




The Impact of Board of Directors' Reforms on Audit Fees in Companies Listed on the Tehran Stock Exchange

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Abstract: The presence of a strong and efficient board of directors in companies strengthens the control environment. It can be expected that the auditor's assessment of audit risk and audit procedures will be reduced, leading to decreased audit costs. Therefore, the purpose of this study was to examine the impact of board of directors' reforms on audit fees. This study employed a descriptive, ex-post facto research method and is classified as applied research in terms of purpose. The statistical population included all active companies listed on the Tehran Stock Exchange during the years 2018 to 2022, totaling 603 companies. Using a systematic elimination method, a sample size of 180 companies was selected as a census sample. Data were collected from audited financial statements published on the Codal website, Rahavard Novin software, and the Securities and Exchange Organization website, and extracted using panel data methods. Data analysis was performed using regression tests with Excel and EViews software. The results of the study showed that board of directors' reforms do not affect audit fees, but company size has a significant impact on audit fees. Consequently, it can be concluded that there are other factors and variables influencing audit fees that require further investigation and research.

Keywords: Board of Directors, Auditing, Audit Fees

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1. Introduction

Today, companies turn to auditors during the assurance phase to satisfy stakeholders. According to agency theory, as agency conflicts increase, economic entities are more inclined to select independent auditing firms. Inadequate and insufficient disclosures in financial reports and lack of informational transparency in companies increase the challenges associated with the separation of ownership and management, prompting stakeholders to seek assurance services from independent auditors [1]. Auditors, in turn, charge fees for their services. Therefore, audit fees are amounts paid by companies to auditing firms for various audit services. Audit fees are determined based on the level of activity and audit characteristics, with determining factors often including company size, complexity, operational volume, and the type of auditor auditing the company's financial statements [2-5]. In Iran, audit fees for preparing financial statement audit reports consist of two components: the primary component includes the salaries and benefits of certified public accountants and their colleagues at various professional levels, while a minor portion compensates the auditor for legal responsibilities under commercial law [5, 6].

The board of directors is a vital unit in the organizational structure of any company, serving as the central link between shareholders and management. This role makes the board of directors a crucial player in corporate governance at the company level [7]. To supervise management and participate in decision-making, the board of directors requires diverse skills, including accounting, banking, and law, as well as specific attributes such as independence and size, which are discussed further [8]. According to an appropriate corporate governance system, the fundamental duty of board members is to oversee the company's management and assure shareholders that management operates in their best interests [9]. Non-executive board members also supervise the decisions of executive managers. As a result, the composition of the board of directors can influence the financial performance of companies. When independent, non-executive directors constitute the majority of the board, the board becomes more efficient [10].

Research by Kim et al. (2023) and Fauver et al. (2018) identifies creating independence within board members as a type of board reform. Their findings suggest that implementing or explaining board reforms enhances company value more than reforms based on regulatory requirements, with these effects being uniformly positive across civil law jurisdictions. Further research indicates that subsequent changes in board independence play a significant role in explaining the effectiveness of such reforms.

The World Bank (1999) proposed a framework for studying corporate governance, highlighting the interplay of internal and external forces that influence corporate behavior and activities. Internal forces describe relationships among key company actors, while external forces regulate the behavior of internal actors. Auditing is a clear example of an external force, serving as an independent profession and part of the shareholders' oversight system. Evidence suggests that corporate governance mechanisms, including board reforms aimed at fostering cooperation with non-executive directors and enhancing company efficiency, affect audit fees due to their impact on agency problems, company size, risk, and complexity [11].

According to the audit supply perspective, the composition of the board is an important proxy for management oversight. From the stakeholder theory and audit demand perspective, board reforms that strengthen its supervisory role require increased pressure to achieve audit objectives [6]. Studies examining factors influencing audit fees in developing economies recognize that these countries face distinct regulatory environments and audit service demands, which affect audit fees. However, the effect of corporate governance mechanisms, such as board reforms that enhance independence, on audit fees remains ambiguous in developing economies. This issue, especially when considering the potential substitution effects of board characteristics and non-compliance risks in corporate governance, underscores the need for country-specific investigations based on existing laws [12]. Fauver et al. (2018) revealed that board reforms increase firm value [13]. Given that the board of directors is a critical decision-making body with a significant influence on company performance, the importance of an effective board in implementing successful corporate governance is widely recognized. This effectiveness can lead to improved or diminished financial reporting quality. Therefore, the present study seeks to answer the question: Do board reforms affect audit fees in companies listed on the Tehran Stock Exchange?

2. Methodology

This study is correlational in nature and employs a quasi-experimental and ex-post facto research methodology within the domain of positive accounting research. It utilizes actual data and is classified as applied research since it can be used in practical decision-making processes. The statistical population includes all companies listed on

the Tehran Stock Exchange, and the temporal scope of the research spans from 2018 to 2022. The companies must meet the following criteria:

- Companies actively listed on the stock exchange during the 2018–2022 period.
- Companies listed on the stock exchange after 2018.
- Companies not categorized as holdings, investment firms, financial intermediaries, banks, or leasing companies.
- Companies whose fiscal year does not end on December 20, or those that changed their fiscal year during the study period.

After applying these criteria, 180 companies remained as the filtered population. Given the limited statistical population, a purposive sampling method was used, and the entire population was considered the sample. Consequently, observations over the 2018–2022 period amounted to 900 firm-years (5 years multiplied by 180 companies). The required data were collected directly from financial statements, the Tadbir Pardaz database, Rahavard Novin, and the Securities and Exchange Organization's website. Some calculations were performed using Excel software. For data analysis, preliminary tests, including regression, correlation, F-test, LM-ARCH test, and Hausman test, were conducted. The primary and final research model was analyzed using multivariate regression with EViews version 9 econometrics software.

Research Model

To test the research hypothesis, the following regression models were used:

Hypothesis Model:

$$ASFit = \alpha_0 + \alpha_1 \text{ multiplied by } BDR_{i,t} + \alpha_2 \text{ multiplied by } Controls_{i,t} + \epsilon_{i,t}$$

Dependent Variable:

The dependent variable in this study is audit fees, represented by ASF.

Based on the research by Hosseini and Borkhordari (2023), it is measured as follows:

The natural logarithm of the audit fees of companies.

Independent Variable:

The independent variable in this study is board reforms, represented by BDR.

Based on the research by Kim et al. (2023), it is measured as follows:

Changes in the type of board members (executive and non-executive) in company *i* compared to the previous year. If there is a change in the percentage of executive and non-executive board members compared to the prior year, it is assigned a value of one; otherwise, it is assigned a value of zero.

Control Variables:

The control variables in this study are company size, auditor size, and auditor opinion, measured as follows (adapted from Hosseini and Borkhordari, 2023)[6]:

- **SIZE (Company Size):**
- The natural logarithm of sales revenue.
- **SizeAuditor (Auditor Size):**
- If the auditor is the Audit Organization, it is assigned a value of one; otherwise, zero.
- **AOPN (Auditor Opinion):**
- If the auditor provides an unqualified opinion, it is assigned a value of one; otherwise, zero.

3. Findings

Initially, the descriptive statistics for all research variables are presented in Table 1.

Table 1. Descriptive Statistics for Research Variables

Variable	Mean	Median	Maximum	Minimum	Standard Deviation	Skewness	Kurtosis
Audit Fees	7.816	7.803	11.245	4.967	0.855	0.095	3.071
Board Reforms	0.312	0.000	1.000	0.000	0.464	0.807	1.652
Company Size	15.275	15.230	20.599	9.971	1.600	0.281	3.834
Auditor Size	0.139	0.000	1.000	0.000	0.346	2.082	5.336
Auditor Opinion	0.693	1.000	1.000	0.000	0.461	-0.840	1.706

As shown in Table 1, the mean value of audit fees is 7.816, with a standard deviation of 0.855. Additionally, the mean value of board reforms is 0.312, indicating that 31% of the boards underwent reforms. The mean company size is 15.275, with a median of 15.230, and the proximity of these values suggests homogeneity in the data. The descriptive statistics further indicate that the mean auditor size is 0.139, and the mean auditor opinion is 0.693.

Before estimating the model, it must be determined whether the model is panel data or pooled regression. To this end, the F-Limer (Chow) test is conducted using EViews software.

The F-Limer test examines the homogeneity of intercepts in the model. The results from EViews are shown below:

Table 2. Results of the Chow (F-Limer) Test for the Model

Test Type	F-Statistic	Probability	Result
F-Limer Test	9.184	0.000	The model is panel data (fixed or random).

Since the probability value for the F-Limer test is less than 0.05, the null hypothesis of pooled regression (no fixed or random effects) is rejected. Therefore, the appropriate model for estimation includes either fixed or random effects.

To determine whether fixed effects or random effects are more appropriate (identifying whether cross-sectional differences are fixed or random), the Hausman test is used. The results are as follows:

Table 3. Results of the Hausman Test for the Model

Test Type	Chi-Square Statistic	Probability	Result
Hausman Test	81.898	0.000	The model has fixed effects (not random).

Since the probability value for the Hausman test is less than 0.05, the null hypothesis that the model has random effects is rejected. Thus, the final conclusion is that the model exhibits fixed effects across cross-sections, and the regression model is estimated accordingly.

Hypothesis: Board reforms affect audit fees in companies listed on the Tehran Stock Exchange:

$$ASFit = \alpha_0 + \alpha_1 \text{ multiplied by } BDR_{i,t} + \alpha_2 \text{ multiplied by } Controls_{i,t} + \epsilon_{i,t}$$

After determining the regression method (fixed effects) in the previous section, the regression model was fitted as shown in Table 4:

Table 4. Fitted Regression Model for the Research Hypothesis

Model Variables	Coefficient	Standard Error	t-Statistic	Significance
Board Reforms	-0.011	0.036	-0.312	0.754
Company Size	0.585	0.020	27.863	0.000
Auditor Size	-0.206	0.205	-1.000	0.317
Auditor Opinion	-0.039	0.050	-0.784	0.432

Constant (C)	-1.060	0.323	-3.284	0.001
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Durbin-Watson: 2.147

Significance: 0.000

Prediction Accuracy: 83.2%

Based on the results in Table 4, the significance value for the impact of board reforms on audit fees is 0.754, which is greater than 0.05. Therefore, board reforms do not significantly affect audit fees, and the hypothesis is rejected.

The significance value for company size is 0.000, which is less than 0.05, indicating a significant impact on audit fees. Since the coefficient is positive (0.585), it can be concluded that company size positively affects audit fees.

Finally, the significance values for auditor size (0.317) and auditor opinion (0.432) are greater than 0.05, indicating that these variables do not significantly affect audit fees.

4. Discussion and Conclusion

Auditors use various factors to determine the pricing of their audit services, and extensive research has been conducted to identify and evaluate these factors. Current audit fee models are based on the implicit assumption that audit fees are determined by influencing factors at a specific point in time, without considering the impact of managerial factors on fee levels. Accordingly, this study examined the impact of board reforms on audit fees in companies listed on the Tehran Stock Exchange.

Based on the results, board reforms do not affect audit fees, as the estimated probability value exceeds the threshold probability level, leading to the rejection of the research hypothesis. This finding can be interpreted as follows: changes in the type of board members (executive and non-executive) compared to the previous year have no impact on audit fees, neither increasing nor decreasing them. Thus, audit fee determination is not influenced by board reforms. After board reforms, companies are less likely to reissue statements, and neither the accuracy of analysts' forecasts nor the frequency of management forecasts changes.

The results of control variable tests indicate that company size has a positive impact on audit fees, whereas auditor size and auditor opinion do not influence audit fees. In this regard, Navidi Abbaspour and Kazemloo (2022) found that board independence has a positive and significant effect on abnormal audit fees. Sayahati (2021) concluded that an increase in the overlap of the board's specialized committee reduces audit fees.

The findings of studies by Reisyian Parvari (2021), Hosseini and Borkhordari (2020), Khatiri and Zand (2015), Hazrati and Pahlevan (2014), Farooq et al. (2022), Cheezy and Nham (2018), Kumar (2017), and Ghayoner et al. (2016) indicate a significant relationship between board independence and audit service fees. Kim et al. (2023) found that board reforms have a positive impact on audit fees.

Based on the findings, it is recommended that major shareholders and clients avoid implementing board reforms to reduce audit fees. Furthermore, for more comprehensive utilization of the study's results and to clarify the impact of board reforms on audit fees in the future, the following considerations are suggested:

1. Incorporate other company and audit firm characteristics, such as audit quality and financial leverage, as control variables in the regression model.
2. Investigate the impact of board reforms on audit fees in family-owned companies.
3. Examine the impact of changes in CEOs and CFOs on audit costs in companies listed on the Tehran Stock Exchange.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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