



Audit Committee Attributes and Readability of Financial Statement Footnotes

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Abstract

This study aimed to investigate the relationship between audit committee attributes and readability of financial statement footnotes of companies listed in the Iranian Stock Exchange.

This study's statistical population included all companies listed on the Tehran Stock Exchange over seven years from 2012 to 2018. A systematic elimination method has been used for sampling. Multivariate regression and Eviews software were used to test the research models.

The results showed a significant relationship between the audit committee's independence and the readability of financial statement footnotes. There was also a significant relationship between the number of audit committee meetings and the readability of financial statement footnotes. However, there was no significant relationship between the audit committee's financial expertise and financial statement footnotes' readability.

Companies with less readable financial statements are more likely to commit fraud than other companies. Financial reporting's readability plays an important role in enhancing the predictability of fraud in the financial statement. By using sophisticated and lengthy disclosures, managers keep some of their intended information secrets from investors and other stakeholders to avoid disclosing information about their bad news or performance. This study's results can be applicable for shareholders and investors; securities exchange, universities and research institutes, suppliers of goods and services, and the government. There have also been very limited efforts, especially in Iran, to investigate the relationship between audit committee attributes and readability of financial statement footnotes, so we address this topic in the present study.

Keywords: audit committee size, audit committee financial expertise, financial statement footnote readability, audit committee meetings.

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1. Introduction

Recent corporate scandals (such as Enron and WorldCom) have caused public concern about integrating information released in the capital market and ethical performance in the financial reporting process. New rules have been introduced to address these concerns that have made extensive changes to corporate governance needs and improved financial reporting quality. One of the fundamental changes required is the audit committee in the corporate governance structure. The audit committee is considered one of the board of directors' sub-committees and an essential component of the company's effective internal control structure. The shareholders also assign it an important role to oversee the process of financial reporting and internal auditing and independent auditing. An important factor affecting the transparency of the company is the activity of the audit committee. Information disclosure usually consists of three parts, including the content, timing, and presentation of information, the usefulness of each of them depends on the readability and intelligibility of financial reports. The term 'readability' means the approximate way a reader is likely to read and understand a text. In accounting and financial reporting, financial reporting's readability has recently attracted capital market legislators' attention. For example, there have been efforts since 1993 by the US Securities and Exchange Commission to publish more readable and comprehensible company reports, indicating that since all investors can understand complex company reports quickly, companies should refrain from publishing complex, lengthy or excessive reports (Lehavy & Merkley, 2011). The growing concern about the readability of financial statements with advanced technology that allows researchers to review large collections of text via readable data through annual reports has led to increased readability of financial reports. Evidence suggests that investors are affected by the ability to read annual reports. For example, Li (2008) states a significant relationship between financial reports with lower readability and lower sustainable profit. In addition, research shows that the readability of texts (contextual information) depends on whether investors can use them effectively. Psychological processing indicates people's concern for the ease of information processing and determining their dependence on disclosure. With the incomplete disclosure hypothesis, investors react to information that makes processing difficult in a timely and complete manner (Bloomfield, 2002). Li (2008) shows that managers with unrated (NR) stock options increase annual reports' complexity when current news is not stable. This shows that incentives can drive managers to misuse information. McMullen & Raghunandan (1996) showed that the audit committee's presence in improving financial reports is associated with a reduction in significant errors and irregularities. During the audit committee meeting, problems are identified in the financial reporting process; however, if the number of sessions is low, problems can persist and be resolved in the short term (Mohamad-Nor, Shafie and Wan-Hussin, 2010). Allegrini and Greco (2011) found a significant relationship between the number of audit committee meetings and the quality of reporting. Therefore, the independent audit committee reduces the inherent risk and assures the controlling environment's auditor and reduces his/her business risk. Prawitt (2009) examined the impact of the audit committee on the quality of financial reporting. They used criteria such as experience, professional certificates, training, reporting structure, and audit committee size to assess audit committee performance. They showed that the quality of internal audit committee work affects the quality of corporate financial reporting. Having a professional certification and the audit committee's size had a significant positive effect on financial reporting quality. Persons (2009) noted that in an audit committee with independent and specialized accounting and financial members, it is more likely that wrong financial statements and transactions will be discovered because they must act to maintain a reputation for professional ethics. The Braiotta and Zhou (2006) study results suggest that effective audit committees following

the Sarbanes-Oxley requirements have led to decreased profit management. Dhaliwal (2010) observed that the audit committee's quality increases accruals' quality after passing the Sarbanes-Oxley Act. Chang and Sun (2009) found that the Sarbanes-Oxley Act's provisions improved the audit committee's effectiveness and other corporate governance functions in monitoring the quality of profitability of foreign companies listed in a stock exchange. However, some scholars have argued that an audit committee's presence does not necessarily lead to better financial reporting quality. Forker (1992) observed a non-significant relationship between an audit committee's presence and disclosure quality. Brick & Chidambaran (2010) found that audit committee oversight activity has a negative impact on company value. However, the sub-courses results indicate a positive effect on corporate value for the course prior to the Sarbanes-Oxley Act but a negative (non-significant) effect after passing the act. Ghosh et al. (2010) examined whether the board of directors and the audit committee's characteristics before and after adopting the Sarbanes-Oxley Act were related to earnings management. Using the non-discretionary accruals, special items, and deferred tax expense as different earnings management structures, they found that the audit committee's size, tenure, and activity were related to earnings management. More importantly, the relationship's intensity is weaker in the years following the Sarbanes-Oxley Act than in the years before it. The audit committee's unique role in the corporate audit process may enable it to play a more prominent role in preventing managers from influencing audit fees. Beck & Mauldin (2014) demonstrated that in firms with stronger audit committees during the economic and financial crisis, the lower fees are reduced. A strong audit committee moderates the relationship between audit fees and managers' overconfidence. Wilbanks et al. (2017) found a significant relationship between audit committee members having social relationships (e.g., personal relationships) with the CEO with audit committee actions to assess fraudulent financial reporting risk and management integrity. Alves (2013) examined the combined effect of an audit committee's presence and an independent auditor on earnings management. Compared with the results of previous studies in which the audit committee's performance and the independent auditor were assumed to be independent of each other, this study identified a positive relationship between the audit committee's existence and an independent audit committee non-discretionary accruals. They also found that the existence of an audit committee and an independent auditor jointly reduced earnings management. KamelMadi, H. (2014) investigated the impact of audit committee characteristics on voluntary corporate disclosure. Their research results showed that independence, size, financial expertise, and audit committee meetings were correlated with corporates' voluntary disclosure. Alzeban and Sawan (2015) examined the impact of audit committee characteristics on implementing internal audit guidelines. They have concluded that independent, specialized accounting and auditing staff affects the understanding and implementation of internal audit recommendations. Implementation of such recommendations and guidelines also improves with the number of auditing committee and senior internal auditors meetings. Sun and Lan (2014) showed that committee members' oversight is positively correlated with real earnings management calculated from abnormal cash flows due to operations, abnormal discretionary expenses, and abnormal production (manufacturing) costs. The findings are also consistent with this finding that hiring members of the corporate committee's audit committee impairs their oversight effectiveness. Khlif and Samaha (2016) provided evidence showing that corporate executives restrict fraudulent activities that reduce stakeholder interests by examining audit committee members and the number of audit committee meetings during the year and sought to draw the audit committee members' attention to extend the term of their tenure. Therefore, they argue that increasing audit committee meetings will improve

internal control systems' quality. Al-Matari et al. (2017) examined the relationship between the audit committee's activities and the internal control system of commercial banks operating in Yemen. Their research indicated a significant relationship between the audit committee's activities, including the number of audit committee members' meetings and the internal control system. Bansal & Sharma (2017) examined the relationship between audit committee, corporate governance, and financial performance. The results showed a significant relationship between the board of directors' size and the CEO's duality of duty with financial performance (rate of return on assets and the return rate on equity). Simultaneously, there was no significant relationship between audit committee variables, including audit committee independence and the number of meetings with financial performance (rate of return on assets and returns on equity). Gabriela (2017) conducted a study on audit committee characteristics and financial performance in the UK. The results showed a significant relationship between the audit committee's size, the number of audit committee meetings, and the financial expertise of audit committee members with financial performance. The audit committee's various functions, including financial expertise, independence, size, and so on, can affect the audit committee's effectiveness. Previous studies indicate that audit committee members' financial expertise helps them to more effectively oversee the financial reporting process (Krishnan and Visvanathan, 2008). Audit committees with at least one financial expert can control accrual earnings management more effectively than those who lack financial expertise (Dhaliwal et al., 2010). The size of the audit committee can also have a constructive effect on the audit committee. Large audit committees include members with various expertise to oversee financial reporting practices (Baxter and Cotter, 2009 & Vafeas). Boubaker et al. (2018) examined the impact of annual report readability on corporate stock liquidity. By using computational linguistic techniques, they showed that less readable lists were associated with lower stock liquidity. Their study provides evidence that less readable annual reports impede investors' ability to process, analyze the information in corporate annual reports and reduce their willingness to trade, reducing stock liquidity. Ginesti et al. (2018) examine the relationship between female members of the board of directors and the annual report's readability. They collected data from a "network marketing" in Italy containing 435 annual reports. They performed regression analysis to examine whether the female participation on boards of directors affects the annual report's readability. Female participation in boards of directors has a positive impact on disclosure readability in companies with small boards of directors, which is in contrast with those with large ones. In the financial literature, the audit committee is considered part of the corporate governance structure, a tool for reducing agency costs, and an effective oversight tool for improving agency relationships. An audit committee's existence promotes the quality level of the corporate governance mechanism and can increase financial reporting quality. The audit committee reduces earnings management compared to the time before the existence of audit committees in American companies. Greater independence of the audit committee results in fewer accrual earnings management. Existing studies indicate the effect of some audit committee characteristics on limiting accrual earnings management and enhancing the quality of financial reporting, but the effect of these attributes on limiting earnings management through actual items have not been properly explained (Klein, 2002; Sun et al., 2014; Cohen & Zarin, 2008). Atef Oussii & Taktak (2018) showed a significant relationship between audit committees with financial expertise members and shorter audit report delay by multivariate regression analysis. Thus, the results show that the audit committee's financial expertise helps improve the timing and on-time financial statements. Unusual prolongation of audit time provides information about the risk associated with auditing. Luo et al. (2018) examined the relationship between the readability of annual report and agency costs in which

readability is reported with the length or size of the text. They found that companies with annual report readability reduce agency costs. The negative association between readability and agency costs is more prominent in companies with higher external audit quality, internal control quality, or analyst coverage. The positive impact on the readability of annual reports in private companies is more than public ones and becomes stronger after implementing new accounting standards in 2007. Healthy readable reports can oversee the opportunistic behavior of domestic companies, thereby reducing organization costs.

2. Theoretical Foundations and Research Background

2.1. Independence of the Audit Committee and Readability of Financial Statement Footnotes

Another feature of the audit committee, which is referred to as the basis of its effectiveness, is audit committee members (Abernthy et al., 2013). Joseph et al. (2003) often consider audit committee independence an essential and influential feature of audit committee effectiveness in monitoring and presenting financial reporting and suggest that audit committee independence is related to disclosing companies' financial position facing a financial crisis. Previous studies have shown that the independence of audit committee members reinforces the monitoring process for two reasons. First, independent managers do not have economic and mental dependence on company managers that interferes with their ability to examine their actions; and second, maintaining and enhancing the reputation of managers provides incentives for better oversight of independent audit committee members (Carcello and Neal, 2003 & Carcello and Neal, 2000). Beasley (1996) points out that non-bound (independent) managers use their management process to signal to foreign markets that are decision-makers, understand the importance of decision control, and can use such controlling systems (for example, the accounting system). Abbott and Parker (2000) also point out that although a person's membership as an independent manager (non-bound) in the audit committee increases his or her reputation, if the company provides financial misstatement, his/her reputation may be potentially compromised. Akeel and Dennis (2012) concluded that the audit committee's independence reduces corporate financial statements' restatement and increases their reliability. The independence of audit committee members reduces the chance of financial restatements by more monitoring for two reasons. First, the internal audit unit's independence and effectiveness are reinforced because the internal audit unit reports directly to the audit committee. Neither the present nor the former managers are present (Palmrose and Scholz, 2000). An effective audit committee needs more power and authority to better its supervisory role (Treadway Commission, 1987). Studies conducted on corporate governance have found that the prerequisite for effective oversight is its independence, and greater independence will lead to better oversight by the audit committee (Fama 1980; Klein, 2002). Researchers and legislators have always emphasized that independent external organizational members of audit committees are less likely to be assigned to other committees and responsibilities of the company and that committee members' independence improve earnings quality (Klein, 2002). Independence of audit committee members allows internal auditors to assess the company's status completely. Internal audit independence is an essential feature in reducing the amount of financial misstatement. Second, since the increase in the auditing scope of the independent auditor is frequent with the restatement of financial statements, an audit committee independent of the auditor may request to expand the auditing scope of the independent audit. The evidence suggests that the audit committee's independence enforces the company's internal control structure and increases independent audit effectiveness by reducing the likelihood of misstatement of financial statements

(Wallace and Kreutzfeldt, 1991 & Abbott and Parker, 2000). Lawmakers and researchers have paid much attention to the audit committee (Abbott, Park & Parker 2000). Baxter (2009) showed that earnings management declines by the formation of the audit committee. There is little relationship between audit committee characteristics and financial reporting quality. The proponents of agency theory and resource dependency theory share similar views, arguing that increasing the number of outside directors in an audit committee reduces the possibility of committee members' agreement on conducting roles and responsibilities. In addition, due to lack of bias, more independent audit committees may be better able to remove important financial accounting issues such as earnings quality, exposure to independent auditors, and settling disputes (Bedard, Chtourou, and Courteau, 2004). Previous research has shown that those audit committees that are largely independent directors are likely to hire specialist auditors in the industry, employ internal audit units in the firm, be more conservative in accounting, and improve financial reporting quality. Corporate finance improves firms (Goodwin, 2003). Hysham et al. (2014) show that committee independence and its size directly correlate with voluntary disclosure, but the number of committee meetings and committee members' expertise does not influence voluntary disclosure. Poretti et al. (2018), in a study on the role of audit committee independence in the market reaction to the earnings announcement, showed that there is a significant relationship between the information content of earnings announcements and market response. The audit committee's independence moderates the impact of the information content of the profit and loss statements on market reaction. Klein (2002), in a study titled "investigating the impact of audit committee members on financial reporting quality," found that there was an inverse relationship between the committee independence and the level of voluntary accruals (where its unlimited use reduces the quality of financial reporting). He found that while legislators support fully independent committees, a committee with a majority composition of independent board members is more likely to reduce accruals than a fully independent committee.

The first hypothesis is presented as follows:

H1: There is a significant relationship between the audit committee's independence and the readability of financial statement footnotes.

2.2. Financial Expertise of the Audit Committee and Readability of Financial Statement Footnotes

One of the extensively considered features in the audit committee literature is audit committee members' financial expertise. But the definition of this feature of the audit committee in the research literature suggests that there are two distinct perspectives, including the limited and the broad view. Proponents of the limited view consider the audit committee's financial expertise related to education and work experience only in accounting and auditing. This means that there is a distinction between the accounting and non-accounting expertise of the audit committee members. (2014) Abernathy et al. (2014) have linked the increase in audit committee members' accounting expertise with raising commercial units' share prices. Rchamblett et al. (2008) examined the relationship between audit committee, remuneration incentives, and accounting figures' restatement. The results showed that financial experts in the audit committee reduce the likelihood of fraud in the company and improve its performance. The market may react to the presence of people with accounting and non-accounting expertise in the audit committee. In contrast, advocates of the broader view of the audit committee's financial experts believe that those with executive or managerial backgrounds who have studied in a field other than accounting and auditing are considered to be of the audited committee's financial expertise, which is consistent with the definition presented for SEC regarding the

financial expertise of the audit committee. In other words, financial expertise includes accounting and auditing expertise and those who oversee the provision of financial statements (Abernathy et al. 2013). Although some research has shown that the audit committee's financial expertise reduces the restatement of financial statements, it also reduces the likelihood of error and fraud in financial reporting (Farber D., 2005 & Abbott, Parker, Peters, & Raghunandan, 2003). Carcello (2006) has shown that audit committee members' financial expertise is not correlated with abnormal production costs as a measure of real earnings management. Many theoretical and practical perspectives in research suggest that the audit expertise of finance committee members is effective. One of the corporate governance mechanisms, having members with accounting and auditing knowledge, is essential for better and more effective oversight. So, the presence of certified accountants in the audit committee reduces the amount of compulsory action by legislators or the restatement of seasonal reports. Financial professionals are more responsible for the financial reporting process due to their superior financial knowledge, understanding of financial issues, and reporting problems. Therefore, these individuals are more motivated to apply conservational approaches to increase reputation for retention of capital, increase the likelihood of being appointed to other management positions, and reduce the risk of a lawsuit. (Dhaliwal, 2010; Bull & Sharp, 1989). Much of the recent research and debate in audit committees have emphasized the need for committee members' expertise in financial reporting and auditing (DeZoort, 1998; Beasley, & Salterio, 2001). The proponents of agency theory argue that the presence of members with financial expertise increases the audit committee's ability to ensure the auditor's accurate performance, understands audit statements, recognizes and settle auditor-firm disputes, and ultimately reduces audit report delays. In addition, members with financial expertise assist the audit committee in creating more effective internal control and risk management (McDaniel, Marinette & Mainz 2002; Cohen, Hewitt, Krishnamours & Wright, 2013). Supporters of resource dependence theory express support of financial experts' presence in audit committees that this presence helps sub-committees have more power on financial accounting information and audit comments. If the audit committee lacks this expertise, it relies heavily on the independent auditor to ensure that significant financial accounting figures (such as earnings) are reliable and appropriate for external organizational decision-makers (Defond, Hann & Hu, 2005; Soltana, and Fandezun, 2013). Abernathy et al. (2014) examined the relationship between audit committee members' financial expertise and corporate financial reporting timeliness. Their results showed a significant relationship between audit committee members' financial skills and timely accounting information. Sanchez and Meca (2017) found that the presence of financial experts in the audit committee effectively reduces the risk of banks' bankruptcy. By presenting a broad definition of committee members' financial expertise, Farber (2005) indicated that the audit committee's financial experts would lead to less financial fraud.

Defond et al. (2005), in their research, separated the financial and non-accounting financial expertise and showed that there was a positive and significant relationship between the presence of members with financial accounting expertise in the corporate audit committee and the abnormal market returns. However, no relationships were found with the presence of members with non-accounting financial expertise. Abbott et al. (2004) examined the relationship between audit committee members' financial expertise and the preparation and restatement of financial statements. They concluded a significant negative relationship between financial experts' presence in the audit committee and the incidence of restatement of financial statements. Wallace and Shi (2004) found that audit committee members' financial and accounting knowledge and education played an effective role in releasing reliable information. Abbott, Parker & Peter (2002) found that

the audit committee's lack of financial expertise has a significant relationship with an increased likelihood of financial fraud and error. Their results showed that the presence of an independent audit committee of board members is likely to reduce financial fraud and error incidence. Abbott et al. (2000) studied the relationship between financial reporting quality and audit committee characteristics. Another study found that financial statements' misstatement was less in companies with an independent audit committee by financial professionals. Wild (1996) investigated a number of companies with auditing committees in his study and found that after the audit committee's formation, the information content of these economy units' earnings reports has increased. Kalbers & Fogarty (1993) states that audit committee members with financial and accounting expertise increase audit committee effectiveness. In addition, audit committee expertise enhances the quality of financial reporting. The expertise of the audit committee plays a key role in the effectiveness of the audit committee. The audit committee's presence becomes more important when the banking sector's internal regulations and controls are weak. Soltana (2015) argues that there is a significant relationship between audit committee financial expertise and conservatism measured by earnings and accruals. Therefore, the second hypothesis is presented as follows:

H2: There is a significant relationship between the audit committee's financial expertise and financial statement footnotes' readability.

2.3. Number of Audit Committee Meetings and Readability of Financial Statement Footnotes

Board size is the number of board members and is an important influencing factor. A literature review indicates conflicting views about the relationship between the board of directors' size and its effectiveness. From the agency theory perspective, it can be argued that a larger board of directors is more likely to be aware of agency problems because more people will oversee management tasks (Nicholson & Kiel, 2003). The number of audit committee members is considered an important factor that was influencing audit committee effectiveness (Lin et al., 2014). The audit committee's role is to oversee internal control and provide stakeholders with reliable information on evaluating managers in administrating controlling environment and controlling systems. Zhang et al. (2007) stated that the number of audit committee members could be used to indicate audit committee acts. The audit committee evaluates the number of members with greater scrutiny and discussion. It leads to an improvement in the quality of internal control systems and reduces the likelihood of fraud in the financial statements and internal control system. On the other hand, audit committees with fewer members appear to agree with managers' views, distort financial statements, and reduce internal control systems' quality. Allegrini and Greco (2013) have also acknowledged that increasing the number of audit committee members during the year cause that the executive activities of the board of directors, especially the CEO, to be further reviewed and evaluated, and given the audit committee's duty to ensure that the company's environment is healthy. They are required to take appropriate action, and this will allow corporate executives to rethink their performance and administrative activities leading to improved quality of internal control systems. Khlif and Samaha (2016) have also provided evidence indicating that the corporate executives restrict fraudulent activities that reduce shareholder interest by reviewing members of the audit committee during the year. They try to attract the members of the audit committee to increase the length of their tenure. Therefore, they argue that increasing audit committee members' numbers will improve internal control systems' quality. In addition, numerous studies are showing that the quality of internal controls is influenced by factors such as the independence of the audit committee and its size (Krishnan, 2005), a number of committee members' meetings, auditing and

independent auditor size (Khlif and Samaha, 2016; Zhang et al. 2007), characteristics of the board of directors (Lin et al., 2014), ownership structure (Mitra & Hussein, 2011). Al-Matari et al. (2017) also acknowledged that increasing the number of audit committee members' meeting during the year cause that the executive activities of the board of directors, especially the CEO, to be further reviewed and evaluated, and given the audit committee's duty to ensure that the company's environment is healthy. They are required to take appropriate action, and this will allow corporate executives to rethink their performance and administrative activities leading to improved quality of internal control systems.

H3: There is a significant relationship between the number of audit committee meetings and the readability of financial statement footnotes.

3. Research Methodology

3.1. Method of Data Collection

Research data were collected from the database of the Tehran Stock Exchange.

3.2. Statistical Population and Sample

The statistical population of this study includes all companies listed on the Tehran Stock Exchange. In this research, a systematic elimination method was used to select the statistical sample. For this purpose, the following five criteria are considered, and if a company meets all the criteria, it will be selected as the sample and the rest eliminated.

- 1- The company has been listed on the exchange before 2012 and will be active on the exchange until the end of 2018.
- 2- Due to the specific nature of the holding companies' activities, insurance, leasing, banks, financial and investment institutions, and their significant differences with the manufacturing and trading companies, the company selected is not among those listed here.
- 3- Corporate financial data are available.

After meeting all of the criteria mentioned above, 150 companies remained a screened population, all of which were selected as samples. Hence, our observations over the period 2012 to 2018 reached 1050 firm-years (7 years × 150 companies). In this study, the data panel and multivariate linear regression method and EViews software are used for data analysis and hypothesis testing.

3.3. Research Model and Analysis

In this study, a regression model was used to test the hypotheses to estimate the relationship between audit committee characteristics and readability of company financial statement footnotes and control variables.

Hypothesis Test Model 1:

$$READ_{i,t} = \beta_0 + \beta_1 ACIND_{i,t} + \beta_2 ACFSIZE_{i,t} + \beta_3 CHANGE_{i,t} + \beta_4 TENURE_{i,t} + \beta_5 REPU_{i,t} + \beta_6 AO_{i,t} + \beta_7 AFEE_{i,t} + \beta_8 SIZE_{i,t} + \beta_9 LEV_{i,t} + \beta_{10} ROA_{i,t} + \beta_{11} LOSS_{i,t} + \beta_{12} REST_{i,t} + \beta_{13} AGE_{i,t} + \beta_{14} MTB_{i,t} + \beta_{15} CFO_{i,t} + \varepsilon_{i,t}$$

Table 1. Definition of research variables

| Variable | Symbol | Type | Operational definition |
|--|--------|-----------|--|
| financial statement footnote readability | READ | Dependent | The fog index was used to calculate financial reporting readability. |

| | | | |
|-------------------------------------|----------------|-------------|--|
| audit committee's independence | <i>ACIND</i> | Independent | The ratio of the independent committee members to the total number of audit committee members. |
| Audit committee financial expertise | <i>CFE</i> | Independent | It is a dummy variable; if the member of the audit committee (manager) has the financial expertise, he/she takes number 1 and otherwise 0 |
| Number of audit committee meetings | <i>ACMET</i> | Independent | Number of audit committee meetings per year |
| Audit committee size | <i>ACFSIZE</i> | Controlling | It is a dummy variable; if the auditor is the audit organization, it takes number 1 and otherwise 0 |
| Auditor's Change | <i>CHANGE</i> | Controlling | It is a dummy variable if the company auditor changes. It is equal to 1 and otherwise 0 |
| Auditor's tenure | <i>TENURE</i> | Controlling | The number of years the company has retained the auditor. |
| Auditor's reputation | <i>REPU</i> | | This variable is set to 1 if the audit company is well-known; otherwise, it will be zero. To distinguish a reputable auditor from an unreputable one, the number of companies under their auditing is used. They are classified by their stock exchange workload method. And if the audit firm is one of the top 20 in terms of workload, it is regarded as a reputable auditor, otherwise an unreputable one. |
| Auditor's opinion | <i>AO</i> | | If the auditor gives an acceptable opinion on its financial statements, it is equal to 1; otherwise, it is 0. |
| Audit fee | <i>AFEE</i> | | It is measured based on the auditor's natural logarithm to homogenize large and small companies' fees. This method has been used in all previous studies. |
| Size of the company | <i>SIZE</i> | Controlling | The company size is used by the natural logarithm of the total sales of the company. |
| Financial leverage | <i>LEV</i> | Controlling | The debt-to-asset ratio represents the company's financial leverage |
| Return on assets | <i>ROA</i> | Controlling | Return on assets is net earnings divided by total assets |
| Losses | <i>LOSS</i> | Controlling | It is a virtual variable that, if the company has losses this year, is equal to one; otherwise, it will be 0. |
| Restatement | <i>REST</i> | Controlling | The variable is a zero-to-one dummy variable set to 1 if it is re-stated in the financial statements, and otherwise, it will be 0. |
| Age of company | <i>AGE</i> | Controlling | Company lifetime from the date of establishment to the date of initial release in years (the logarithm of this variable will be used in the model). |

| | | | |
|---|-----|-------------|---|
| The ratio of market value to book value | MTB | Controlling | The market-to-book ratio is calculated by dividing the stock's current closing price by the number of shares issued and held by shareholders by the book value of the company's total equity. |
| Operating cash flow | CFO | Controlling | This variable is derived from the following relation: Net Profit + Non-Cash Expenses + Working Capital |

Hypothesis Test Model 2:

$$READ_{i,t} = \beta_0 + \beta_1 CFE_{i,t} + \beta_2 ACFSIZE_{i,t} + \beta_3 CHANGE_{i,t} + \beta_4 TENURE_{i,t} + \beta_5 REPU_{i,t} + \beta_6 AO_{i,t} + \beta_7 AFEE_{i,t} + \beta_8 SIZE_{i,t} + \beta_9 LEV_{i,t} + \beta_{10} ROA_{i,t} + \beta_{11} LOSS_{i,t} + \beta_{12} REST_{i,t} + \beta_{13} AGE_{i,t} + \beta_{14} MTB_{i,t} + \beta_{15} CFO_{i,t} + \varepsilon_{i,t}$$

Hypothesis Test Model 3:

$$READ_{i,t} = \beta_0 + \beta_1 ACMET_{i,t} + \beta_2 ACFSIZE_{i,t} + \beta_3 CHANGE_{i,t} + \beta_4 TENURE_{i,t} + \beta_5 REPU_{i,t} + \beta_6 AO_{i,t} + \beta_7 AFEE_{i,t} + \beta_8 SIZE_{i,t} + \beta_9 LEV_{i,t} + \beta_{10} REST_{i,t} + \varepsilon_{i,t}$$

The definition of all the variables in the three models above is presented in Table 1.

4. Research Findings

4.1. Descriptive Statistics of Observations

Descriptive statistics are the arrangement and classification of data, graphical representation, and the calculation of values such as mean, median, etc., indicating the characteristics of each member of the population in question. Table 2 provides information on central tendency indices (mean, median, maximum, and minimum) and data dispersion (standard deviation, skewness, and kurtosis). The degree of asymmetry is often called skewness. If the skewness coefficient is zero, the population is perfectly symmetrical, and if the skewness coefficient is positive, its skewness will tend to the right and, if negative, to the left. The positive kurtosis coefficients indicate that the distribution of variables is higher than the normal distribution and that the data is more concentrated around the mean.

4.2. Correlation of Variables

Pearson correlation analysis was used to investigate the presence or absence of collinearity among the research variables. Table (3) shows Pearson's correlation coefficients between variables.

4.3. F-Limer Test

First, the F-Limer test is used to select between panel data methods and pooled data. If the probability calculated (p-value) is greater than the 0.05 error level, the integrated data will be used; otherwise, panel data will be applied. Table (4) shows the results of the F- Limer test.

Table 2. Summary of descriptive statistics of variables

| | READ | ACIND | CFE | ACMET | ACFSIZE | CHANGE | TENURE | REPU | AO |
|--------------|----------|---------|---------|---------|---------|--------|--------|---------|--------|
| Mean | -16.0027 | 0.4767 | 0.49135 | 0.50952 | 0.2343 | 0.2639 | 4.2171 | 0.7886 | 0.4676 |
| Median | -15.52 | 0.6667 | 0.66667 | 0.000 | 0.000 | 0.000 | 3.000 | 1.000 | 0.000 |
| Maximum | -13.904 | 1.000 | 1.000 | 2.000 | 1.000 | 1.000 | 16.000 | 1.000 | 1.000 |
| Minimum | -21.908 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 0.000 | 0.000 |
| Std. Dev. | 1.5522 | 0.3699 | 0.4108 | 0.5298 | 0.4237 | 0.4409 | 4.1006 | 0.4085 | 0.4992 |
| Skewness | -1.1493 | -0.2790 | -0.0699 | 0.2699 | 1.2547 | 1.0719 | 1.4792 | -1.4134 | 0.1298 |
| Kurtosis | 4.2727 | 1.5780 | 1.3930 | 1.7428 | 2.5743 | 2.1489 | 3.9126 | 2.9978 | 1.0169 |
| Observations | 1050 | 1050 | 1050 | 1050 | 1050 | 1050 | 1050 | 1050 | 1050 |

Table 3. Summary of descriptive statistics of variables

| | AFEE | SIZE | LEV | ROA | LOSS | REST | AGE | MTB | CFO |
|--------------|---------|---------|---------|---------|--------|---------|---------|----------|--------|
| Mean | 4.9076 | 13.9159 | 0.6301 | 0.0955 | 0.1209 | 0.7104 | 20.2533 | 2.4439 | 0.1162 |
| Median | 6.3795 | 13.7754 | 0.6177 | 0.0829 | 0.0000 | 1.000 | 18.5000 | 2.0360 | 0.1030 |
| Maximum | 9.3486 | 19.7226 | 4.0027 | 0.6269 | 1.0000 | 1.0000 | 52.000 | 121.5096 | 0.6422 |
| Minimum | 0.0000 | 8.8997 | 0.1085 | -1.0632 | 0.0000 | 0.0000 | 2.000 | -53.2179 | -0.46 |
| Std. Dev. | 3.1000 | 1.4905 | 0.2550 | 0.1445 | 0.3262 | 0.4537 | 10.4012 | 6.1393 | 0.1267 |
| Skewness | -0.8479 | 0.7885 | 3.4461 | -0.5215 | 2.3249 | -0.9281 | 0.4819 | 8.2669 | 0.2722 |
| Kurtosis | 1.9444 | 4.8595 | 36.9977 | 10.0317 | 6.4053 | 1.8614 | 2.6127 | 187.4198 | 4.7167 |
| Observations | 1050 | 1050 | 1050 | 1050 | 1050 | 1050 | 1050 | 1050 | 1050 |

According to the results of Table (4), there are no too high or too low correlation coefficient values (close to +1 and -1) to affect the results of regression analysis. Consequently, there is no collinearity between independent research variables.

Table 4: Correlation coefficients of variables

| | READ | ACIND | CFE | ACMET | ACFSIZE | CHANGE | TENURE | REPU | AO |
|----------------|--------|--------|--------|---------|---------|---------|--------|---------|---------|
| READ | 1 | -0.031 | 0.017 | -0.1191 | 0.0228 | -0.008 | 0.067 | 0.047 | 0.060 |
| ACIND | -0.031 | 1 | 0.770 | 0.0274 | 0.066 | 0.011 | 0.029 | -0.052 | 0.094 |
| CFE | 0.017 | 0.770 | 1 | -0.011 | -0.010 | -0.003 | -0.012 | -0.0427 | 0.096 |
| ACMET | -0.119 | 0.027 | -0.011 | 1 | -0.065 | -0.0005 | -0.054 | 0.026 | -0.072 |
| ACFSIZE | 0.022 | 0.066 | -0.010 | -0.065 | 1 | -0.280 | 0.788 | 0.286 | 0.004 |
| CHANGE | -0.008 | 0.011 | -0.003 | -0.000 | -0.280 | 1 | -0.469 | -0.134 | -0.049 |
| TENURE | 0.067 | 0.029 | -0.012 | -0.054 | 0.788 | -0.469 | 1 | 0.247 | 0.0057 |
| REPU | 0.047 | -0.05 | -0.042 | 0.026 | 0.286 | -0.134 | 0.247 | 1 | -0.0008 |
| AO | 0.060 | 0.094 | 0.096 | -0.0727 | 0.004 | -0.049 | 0.005 | -0.0008 | 1 |

Table 5: Correlation coefficients of variables

| | AFEE | SIZE | LEV | ROA | LOSS | REST | AGE | MTB | CFO |
|------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| AFEE | 1 | -0.193 | -0.084 | 0.059 | -0.034 | -0.010 | -0.086 | -0.048 | 0.048 |
| SIZE | -0.193 | 1 | 0.074 | 0.125 | -0.072 | 0.038 | 0.075 | -0.032 | 0.159 |
| LEV | -0.084 | 0.074 | 1 | -0.688 | 0.413 | 0.073 | 0.002 | -0.037 | -0.277 |
| ROA | 0.059 | 0.125 | -0.688 | 1 | -0.424 | -0.062 | 0.026 | 0.051 | 0.488 |
| LOSS | -0.034 | -0.072 | 0.413 | -0.424 | 1 | 0.043 | 0.019 | 0.029 | -0.160 |
| REST | -0.0108 | 0.038 | 0.073 | -0.062 | 0.043 | 1 | 0.047 | -0.040 | -0.014 |
| AGE | -0.086 | 0.075 | 0.002 | 0.026 | 0.019 | 0.047 | 1 | -0.016 | 0.034 |
| MTB | -0.048 | -0.032 | -0.037 | 0.051 | 0.029 | -0.040 | -0.016 | 1 | 0.016 |
| CFO | 0.048 | 0.159 | -0.277 | 0.488 | -0.160 | -0.014 | 0.034 | 0.016 | 1 |

According to Table (6), given the significance level (Prob) obtained from the F-Limer test, the hypothesis testing methods are determined. In all three models, the probability calculated (p-value) is greater than the error level of 0.05. Thus the integrated data is used.

Table 6: F-Limer Test

| Hypothesis | Test type | Prob | Result |
|------------|-----------|--------|--------|
| 1 | F- limer | 0.7876 | Pooled |
| | Hausman | - | - |
| 2 | F- limer | 0.9223 | Pooled |
| | Hausman | - | - |
| 3 | F- limer | 0.9648 | Pooled |
| | Hausman | - | - |

4.4. Results of Research Hypotheses Test

Table 7: Estimation Results of Model 1

| Dependent Variable: READ | | | | |
|---|--------------------|--------------------|--------------------|--------------|
| Method: Panel EGLS (Cross-section weights) | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | -18.2598 | 0.8681 | -21.0329 | 0.0000 |
| ACIND | 0.1105 | 0.0497 | 2.2244 | 0.0264 |
| ACFSIZE | -0.0646 | 0.0749 | -0.8623 | 0.3888 |
| CHANGE | 0.0457 | 0.0234 | 1.9505 | 0.0515 |
| TENURE | 0.0231 | 0.0096 | 2.3931 | 0.0170 |
| REPU | 0.0568 | 0.0227 | 2.5038 | 0.0125 |
| AO | 0.0242 | 0.0322 | 0.753130 | 0.4516 |
| AFEE | 0.0056 | 0.0079 | 0.7149 | 0.4749 |
| SIZE | 0.1726 | 0.0481 | 3.5899 | 0.0004 |
| LEV | -0.4638 | 0.1196 | -3.8775 | 0.0001 |
| ROA | -0.5560 | 0.2047 | -2.7159 | 0.0068 |
| LOSS | -0.0934 | 0.0489 | -1.9070 | 0.0569 |
| REST | -0.0087 | 0.0178 | -0.4902 | 0.6241 |
| AGE | -0.0331 | 0.0212 | -1.5597 | 0.1193 |
| MTB | 0.0049 | 0.0020 | 2.3821 | 0.0175 |
| CFO | -0.0724 | 0.0980 | -0.7383 | 0.4606 |
| AR(1) | 0.8969 | 0.0206 | 43.441 | 0.0000 |
| AR(2) | 0.04037 | 0.0201 | 2.0102 | 0.0448 |
| Weighted Statistics | | | | |
| R-squared | 0.909844 | Mean dependent var | | -27.6904 |
| Adjusted R-squared | 0.9077 | S.D. dependent var | | 29.5591 |
| S.E. of regression | 0.786384 | Sum squared resid | | 452.6685 |
| F-statistic | 434.5440 | Durbin-Watson stat | | 2.2043 |
| Prob(F-statistic) | 0.000000 | | | |

Table 7 shows the estimation results of Model 1 using Eviews software. The results shown in Table 5 show that the F test's significance level is 0.0000, which is < 0.05 . Since the F statistic shows the model's overall validity, it can be concluded that this model is significant at the 95% level and has high validity. Also, the adjusted coefficient of determination of this model is 0.9077. This value indicates that the model's explanatory variables can explain 90% of the dependent variable variations; since the Durbin-Watson statistic of the model is 2.2043, this value is between 1.5 and 2.5 say that there is no type II autocorrelation model. Table 5 also shows that the calculated significance level for audit committee size is 0.0264 and is < 0.05 . As a result, there is a significant relationship between the audit committee's size and the readability of financial statement footnotes. Accordingly, research hypothesis 1 is confirmed at a 95% confidence level in Model 1.

Table 8: Results of Model 2

| Dependent Variable: READ | | | | |
|---|--------------------|--------------------|--------------------|--------------|
| Method: Panel EGLS (Cross-section weights) | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | -18.2310 | 0.8819 | -20.671 | 0.0000 |
| CFE | 0.0421 | 0.0433 | 0.9717 | 0.3314 |
| ACFSIZE | -0.0475 | 0.0734 | -0.6472 | 0.5177 |
| CHANGE | 0.0495 | 0.0233 | 2.1282 | 0.0337 |
| TENURE | 0.0214 | 0.0097 | 2.2181 | 0.0269 |
| REPU | 0.0287 | 0.0199 | 1.4509 | 0.1472 |
| AO | 0.0287 | 0.0321 | 0.8946 | 0.3713 |
| AFEE | 0.0070 | 0.0079 | 0.8942 | 0.3715 |
| SIZE | 0.1844 | 0.0489 | 3.7683 | 0.0002 |
| LEV | -0.4786 | 0.1228 | -3.8955 | 0.0001 |
| ROA | -0.5317 | 0.2079 | -2.5569 | 0.0108 |
| LOSS | -0.1014 | 0.0499 | -2.0292 | 0.0428 |
| REST | -0.0074 | 0.0178 | -0.4127 | 0.6799 |
| AGE | -0.0338 | 0.02139 | -1.5816 | 0.1142 |
| MTB | 0.0049 | 0.00212 | 2.3324 | 0.0200 |
| CFO | -0.0658 | 0.0985 | -0.6679 | 0.5045 |
| AR(1) | 0.8960 | 0.0209 | 42.9042 | 0.0000 |
| AR(2) | 0.0415 | 0.0203 | 2.0459 | 0.0411 |
| Weighted Statistics | | | | |
| R-squared | 0.9104 | Mean dependent var | | -27.8892 |
| Adjusted R-squared | 0.9084 | S.D. dependent var | | 30.3366 |
| S.E. of regression | 0.7906 | Sum squared resid | | 457.5706 |
| F-statistic | 437.7294 | Durbin-Watson stat | | 2.2174 |
| Prob(F-statistic) | 0.0000 | | | |

Table 8 shows the estimation results of Model 2 using Eviews software. The results shown in Table 8 show that the F test's significance level is 0.0000, which is < 0.05 . Since the F statistic shows the model's overall validity, it can be concluded that this model is significant at the 95% level and has high validity. Also, the adjusted coefficient of determination of this model is 0.9104. This value indicates that the model's explanatory variables can explain 91% of the dependent variable variations; since the Durbin-Watson statistic of the model is 2.2174, and this value is between 1.5 and 2.5, we can say that there is no type II autocorrelation model. Table 6 also shows that the calculated significance level for audit committee financial expertise is 0.3314 and is > 0.05 . As a result, there is no significant relationship between the audit committee's financial expertise and the readability of financial statement footnotes (by the Fog Index Method). Accordingly, research hypothesis 2 is rejected at a 95% confidence level in Model 2.

Table 9 shows the estimation results of Model 3 using Eviews software. The results shown in Table 9 show that the F test's significance level is 0.0000, which is < 0.05 . Since the F statistic shows the model's overall validity, it can be concluded that this model is significant at the 95% level and has high validity. Also, the adjusted coefficient of determination of this model is 0.8994. This value indicates that the model's explanatory variables can explain 89% of the dependent variable variations; since the Durbin-Watson statistic of the model is 2.2104, this value is between 1.5 and 2.5 say that there is no type II autocorrelation model. Table 7 also shows that the calculated significance level for the number of audit committee meetings is 0.0453 and is < 0.05 . As a result, there is a significant relationship between the number of audit committee meetings and the readability of financial statement footnotes (by the Fog Index Method). Accordingly,

research hypothesis 3 is approved at a 95% confidence level in Model 3.

Table 9: Results of Model 3

| Dependent Variable: READ | | | | |
|---|--------------------|--------------------|--------------------|--------------|
| Method: Panel EGLS (Cross-section weights) | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | -18.390 | 0.7904 | -23.2665 | 0.0000 |
| ACMET | -0.0600 | 0.0299 | -2.0055 | 0.0453 |
| ACFSIZE | -0.0386 | 0.0863 | -0.4469 | 0.6551 |
| CHANGE | 0.0434 | 0.0277 | 1.5683 | 0.1172 |
| TENURE | 0.0183 | 0.0109 | 1.6685 | 0.0956 |
| REPU | 0.0451 | 0.0305 | 1.4787 | 0.1396 |
| AO | 0.0149 | 0.0316 | 0.4717 | 0.6373 |
| AFEE | 0.0083 | 0.0078 | 1.0656 | 0.2869 |
| SIZE | 0.1492 | 0.0474 | 3.1478 | 0.0017 |
| LEV | -0.3016 | 0.1103 | -2.7329 | 0.0064 |
| REST | -0.0298 | 0.0257 | -1.1615 | 0.2458 |
| AR(1) | 0.9028 | 0.0197 | 45.976 | 0.0000 |
| AR(2) | 0.0328 | 0.0190 | 1.7279 | 0.0844 |
| Weighted Statistics | | | | |
| R-squared | 0.8994 | Mean dependent var | | -26.224 |
| Adjusted R-squared | 0.8977 | S.D. dependent var | | 16.8348 |
| S.E. of regression | 0.7904 | Sum squared resid | | 460.4772 |
| F-statistic | 548.9436 | Durbin-Watson stat | | 2.2104 |
| Prob(F-statistic) | 0.0000 | | | |

5. Discussion and Conclusion

In the last decade, financial information and accounting texts' readability has attracted many financial market observers' attention. As satisfying the quality of intelligibility is largely dependent on understanding the concept of readability, understanding the impact information readability has on a variety of stakeholder decisions, especially investors, seems essential. Proper settlement of the audit committee can positively impact the economic unit's performance and, subsequently, its report, and somehow protect users' interests. It can also help establish effective reporting systems to provide transparent and reliable information, given the board of directors' responsibility for disclosure and reporting. The audit committee acts as an intermediary between internal and independent auditors and management and plays a key role in overseeing and controlling the financial reporting process. Ensuring that management's financial statements are free of any bias is an important matter for shareholders. To achieve this goal and ensure the value-added content of accounting information, it is essential to have an effective audit committee. Corporate auditing is an important mechanism in corporate governance. The audit committee's effective work can provide the Reinforcement and health of financial reporting and improve corporate financial statements' quality. The audit committee is one of the most important committees of the board of directors, ultimately responsible for overseeing all company activities. Therefore, the audit committee is a new control mechanism in financial reporting. A key factor in assessing the effectiveness of the audit committee activity is the existence of a statute or activity charter containing all that the board of directors would expect in terms of responsibility, including overseeing, controlling, and directing the organization. An effective audit committee as a determinant of the financial reporting process increases audited financial statements' validity. Members of this committee work with the board of directors responsible for safeguarding shareholders' interests and oversee the quality and suitability of financial statements,

accounting, auditing, internal control, and the reporting process. Communicating with auditors, audit committees, and the board of directors increases the flow of useful, effective, and informative information. By reviewing the audit committee members during the year, the company's managers restrict fraudulent activities that reduce shareholder interest. In this way, they try to attract the audit committee members to increase their tenure length. Therefore, they state that increasing audit committee members' numbers will improve internal control systems' quality. To improve the audit committee's performance, the corporate governance principles associated with it should be strengthened. Companies should be encouraged to observe the audit committee charter with a stronger emphasis and stricter rules on the Tehran Stock Exchange part. The audit committee member's activities should be more supervised to make this committee do its job accurately and properly. The purpose of this study was to investigate the relationship between audit committee characteristics and the readability of financial statements of companies listed on the Iranian Stock Exchange. Financial statements' readability can lead to managers' less opportunistic behavior and the probability of fraudulent reporting by reducing the information asymmetry between managers and investors and, consequently, increasing transparency and understanding of financial statements. The results showed a significant relationship between the audit committee's independence and the number of audit committee meetings with the readability of financial statement footnotes. However, there is no significant relationship between the audit committee's financial expertise and financial statement footnotes' readability. Investors and financial analysts are advised to consider the relationship between financial reporting readability and fraud probability in their decision-making models when analyzing financial statement information and note that fraudulent reporting is more likely to occur in companies with more complex and difficult financial reports. Audit firms are suggested to consider the readability and understanding of corporate financial statements, besides other factors, in their evaluations of the auditor's firm's level, planning of operations, and the volume of audits. This study's results can help enrich the theoretical foundations of Iran and the capital market directly and indirectly. Specifically, this study's findings may highlight the necessity for setting guidelines (similar to the easy to understand English guidelines of the US Securities and Exchange Commission) to increase the readability of nonprofit and minor investors' financial statements. It is also recommended that institutions overseeing capital markets develop the necessary mechanisms to diversify information channels other than corporate financial statements (such as increasing financial analysts, rating agencies, etc.). Given the limitations of the "Fog Index Method," the development of a native Iranian model is recommended to assess accounting and financial literature's readability with proper validity and feasibility in the Iranian reporting environment.

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