

## Analysis of the Impact of Remote Auditing on the Relationship between Audit Quality and Audit Fees

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### ABSTRACT

The purpose of this study is to investigate the impact of remote auditing on the relationship between audit quality and audit fees. In terms of research objectives, this study is classified as descriptive and applied research. The statistical population of the study consists of companies listed on the Tehran Stock Exchange and Iran's Over-the-Counter Market (FaraBourse) that were active between 2019 and 2022. For the research sample, only 63 companies meeting the specified criteria were selected systematically and purposefully. Data were collected and analyzed using Microsoft Excel spreadsheet software and EViews statistical software. Hypotheses were tested using statistical models. The results indicate that the size of the audit firm has no effect on audit fees, whereas auditor industry specialization and auditor tenure do influence audit fees. However, remote auditing does not affect the relationship between audit firm size and audit fees. Remote auditing does impact the relationship between auditor industry specialization and audit fees, but it has no effect on the relationship between auditor tenure and audit fees.

**KEYWORDS:** Remote Auditing, Audit Quality, Audit Fees, Auditor Tenure

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## 1. Introduction

In early January 2020, a global human pandemic originating in China was identified as a novel strain of the coronavirus. Subsequently, the virus spread to other parts of the world, including the United States and Europe, causing unprecedented disruptions to the global economy. On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a global pandemic (Albitar et al., 2021).

Business entities have undergone significant changes in their operational environment, including financial reporting processes, disclosures in financial statements, and their ability to ensure operational continuity in the foreseeable future. Consequently, auditors are compelled to adapt their methods for obtaining sufficient and appropriate audit evidence and forming the basis of their opinions. Amid these circumstances, auditors must address challenges such as limited access to individuals or information, reassess and evaluate significant risks, and modify planned audit procedures or implement new ones as deemed appropriate. Given the nature of these risks and their impact on financial markets, the role of auditors—both internal and external—becomes particularly valuable due to their unique skills and positions (Zare Ebrahimabadi et al., 2020).

Unlike natural disasters such as earthquakes or hurricanes, pandemics do not destroy production facilities (capital shock) and are generally considered relatively short-term shocks. However, the impact of the COVID-19 shock has been profound and extensive, significantly affecting companies, workforces, and households worldwide. It is critical to recognize that the consequences of this pandemic vary across individuals and entities. Therefore, auditors must continuously assess how these impacts affect the businesses they audit (Azinfar & Valimohammadpour, 2022). Should the global health crisis persist, the economic consequences arising from restrictions on production, trade, consumption of goods and services, and transportation and travel will adversely affect companies' operations, financial performance, financial position, and cash flows. Ultimately, these economic consequences will also impact the accounting, financial reporting, and auditing of the financial statements of affected companies (Mashayekhi et al., 2016).

Financial statements provide a substantial portion of the information required by investors and creditors of a company. Given the high level of reliance on financial statements, the role of auditors is critical. Auditing financial statements is essential, as audited financial statements provide investors and creditors with assurance that the information presented is reliable and trustworthy. Thus, auditing financial statements can create economic value for a company (Biddle & Hilary, 2006). Considering the importance of audit services and the inability to directly observe audit quality, establishing an effective method for controlling audit quality is imperative. The most significant aspect of controlling and managing audit quality is audit fees (Simunic, 1984). Audit fees are a necessary condition for ensuring audit quality (DeAngelo, 1981). While higher audit fees do not always indicate higher audit quality, audit firms typically set standard costs for their services, and the fees they receive generally exceed these costs (Charles et al., 2010). In a competitive market, audit firms charging lower fees may risk losing clients. Conversely, if audit firms charge significantly higher fees relative to the costs incurred, public perception of their work quality may be questioned (DeFond et al., 2020). Therefore,

empirical research on audit fees of listed companies in Iran provides valuable insights for investors in interpreting audit fees (Lari Dashtbayaz & Oradi, 2017).

This study aims to examine the impact of "remote auditing" on the relationship between audit quality and audit fees. We first analyze the relationship between audit quality and audit fees and then investigate the effects of remote auditing on this relationship.

## 2. Theoretical Framework and Research Background

Due to the COVID-19 pandemic and its adverse effects on businesses worldwide, unprecedented measures such as social distancing, closures of educational institutions and certain industries, border restrictions, remote service delivery, and teleworking in various professions have gained prominence. The auditing profession has not been immune to this crisis. Auditors may encounter challenges in the audit process, such as obtaining evidence to form opinions, or may themselves contract the disease. In such circumstances, a key question arises: Is it possible to forgo the physical presence of an independent auditor at the client's premises? (Jin et al., 2021).

Regular and systematic auditing is a standard business necessity for most companies, even if not mandated by regulations. Independent auditing enhances the credibility of a company's financial reporting, thereby adding greater value to the company (Jin et al., 2021). On-site auditing at a company's premises, even when well-planned and executed, often causes disruptions and concerns for the company. However, "remote auditing" serves as an alternative that can make the experience more efficient and less burdensome for both the audited company and the audit team (Zare Ebrahimabadi et al., 2020). Remote auditing can also contribute to reducing audit time and costs (Jin et al., 2021).

The term "remote auditing" refers to a process in which auditors, regardless of their physical location, combine information and communication technologies with data analysis techniques to collect electronic evidence from the audited entity to evaluate and report on the accuracy of financial information and internal controls (Jin et al., 2021). As implied by the definition, conducting remote auditing is closely tied to technological infrastructure, organizational culture, and the training of audit team members, and it is not feasible without these prerequisites (Albitar et al., 2021).

The Center for Audit Quality (affiliated with the American Institute of Certified Public Accountants) has stated that audit firms, while prioritizing the health and safety of their employees, are committed to maintaining high audit quality standards when serving their audit clients during this crisis (Albitar et al., 2021). The auditing profession remains in close contact with regulators as the impact of the virus on companies, auditors, and the audit process continues to be assessed (Albitar et al., 2021).

Technological advancements have enabled new methods of remote auditing, requiring minimal essentials for successful audits. One such technology is video conferencing, which facilitates live discussions with clients and allows auditors to observe tangible evidence previously thought to be accessible only through on-site visits (Lai, 2019). Conducting meetings via platforms such as Skype, WhatsApp, Zoom, and Jitsi Meet makes communication more effective and productive.

When independent auditors shift to remote auditing following the COVID-19 outbreak, audit quality tends to decline. The negative impact of remote auditing is more pronounced for non-local auditors or those with short tenure (DeFond et al., 2020). However, several appropriate methods, including timely adjustments to audit procedures, greater reliance on risk assessment and data analysis, emphasis on the adequacy and reliability of digital evidence, and leveraging information and communication technologies, can enhance the effectiveness of remote auditing (Jin et al., 2021). Auditor tenure can also influence the quality of remote auditing; longer auditor tenure increases familiarity with the company's financial history, thereby improving audit quality (Jin et al., 2021).

Audit quality is directly related to financial reporting quality, as higher audit quality enhances the credibility of financial statements. The greater the assurance provided by auditors regarding financial statements, the higher the credibility of financial reporting (Kim et al., 2014). The amount of audit fees can also affect audit quality. Higher fees may lead to greater auditor effort and improved audit quality, but this can create financial dependence on clients, potentially leading auditors to compromise on procedures due to concerns about losing clients, which could have adverse financial consequences later (Blankley et al., 2012).

Traditionally, the audit process involved teams of auditors spending weeks or even months stationed in a conference room at the company's headquarters. However, technological advancements, such as cloud storage, smart devices, and secure data-sharing platforms, have become viable alternatives to dispatching audit teams, adopted by many audit firms. This approach not only saves time and audit costs but also allows auditors to work remotely, improving work-life balance for auditors and internal accounting staff. Company employees are no longer required to remain at their desks during the audit period, as they can respond to auditor inquiries and provide documentation remotely (Fathe et al., 2023).

A wide range of technologies enables audit team members to collaborate effectively in real time, even when working remotely from different locations. This allows auditors to address questions such as how businesses are performing and the financial risks they currently face. Real-time data access is particularly critical during the COVID-19 pandemic for auditors to perform assessments related to going concern (Mashayekhi et al., 2016).

In this study, we examine the impact of remote auditing on audit quality, the appropriate practices employed by auditors to enhance audit quality, and audit fees. The negative impact of remote auditing is more pronounced for non-local auditors or those with short tenure. However, several appropriate methods, including timely adjustments to audit procedures, greater reliance on risk assessment and data analysis, emphasis on the adequacy and reliability of digital evidence, and leveraging information and communication technologies, can improve the effectiveness of remote auditing.

Lin et al. (2021) conducted a study titled "Remote Auditing and Audit Quality" and concluded that when auditors shifted to remote auditing following the COVID-19 outbreak, audit quality declined. The negative impact of remote auditing was more pronounced for non-local auditors or those with short tenure. However, several appropriate methods, including timely adjustments to audit procedures, greater reliance on risk assessment and data analysis, emphasis on the adequacy

and reliability of digital evidence, and leveraging information and communication technologies, could enhance the effectiveness of remote auditing. Insufficient client-specific knowledge can lead to lower audit quality in remote auditing, thereby increasing audit risk, which has resulted in a 5.87% increase in audit fees (Jin et al., 2021).

Ilouzi et al. (2020) in a study titled "Consequences of COVID-19: Potential Audit Challenges" concluded that when in-person fraud interviews are not feasible, video conferencing is preferable to audio conferencing because it allows auditors to observe body language (Zare Ebrahimabadi et al., 2020). Christis (2019) in a study titled "Why You and Your Audit Team Should Consider Remote Auditing in the Coming Year?" found that some audit processes can be fully conducted in the digital realm, but most still require on-site presence and time spent with the client for consultations. By maximizing remote capabilities for most audit tasks, on-site visits can be pre-planned and significantly reduced, often to just a few days or even a single day. This shorter duration encourages focused interactions, fostering mutual understanding between auditors and relevant company personnel, thereby strengthening their relationship (Lai, 2019).

Lawson et al. (2007) in a study titled "The Impact of Auditor Expertise on Audit Fees" found no significant relationship between auditor expertise and the level of audit fees received by audit firms. Their findings suggest that, as a policy, local firms may engage more extensively with specialized auditors compared to other firms (Bruce et al., 2007). Akbari et al. (2024) investigated the impact of auditor-controlled factors on the audit quality of the Iranian Court of Audit and ranked these factors. This applied study used a descriptive-survey method. The population consisted of auditors and audit managers of the Iranian Court of Audit, with a sample of 304 questionnaires distributed and collected in winter 2022 and spring 2023. To test the research hypotheses, a t-test was used, and the Friedman test was applied to rank the factors. The findings indicate that auditor-controlled factors, including ethics, motivation, professional competence, education level, experience, independence, knowledge of regulations, effort, non-audit services, appropriate presence at the audited entity, use of technology, work experience, industry expertise, and auditor judgment, affect audit quality in the Iranian Court of Audit. However, auditor stress was found to have no impact on audit quality. The results of this study can be used to inform decision-making by auditors and the Iranian Court of Audit to improve audit quality (Karmian et al., 2024).

Rokhshan et al. (2024) proposed a practical model for enhancing audit quality by focusing on improving procedures. The research method involved reviewing the literature and prior studies related to the topic and adopting a systematic grounded theory approach. After identifying deficiencies and weaknesses in current audit market procedures, a proposed model was designed to address these gaps. The model was developed with the participation of 16 audit experts through interviews conducted in 2022. To ensure transparency in audit fees, maintain audit market integrity, enhance audit quality, and uphold the rights of all stakeholders, strategic factors were classified into three categories: reformative, supervisory, and restrictive policies and procedures (Karmian et al., 2024). Zare Ebrahimabadi et al. (2020) in a study titled "Remote Auditing and the COVID-19 Pandemic" concluded that remote auditing provides an opportunity to improve the internal audit process. However, parts of the independent audit process may also be conducted remotely, provided auditors exercise greater caution. For instance, using cloud computing or virtual storage spaces allows audit team members to share and access workpapers

efficiently (Zare Ebrahimabadi et al., 2020). Ranjbar (2020) in a study titled "Internet and Automated Accounting and Auditing" found that in traditional accounting, if an accountant could not continue working with a client, the process would be disrupted, often requiring multiple accountants to complete past work. In contrast, internet-based and automated accounting shifts the focus from individual accountants to a team-based, expert-driven approach. If one accountant is unavailable, another can seamlessly continue the work without disruption, as this method prioritizes group collaboration over individual reliance. The use of online and remote methods in the 21st century accelerates business progress and can contribute to a country's economic growth (Zare Ebrahimabadi et al., 2020).

The unprecedented crisis caused by the COVID-19 pandemic, which began in January 2020, has significantly impacted how auditors operate. On one hand, auditors have addressed challenges during the pandemic by transitioning to remote auditing. On the other hand, the COVID-19 outbreak has accelerated the digital transformation of the auditing industry, expediting audit execution (Zare Ebrahimabadi et al., 2020). The COVID-19 pandemic in China coincided with the busy audit season for the 2019 financial year. On January 23, 2020, Wuhan initiated a lockdown, prohibiting nearly all intra-city and inter-city travel. In response to the outbreak and travel restrictions, auditors in China swiftly shifted from on-site to remote auditing, despite having no prior experience with remote auditing (Jin et al., 2021). Remote auditing offers significant advantages over traditional on-site methods in terms of time and total audit costs, making it highly attractive to resource-conscious company leaders and managers (Zare Ebrahimabadi et al., 2020). Auditors can work from an optimal location (e.g., their own offices), while operations at the client's factory or company continue as usual, eliminating the need for companies to provide suitable workspaces for visiting auditors. This is particularly relevant for Iranian companies, which often host multiple inspection or tax audit teams simultaneously (Lai, 2019). Reduced travel and the ability to work from a comfortable environment also contribute to a better work-life balance for auditors, potentially leading to higher-quality work (Karmian et al., 2024).

Empirically, challenges in remote auditing, such as less effective communication and difficulties in collecting evidence, can lead to lower audit quality. Traditionally, auditors rely on face-to-face interactions with client management and physical evidence collection through on-site visits. Unexpected changes in audit schedules and adjustments to procedures post-pandemic can disrupt the audit process and incur additional costs. However, as noted by experts, remote auditing may encourage auditors to adopt risk-based audit planning, which is more effective in mitigating audit risks (Jin et al., 2021). Auditors believe remote auditing offers several advantages, including the use of information technology, reduced audit costs (e.g., travel expenses), and time savings in evidence collection for specific audit procedures (e.g., through online channels), which can enhance audit effectiveness and efficiency, ultimately leading to better audit quality (Jin et al., 2021). Due to the implementation of remote auditing and potential improvements in audit quality, audit fees have increased by 5.87% (Jin et al., 2021). Remote auditing improves audit quality by reducing certain audit costs, alleviating stress due to early completion within budget and time constraints, and slowing the audit pace, which enhances accuracy and effectiveness.

Based on the theoretical framework, the following hypotheses have been formulated: **Hypothesis 1:** Audit firm size has a positive and significant effect on audit fees.

**Hypothesis 2:** Independent auditor industry expertise has a positive and significant effect on audit fees.

**Hypothesis 3:** Auditor tenure has a positive and significant effect on audit fees.

**Hypothesis 4:** Remote auditing has a positive and significant effect on the relationship between audit firm size and audit fees.

**Hypothesis 5:** Remote auditing has a positive and significant effect on the relationship between independent auditor industry expertise and audit fees.

**Hypothesis 6:** Remote auditing has a positive and significant effect on the relationship between auditor tenure and audit fees.

### 3. Research Methodology

The most challenging step in the research process is defining the problem under study. Initially, there exists doubt about a phenomenon, obstacle, or ambiguous situation that requires clarification. In any research, the type, nature, objectives, and scope of the study must first be determined to enable the use of valid rules and tools to uncover facts (Sarmad et al., 2002). This study is developmental in terms of its objectives and falls within the realm of descriptive-regression research. The required data will be collected from the actual information of companies listed on the Tehran Stock Exchange. To develop the theoretical framework of this study, a library study was conducted, followed by the collection of primary data related to companies directly from the Tehran Stock Exchange and their financial statements using the Tadbir Pardaz software. Therefore, the data collection method in this study is field-based. For data processing, Microsoft Excel and EViews (version 9) software were utilized.

The statistical tests in this study are divided into two sections: descriptive statistics and inferential statistics. In the descriptive statistics section, indicators such as the mean are used. In the inferential statistics section, multivariate linear regression analysis is employed to determine the presence or absence of a relationship between the independent and dependent variables. Additionally, Excel and EViews statistical software were used to test the hypotheses and analyze the data. The variables in this study are categorized into four groups to test the hypotheses: independent variables, dependent variable, moderating variable, and control variables.

**Dependent Variable: Audit Fees (AUDFEE)** In this study, the dependent variable is audit fees, calculated using the natural logarithm of audit fees (Nikbakht & Tanani, 2010; Rajabi & Mohammadikhoshoei, 2008; Bruce et al., 2007; Charles et al., 2010).

#### Independent Variables

1. **Audit Firm Size (ASIZE)** In this study, audit firm size is a dummy variable, assigned a value of 1 if the company is audited by the Audit Organization or Mofid Rahbar Audit Firm, and 0 otherwise.

2. **Auditor Industry Specialization (SPEC)** Auditor industry specialization is defined as the total assets of all clients of a specific audit firm in a particular industry divided by the total assets of clients in that industry. According to Selman, Shields, and Whittington (1999), industry-specialized auditors are those whose training, education, and experience are focused on a specific industry, spending the majority of their time auditing clients within that industry (Bandari et al., 2018). Industry-specialized auditors provide higher-quality audits, which enhance the quality of accounting information due to their greater knowledge and experience compared to non-specialized auditors (Balsam, Krishnan, & Yang, 2003). This variable is assigned a value of 1 if the auditor is specialized and 0 otherwise.
3. **Auditor Tenure (TENURE)** According to Myers et al. (2003), auditor tenure is defined as the number of consecutive years an auditor is responsible for auditing a company. Data on auditor tenure is collected from the companies' audit reports.

**Moderating Variable** In this study, the moderating variable is remote auditing. It is assigned a value of 1 if the audit is conducted remotely and 0 otherwise.

**Control Variables** Based on the study by Hay et al. (2007), the control variables are defined as follows:

- **Return on Assets (ROA):** Represents the company's return on assets in year  $t$ , calculated as the ratio of operating profit to total assets (Khani, 2012).
- **Financial Leverage:** The ratio of the company's liabilities to its assets (Hay et al., 2008).
- **Firm Size:** Defined as the natural logarithm of the market value of the company's equity (Hay et al., 2008).
- **Market-to-Book Ratio:** The market value of the company's equity divided by its book value (Hay et al., 2008).
- **Growth Rate:** Calculated as  $GRW = (EPS2 - EPS1)/EPS1$  (Fernando et al., 2008).

This study aims to investigate the impact of remote auditing on the relationship between audit quality and audit fees. To this end, the following two models are used to test the hypotheses:

**Model 1:**  $LNAUDFEE_{it} = \alpha_0 + \alpha_1 ASIZE_{it} + \alpha_2 SPEC_{it} + \alpha_3 TENURE_{it} + \alpha_4 ROA_{it} + \alpha_5 LEV_{it} + \alpha_6 LNSIZE_{it} + \alpha_7 MBit + \alpha_8 GRW_{it} + \epsilon_{it}$

**Model 2:**  $LNAUDFEE_{it} = \beta_0 + (\beta_1 TREAT_{it} \times ASIZE_{it}) + (\beta_2 TREAT_{it} \times SPEC_{it}) + (\beta_3 TREAT_{it} \times TENURE_{it}) + \beta_4 TREAT_{it} + \beta_5 ROA_{it} + \beta_6 LEV_{it} + \beta_7 LNSIZE_{it} + \beta_8 MBit + \beta_9 GRW_{it} + \epsilon_{it}$

In the above models:

- **LNAUDFEE:** Audit fees (natural logarithm of audit fees).
- **TREAT:** A dummy variable that equals 1 if the company is audited remotely and 0 otherwise.
- **ASIZE:** Audit firm size.
- **SPEC:** Auditor industry specialization.
- **TENURE:** Auditor tenure.

- **ROA**: Return on assets.
- **LEV**: Financial leverage.
- **LNSIZE**: Firm size (natural logarithm of the market value of equity).
- **MB**: Market-to-book ratio.
- **GRW**: Company growth rate.
- **i**: Denotes the specific company.
- **t**: Denotes the year under study.

The statistical population of this study consists of companies listed on the Tehran Stock Exchange and Iran's Over-the-Counter Market (FaraBourse). Additionally, the population was adjusted based on the following criteria:

**Table 1: Systematic Elimination Table**

Description	Number of Companies
Total number of companies listed on the Tehran Stock Exchange and FaraBourse	719
Companies not listed on the Tehran Stock Exchange as of March 19, 2020	-64
Companies that changed their fiscal year during the study period	-8
Companies in financial intermediation, investment, leasing, banking, or insurance sectors	-162
Companies whose fiscal year-end is not March 19 each year	-174
Companies not audited remotely at least once during the study period by the Audit Organization or audit firms	-248
Total sample size	63

According to Table 1, out of the 719 companies listed on the Tehran Stock Exchange and FaraBourse examined, only 63 companies met the specified criteria and were selected as the systematic and purposeful sample for this study.

#### 4. Findings

To address the formulated research problem and make decisions regarding the acceptance or rejection of the research hypotheses, various analytical methods were employed. Descriptive statistics, regression assumptions, and variable stationarity tests were conducted, followed by the use of the F-Limer and Hausman tests to determine the estimation method for the models. After estimating the models, the results were analyzed. This study utilized a panel data approach. To determine whether the data should be treated as pooled or panel, the Chow test was applied. The hypotheses for this test are as follows:

- **H0**: Pooled Model
- **H1**: Panel Model

**Table 2: Panel vs. Pooled Data Test Results**

Model	Test Statistic (F)	Significance Level	Result
Model 1	9.8186	0.000	Panel Data Method
Model 2	10.5668	0.000	Panel Data Method

According to Table 2, the significance level for both models is less than the 5% threshold. Therefore, the null hypothesis (H0) is rejected, indicating that the data for both models are panel data. Following the confirmation that the data are panel data, it is necessary to choose between fixed effects and random effects methods using the Hausman test.

**Table 3: Hausman Test Results**

Model	Test Statistic (Chi-Square)	Significance Level	Result
Model 1	39.4765	0.000	Fixed Effects Method
Model 2	9.1371	0.4247	Random Effects Method

Based on Table 3, the significance level for Model 1 is less than 5%, indicating that the fixed effects method should be used. For Model 2, the significance level is greater than 5%, indicating that the random effects method should be used. According to Table 4, the significance level for the audit firm size variable (ASIZE) is 0.6530, which is greater than the 5% threshold. Therefore, Hypothesis 1 is rejected, meaning audit firm size does not have a significant effect on audit fees. The significance level for the auditor specialization variable (SPEC) is 0.0001, which is less than 5%, so Hypothesis 2 is accepted, indicating that auditor specialization has a significant effect on audit fees. The significance level for the auditor tenure variable (TENURE) is 0.0003, which is less than 5%, so Hypothesis 3 is accepted, indicating that auditor tenure has a significant effect on audit fees. The significance level for the return on assets variable (ROA) is 0.000, which is less than 5%, indicating that ROA has a significant effect on audit fees. The significance level for the financial leverage variable (LEV) is 0.000, which is less than 5%, indicating that financial leverage has a significant effect on audit fees. The significance level for the firm size variable (LNSIZE) is 0.000, which is less than 5%, indicating that firm size has a significant effect on audit fees. The significance level for the market-to-book ratio variable (MB) is 0.000, which is less than 5%, indicating that the market-to-book ratio has a significant effect on audit fees. The significance level for the growth rate variable (GRW) is 0.2763, which is greater than 5%, indicating that the growth rate does not have a significant effect on audit fees. The coefficient of determination shows that 94% of the variation in audit fees is explained by the variables audit firm size, auditor specialization, and auditor tenure. The Durbin-Watson statistic of 2.17 indicates the absence of autocorrelation in the error terms.

**Table 4: Regression Analysis Results**

$$LNAUDFEE_{it} = \alpha_i + \beta_1 ASIZE_{it} + \beta_2 SPEC_{it} + \beta_3 TENURE_{it} + \beta_4 ROA_{it} + \beta_5 LEV_{it} + \beta_6 LNSIZE_{it} + \beta_7 MBit + \beta_8 GRW_{it} + \epsilon_{it}$$

**Table 4: Regression Analysis Results**

Variable	Regression Coefficient	Standard Error	t-Statistic	Significance Level
C	-6.1889	0.5452	-11.3501	0.000
ASIZE	-0.0435	0.0967	-0.4503	0.6530
SPEC	-0.2930	0.0749	-3.9081	0.0001
TENURE	-0.2025	0.0542	-3.7362	0.0003
ROA	0.0229	0.0048	4.7577	0.000

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LEV	3.0825	0.0909	33.8749	0.000
LNSIZE	0.8556	0.0232	36.8035	0.000
MB	-0.0176	0.0007	-23.3592	0.000
GRW	-0.0008	0.0007	-1.0918	0.2763
<b>Coefficient of Determination</b>	<b>0.9547</b>	<b>Significance of F-Statistic</b>	<b>0.000</b>	
<b>Adjusted Coefficient of Determination</b>	<b>0.9373</b>	<b>Durbin-Watson</b>	<b>2.1708</b>	

For Model 2, according to Table 5, the significance level for the interaction term between remote auditing and audit firm size (*TREATASIZE*) is 0.9204, which is greater than the 5% threshold. Therefore, Hypothesis 4 is rejected, meaning remote auditing does not have a significant effect on the relationship between audit firm size and audit fees. The significance level for the interaction term between remote auditing and auditor specialization (*TREATSPEC*) is 0.0000, which is less than 5%, so Hypothesis 5 is accepted, indicating that remote auditing has a significant effect on the relationship between auditor industry specialization and audit fees. The significance level for the interaction term between remote auditing and auditor tenure (*TREAT\*TENURE*) is 0.2470, which is greater than 5%, so Hypothesis 6 is rejected, indicating that remote auditing does not have a significant effect on the relationship between auditor tenure and audit fees. The significance level for the return on assets variable (ROA) is 0.8405, which is greater than 5%, indicating that ROA does not have a significant effect on audit fees. The significance level for the financial leverage variable (LEV) is 0.000, which is less than 5%, indicating that financial leverage has a significant effect on audit fees. The significance level for the firm size variable (LNSIZE) is 0.000, which is less than 5%, indicating that firm size has a significant effect on audit fees. The significance level for the market-to-book ratio variable (MB) is 0.1972, which is greater than 5%, indicating that the market-to-book ratio does not have a significant effect on audit fees. The significance level for the growth rate variable (GRW) is 0.9872, which is greater than 5%, indicating that the growth rate does not have a significant effect on audit fees. The coefficient of determination shows that 58% of the variation in audit fees is explained by the variables audit firm size, auditor specialization, and auditor tenure. The Durbin-Watson statistic of 1.5168 indicates the absence of autocorrelation in the error terms.

**Table 5: Regression Analysis Results for Model 2**

$$LNAUDFEE_{it} = \alpha_i + \beta_1(TREATASIZE)_{it} + \beta_2(TREATSPEC)_{it} + \beta_3(TREAT*TENURE)_{it} + \beta_4TREAT_{it} + \beta_5ROA_{it} + \beta_6LEV_{it} + \beta_7LNSIZE_{it} + \beta_8MB_{it} + \beta_9GRW_{it} + \epsilon_{it}$$

**Table 5: Regression Analysis Results**

Variable	Regression Coefficient	Standard Error	t-Statistic	Significance Level
C	1.1021	0.9866	1.1170	0.2651
TREAT*ASIZE	0.0058	0.0579	0.1000	0.9204
TREAT*SPEC	-0.2206	0.0518	-4.2595	0.0000
TREAT*TENURE	-0.3041	0.2620	-1.1604	0.2470
TREAT	-0.0519	0.2051	-0.2532	0.8003

ROA	-0.0010	0.0050	-0.2014	0.8405
LEV	1.6488	0.2232	7.3858	0.0000
LNSIZE	0.4071	0.0557	7.2996	0.0000
MB	-0.0092	0.0071	-1.2916	0.1977
GRW	-0.00001	0.0009	-0.0161	0.9872
<b>Coefficient of Determination</b>	<b>0.5993</b>	<b>Significance of F-Statistic</b>	<b>0.000</b>	
<b>Adjusted Coefficient of Determination</b>	<b>0.5844</b>	<b>Durbin-Watson</b>	<b>1.5168</b>	

## 5. Discussion and Conclusion

The unprecedented crisis caused by the COVID-19 pandemic, which began in January 2020, has significantly impacted the operations of independent auditors. On one hand, independent auditors have addressed challenges during the pandemic by transitioning to remote auditing. On the other hand, the COVID-19 outbreak has accelerated the digital transformation of the auditing industry, expediting audit execution. Remote auditing improves audit quality by reducing certain audit costs, alleviating stress due to early completion within budget and time constraints, and slowing the audit pace, which enhances accuracy and effectiveness.

This study investigated the impact of remote auditing on the relationship between audit quality and audit fees. Regarding Hypothesis 1, audit firm size does not have a significant effect on audit fees. For Hypothesis 2, auditor industry specialization has a significant effect on audit fees. For Hypothesis 3, auditor tenure has a significant effect on audit fees. However, for Hypothesis 4, remote auditing does not have a significant effect on the relationship between audit firm size and audit fees. For Hypothesis 5, remote auditing has a significant effect on the relationship between auditor industry specialization and audit fees. Finally, for Hypothesis 6, remote auditing does not have a significant effect on the relationship between auditor tenure and audit fees.

Remote auditing provides advantages such as access to new technologies and data analysis tools, which can enhance the accuracy and quality of audit processes. By utilizing modern methods such as big data analysis and analytical procedures, independent auditors can more effectively identify deficiencies and risks, ultimately leading to improved audit outcomes. With enhanced audit service quality, it is expected that audit fees will increase, as clients are more willing to pay higher fees for higher-quality services. By reducing transactional and operational costs through time and resource savings in remote auditing, independent auditors can lower their costs, which may impact overall audit fees. To fully leverage the benefits of remote auditing, investment in information technology infrastructure and training for independent auditors is crucial. These measures can help auditors better address challenges and enhance the quality of their services.

The findings of this study are consistent with the research by Akbari et al. (2024), Zare Ebrahimabadi et al. (2020), Christis (2014), and Davis et al. (1993), but they contrast with the findings of Ranjbar (2020), Lin et al. (2021), Ilouzi et al. (2020), and Lawson et al. (2007). The results of this study can be useful for managers, shareholders, creditors, investors, and all stakeholders, particularly in the context of Iran's economic environment. Therefore, it is recommended that audit firms invest in developing their employees' industry-specific expertise to enhance the value of their services and command higher audit fees. Audit firms can

differentiate themselves from competitors by focusing on specialized services. Industry-focused auditing, tailored specifically to the needs of particular industries, is also recommended. Based on the findings of this study, further research is suggested to explore other factors that may influence audit fees, such as audit complexity, firm risk, and industry characteristics. This would contribute to a more comprehensive understanding of the factors affecting audit fees. Additionally, field studies examining the impact of auditor specialization on audit fees, particularly in the context of remote auditing, are recommended.

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#### ETHICAL CONSIDERATION

Authenticity of the texts, honesty and fidelity has been observed.

#### CONFLICT OF INTEREST

Author/s confirmed no conflict of interest.