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Voluntary Disclosure–Profitability Nexus: The Moderating Effect of Audit Quality

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ABSTRACT

The study aims to explore the moderating effect of audit quality on the association between voluntary disclosure and profitability. The study sample consists of 34 industrial companies listed on the Amman Stock Exchange (ASE) during the period 2017–2021. To achieve the objectives of the study, the content analysis method has been used to measure the impact of voluntary disclosure by reviewing 32 items of voluntary disclosure. Several statistical methods that fit the objectives of the study are used as well. The results of the study show that there is a positive association between the voluntary disclosure level and the profitability of the company, and that the moderating variable of audit quality negatively affects the relationship between voluntary disclosure and the profitability of the company. Considering the aforesaid results, the study recommends making voluntary disclosure by the industrial companies listed on the ASE due to its role in enhancing the profitability of companies.

Keywords: Disclosure ▪ Voluntary disclosure ▪ Profitability ▪ Audit quality

1. INTRODUCTION

Accounting disclosure is considered a means of furnishing users with financial statements and financial, non-financial, quantitative, and qualitative information usually governed by laws, instructions, and legislation in the country; this is called compulsory disclosure [1]. However, any additional information beyond that is called "voluntary disclosure."

The growing interest in voluntary disclosure is due to the increasing complexity and diversity of financial operations, the diversity of cultures of users of financial statements, and the insufficiency of compulsory disclosure at times for decision-makers [2, 3, 4]. The continuous development of any company in all its fields, including disclosure, has an impact on the company's current and future conditions. Companies must develop their disclosures to raise the degree of transparency, give a clearer, more comprehensive, and easier picture of all the company's conditions to help decision-makers and users of financial statements, and raise investors' confidence and reassurance about their investments so that the company can achieve greater profitability [5].

The increasing challenges and crises that have hit all companies since the last decade until the present time, starting with the financial crisis through the financial recession and its consequences, such as the failure and collapse of many companies, have created a state of doubt and mistrust among existing and new investors, suppliers, and users of financial statements. It is essential to increase interest in obtaining the confidence of this category by increasing additional information and expanding voluntary disclosure to rebuild trust.

Undoubtedly, giving a full and transparent picture of the company's historical, current, and future reality by making use of information utilization and presenting it to the public through voluntary disclosure approved by an auditing company whose work is characterized by quality has several benefits, such as restoring bridges of confidence and reassurance among stakeholders, its reflection on the market value of shares, and profitability to reach the principle of achieving continuity [6].

It is also difficult for companies, under the current circumstances, to increase and achieve profitability at a low level without voluntary disclosure. Accordingly, the problem of the study lies in exploring the impact of voluntary disclosure on profitability and answering the following study questions:

1. Does voluntary disclosure affect the profitability of firms listed on the ASE?
2. Does external audit quality affect the relationship between voluntary disclosure and the profitability of firms listed on the ASE?

The importance of this paper lies in the originality of the topic and the lack of studies that have focused on it, as the moderating effect of audit quality on the association between voluntary disclosure and profitability is of great interest to many financial organizations and researchers at the global and Jordanian levels. This study contributes to highlighting the role of voluntary disclosure in enhancing the quality of financial reports by increasing transparency, raising the percentage of objectivity, and increasing the accuracy and clarity of information, which leads to attracting additional investments and enhancing the confidence of external financing sources, ultimately affecting the profitability of the company.

This study is also important as it sheds light on the impact of external audit quality, represented by the size of the audit office, in clarifying the association between voluntary disclosure and the company's profitability. On the other hand, due to the scarcity of studies on the impact of voluntary disclosure on profitability in particular, enhanced by the moderating variable of external audit quality, the study may be of great value and benefit to competent authorities such as current and new investors, suppliers, and legislators. It can help them make decisions and bylaws to adopt many voluntary-disclosure elements that are considered mandatory in light of their clear and tangible impact on the accuracy, transparency, and clarity of the company's financial position.

2. LITERATURE REVIEW

This section gives insight into the literature review and previous studies related to the effect of voluntary disclosure on profitability. Concerning voluntary disclosure, Elfeky [3] defines it as a free choice for the company's management to provide financial and non-financial information in the financial statements, where the company determines the suitability of this information for decision-makers to disclose.

In the same context, Al-Homaidi et al. [7] consider voluntary disclosure as the self-motivation to achieve economic benefits through the important role it plays in protecting the interests of users of the statements as a result of the disclosure of financial and non-financial information that is not obligated by a legal text. As put by Alzoubi [8], it is to provide users of financial statements with all additional information, in addition to the information required by the presentation and disclosure standard, to offer the required services to all parties interested in financial statements.

In other words, voluntary disclosure includes providing additional financial and non-financial information that is not legally binding and is outside legal and legislative requirements for users of financial statements and beneficiaries of all categories, to help them make decisions to achieve future economic benefits. The importance of voluntary disclosure lies in the diversity and multiplicity of parties benefiting from this information and its impact on the decisions made by these parties [9]. Voluntary disclosure also derives its importance from the benefits it provides to the company on the one hand and the beneficiaries of the financial statements on the other [10]. The importance of voluntary disclosure, according to Musyoka [11] and Albawwat et al. [12], is to provide appropriate information to all parties that use data and accounting statements in a way that facilitates and allows these groups to predict some of the company's main variables, such as the facility's ability to meet short- and long-term obligations and the company's revenue strength.

Several previous studies [4, 11, 12, 13] emphasize that the importance of voluntary disclosure lies in providing external parties with additional information about the work of companies, which gives an impression to the beneficiaries, describes the nature of the company's business environment, and reduces uncertainty about its future and performance. It also helps in making investment decisions, which leads to a decrease in the cost of capital.

Regarding the effect of voluntary disclosure on profitability, its effect is clear in many aspects, such as increasing the confidence of users of financial statements and supporting their decisions, and giving more clarity and transparency about the company's financial position. This leads to gaining investors' confidence, encouraging them to increase their investment, and attracting new investors [1, 14]. This also applies to suppliers and lenders gaining trust, and to employees and customers feeling confident about the company's future and their continued connection with it.

Other related studies [4, 15, 16] show the impact of expanding disclosure on the growth and revitalization of financial markets, reducing the cost of capital, reducing the phenomenon of information asymmetry, and increasing development ratios in the national economy. All these factors have a noticeable impact on companies' profitability indicators. Aikaeli and Rashid [17] show that voluntary disclosure is positively correlated with corporate profitability. The results of Milad and Bicer [18] also indicate a positive association between profitability and voluntary disclosure. Rody et al. [4] similarly find a positive relationship between profitability and the degree of voluntary disclosure.

Makhlouf et al. [1] show that the element most affected by voluntary disclosure is earnings per share, while Sartawi et al. [19] indicate a positive significant association between a firm's profitability and the extent of its general voluntary disclosure. Naran [20] indicates that there is a strong and positive relationship between voluntary disclosure and the company's financial position and performance. Rody et al. [4] also find a positive relationship between financial performance and the degree of voluntary disclosure in the banking sector.

On the other hand, Al-Homaidi et al. [7] show that the relationship between profitability and the level of voluntary disclosure is negative. Rody et al. [4] report that higher profitability is associated with a lower level of voluntary disclosure, and thus a negative relationship. In the same area, Naran [20] shows that public and strategic voluntary disclosures negatively impact profitability and a company's financial performance. Accordingly, it is hypothesized that voluntary disclosure positively affects the profitability of companies.

H1: Voluntary disclosure positively affects the profitability of companies listed on the ASE.

On the subject of audit quality as a moderating variable in the relationship between voluntary disclosure and profitability, audit quality and objectivity are the foundation for the credibility and validity of financial reporting, which is extremely important for markets that function adequately. Conducting independent audits would also help to strengthen and activate a strong mechanism for internal control, risk management, and corporate-governance rules, and contribute to increasing profitability [21, 22, 23].

Financial statements and reports are the main sources of information in financial markets, and the party responsible for disclosing this information is the administration. If the administration discloses misleading information to achieve special benefits, this will result in the so-called information-asymmetry problem, which leads to an increase in the level of information risk because investors are unable to accurately estimate their expected returns from these investments [22, 24]. Hence, audit quality is important to ensure the credibility and validity of this information. High audit quality will improve the reliability and credibility perceived by users of the data by evaluating the accuracy and reliability of the information provided in these reports [25, 26].

Previous studies such as Matoke and Omwenga [27] show a positive impact of audit quality on corporate profitability. The impact of audit quality on corporate profitability is found to be positive and important, and the size and independence of the audit firm are also positive and important. Hassan and Farouk [28] show that the size of the audit office has significant effects on the profitability of companies. Ado et al. [21] find a significant positive relationship between the size of the auditor and return on assets; this positive number means that there is an increase in the percentage of companies audited by Big Four companies [29].

Studies addressing the use of external audit quality as a moderating variable in the relationship of disclosure with profitability are very few. Some related studies, such as Dewi and Monalisa [30], show a relationship between the disclosure of social responsibility and return on assets, and that the presence of audit quality as a moderating variable does not affect the relationship between them. Putri and Suputra [25] show a positive relationship between disclosure represented by 33 optional items and earnings management, and that the moderating variable of audit quality has no effect on the relationship between them; its effect is limited to the independent variable, disclosure. Accordingly, it is hypothesized that audit quality affects the relationship between voluntary disclosure and the profitability of companies.

H2: Audit quality affects the relationship between voluntary disclosure and the profitability of companies listed on the ASE.

3. METHODOLOGY OF THE STUDY

3.1 Study Sample and Population

The study population involves all industrial firms on the Amman Stock Exchange that meet a set of criteria and conditions, including the availability of the necessary financial data, disclosure of information related to the study variables, being listed on the ASE in all years of the study, and continuing to practice industrial activity in all years of the study (2017–2021). Accordingly, the study sample is limited to 34 industrial companies whose data were collected through the published and announced financial statements on the official ASE website, the Securities Commission, and the Securities Depository Center over the five years from 2017 to 2021.

3.2 Research Approach

The nature of the study necessitates the use of the content-analysis method for the financial statements of industrial companies listed on the ASE. The study also adopts the time-series cross-section approach (TSCSA) and panel data for industrial companies listed on the ASE when analyzing the financial data, as these series study the relationship between more than one variable for more than one year. The results are attained in two models.

Model (1) examines the relationship between voluntary disclosure and the profitability of industrial companies listed on the ASE:

$$PR_{it} = \alpha + \beta_1 VD_{it} + \beta_2 FS_{it} + \beta_3 LV_{it}. \tag{1}$$

Model (2) examines the impact of external audit quality on the relationship between voluntary disclosure and the profitability of industrial companies listed on the ASE:

$$\begin{aligned} PR_{it} = \alpha + \beta_1 VD_{it} + \beta_2 AQ_{it} + \beta_3 (VD \times AQ)_{it} \\ + \beta_4 FS_{it} + \beta_5 LV_{it}. \end{aligned} \tag{2}$$

3.3 Variables Measurement

To calculate the variables adopted in the research paper, the study uses the financial reports of industrial companies published on the official websites of the ASE and the Securities Depository Center, as shown in Table 1.

The level of voluntary disclosure is measured by giving the number 1 when an item is disclosed and the number 0 if it is not disclosed. The elements of voluntary disclosure are identified within six main groups: general information about the company; information about shareholders and members of the board of directors; information about social and environmental responsibility disclosure; information about financial-ratio disclosure; information about employees; and information about the review and audit system. There are 32 sub-disclosure elements within these main groups.

4. RESULTS

4.1 Descriptive Statistics

Table 2 indicates that the arithmetic mean of the dependent variable, profitability, measured by return on assets (ROA), is 0.015, which is a relatively low value. In other words, the closer this ratio is to 1, the more profitable the company

Table 1. Explanation of the Study Variables Measurement

Variable	Symbol	Measurement Method	Reference
Independent Variable: Voluntary Disclosure			
Voluntary Disclosure	VD	The number 1 is given if the items to be measured are disclosed, and the number 0 is given if they are not disclosed.	[1]
Dependent Variable: Profitability			
Profitability	PR	Measured based on return on assets.	[31]
Moderating Variable			
Audit Quality	AQ	Measured by adopting 1 or 0 according to whether the approved auditing company is one of the Big Four.	[32]
Control Variables			
Firm Size	FS	Natural logarithm of total assets.	[33]
Leverage	LV	Ratio of total debt to total assets.	[34]

will be from the total invested capital (total assets), while the standard deviation is approximately 0.010. The highest value of return on assets during the study period is 0.360, while the lowest value is −0.36. This means that the industrial companies listed on the ASE during 2017–2021 have a clear discrepancy in profitability values.

Table 2. Results of the Descriptive Statistics

Variable	Mean	Minimum	Maximum	SD
ROA	0.015	−0.36	0.36	0.095
VD	0.739	0.469	0.969	0.096
Size	101,126	965	1,174,183	247.733
Lev	0.342	0.032	0.956	0.204
AQ	0.394	0.000	1.000	0.49

The results of the descriptive analysis of the independent variable show that the arithmetic mean of voluntary disclosure for industrial companies is about 0.74, which is a good ratio. The closer the value is to 1, the more complete the voluntary disclosure of all items included in the study. These include public information about the company, information about shareholders and members of the board of directors, information about social and environmental responsibility disclosure, information about financial-ratio disclosure, information about employees, and information about the review and audit system. The extent of disclosure ranges from 0.47 to 0.97.

The results indicate that the industrial companies listed on the ASE between 2017 and 2021 paid attention to disclosing information related to the company's employees, with an arithmetic mean of 96%. Public disclosure about the company is ranked second at approximately 93%, while the lowest disclosure percentage is approximately 47% and relates to information on the review and audit system. The standard deviation is 0.096, indicating that there is no problem of data heterogeneity.

Relating to the moderating variable of audit quality—whether the accredited auditing company is one of the Big Four—the numbers 1 and 0 are adopted. The number 1 indicates that the auditor is one of the Big Four companies: Deloitte, Ernst & Young (EY), PricewaterhouseCoopers (PwC), and Klynveld Peat Marwick Goerdeler (KPMG). Table 1 shows that the arithmetic mean of audit quality in Jordanian industrial companies is approximately 39%. This indicates that the study sample is distributed among auditors from the four major companies and other companies, with an increase in the

Table 3. Results of the Descriptive Analysis of the Items of Voluntary Disclosure

Items of Voluntary Disclosure	AM	Rank
General information about the company	93%	2
Information about shareholders and members of the board of directors	81%	3
Information about social and environmental responsibility disclosure	78%	4
Information about financial ratios	50%	5
Information about employees	96%	1
Information about the review and audit system	48%	6
Overall mean	**74%**	

number of industrial companies audited by local companies and no significant variation in the study sample. The standard deviation of the study observations is 0.49. The lowest value is zero, indicating that the industrial company is audited by firms that are not among the Big Four. During the analysis, it was found that 13 industrial companies in 2021 had their accounts audited by the four largest companies, while the remaining 21 companies had their accounts audited by local companies.

4.2 Correlation Analysis

This study tests the relationship between the variables and the extent of their correlation with one another by applying the Pearson correlation test. The correlation coefficients according to the Pearson scale range between 0 and ±1, where zero indicates the absence of a relationship between the variables, while ±1 indicates a complete direct or inverse relationship. The Pearson correlation matrix is an initial indicator used to verify multicollinearity problems when the relationship among independent variables exceeds ±80%.

Table 4 indicates that there are no correlation problems, as the highest correlation value, between audit quality and firm size, is 34%, indicating a weak relationship between these variables. The lowest value is the correlation between company profitability, represented by return on assets, and voluntary disclosure, at approximately −3%, which is a very weak inverse relationship.

Table 4. Results of the Pearson Correlation Test

No.	Variable	(1)	(2)	(3)	(4)	(5)
(1)	ROA	1.000				
(2)	VD	−0.026	1.000			
(3)	Size Log	0.208	0.187	1.000		
(4)	Lev	−0.155	0.119	−0.217	1.000	
(5)	AQ	0.218	0.209	0.335	−0.108	1.000

4.3 Diagnostic Tests

4.3.1 Instability Tests of Variance for Data and the Autocorrelation Test

Panel data may suffer from variance-instability problems, or heteroscedasticity, because of the time-series cross-section dimension within the study sample. This type of problem can be solved, if it exists, using a special standard-error correction model named Driscoll–Kraay. Wooldridge's test is one of the modern and suitable tests for testing the presence of an autocorrelation problem in the study data. The results presented in Table 5 show that the F-value of the study models is significant, with a probability value of 0.000, indicating the existence of heterogeneity and autocorrelation problems in all estimated models and necessitating statistical treatment. To eliminate these problems, Driscoll–Kraay standard errors are used to identify the error-correction model.

Table 5. Instability Tests of Variance for Data

Model	Modified Wald Test	Wooldridge Test F-value	P-value
First model	1.9e+08	5415.781	0.000
Second model with the moderating variable	3.8e+08	32246.215	0.000

4.4 Appropriate Study Model Selection

To select the appropriate model for the study, a set of tests is conducted: the Breusch–Pagan Lagrange Multiplier (LM) test to select between the pooled least-squares model (PLS) and the random-effects model (RM), and then the Hausman test to select between the fixed-effects model (FM) and the random-effects model (RM).

4.5 Breusch–Pagan Lagrange Multiplier Test

This test compares the random-effects model and the pooled least-squares regression model to select the appropriate model, as its use leads to the detection of random effects in the regression model for the study. Table 6 shows that the chi-square value of the Breusch–Pagan LM test for all models is significant, with a probability value of 0.000, which is less than the significance level of 0.05. Thus, the appropriate model is the random-effects model.

Table 6. Results of the Breusch–Pagan Lagrange Multiplier Test

Model	LM χ^2	P-value	Result
First model	100.87	0.000	Random effect
Second model with the moderating variable	100.83	0.000	Random effect

4.6 Hausman Test

This test compares the fixed-effects model and random-effects model to select the appropriate model. Table 7 indicates that the chi-square statistics for the estimated study models range between 14.168 and 21.204. All have significant values, with probability values below 0.05, indicating the existence of a relationship between the explanatory variables and random error in the study models. Therefore, the most appropriate model for this study according to the Hausman test is the fixed-effects model.

Table 7. Results of the Hausman Test

Model	Hausman χ^2	P-value	Result
First model	14.168	0.003	Random effect
Second model with the moderating variable	21.204	0.001	Random effect

4.7 Multiple Linear Regression Analysis and Hypothesis Testing

This section presents the statistical results from multiple linear regression tests using panel-data analysis for the proposed study models, based on the previously mentioned diagnostic tests: the Hausman test and the Breusch–Pagan Lagrange Multiplier test. The problems of heterogeneity and autocorrelation are addressed using the Driscoll–Kraay standard-errors method.

The results show the direct effects of voluntary disclosure on the profitability of Jordanian industrial companies listed on the ASE. They also test the model that includes audit quality as a moderating variable.

4.8 Results of the Direct Relationship between Voluntary Disclosure and Company Profitability

This section offers insight into the statistical outcomes related to measuring the relationship of voluntary disclosure with return on assets as a measure of the profitability of Jordanian firms listed on the ASE, thereby testing the first hypothesis, as presented in Table 8. Looking at the diagnostic tests of the estimated model, the F statistic is 209.85 and the probability value is 0.000, which is less than the significance level of 0.01. This indicates that the model is acceptable and statistically appropriate. The coefficient of determination, R^2, is 0.162; voluntary disclosure in the presence of firm size and financial leverage thus explains approximately 16% of the changes in the dependent variable, firm profitability. This percentage is acceptable in this type of analysis.

From a statistical standpoint, the t statistic corresponding to the estimated coefficient is 10.10, with a probability value of 0.001, which is less than the significance level of 0.01. This indicates acceptance of the first hypothesis, which states that voluntary disclosure positively affects the profitability of companies listed on the ASE. The estimated coefficient for voluntary disclosure (VD), 0.199, indicates that voluntary disclosure positively affects company profitability among Jordanian industrial companies.

In other words, the greater the voluntary disclosure of industrial companies, the higher the ratio of return on company assets, which positively affects the profitability of the Jordanian industrial companies in the study sample. This result agrees with several studies [3, 17, 18, 20] showing that voluntary disclosure has a positive impact. It is also in line with agency theory, where the expansion of disclosure and increase in transparency contribute to improving relationships, converging interests that reduce agency costs, and developing disclosure that improves information quality, which leads to reducing information asymmetry between managers and stakeholders.

Furthermore, this result is consistent with signaling theory, as companies issuing voluntary bulletins and reports on the results of their work give users of financial statements an indicator of the strength of company performance and success. Supporters of this theory see that the value of the company increases in the eyes of users of the statements when it has greater voluntary disclosure. This result also agrees with legitimacy theory because it is based on the view of the community, and the administration is obliged to disclose the information it has as an important source of legitimacy through compulsory disclosure under laws and regulations, and through voluntary disclosure, to create a good impression for the community.

Regarding the first control variable, company size (Size Log), measured by the natural logarithm of company assets, the results indicate that company size positively affects company profitability, consistent with previous studies. As for the second control variable, financial leverage (Lev), the results indicate that increasing the volume of company debt leads to a decrease in realized return and company profitability. This may be because borrowing costs resulting from debt are high, leading to a decrease in net profits.

Table 8. First Model of Voluntary Disclosure and Firm Profitability

Variable	Coefficient	t statistic	P-value
VD	0.199	10.090	0.001
Size Log	0.155	7.710	0.002
Lev	−0.079	−5.180	0.007
Constant	1.352	9.340	0.001
R^2	0.1620		
F value	209.85 ($P = 0.000$)		

4.9 Moderating Effect of Audit Quality on the Relationship between Voluntary Disclosure and Firm Profitability

This section highlights the moderating role of audit quality in explaining the relationship between voluntary disclosure and company profitability, measured by return on assets for Jordanian industrial companies listed on the ASE, and thereby tests the second hypothesis. Concerning the statistical suitability of the model, the F statistic is 5.433 with a probability value of 0.000, which is less than the significance level of 0.01, indicating the suitability of the model from a statistical point of view. The coefficient of determination, R^2, is 0.1720, which is higher than the value of 0.1621 in the direct model. The independent variables together with the moderating variable of audit quality thus explain 17.20% of the changes in the dependent variable, company profitability.

The statistical results presented in Table 9 show that the estimated coefficient for the variable combining audit quality and voluntary disclosure (AQ×VD) is −0.148, a negative and statistically significant value. The absolute t statistic is 4.46 and the probability value is 0.001, which is less than the significance level of 0.01. This leads to acceptance of the hypothesis that audit quality affects the relationship between voluntary disclosure and the profitability of companies listed on the ASE. The findings indicate statistically significant effects of the variable combining audit quality and the voluntary-disclosure index, but this effect is negative.

This result agrees with studies [25, 30] showing no effect of external audit quality as a moderating variable in the relationship between voluntary disclosure and corporate profitability. The negative sign of the estimated coefficient contrasts with the direction of the effect caused by voluntary disclosure on firm profitability, previously shown in Table 8. The results can be understood based on the fact that companies audited by the Big Four audit firms do not attempt to disclose all the items considered: general information about the company; information about shareholders and members of the board of directors; information about social and environmental responsibility disclosure; information about financial ratios; information about employees; and information about the review and audit system. These companies focus on discovering financial errors and applying accounting standards correctly, which leads to inattention to the voluntary-disclosure aspect.

Table 9. Moderating Role of External Audit Quality

Variable	Coefficient	t statistic	P-value
VD	−0.145	−1.80	0.081
AQ	0.085	0.82	0.415
VD×AQ	−0.148	−4.46	0.001
Lev	−0.079	−3.48	0.001
Size Log	0.146	2.60	0.010
Constant	1.257	2.90	0.004
R^2	0.1720		
F value	5.433 ($P = 0.000$)		

5. CONCLUSION

This article aims to identify the impact of voluntary disclosure on firm profitability, along with the impact of external audit quality on the association between voluntary disclosure and the profitability of firms listed on the ASE for 2017–2021. The results confirm that voluntary disclosure positively affects company profitability. Concerning the moderating variable, external audit quality, the results confirm that audit quality negatively affects the association between voluntary disclosure and firm profitability.

These results highlight the importance of voluntary disclosure, which increases the confidence of users of financial statements in the data and information issued by the company by increasing management's interest in good disclosure to improve performance and thus increase profitability. Considering the previous results and related discussion, the study presents several recommendations for regulators, companies, and future studies. These include increasing interest in voluntary disclosure and its content so that the focus is on information that will improve companies' performance and inform stakeholders with useful information that gives a correct indication of the company's financial position, alleviates the agency problem, and limits the phenomenon of information asymmetry.

The study also recommends that future researchers expand the study of voluntary disclosure by examining other indicators to give a clearer picture of this relationship. Other profitability variables should be studied, such as variables measuring predictive future performance, including growth and Tobin's Q. Researchers should also conduct additional studies dealing with the role of audit quality and its relationship to voluntary disclosure. The current study considers one audit-quality indicator, the size of the audit company; audit duration or audit fees can be added as a second indicator of audit quality to provide more comprehensive results.

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