Investors identify the degree of geographical diversification of the firm, anticipate the likelihood of real earnings management, and invest after knowing the characteristics of the firm's auditor to determine the extent of success of the auditor in controlling the earnings management. This study will continue as follows: first, the theoretical framework of financial literacy research on earnings management and Geographical Diversification and expansion of hypotheses are defined. The research methodology, including research variables and patterns, is presented below. After stating the research results, conclusions will be presented in the final part.

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2. Research Background and Hypothesis

2.1. Geographical Diversity and Earnings Management

Didar, Imani Barandagh and Shahrezaei (2014) show that business diversification has a significant and positive effect on performance and have non-significant and negative effects on the value of studied firms. Moreover, Hemati and Yosefirad (2011)argue a negative and significant relationship between abnormal returns and diversification strategy, but the relationship between abnormal returns and cash holding was not statistically significant. The results also revealed that diversification positively and significantly impacts the relationship between abnormal returns and cash balance. On the other hand, Many diversified companies have information asymmetry and agency problems due to complex operations and information. For example, non-transparency of accounting figures provided by diversified companies leads to information asymmetry between companies and external investors (Gilson et al., 2001; Hadlock, Ryngaert and Thomas, 2001). Also, to investigate the information asymmetry in diversified companies, Burch and Vikram (2003), Denis, Denis and Yost (2002), Doukas and Pantzalis (2003) concluded that diversified companies, compared to single-product companies, have more information asymmetry. Asymmetric information and its impact are more prominent in the capital market. In the trading behaviour of the capital market, there is often a massive conflict of interest, and asymmetric information provides opportunities for fraud and unethical behaviour in pursuit of the interests (Du, Shu and Xia, 2020). One of the significant reasons for information asymmetry in diversified companies may be the lack of information transparency (Thomas, 2002). Trueman and Titman (1988) argue that information asymmetry between company management and company shareholders is essential for earnings management. Vazifedust, Dadbeh and Hashemloo (2014), by examining the Corporate diversification, information asymmetry and firm performance in the Tehran stock exchange, indicate that corporate diversification using entropy influenced information asymmetry and firm performance. Accordingly, information asymmetry in diversified companies provides the necessary conditions for managing earnings and manipulates earnings in multi-product companies. Earnings management in diversified companies involves manipulating accrual and real earnings (Alhadab and Nguyen, 2018). For example, Lim, Thong and Ding (2008), based on a modified model of Jones, showed that discretionary accruals are more in the diversified companies compared to non-diversified companies. Berrill, Campa and O'Hagan-Luff (2021) show that international diversification is associated with greater manipulation of accruals and sales but with lower manipulation of production costs. Moreover, they found strong evidence that the combination of industrial and international diversification increases real activity manipulation but does not affect accrual manipulation. A diversification strategy can be applied through commercial and geographical diversification in the company. Many studies have examined the relationship between commercial and geographic diversification and earnings management. For example, Masud, Anees and Ahmed (2017) showed that commercial diversification and the sum of commercial and geographical diversification reduce earnings management. The study conducted by Dadashzadeh and Baradaran Hasanzadeh is one of the studies investigating this relationship in Iranian stock companies (2017). Dadashzadeh and Baradaran Hasanzadeh (2017) concluded that there was no relationship between artificial earnings management and commercial diversification, and there was a significant and negative relationship between geographical diversification and artificial earnings management. In addition, no association was found between real earnings management and corporate diversification. Shi, Sun and Luo (2014) argue that geographically dispersed firms have lower accrual-based management but higher real earnings management when compared to geographically concentrated firms. Based on the research literature and background, the following hypothesis is

presented:

There is a positive relationship between geographical diversification and real earnings management.

2.2. Industry Expertise, Diversification, and Earnings Management

Most studies consider applying industry-expertise auditors as a factor to enhance the quality of auditing. In fact, by time and financial investments, industry-expertise auditors seek to enhance their aspects (Bell, Peecher and Solomon, 2005). The studies conducted by Kwon (1996) and Libby and Tan (1995) are among the studies conducted on the efficiency of industry-expertise auditors. They realised that experienced or trained auditors act better than un-trained or in-experienced individuals. Industry-expertise auditors increase the likelihood of distortions in financial statements (Hammersley, 2006; Ashton, 1991; Libby and Frederic, 1990). As a result, they improve the quality of financial reporting and consequently the level of trust in financial statements (Hegazy, Sabagh and Hamdy, 2015). Dunn and Mayhew (2004) found that the owners of industry-expertise auditing firms are ranked higher by financial analysts in terms of disclosure quality. This analysts' view compared to industry-expertise auditors highlights the importance and role of this feature in the quality of audits. The industry-expertise auditor is of particular importance from the auditors' perspective so that managers select the industry-expertise auditing companies in their priority to display transparency and their performance and to provide the users with the guarantee of the financial statements (Tate and Feng, 2013). Dunn and Mayhew (2004) showed that the use of industry-expertise auditors has advantages such as reduced costs in the form of low audit fees and the ability to identify incorrect cases compared to non-expertise auditors to modify or report incorrect cases support professional reputation. Feng et al. (2019)argue that individual auditor industry specialisation decreases the risk of price crashes by mitigating earnings manipulation. As a result, there is a positive relationship between industry-expertise auditors and the quality of disclosure of financial statements (Badavar Nahandiand and Taghizadeh, 2013). Many studies have been conducted on the impact of the industry-expertise auditors on earnings management. For example, Krishnan (2003) examined the relationship between industry-expertise auditors and the absolute level of discretionary accruals of business owners. The results showed that business owners who do not use industry-expertise auditors compared to those who do not use industry-expertise auditors who use it have more discretionary accruals. On the other hand, some studies have different outcomes. For example, Mnif and Hamouda (2021) believe that companies may substitute between earnings management strategies and shift from accrual earning Management to Real Earning Management when audited by an industry expert. Lopez and Vega (2019) show that audits performed by firms with longer industry specialist durations are associated with greater levels of real earnings management. Based on the previous studies, this study examines the effect of industry-expertise auditors on real earnings management in geographically diversified companies. Since most of the studies conducted on the industry-expertise auditor and earnings management have focused on non-diversified, there is a research gap in diversified companies. Accordingly, the following hypothesis is presented:

The industry-expertise auditor has a significant negative impact on the relationship between the company's geographical diversification and real earnings management.

2.3. Tenure, Diversification, and Earnings Management

Diversified companies are complex organisations operating in various industries. Accordingly, the auditor needs more time to properly understand the company's activities and performance. Auditor

tenure for auditing the company plays a pivotal role. The auditor would better understand business processes, the company's industrial characteristics, and accounting policies due to having expertise in auditing this type of company. As a result, with increasing the tenure, the auditor avoids incorrect cases and discovers them easily in diversified companies, leading to increased quality of reported information and disclosure quality and reduced agency costs and information asymmetry in diversified companies. Increased audit quality caused by increased tenure has been reported in several studies (Mansi, Maxwell and miller 2004; Gul, Fung and Jaggi 2009; Stanly and DeZoort 2007; Carcello and Nagy 2004; Johnson, Khurana and Reynolds 2002). for example, Jadiyappa et al. (2021)show that Contrary to the objective of mandatory rotations, longer auditor tenure generally enhanced audit quality among Indian firms prior to mandatory rotations. Moreover, Martani et al. (2021)examined the impact of audit tenure and audit rotation on the audit quality: Big 4 vs non-big 4. they believe that the relationship between auditor tenure and audit quality is not significant. Audit firm rotation positively impacts audit quality, and the positive impact is lower in Big 4. In non-Big 4, audit partner rotation does not affect audit quality, but audit firm rotation could improve audit quality. meanwhile, in Big 4, audit partner rotation is sufficient to improve audit quality because they have sufficient partners to perform a quality review

They argue that non-standard audits generally occur in companies where the auditor is unfamiliar with the environment and industry and opposes restrictions on the tenure. However, it should be noted that many views oppose the increase in the auditor's tenure. Therefore, it is not possible to make a definitive decision on the positive or negative impact of tenure on audit quality. Primadita, Fitriany and Kiantara (2021) show that information asymmetry will decrease as tenure increases in the early years of the audit engagement. The longer audit tenure implies that the auditor is more skilled in auditing the company, minimising information asymmetry. However, after 8 years, the information asymmetry will be increased again. As the audit tenure increases, the auditor becomes more familiar with the clients, and the independence and objectivity of auditors might be decreased.

The study results conducted by Bates, Ingram and Reckers(1982) show that auditors' judgment is influenced by the long-term relationships of auditors and business owners. Copley and Doucet (1993) found that non-standard audits increase with increasing tenure. The results of the research conducted by Vanstraelen (2000) suggested that long-term cooperation between auditors and business owners raises the prospect of issuing an acceptable report by auditors. Vanstraelen (2000) suggests that long-term audit and auditor collaborations increase the likelihood of auditors reporting acceptable results. Dopuch, King and Schwartz (2001) concluded that auditors' rotation reduces auditors' willingness to provide biased, irrational reports. Turner, Mock and Srivastava (2002) and Brody and Moscove (1998) argue that restricting an auditor's tenure leads to increased audit quality and prevents the influence of business owners on auditors. Rajabi (2006) reported that the long-term presence of an auditor and the business owners could create the willingness to observe the opinions of the business owner's management. This state disrupts his independence and bias. The common feature of the mentioned studies is restricting and preventing an increase in auditor tenure. Based on these studies, the long-term tenure can significantly impact the quality of an audit and financial statements.

Some studies have also been conducted on the effect of tenure on earnings management. Myers, Myers and Omer (2003) showed that the likelihood of earnings deviation increases in companies with long-term audit tenure. Davis, Soo and Trompeter (2009) found a positive relationship between audit tenure and level of non-normal accruals. Karami, Bazrafshan and Mohammadi (2011) showed that management flexibility in discretionary accruals increased as the auditor tenure increased. Management uses the created flexibility in the negative direction. Thus, according to this study's results, it can be stated that the long-term relationship between the business owner and the auditor

increases the flexibility of management to use discretionary accruals, but this is used more to reduce conservative earnings. Jabarzadeh Kangarluei, Namazi and Bayazidi (2011) investigated the relationship between audit size and auditor tenure and earnings management. The results investigated the relationship between the independent variables (audit size and auditor tenure) and earnings management, and they found a significant and positive relationship between earnings management and auditor tenure. KashaniPoor, Maranjory and Moshashaee (2012) showed a positive and significant relationship between discretionary accruals and audit tenure. Azizkhani and Safarvandi (2012) examined the effect of audit tenure on the predicted earnings error in the listed companies in the Tehran Stock Exchange. The results show that the accuracy of the predicted earnings of management increases in the early years of the tenure (fewer prediction errors) and then decreases (more prediction errors). Finally, considering the relationship between tenure and earnings management and the impact of tenure on audit quality, this study examines the effect of the characteristics of the auditor on the earnings manipulation in geographically diversified companies to reveal whether 4-years or more tenure in different companies leads to increased real earnings management or not. Based on the previous studies conducted on auditor tenure, the final hypothesis of the research is presented as follows:

The auditor tenure has a significant positive impact on the relationship between the company's geographical diversification and real earnings management.

2.4 Auditor Size, Diversification, and Earnings Management

Audit quality, which is recognised by various indicators, can significantly reduce information asymmetry and solve the problems caused by conflicts of interest between managers and owners and any manipulation of financial statements and data. Several studies have been conducted by Becker et al. (1998) on the role of auditors in reducing errors and enhancing the quality of reported information. Audit quality includes input criteria such as the auditor size, tenure, industry-expertise auditor, auditor independence, and auditor fee. This article addresses three indicators and considers them as auditor characteristics. Biddle, Hilary and Verdi (2009) and Biddle and Hilary (2006) have shown that by providing high-quality financial information, it is possible to reduce the information symmetry between diversified companies and the investors and allow the investors to predict the real value of the diversified company more accurately. Many investigations have been conducted on the relationship between audit size and audit quality and the impact of auditor size on the prevention and or disclosure of earnings management. In his research entitled “the size of the auditor company and the auditor quality, DeAngelo (1981) stated that larger audit firms have a stronger motivation to provide higher quality audits since larger companies are interested in acquiring a better reputation in the market. As they worry about losing the customers because of the large number of customers, such institutions are thought to provide higher quality auditing services because of having access to more resources and facilities for training their auditors and performing various tests. De Angelo is one of those who investigated auditor size and its relationship with audit quality for the first time. Lam and Chang (1994) found that large audit firms do not necessarily provide better audit quality than small audit firms. Louis (2004) investigated the relationship between audit firms' service quality and auditor size and found that large audit firms do not always provide better services than smaller ones. Abubakar et al. (2020)argue that audit firm size has a positive and significant impact on earnings management. Nonahal Nahr, Alinejad Sarookalaei, and Khezri (2012) found that larger audit firms had more control over earnings management by adding control variables. They also found that tenure has a negative impact on earnings management. Also, some other studies have found a negative

relationship between company size and earnings management, indicating that large audit firms can reduce earnings management and leverage audit quality. Abbasiazadeh and Zamanpour (2016) examined the impact of auditor size on earnings management in Tehran Stock Exchange companies and found that company size had a significant negative impact on earnings management. Abdollahi, Rezaei Pitenoei and Safari Gerayli (2020) show that auditor's report and audit firm size is positively and significantly correlated with two indicators of accounting information's value relevance, including value relevance of earnings and book value per share. Chowdhury and Eliwa(2021) find that the presence of Big 4 auditors is significantly and positively related to greater levels of sales and discretionary expenses manipulation. Though they do not find any conclusive evidence on production costs manipulation, the aggregated measure of real earnings management shows a significant positive association with the presence of Big 4 auditors. The study conducted by Fatahi and Fazel (2018) showed that with increasing audit quality, earnings management decreases, and auditor's independence and audit firm size were more effective than other components. Based on the results of previous studies, the fourth hypothesis can be presented as follows:

The size of the auditor firm has a significant negative impact on the relationship between the company's geographical diversification and real earnings management

3. Research Methodology

This study is applied research in terms of objective. Applied research uses fundamental research to improve and complete human communities' behaviours, methods, tools, products, structures, and models. In addition, applied research uses theories, rules, principles, and techniques to solve executive problems. The method used in this study is a correlational-descriptive method. The reason for using the correlation method is to discover the correlations among the variables. Correlational research is one type of descriptive research. In addition, the present research is a post hoc study, meaning that it is performed based on past analysis (financial statements of companies).

3.1. Statistical Population and Sampling Method

The statistical population of this research is the listed companies in Tehran Stock Exchange(listed and OTC companies)in 2012-2017. The statistical sample is collected through elimination based on Table 1.

Table 1. The sample of the study

Row	Description	Number of companies	Number of observations
1	Listed companies in Stock Exchange at the end of 2017	510	2169
2	Companies that their information is not available	239	889
3	Companies that are among the intermediary, financial, insurance, and bank organisations	63	140
4	Transaction lag for more than 3 months	4	53
	Remaining companies	204	1087

Finally, 1087 observations from 204 companies were tested.

3.2. Model and Definitions of Research Variables

3.2.1. Research Models

The following equation is used to determine the relationship between real earnings management

and geographical diversification (Lai and Liu, 2018):

$$RMi,t = \beta0 + \beta1GDIVFYi,t + \beta2LAGACCRUALi,t + \beta3CYCLEi,t + \beta4PROFITi,t + \beta5SIZEi,t + \beta6LEVi,t + \beta7MBi,t + \beta8LOSSi,t + \beta9INST + \beta10CFOi,t + \Sigma\beta jINDUSTRYj + \Sigma\beta tYEARt + \nu i,t$$

The following model is used to investigate the Hypotheses 2, 3, and 4:

$$RMi,t = \beta0 + \beta1GDIVFYi,t + \beta2TENUREi,t + \beta3EXPERTi,t + \beta4AUDITSIZEi,t + \beta5GDIVFYi,t \times TENUREi,t + \beta6GDIVFYi,t \times EXPERTi,t + \beta7GDIVFYi,t \times AUDITSIZEi,t + \beta8LAGACCRUALi,t + \beta9CYCLEi,t + \beta10PROFITi,t + \beta11SIZEi,t + \beta12LEVi,t + \beta13MBi,t + \beta14LOSSi,t + \beta15INST + \beta16CFOi,t + \Sigma\beta jINDUSTRYj + \Sigma\beta tYEARt + \nu i,t$$

3.2.1.1 Dependent Variable

RM= Real earnings management

The following three indicators are used to determine the real earnings management:

$$CFOi,t/ASSETSi,t-1 = \alpha0t\ (1/ASSETS\ i,t-1) + \alpha1t\ (SALESi,t/ASSETS\ i,t-1) + \alpha2t\ (\Delta SALESi,t/ASSETSi,t-1) + \varepsilon AbnCfo$$

$$DISXi,t/ASSETSi,t-1 = \alpha0t\ (1/ASSETS\ i,t-1) + \alpha1t\ (SALESi,t-1/ASSETS\ i,t-1) + \varepsilon AnbDexp$$

$$Prodcsti,t/ASSETSi,t-1 = \alpha0t\ (1/ASSETS\ i,t-1) + \alpha1t\ (SALESi,t/ASSETS\ i,t-1) + \alpha2t\ (\Delta SALESi,t/ASSETSi,t-1) + \alpha3t\ (\Delta SALESi,t-1/ASSETSi,t-1) + \varepsilon AbnProd$$

The remaining value of each indicator reflects the real earnings management based on that indicator.

CFOi, t = Operating cash flow in period t

ASSETSi, t-1 = Total assets at the end of the previous year

ΔSALESi, t = Changes in sales during the year

ΔSALESi, t-1 = Changes in sales in the previous year

SALESi, t = Sales at the end of year

SALESi, t-1 = Sales in the last year

DISXi, t = Discretionary expenditures in the period of t = total public and administrative expenditures, sales and advertising, and research and development.

PRODCSTi, t = Production costs in the year t - Total cost of the sold goods and changes in inventory of goods (Ge and Kim, 2014).

3.2.1.2. Independent Variable

GDIVFY = Geographical Diversification = the ratio of export sales to total sales (Schmid and Walter, 2012)

3.2.1.3. Moderating Variables

Industry-expertise auditor: The level of auditor's expertise in the audit industry is calculated in this way: the sum of the assets of all business owners of a particular audit firm in a particular industry divided by the sum of the assets of the business owners in this industry. Those firms are considered as a specialised industry in this research that their market shares (i.e. the above equation) are greater than [1.2x 1/number of the companies in an industry)] (Palmrose, 1986).

Auditor tenure: The number of consecutive years of auditing a company by an auditor. If the auditor is auditing a company for 4 years or more, it will take a value of 1; otherwise, it will take 0 (Pezeshkian and Hosseini, 2017).

Audit firm size: If the audit firm is an audit organisation, it will take the value of 1; otherwise, it will take 0 (Hajiha and Ghane, 2016).

3.2.1.4. Control Variables

LAGACCRUAL = Accruals of the previous year divided by total assets at the beginning of the previous year.

CYCLE = It is the sale period and purchase of the goods and then receiving the cash. The operating cycle in this study is obtained by summing up a turnover period of inventory and the period of claims receivable. These ratios indicate that to what extent the firm is applying its resources effectively. This value is obtained by the formulas provided.

1- Inventory turnover ratio = ratio of the total cost of sold goods to average inventory

Inventory turnover period = 360 divided by the inventory turnover ratio

2- Ratio of accounts receivable turnover = sales divided by the average of accounts receivable

Period of claims receivable = 360 divided by the ratio of accounts receivable turnover

Cycle= invt+Rect= period of claims receivable+ period of inventory turnover (Hoitash, Markelevich and Barragato, 2007).

SIZE = Natural logarithm of company share market value obtained by multiplying the number of shares at the current price of each share in the market (Sun and Liu, 2013).

PROFIT = Profitability of a company calculated by net profit before tax divided by total assets.

LEV = Company financial leverage = ratio of total debts to total corporate assets. This variable specifies what portion of a company's assets is financed by people other than business unit owners.

MB = ratio of the market value of equity to book value of equity

LOSS = Indicates the loss of the company. If the company (for the financial period t) has reported a loss, it will take the value of 1; otherwise, it will take 0.

INST = ratio of shares held by institutional owners (banks, insurances, holdings, investment companies, pension funds, investment funds, government agencies, and institutions) to total issued shares

CFO = cash resulting from operations divided by total assets

4. Results

4.1. Descriptive Statistics

Based on the results of Table 2, the dependent variable of this research (real earnings management) includes three indicators of cash flows with a mean of 0.13, discretionary expenditures with a mean of 0.033, and total cost with a mean of 0.132. These numbers were more than their relevant median, indicating that the companies with real earnings management in the sample were more than 50%. In addition, the dependent variable of this research is geographical diversification, with a mean of 0.10. In addition, three moderating variables are related to the auditor’s characteristics, which, respectively, represent the industry-expertise auditor, tenure, and size. The audit firm variable has a mean of 0.2 and indicates that about 20% of companies have auditors who have audited for more than 4 years. In addition, the auditor's size with a mean of 0.188 indicates that the audit organisation audits about 19% of the sample companies. Concerning control variables, it is seen that earnings before interest and tax account for about 10% of assets of companies and debt of companies to assets is 66%. The market to book equity ratio is about 2.5, and 18% of sample companies experience loss. Institutional shareholders also have a mean of about 28%.

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Table 2. The descriptive Statistics Indicators of Research Model Variables

Operating definition	Symbol	Mean	Median	SD	Min	Max
Real earnings management (Cash Flows)	RMCFO	0.113	0.081	0.114	0.000	1.008
Real earnings management (discretionary expenditures)	RMDISX	0.033	0.024	0.036	0.000	0.439
Real earnings management (total cost)	RMPRODCOST	0.132	0.102	0.131	0.000	1.566
Geographical diversification	GDIVFY	0.100	0.007	0.188	0.000	1.000
Goods purchase and sale period	CYCLE	2.407	2.401	0.378	1.051	6.370
Company profitability	Proft	0.097	0.081	0.189	-1.822	0.811
Company size	Size	13.863	13.814	1.585	9.340	19.190
Company financial leverage	LEV	0.660	0.616	0.324	0.197	1.978
The ratio of market value to book value	MB	2.396	2.198	1.761	-1.104	8.489
Percentage of institutional shareholders	Inst	0.277	0.148	0.310	0.000	0.991
Operating cash flow	CFO	0.115	0.095	0.138	-0.387	0.873
Accruals of previous year	LagAcrual	0.028	0.011	0.168	-0.609	1.178
Industry-expertise auditor	AEXPERTISE	0.365	0.000	0.482	0.000	1.000
Auditor tenure	ATENURE	0.200	0.000	0.400	0.000	1.000
Auditor size	ASIZE	0.188	0.000	0.391	0.000	1.000
Company loss	Loss	0.178	0.000	0.383	0.000	1.000

4.2. Normality of Research Variables

Table 3. The normality of Research Variables

Variable	Symbol	Kolmogorov-Smirnov test statistic	Significance
Real earnings management (Cash Flows)	RMCFO	0.161	.000
Real earnings management (discretionary expenditures)	RMDISX	0.192	.000
Real earnings management (total cost)	RMPRODCOST	0.157	.000
Geographical diversification	GDIVFY	0.298	.000
Goods purchase and sale period	CYCLE	0.080	.000
Company profitability	Proft	0.126	.000
Company size	Size	0.088	.000
Company financial leverage	LEV	0.125	.000
The ratio of market value to book value	MB	0.133	.000
Percentage of institutional shareholders	Inst	0.185	.000
Operating cash flow	CFO	0.091	.000
Accruals of the previous year	LagAcrual	0.077	.000

As the results of Table 3 show, none of the variables in the study followed the normal distribution (the significance of the Kolmogorov-Smirnov test was below 5% in all variables).

4.3. Results of Testing Hypothesis:

The primary research model was used as the basis for testing the first hypothesis, and the following result was obtained:

Hypothesis 1: There is a significant positive relationship between the company's geographical

diversification and real earnings management.

Table 4. Test Results of the First Research Hypothesis (Dependent Variable: Real Earnings Management)

Variable	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
	Cash flows		Discretionary expenditures		Production costs	
C	.032	0.453	.022	0.127	.017	0.727
GDIVFY	.036	0.058	.023	0.000	.024	0.259
CYCLE	.015	0.163	-.007	0.058	.023	0.056
Proft	.287	0.000	.012	0.263	.398	0.000
Size	-.002	0.534	.000	0.740	-.004	0.190
LEV	.047	0.001	.017	0.001	.077	0.000
MB	.002	0.324	.001	0.320	.004	0.093
Loss	.045	0.000	-.004	0.235	.080	0.000
Inst	-.011	0.331	-.014	0.000	-.031	0.014
CFO	.118	0.000	.013	0.152	.106	0.001
LagAcrual	-.034	0.112	.005	0.450	.009	0.722
∑IND	Controlled		Controlled		Controlled	
∑YEAR	Controlled		Controlled		Controlled	
Statistic F	10.121		4.863		11.040	
Significance of statistic F	0.000		0.000		0.000	
Coefficient of determination	0.223		0.121		0.239	
Adjusted coefficient of determination	0.201		0.096		0.217	

Table 4 shows the results of testing the first hypothesis using the dependent variable of real earnings management. It can be seen that the significant value of the Fisher statistic in all three models is 0.000, which suggests a linear and appropriate fitness of the model. The adjusted coefficient of variation indicates that the independent variables account for about 22, 12 and 23% of the dependent variables. In addition, the variables of year and industry have controlled the fixed effects of year and industry. However, with regards to the main independent variable, namely geographical diversification, it is observed that there is a significant relationship between this variable and real earnings management using cash flows and discretionary expenditures with a significant value of 0.058 and 0.000, respectively, and the first hypothesis is confirmed using these two indicators. In addition, the direction of the relationship is positive, and with increasing diversification, the real earnings management is also increasing.

To investigate the second to the fourth hypothesis, by applying the moderating variables, the second model is used, and the following results are observed:

Hypothesis 2: Industry-expertise auditor significantly negatively impacts the relationship between geographical diversification and real earnings management.

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Table 5. Test Results of the Second Research Hypothesis (Dependent Variable; Real Earnings Management, Independent Variable; Industry-Expertise Auditor)

Variable	Coefficients	Significance	Coefficients	Significance	Coefficients	Significance
	Cash flows		discretionary expenditures		Production costs	
C	.022	0.634	.046	0.003	.055	0.294
GDIVFY	.007	0.767	.002	0.804	-.032	0.211
AEXPERTISE	-.021	0.016	.000	0.872	-.014	0.157
AEXPERTISEGDIVFY	.083	0.024	.064	0.000	.168	0.000
CYCLE	.015	0.153	-.007	0.048	.023	0.056
Proft	.282	0.000	.010	0.311	.393	0.000
Size	.000	0.897	-.001	0.136	-.006	0.063
LEV	.048	0.001	.015	0.002	.074	0.000
MB	.002	0.365	.001	0.217	.004	0.077
Loss	.045	0.000	-.004	0.280	.081	0.000
Inst	-.007	0.500	-.013	0.000	-.028	0.028
CFO	.112	0.000	.009	0.322	.095	0.002
LagAcrual	-.030	0.166	.005	0.495	.010	0.671
∑IND	Controlled		Controlled		Controlled	
∑YEAR	Controlled		Controlled		Controlled	
Statistic F	9.790		5.670		10.996	
Significance of statistic F	0.000		0.000		0.000	
Coefficient of determination	0.229		0.147		0.250	
Adjusted coefficient of determination	0.206		0.121		0.228	

According to Table 5, the significant value of the Fisher statistic in all three models is 0.000, which suggests a linear and appropriate fitness of the model. The adjusted coefficient of variation indicates that the independent variables account for about 23, 15 and 25% of the dependent variables. In addition, the variables of year and industry have controlled the fixed effects of year and industry. However, concerning the main independent variable, namely geographical diversification and industry-expertise auditor, the significance value related to all three models of real earnings management was at the error level of 5%. The second hypothesis is confirmed using all three indicators. In addition, the direction of the relationship is positive. In other words, with increasing geographical diversification, the real earnings management is also increasing.

Hypothesis 3: The auditor tenure has a significant positive impact on the relationship between the geographical diversification of the company and the real earnings management.

According to Table 6, the significant value of the Fisher statistic in all three models is 0.000, which suggests a linear and appropriate fitness of the model. The adjusted coefficient of variation indicates that the independent variables account for about 25, 12 and 24% of the dependent variables. However, regarding the main independent variable, the interactive effect of geographical diversification and the auditor tenure, the significance value of all three models of real earnings management is above the 5% error level, and these indicators do not confirm the third hypothesis.

Hypothesis 4: Auditor size significantly negatively impacts the relationship between company geographical diversification and real earnings management.

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Table 6. The Results of Testing the Third Hypothesis (Dependent Variable: Real Earnings Management, Independent Variable: Audit Tenure)

Variable	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
	Cash flows		discretionary expenditures		Production costs	
C	.029	0.500	.022	0.124	.015	0.762
GDIVFY	.036	0.082	.022	0.002	.015	0.524
ATENURE	-.014	0.126	-.001	0.820	-.023	0.027
ATENUREGDIVFY	.004	0.917	.006	0.666	.055	0.251
CYCLE	.015	0.153	-.007	0.058	.023	0.052
Proft	.287	0.000	.012	0.262	.399	0.000
Size	-.001	0.621	.000	0.743	-.003	0.239
LEV	.048	0.001	.017	0.001	.079	0.000
MB	.002	0.321	.001	0.334	.004	0.103
Loss	.045	0.000	-.004	0.239	.080	0.000
Inst	-.009	0.418	-.014	0.000	-.029	0.021
CFO	.120	0.000	.013	0.152	.108	0.000
LagAcrual	-.033	0.126	.006	0.441	.011	0.647
∑IND	Controlled		Controlled		Controlled	
∑YEAR	Controlled		Controlled		Controlled	
Statistic F	9.579		4.557		10.535	
Significance of statistic F	0.000		0.000		0.000	
Coefficient of determination	0.255		0.122		0.242	
Adjusted coefficient of determination	0.202		0.095		0.219	

Table 7. The Results of Testing the Fourth Research Hypothesis (Dependent Variable: Real Earnings Management, Independent Variable: Auditor Size)

Variable	Coefficient	Significance	Coefficient	Significance	Coefficient	Significance
	Cash flows		discretionary expenditures		Production costs	
C	.013	0.772	.020	0.167	.004	0.932
GDIVFY	.043	0.032	.025	0.000	.025	0.285
ASIZE	-.011	0.274	.001	0.815	-.013	0.259
ASIZEGDIVFY	-.041	0.350	-.011	0.435	.002	0.965
CYCLE	.015	0.141	-.007	0.060	.024	0.050
Proft	.286	0.000	.012	0.263	.397	0.000
Size	.000	0.962	.000	0.680	-.003	0.364
LEV	.049	0.001	.017	0.001	.079	0.000
MB	.002	0.307	.001	0.310	.004	0.091
Loss	.044	0.000	-.004	0.220	.080	0.000
Inst	-.007	0.531	-.014	0.000	-.028	0.029
CFO	.115	0.000	.013	0.160	.104	0.001
LagAcrual	-.033	0.130	.006	0.437	.010	0.696
∑IND	Controlled		Controlled		Controlled	
∑YEAR	Controlled		Controlled		Controlled	
Statistic F	9.617		4.572		10.393	
Significance of statistic F	0.000		0.000		0.000	
Coefficient of determination	0.226		0.122		0.240	
Adjusted coefficient of determination	0.202		0.095		0.217	

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According to the results of Table 7, it is observed that the significant value of the Fisher statistic in all three models is 0.000, indicating the linear and appropriate fitness of the model. The adjusted coefficient of variation indicates that the independent variables account for about 22, 12 and 24% of the dependent variables. In addition, the year and industry variables have controlled the fixed effects of year and industry.

However, regarding the main independent variable, the interactive effect of geographical diversification and auditor size, the significance of all three models of real earnings management is above the 5% error level, and the fourth hypothesis is not confirmed by these indicators.

5. Discussion and Conclusion

Researchers have extensively investigated the audit quality and the factors that may affect this feature to test the effect of audit quality on other financial variables. Earnings management is among these variables, resulting in the separation of management and ownership and the conflict of interests in this area. The relationship between audit quality and earnings management has always been discussed. In this study, the tenure, auditor size, and industry-expertise auditor were evaluated to examine the impact of these variables on the relationship between geographical diversification and real earnings management. DeAngelo (1981) argues that large audit firms can train more efficient and skilled auditors due to their available resources. As a result, greater audit quality can be expected in audits performed by large audit firms. Industry expertise also increases with enhancing the auditor's knowledge of a particular industry's standards, financial events, and environmental conditions, leading to increased audit quality and discovering distortions and manipulation in earnings management. There are two views on auditor tenure. Some believe that an increase in tenure will target the auditor's independence and direct his/her reports. As a result, they agree with the mandatory rotation of the auditors. Some argue that increasing the tenure increases the auditor's familiarity with the business owner, thus increasing the likelihood of discovering the existing distortions. Unlike the first group, they oppose the mandatory audit rotation.

Although there is a positive relationship between geographical diversification and real earnings management, according to the primary hypothesis, which predicted a positive relationship between geographical diversification and real earnings management, companies with more exports, such as oil companies, manage more real earnings than other companies. Because of this real earnings management, discovering the manipulation will be difficult, and the investor should analyse the current risks and profits based on his/her utility chart. The result obtained from the primary hypothesis is consistent with the results of the studies by Shi, Sun, and Lu (2014), Alhadab and Nguyen(2018) and Berrill, Campa and O'Hagan-Luff (2021). They believe that Earnings management in diversified companies involves manipulating real earnings management. The result is also inconsistent with the study result by Bustani (2019), who showed that geographical and commercial diversification alone did not significantly impact real earnings management. Many studies have reported that using an auditor specialising in the industry leads to increased auditing quality. Thus, the second hypothesis, in companies where industry-expertise auditors are auditing, the ability to discover and manipulate the real earnings by industry-expertise auditor decreases by increasing geographical diversification is confirmed, and contrary to the prediction of the second hypothesis, the auditor's expertise has a positive effect on the relationship between geographic diversity and the earnings management. This result is consistent with the results of Lopez and Vega (2019) which found that audits performed by firms with longer industry specialist durations are associated with greater levels of real earnings management, and Mnif and Hamouda (2021), which show that companies may substitute between

earnings management strategies and tend to shift from accrual earning Management to Real Earning Management when audited by an industry expert. As a result, the industry expertise of an author as one of the auditor's characteristics lacks sufficient credibility to ensure transparency and to achieve the appropriate audit quality in the financial statements of diversified companies. Hence, using merely an industry-expertise auditor does not ensure tolerating a lower risk of earnings manipulation. The direction of impact is also opposed to what was predicted (negative impacts). Investors need to be more sensitive to investing in companies whose auditors are industry experts.

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References

1. Abbasiazadeh, L. and Zamanpour, A. (2016). Investigation of the effect of audit size on Earnings Management in the Tehran stock exchange.
2. Abdollahi, A., Rezaei Pitenoei, Y. and Safari Gerayli, M. (2020). Auditor's report, auditor's size and value relevance of accounting information. Journal of Applied Accounting Research, 21(4), pp. 721-739. https://doi.org/10.1108/JAAR-11-2019-0153
3. Abubakar, a., Mazadu, s. A. and Yusuf, A.M. (2020). Audit quality and earnings management of listed insurance companies in Nigeria. Gusau journal of accounting and finance, 1(1), pp. 14-14 https://journals.gujaf.com.ng/index.php/gujaf/article/view/13
4. Alhadab, M. and Nguyen, T. (2018). Corporate diversification and accrual and real earnings management: A non-linear relationship. Review of Accounting and Finance. 7(2), pp. 198-214. https://doi.org/10.1108/RAF-06-2016-0098
5. Ashton, D.J. (1991). corporate financial policy: American analytics and UK taxation. Journal of Business Finance & Accounting, 18(4), pp. 465-482. https://doi.org/10.1111/j.1468-5957.1991.tb01116.x
6. Azizkhani, M. and Safarvandi, A. (2012). Investigating the impact of audit tenure on predicted earnings error in Listed Companies in Tehran Stock Exchange. Accounting and Auditing Studies, 19(69), pp. 61-78. https://www.sid.ir/fa/journal/ViewPaper.aspx?id=201011
7. Badavar Nahandi, Y. and Taghizadeh, W. (2013). The relationship between audit quality and artificial and real earnings management. Applied Research in Financial Reporting, 2(2), pp. 47-79. http://www.arfr.ir/article_51271.html
8. Bates, H., Ingram, R. and Reckers, P. (1982). Auditor-client affiliation: The impact on"materiality. Journal of Accountancy, 153 (000004), pp. 60-63. https://www.proquest.com/openview/12dd0154541417f8cfadfc5b70710d7f/1.pdf?pq-origsite=gscholar&cbl=41064
9. Becker, C.L., Defond, M.L., Jiambalvo, J. and Subramanyam, K. (1998). The Effect of Audit Quality on Earnings Management. Contemporary Accounting Research, 15(1), pp.1-24. https://doi.org/10.1111/j.1911-3846.1998.tb00547.x
10. Bell, T., Peecher, M.E. and Solomon, I. (2005). Bell, T. B., Peecher, M. E., & Solomon, I. (2005). The 21st-century public company audit: conceptual elements of KPMG's global audit methodology. New York: KPMG International. https://pages.business.illinois.edu/accountancy/wp-content/uploads/sites/12/2014/08/monograph2. pdf
11. Berrill, J., Campa, D. and O'Hagan-Luff, M. (2021). Firm diversification and earnings

management strategies: European evidence. International Review of Financial, 78(1). 101955. https://doi.org/10.1016/j.irfa.2021.101955

12. Biddle, G.C., Hilary, G. and Verdi, R.S. (2009). How does financial reporting quality relate to investment efficiency?. Journal of Accounting and Economics, 48(2–3), pp. 112–131. https://doi.org/10.1016/j.jacceco.2009.09.001
13. Biddle, G.C. and Hilary, G. (2006). Accounting quality and firm-level capital investment. The Accounting Review, 81(5), pp. 963–982. https://doi.org/10.2308/accr.2006.81.5.963
14. Brody, R.G. and Moscove, S.A. (1998). Mandatory auditor rotation. National Public Accountant 43, 32-36.
15. Burch, T.R. and Vikram, N. (2003). Divisional diversity and the conglomerate discount: evidence from spinoffs. Journal of Financial Economics, 70(1), pp. 69-98.
16. Bustani, H. (2019). Impact of diversification strategy on earnings management. Financial Accounting Knowledge, 6(2), pp. 215-234. https://jfak.journals.ikiu.ac.ir/article_1766.html
17. Carcello, J.V. and Nagy, A.L. (2004). Audit firm tenure and fraudulent financial reporting. A Journal of Practice & Theory, 23(2), pp. 55–69. https://doi.org/10.2308/aud.2004.23.2.55
18. Cassell, C, Hunt, E. Narayanamoorthy, G. and Rowe, S. (2019). A Hidden Risk of Auditor Industry Specialization: Evidence from the Financial Crisis. 24(3), pp. 891-926. https://ssrn.com/abstract=3174931
19. Chowdhury, S.N. and Eliwa, Y. (2021). The impact of audit quality on real earnings management in the UK context. International Journal of Accounting & Information Management, 29(3), pp. 368-391. https://doi.org/10.1108/IJAIM-10-2020-0156
20. Copley, P. and Doucet, M.S. (1993). Auditor Tenure, fixed Fee Contracts, and the Supply of Substandard Single Audits. Public Budgeting & Finance, 13(3), pp.23– 36. https://doi.org/10.1111/1540-5850.00980
21. Dadashzadeh, G.H. and Baradaran Hasanzadeh, R. (2017). The relationship between company diversification strategy and the real and artificial real management phenomenon. Empirical Accounting Research, 7 (3), pp. 181-200. https://jera.alzahra.ac.ir/article_2946.html
22. Dadbeh, F. and mirzae goodarzi, Z. (2021). The study of the moderating effect of CEO duality on the relationship between geographic diversification and firm performance. Journal of Accounting and Management Vision, 2(39), pp. 39-52. http://www.jamv.ir/article_130212_e951ca15bdd52014320a3119d27474be.pdf
23. Davis, L.R., Soo, B.S. and Trompeter, G.M. (2009). Auditor Tenure and the Ability to Meet or Beat Earnings Forecasts. Contemporary Accounting Research, 26(2) pp. 48-517. http://dx.doi.org/10.2139/ssrn.1014601
24. DeAngelo, L.E. (1981). Auditor Size and Audit Quality. Journal of Accounting and Economics, 3(3). pp. 183-199. https://doi.org/10.1016/0165-4101(81)90002-1
25. Denis, D.J., Denis, D.K. and Sarin, A. (1997). Agency problems, equity ownership, and corporate diversification. The Journal of Finance, 52(1), pp. 135–160. https://doi.org/10.1111/j.1540-6261.1997.tb03811.x
26. Denis, D.J, Denis, D.K. and Yost, K. (2002). Global diversification, industrial diversification, and firm value. Journal of Finance, 57 (5), pp. 1951-1979. https://doi.org/10.1111/0022-1082.00485
27. Didar, H., Imani barandagh, M. and shahrezaei, S. (2014). Business diversification effects on performance and value of listed companies in Tehran stock exchange. Journal of asset management and financing, 2(5), pp. 65-86.

Https://www.sid.ir/en/journal/viewpaper.aspx?id=574734
28. Dopuch, N., King R.R. and Schwartz, R.(2001). An experimental investigation of retention and rotation requirements. Journal of Accounting Research, 39(1), pp. 93-117.
29. Doukas, J.A. and Pantzalis, C. (2003). Geographic diversification and agency costs of debt of multinational firms. Journal of Corporate Finance, 9(1), pp. 59-92.
30. Du, P., Shu, H. and Xia, Z. (2020). The Control Strategies for Information Asymmetry Problems Among Investing Institutions, Investors, and Entrepreneurs in Venture Capital. Front. Psychol. 11:1579. doi: 10.3389/fpsyg.2020.01579
31. Dunn, K. and Mayhew, B.W. (2004). Audit firm industry specialisation and client disclosure quality. Review of Accounting Studies, 9(1), pp. 35-58.
32. Vazife Dust, H., Dadbeh, F. and Hashemloo, F. (2014). Corporate diversification, information asymmetry and firm performance: Evidence from Tehran Stock Exchange. Management Science Letters, 4(2), pp. 315-324.
33. Etemadi, H., Momeni, M. and Farajzadeh Dehkordi, H. (2012). How does earnings management affect company earnings quality?. Financial Accounting Research, 4(2), pp. 101-122.
34. Etemadi, H., Azar, A. and Nazemi Ardakani, M. (2010). Investigating the role of industry expertise auditor on real earnings management and future operating performance. Research Journal of Accounting Knowledge, 1(1), pp. 9-28.
35. Fatahi Nafchi, H. and Fazel Dehkordi, A. (2018). The impact of audit quality on earnings management based on accruals and real earnings management of listed companies in the Tehran Stock Exchange. Accounting and Management Perspectives, 1(2), pp. 68-82.
36. Feng, H., Habib, A., Huang, H.J. and Qi, B.L. (2019). Auditor industry specialisation and stock price crash risk: individual-level evidence. Asia-Pacific Journal of Accounting & Economics, 28(4), pp. 427–453. doi:10.1080/16081625.2019.1584859
37. Ge, W. and Kim, J.B. (2014). Real earnings management and the cost of new corporate bonds. Journal of Business Research, 67(4), pp. 641-647.
38. Gilson, S.C., Healy, P.M., Noe, C.F. and Palepu, K.G. (2001). Analyst specialisation and conglomerate stock breakups. Journal of Accounting Research, 39(3), pp. 565–582.
39. Gul, F., Fung, Y.K. and Jaggi, B. (2009). Earnings quality: Some evidence on the role of auditor tenure and auditors' industry expertise. Journal of Accounting and Economics, 47(3), pp. 265– 287.
40. Hadlock, C., Ryngaert, M. and Thomas, S. (2001). Corporate structure and equity offerings: Are there benefits to diversification?. Journal of Business, 74(4) pp. 613–635.
41. Hajiha, Z. and Ghane, A. (2016). investigating the impact of audit quality on investment opportunity of listed Companies in Tehran Stock Exchange. Audit knowledge, 16(63), pp. 103-127.
42. Hammersley, J.S. (2006). Pattern identification and industry-specialist auditors. The Accounting Review, 81(2), pp. 309-336.
43. Hegazy, M., Al Sabagh, A. and Hamdy, R. (2015). The effect of audit firm specialisation on earnings management and quality of audit work. Journal of Accounting and Finance, 15(4), pp. 143-164.
44. Hemati, H. and Yosefirad, Z. (2011). The Relationship of Diversification Strategy and Value of Cash Holding with Abnormal Returns in Tehran Stock Exchange listed companies. Empirical Studies in Financial Accounting, 9(33), pp. 127-148.
45. Louis, H. (2004). Acquirers Abnormal Returns, Audit Firm Size and the Small Auditor

Clientele Effect. Available at SSRN 483662.
46. Hoitash, R., Markelevich, A.J. and Barragato, C.A. (2007). Auditor Fees and Audit Quality. Managerial Auditing Journal, 22(8), Available at SSRN: http://ssrn.com/abstract=1025904
47. Indarti, M.G.K. and Widiatmoko, J. (2021). The Effects of Earnings Management and Audit Quality on Cost of Equity Capital: Empirical Evidence from Indonesia. The Journal of Asian Finance, Economics and Business, 8(4), pp. 769–776. https://doi.org/10.13106/JAFEB.2021.VOL8.NO4.0769
48. Jabarzadeh Kangarluei, S., Namazi, M. and Bayazidi, A. (2011). Investigating the relationship between audit quality and earnings management of listed companies in the Tehran Stock Exchange. Accounting Research, 3(9), pp. 4-21.
49. Jadiyappa, N., Hickman, L.E., Kakani, R.K. and Abidi, Q. (2021). Auditor tenure and audit quality: an investigation of moderating factors prior to the commencement of mandatory rotations in India. Managerial Auditing Journal, 36(5), pp. 724-743. https://doi.org/10.1108/MAJ-12-2020-2957
50. Jaggi, B., Gul, F.A. and Chiu Lau, T.S. (2012). Auditor industry specialisation, political economy and earnings quality: Some cross-country evidence. Journal of International Financial Management and Accounting, 23(1), pp. 24-61.
51. Jensen, M. and Meckling, W. (1976). Theory of firm: Managerial behavior, agency costs and ownership structure. Journal of Finacial. Economics, 3(4), pp. 305-360.
52. Jiraporn, P., Miller, G.A., Yoon, S.S. and Kim, Y.S. (2008). Is earnings management opportunistic or beneficial? An agency theory perspective. International Review of Financial Analysis, 17(3), pp. 622-634.
53. Johnson, V.E., Khurana, I.K. and Reynolds, J.K. (2002). Audit-firm tenure and the quality of financial reports. Contemporary Accounting Research, 19(4), pp. 637-660.
54. Karami, G., Bazrafshan, A. and Mohammadi, A. (2011). Auditor Tenure and Earnings Management. Accounting Knowledge Journal, 2(4), pp. 65-82
55. Kashanipoor, M., Maranjory, M. and Moshashaee, S.M. (2012). The relationship between auditor tenure and discretionary accruals in listed Companies in Tehran Stock Exchange. Empirical Accounting Research, 2(1), pp. 113-126.
56. Krishnan, G.V. (2003). Audit Quality and the Pricing of Discretionary Accruals. A Journal of Practice &Theory, 22(1), pp. 109-126.
57. Kwon, S.Y. (1996). The impact of competition within the client's industry on the auditor selection decision, A Journal of Practice & Theory, 15(1) pp. 53-70.
58. Lai, S.M. and Liu, C.L. (2018). The Effect of Auditor Characteristics on the Value of Diversification. A Journal of Practice & Theory, 37(1), pp. 115-137.
59. Lam, S. and Chang, S. (1994). Auditor Service Quality and Auditor Size: Evidence from Initial Public Offerings in Singapore. Journal of International Accounting Auditing and Taxation. 3(1), pp. 103-114.
60. Libby, R., and Tan, H.T. (1995). The role of knowledge and memory in audit judgment. Judgment and decision-making research in accounting and auditing, 1, pp. 176-206.
61. Lopez, D.M. and Vega, J. (2019). Evaluating the effect of industry specialist duration on earnings management. Advances in Accounting, 45, 100412. doi: 10.101 6/j.adiac.2019.02.002.
62. Mansi, S.A., Maxwell, W.F. and Miller, D.P. (2004). Does auditor quality and tenure matter to investors? Evidence from the bond market. journal of accounting research, 42(4), pp. 755-

793. doi:10.1111/j.1475-679x.2004.00156.x
63. Martani, D., Rahmah, N.A., Fitriany, F. and Anggraita, V. (2021). Impact of audit tenure and audit rotation on the audit quality: Big 4 vs non big 4. Cogent Economics & Finance, 9(1), 1901395. doi:10.1080/23322039.2021.1901395
64. Masud, M., Anees, F. and Ahmed, H. (2017). Impact of corporate diversification on earnings management. Journal of Indian Business Research, 9(2), pp. 82-106.
65. Mnif, Y. and Ben Hamouda, A. (2021). Audit quality and the trade-off between real and accrual earnings management in the oil and gas industry: the GCC evidence. Journal of Applied Accounting Research, 22(2), pp. 223-251. https://doi.org/10.1108/JAAR-12-2019-0167
66. Myers, J., Myers, L. and Omer, T. (2003). Exploring the Term of the Auditor-Client Relationship and the Quality of Earnings: A Case for Mandatory Auditor Rotation?. The Accounting Review. 78. pp. 779-799. https://doi.org/10.2308/accr.2003.78.3.779.
67. Nam, J., Tang, C., Thornton, J.H. and Wynne, K. (2006). The effect of agency costs on the value of single-segment and multi-segment firms. Journal of Corporate Finance, 12(4), pp. 761–782.
68. Nonahal Nahr, A.A., Alinejad Sarookalaei, M. and Khezri, P. (2012). Assessing the impact of auditor quality on earnings management in newly Listed Companies in the Tehran Stock Exchange. Accounting Knowledge and Auditing Management, 2(7), pp. 103-114.
69. Palmrose, Z.V. (1986). Audit Fees And Auditor Size - Further Evidence. Journal of Accounting Research, Wiley Blackwell, 24(1), pp. 97-110.
70. Pezeshkian, S.A., Hosseini Azan Akhari, S.M. (2017). Investigating the relationship between auditor tenure and audit quality. Audit Knowledge Quarterly Journal, 17(29), pp. 235-264.
71. Piot, C. and Janin, R. (2007). External auditors, audit committees and earnings management in France. European Accounting Review, 16(2), pp. 429-454.
72. Primadita, I., Fitriany, F. and Kiantara, R.F. (2021). IOP Conf. Ser.: Earth Environ. Sci
73. Rajabi, R. (2006). The Challenges of Audit Replacement. Journal of Official Accountants, 8 and 9, 53-62
74. Rumelt, R.P. (1982). Diversification Strategy and Profitability. Strategic Management Journal, 3(4), pp. 359–369.
75. Schipper, K. (1989). Earnings management. Accounting Horizons, 3(4), pp. 91–102.
76. Schmid, M.M. and Walter, I. (2012). Geographic diversification and firm value in the financial services industry. Journal of Empirical Finance, 19(1), pp. 109-122.
77. Shi, G., Sun, J. and Luo, R. (2015). Geographic Dispersion and Earnings Management. Journal of Accounting and Public Policy, 34(5). 490-508. Available at SSRN: https://ssrn.com/abstract=2748592
78. Stanly, J. DeZoort, F.T. (2007). Audit firm tenure and financial restatements: An analysis of industry specialisation and fee effects. Journal of Accounting and Public Policy, 26(2), pp. 131-159.
79. Sun, J. and Liu, G. (2013). Auditor industry specialisation, board governance, and earnings management. Managerial Auditing Journal, 28(1), pp. 45-64.
80. Tate, S. and Feng, N. (2013). Perceived quality auditors in the non-profit sector: Evidence from request for proposal choices. Mustang Journal of Accounting and Finance, 4, pp. 65–96.
81. Thomas, S. (2002). Firm Diversification and Asymmetric Information: Evidence from Analysts' Forecasts and Earnings Announcements. Journal of Financial Economics, 64(3), pp. 373-396.

82. Trueman, B. and Titman, S. (1988). An Explanation for Accounting Income Smoothing. Journal of Accounting Research, 26, pp. 127-139.
83. Turner, J.L., Mock, T.J. and Srivastava, R.P. (2002). A Formal Framework of Auditor Independence Risk. Working Paper. The University of Memphis.
84. Vanstraelen, A. (2000). Impact of renewable long-term audit mandates on audit quality. The European Accounting Review, 9(3), pp. 419-443.
85. Lim, C.Y., Thong, T.Y. and Ding, D.K. (2008). Firm diversification and earnings management: Evidence from seasoned equity offerings. Review of Quantitative Finance and Accounting, 30(1), pp. 69-92. https://doi.org/10.1007/s11156-007-0043-x

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