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## Article

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*Suggested Citation:* Nguyen, Quang Minh; Nguyen, Chien V. (2024) : Corporate governance, audit quality and firm performance – an empirical evidence, Cogent Economics & Finance, ISSN 2332-2039, Taylor & Francis, Abingdon, Vol. 12, Iss. 1, pp. 1-16,  
<https://doi.org/10.1080/23322039.2024.2334128>

This Version is available at:

<https://hdl.handle.net/10419/321468>

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To cite this article: Quang Minh Nguyen & Chien V. Nguyen (2024) Corporate governance, audit quality and firm performance – an empirical evidence, Cogent Economics & Finance, 12:1, 2334128, DOI: [10.1080/23322039.2024.2334128](https://doi.org/10.1080/23322039.2024.2334128)

To link to this article: <https://doi.org/10.1080/23322039.2024.2334128>



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Published online: 30 Mar 2024.



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# Corporate governance, audit quality and firm performance – an empirical evidence

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## ABSTRACT

The purpose of the study is to assess the impact of governance capacity and audit quality on the financial performance of enterprises listed on the Vietnam Stock Exchange in the period 2012 to 2021, including 40 selected enterprises, this is a complete stage of development of Vietnam's stock market including the addition of bond market and derivatives market. Data is collected annually from audited financial statements, annual reports, prospectus. The paper deploys the panel data regression methods such as Pooled OLS, FEM and REM, and the feasible generalized least squares (FGLS); and evaluates the possibility of interdependence between enterprises as well as test the possibility of endogenous phenomena in the research model. Research results confirm that board size has a negative impact on the financial performance of the business, in contrast, the participation of women on the board and the selection of men as CEO have a positive effect on corporate profits. Research results also suggest that enhancement of audit quality can improve corporate performance. In addition, businesses should seek funding by equity, or in the case of debt, businesses should use short-term debt to help them its increase financial efficiency. Finally, the study confirms that large enterprises or enterprises investing in fixed assets have the ability to generate higher profits. Thereby creating a basis for enterprises listed on the Vietnam Stock Exchange to improve operational efficiency.

## IMPACT STATEMENT

The effective functioning of the board of directors can help the business become more efficient, and this result is better if the business has the ability to choose a reputable auditor. In the case of Vietnam, businesses have an increasingly important position in contributing to the country's socio-economic development, so evaluating the effectiveness of the board of directors becomes necessary. Research results demonstrated that board size has a negative impact on the financial performance, in contrast, the participation of women on the board and the selection of men as CEO have a positive effect on corporate profits. In addition, enhancement of audit quality can improve corporate performance. A firm should seek funding by equity, or in the case of debt, businesses should use short-term debt to increase its financial efficiency. Further, large enterprises or enterprises investing in fixed assets have the ability to generate higher profits.

## ARTICLE HISTORY

Received 31 August 2023  
Revised 12 March 2024  
Accepted 19 March 2024

## KEYWORDS

Audit quality; board of directors; corporate governance; endogeneity; firm performance

## REVIEWING EDITOR



David McMillan, University of Stirling, UK

## SUBJECTS

Economics; finance; business, management and accounting

## 1. Introduction

Businesses play an important role in contributing to jobs, budgets, and the output of each country. When businesses grow, they contribute more and more to the socio-economic development. Therefore, governments around the world are constantly improving the business environment, perfecting legal institutions to help businesses develop in a favorable business environment in order to achieve high profits (Nguyen & Nguyen, 2024).

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This article has been corrected with minor changes. These changes do not impact the academic content of the article.

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In a volatile business environment, it can increase risks for businesses and thereby affect corporate profits. Therefore, each enterprise is always looking for ways to improve its management capacity in order to help its development orientations be planned and implemented correctly. According to the requirements of the Law on Enterprises of Vietnam, enterprises usually have from 3 to 11 members of the board of directors, and this board implements the strategic direction of the business in the short and long term. Furthermore, the board of directors can include women to create its diversity and thereby improve the board's performance. In addition, leading enterprises that want to reach out to the international market are often interested in choosing high-quality auditing firms, typically the BIG4 group of audit firms such as KPMG, Deloitte, PWC and E&Y that have operated in Vietnam. This selection has helped domestic enterprises to access the common standards of international financial reporting, and is considered as a step to create momentum for businesses to develop on a global scale.

Previous studies have all suggested that there is a relationship between corporate governance and corporate financial performance, which can be seen as a positive relationship as in the study of Xu et al. (2022), Siddiqui et al. (2023), Mansour et al. (2022) especially when businesses move towards more responsible production, and harmonize the interests of owners, shareholders and investors. However, some businesses are not always fully aware of corporate governance, Sheikh & Alom (2021) argued that most managers are not fully aware of corporate governance in Bangladesh, sometimes even a lack of transparency in the activities of the Board of Directors, so corporate governance may not have had a positive impact on the operation of the business.

Moreover, improving corporate governance is also associated with improving the quality of financial statements and especially the quality of audits. A business with improved audit quality can lead to higher quality of financial reporting and thus peace of mind and confidence for business owners, shareholders, and investors, and it is therefore to maximize its corporate value (Al-Ahdal & Hashim, 2022; Khader, 2023). Improving audit quality helps to reduce information asymmetries and thereby reduce agency costs in the enterprise, making the business more efficient (Alsmady, 2022). However, Ciftci et al. (2019) argued that increasing cross-ownership in the corporate structure can have an impact on accounting activities, and somewhere it can be seen that the audit activity in the enterprise has a very limited impact on the performance of the company, as mentioned in the study by Al-Ahdal et al. (2020).

The objective of this study is to evaluate the influence of corporate governance and the influence of the choice of audit and financial reporting quality on the financial performance of enterprises listed on the Vietnamese stock market. The novelty of this study can be listed as follows: Firstly, this is a relatively complete study in Vietnam, which is a fast-growing country in Southeast Asia. And, Vietnam has a rapid level of economic integration through attracting foreign direct investment capital and liberalizing trade during the research period from 2012 to 2021. During this period, domestic enterprises began to select reputable auditing firms, especially the BIG4 group such as KPMG, Deloitte, PWC and E&Y as their audit selections, along with that, this is a complete stage of development of Vietnam's stock market including the addition of bond market and derivatives market. Second, recent studies by Khader (2023), Alsmady (2022), Yorke et al. (2023), Al-Ahdal & Hashim (2022), Zhou et al. (2018), Detthamrong et al. (2017) have not performed an analysis of the interdependence relationship between enterprises. Indeed, enterprises in the same country operate in the same macroeconomic environment, as well as the listed companies all have clear listing standards and are subject to securities laws, so among them is likely to have a cross-dependence relationship. Third, the case of Vietnam and some developing and emerging countries with mostly small and medium-sized enterprises, there is a possibility of endogenous phenomena in the estimated model while most of previous studies are lack of this analysis (Siddiqui et al., 2023; Xu et al., 2022). Therefore, the estimation analysis needs to test the endogeneity of the estimated model in order to be able to perform the appropriate regression, it is evident that we can get the best and unbiased estimation results, which is the reason for forming this study.

In addition to the introduction presented, the remainder of this study consists of: Section 2 discussing literature review, Sections 3 and 4 discussing data collection, methodology and results. Section 5 explains the research results and general conclusions of the study presented in Section 6.

## 2. Literature review

### 2.1. Corporate governance and its financial performance

Corporate governance is all activities associated with the leadership process of an individual or a group of individuals in a specific enterprise in order to require the enterprise to operate according to its desires. In a business, the most vocal body representing the owners of the business is the board of directors, which is a group of several people who represent the capital contributors. Corporate governance is associated with the choice of the size of the board of directors, the gender diversity in the board, the choice of the chairman or the board of directors.

Previous studies have suggested that corporate governance helps businesses go in the right direction and bring sustainable development to businesses as well as and ultimately achieve high business efficiency (Khatib et al., 2022). Further, Xu et al. (2022) argued that corporate governance has a positive impact on the financial performance of enterprises, especially this impact is higher in the case of enterprises implementing social responsibility. As the authors explained, responsible businesses often have the ability to mediate and harmonize the relationship between shareholders, the relationship of owners and agents, and ultimately balance business interests in enterprises in the both short and long term. This supports the conjecture that in the process of developing and increasing benefits for shareholders, enterprises always maintain more responsible corporate governance so that they can improve their performance in the future. Moreover, CEO integrity and ownership concentration have a positive impact on corporate social responsibility and improve profitability, thereby increasing business efficiency. Thereby, it shows the role of leaders becomes important to enhance the development of enterprises (Siddiqui et al., 2023).

Given that agency theory holds that well-governed firms perform relatively better than poorly managed firms. Resource dependency theory holds that a board with more internal directors can have more expertise and thus can help the company run better and more efficiently. Zhou et al. (2018) used a sample of companies listed on the Athens Stock Exchange between 2008 and 2012 and suggested that firms with larger board sizes perform better, but those with more independent board members perform worse. Furthermore, agency theory is concerned with the impact of effective monitoring of best practice compliance with internal governance systems on improving corporate performance. Research confirms that the quality of corporate governance has the ability to increase benefits for enterprises, as confirmed in the study of Boachie & Mensah (2022) for the case of Sub-Saharan African countries. This confirms that businesses should improve management capacity to increase business efficiency.

Al-Ahdal et al. (2020) believed that corporate governance is vital in creating corporate culture, transparency and openness. The study carried out in India and the Gulf Companies Council countries on a sample of 53 non-financial companies listed in India and GCC between 2009 and 2016 and suggested that the board's accountability has a negligible impact on the firm's performance. Furthermore, transparency and disclosure have a negligible negative impact on corporate performance while Indian firms outperformed firms in GCC countries in terms of corporate governance practices and financial performance. However, Ciftci et al. (2019) argued that corporate governance is also influenced by familial capitalism and showed that more concentrated ownership, often in the hands of the family, leads to better performing firms. Furthermore, control families are more at risk from underperformance because the economic institutional environment in Türkiye is suitable for family ownership. In addition, Ciftci et al. (2019) also argued a mechanism that facilitates more voices and interests inside and outside the family can create more positive performance and improve corporate financial performance. Therefore, increasing the proportion of family members on the Board of Directors does not have a significant effect on productivity.

In a volatile business environment and affected by shocks in the price market, Song & Yang (2022) suggested that shocks in the price market have a negative effect on business performance of the enterprise. It shows risks that increase costs for businesses and thereby reduce financial benefits of businesses. In that context, incentive policies in corporate governance should be enforced as they can help firms mitigate the negative effects of shocks whereas the management monitoring cannot. Indeed, businesses often delay investments amid macroeconomic volatility and increased risks in the economy. This process can cause enterprises to miss out on highly profitable investment projects and adversely affect

their profits. Meanwhile, firms with higher managerial incentives levels, managers often have optimal investment decisions because of fewer agency conflicts between managers and shareholders due to the reduction of information asymmetry, thereby reducing agency costs.

However, some cases concluded that the relationship between corporate governance and financial performance has not been found, as confirmed by Detthamrong et al. (2017) researched at Thai non-financial companies in the period 2001 to 2014. Sheikh & Alom (2021) studied 24 shipping companies in Bangladesh and found that most of the managers here do not have any recognized full knowledge of corporate governance, including the lack of transparency in the activities of the board of directors. The study confirms that board size, board ownership and board members' participation in governance have an impact on corporate financial performance. However, research shows that the enterprise has more outside members and has greater independence, it does not improve the performance of the business. It is evident that the independent voice of external BOD members is often weak and does not bring a positive impact on the business's operations. In contrast, board size has a negative relationship with ROA but it is not significant for ROE. In contrast, governance capacity has no effect on firm performance as in the case of Malaysian companies (Zabri et al., 2016). Overall, the theory of dependence on resources and representatives has highlighted the superior performance of companies equipped with stronger corporate governance compared to those with poor governance (Alodat et al., 2022). Or it can be shown that businesses with strong management capacity often have higher financial performance.

A systematic literature review of board diversity of financial institutions: Gender diversity has a significant positive impact on a bank's financial performance. On the other hand, the study also indicates that non-executive board membership and board size do not have a significant impact on banking, recommending that deposit banks cited in Nigeria should increase the proportion of women on their boards of directors to improve financial performance (Onyekwere et al., 2019). Social responsibility performance and financial performance are positively correlated, and the extent of this relationship depends on how diverse the board is. As corporate boardrooms become more diverse across a diverse number of attributes, the positive impact of social responsibility on financial performance becomes more profound. Racially and age-diverse structures have an independent regulatory effect on this purposeful relationship (Ozdemir et al., 2021).

## **2.2. Audit selection, financial report quality and financial performance**

In the socio-economic development, businesses are always looking for ways to improve their operations, especially accounting regimes such as making financial statements and auditing in the business to ensure profits. In fact, large enterprises can form audit committees with the role of helping enterprises improve the quality of financial statements. Khader (2023) argued that the quality of financial statements is the key to gaining market and investor interest through a well-informed process. Therefore, audit helps to create confidence in the quality of financial statements. Khader (2023) also confirmed the effectiveness of the audit committee to be able to predict the income management and financial performance of enterprises. This is also confirmed by the study of Alsmady (2022), who said that analysts are often concerned about the ability to generate business income, so reliable information from financial statements and audits is very important and has an impact on business operations. Therefore, improving the quality of audits and financial statements has a positive impact on the firm performance. This is consistent with agency theory, which suggests that increasing financial reporting quality and audit selection is likely to increase the reliability of financial statements and reduce asymmetry, thereby helping investors better evaluate the business and the business operate more efficiently. Al-Ahdal & Hashim (2022) suggested that businesses should improve the quality of their audits to maximize corporate value so that they can increase benefits for shareholders and investors.

A few studies also confirmed that there is no evidence of the impact of audit quality on corporate profitability, as confirmed by Al-Ahdal & Hashim (2022) in 70 non-financial firms between 2014 and 2019 in the Indian stock market. Similarly, Al-Ahdal et al. (2020) argued that audit quality has a negligible impact on the performance of Indian companies and companies in the Gulf countries, but sometimes the governance system has an adverse impact on accounting performance (Ciftci et al., 2019). As explained by Detthamrong et al. (2017), there is a difference between large enterprises and small



enterprises in performing corporate governance and auditing activities. Research in Thai non-financial companies in the period 2001 to 2014 and conducted on a sample of small businesses, and also on a sample of large firms, Detthamrong et al. (2017) concluded that the effect of audit committee size is not statistically significant for the sub-sample of small firms, but is statistically significant and has a negative effect in the sub-sample of large firms. Thereby, it can be seen that the size of the audit council has not had a positive impact on both large enterprises and small enterprises, in which large enterprises may have a negative effect when the size of the large audit committee is often not beneficial to business operations. Or it could also be said that large enterprises with a smaller audit committee size tend to have better firm performance. The authors also argued that smaller audit committees are often able to bring together members with a wide range of financial background and experience, and therefore it is able to help businesses operate more efficiently. Detthamrong et al. (2017) also affirmed audit reputation is negative and significant for small firm sub-sample. Similarly, Zhou et al. (2018) argued that companies with small boards of directors and companies with boards of directors with many independent members are more likely to form audit committees to improve the quality of audits and financial reporting, but the study suggests that there is no relationship between audit committee characteristics and firm performance. Corporate responsibility has a positive impact on corporate financial performance indicators with return on assets (ROA), return on equity (ROE) and Tobin's Q (TQ), indicating that investing in social activities helps businesses achieve better financial results. The authors also found that the improved impact of social responsibility on corporate financial performance was clearer for companies audited by Big Four accounting firms (Dakhli, 2022).

In some other cases, there is a difference in audit performance due to the factor of gender. Yorke et al. (2023) research in US listed companies in the period 2010 to 2021 found that male and female financial experts on the audit committee both have an influence on the sustainability performance of the company. In particular, the influence of female financiers is often higher, reflecting women's ability to be more effective in improving the quality of corporate audits. Furthermore, gender diversity helps to improve corporate audits. Performance reviews affect subordinate auditors' attitudes toward ineffective audit behavior. From a cultural standpoint, U.S. auditors express a more negative view of ineffective audit behavior than their Lebanese counterparts. Further, female auditors are less inclined towards ineffective audit behavior than male auditors (Khalil & Nehme, 2023).

Hypotheses: corporate governance and audit quality have a significant influence on corporate financial performance.

### 3. Theoretical background

According to Miller & Modigliani (1961), Modigliani & Miller (1958), Modigliani & Miller (1963), three important propositions, which form the base of their theorem, can be drawn (Breuer & Gürtler, 2008): A firm's total market value is independent of its capital structure, the cost of equity increases with its debt-equity ratio, a firm's total market value is independent of its dividend policy. In a perfectly competitive market, all combinations of equity and liabilities are the same. In other words, the value of an enterprise does not depend on the amount of shares issued, but only on the amount of assets of that enterprise. The weighted average cost of capital (WACC) will remain constant even if the company changes their capital structure.

Scholarly Perspectives on Audit Quality: DeAngelo (1981a) foundational study of audit quality is still valid today. Accordingly, DeAngelo (1981b) argues that audit quality is based on the ability to detect and report material misstatements in financial statements. According to this study, audit quality depends on the following 2 factors: (i) The auditor's skills, audit procedures and audit techniques used; (ii) Independence of auditors. If an auditor does not meet the qualification requirements, the ability to detect material misstatements in the financial statements will be low, thereby affecting the quality of the audit. On the other hand, the auditor's ability to detect material misstatement is guaranteed, but if the auditor fails to maintain independence and fails to report the detected misstatement, it will directly affect the quality of the audit report prepared. Based on the background view of DeAngelo (1981a), many later studies developed an approach to audit quality tailored to specific conditions. Palmrose (1988), and especially DeAngelo (1981b) concept of assurance-based audit quality, since the purpose of

an audit is to ensure that the financial statements are free of material misstatements, so audit quality is the ability of financial statements free of material misstatements. This definition uses the reliability of audited financial statements to reflect audit quality.

A study comprehensively evaluated the links between systems of high- performance work practices and firm performance. Results indicate that these practices have an economically and statistically significant impact on both intermediate employee outcomes (turnover and productivity) and short- and long-term measures of corporate financial performance. Support for predictions that the impact of high- performance work practices on firm performance is in part contingent on their interrelationships and links with competitive strategy was limited (Huselid, 1995).

## 4. Data and methodology

### 4.1. Data

The data source to conduct this study includes 40 typical enterprises collected on the Vietnam stock exchange, from 2012 to 2021. The data is collected from the audited financial statements, annual report, prospectus.

We have selected the data based on two reasons as follows: (1) Firstly, Vietnam's stock market has only appeared since 2000 with initially 2 listed businesses and market indexes: VN-INDEX for 2000 or HNX-INDEX for 2009. Starting from 2012, Vietnam has just established the VN-30 and HNX-30 index. Among them, Vietnam has selected a list of about 60 enterprises with its great market influence and they are able to represent most of the market fluctuations. However, Vietnam always adds suitable businesses or eliminates businesses that are no longer suitable in this group. That is why this study uses 40 selected enterprises, and all are selected in the VN-30 and HNX-30 groups. Secondly, we choose the company with its longest listing time. Indeed, there are about 20 enterprises that are also large enterprises, but have just been listed on the Vietnamese stock market long enough, or are not yet qualified to be selected into the typical basket of goods in the VN-30 and HNX-30 groups, so these businesses are not selected in this study. For example, Vietnam added 5 stocks to the VN-30 portfolio in July 2023, including EIB, PNJ, REE, DGC, and MSB and replaced other stocks that did not qualify, but with new stocks just entered the VN-30 list for a short time, so it was not selected in this study (Vietstock, 2023).

### 4.2. Methodology

In this study, the panel data regression methods are selected for analysis, including pooled least squares (pooled OLS), fixed effects method (FEM) and random effects (REM). The study also evaluates defects, such as multicollinearity, variable variance and autocorrelation. If defects occur, the study uses the FGLS method. The study uses Stata 21 software for the analysis.

In order to assess the possibility of a cross-sectional relationship between enterprises, especially enterprises on the stock market, they often operate under the general regulation of the securities laws and similar macroeconomic conditions, so there is a possibility of a dependency relationship between enterprises. In this case, the study used regression analysis according to the Driscoll- Kraay standard errors.

In addition, the panel data are likely to have endogenous phenomenon that may bias the study results. The study carries out testing the possibility of endogenous phenomenon and IV-GMM regression to overcome the endogenous phenomenon. According to Nguyen & Huynh (2023), endogeneity often occurs when analyzing firms, and therefore studies should analyze this phenomenon in the analysis.

Based on previous studies, the regression equation is written as follows:

$$Y = \beta_0 + \beta_1 FRQ_{it} + \beta_2 BOARD1_{it} + \beta_3 BOARD2_{it} + \beta_4 BOARD3_{it} + \beta_5 BOARD4_{it} + \beta_6 AUDIT_{it} + \beta_7 AGE_{it} + \beta_8 Leverage_{it} + \beta_9 Short_{it} + \beta_{10} Size_{it} + \beta_{11} Liquidity_{it} + \beta_{12} Tangible_{it} + \beta_{13} Intangible_{it} + \mu_{it}$$

Table 1 indicates that Y: is the dependent variable, is the financial performance in the enterprise, measured by one of three variables: ROA, ROE, ROS.



**Table 1.** Variables used in the model.

Variables	Abbre	Calculation	Previous studies
<b>Dependent variable</b>			
Return on total assets	ROA	$\frac{\text{Profit after tax}}{\text{Total assets}} * 100$	Detthamrong et al. (2017), Ciftci et al. (2019), Al-Ahdal et al. (2020)
Return on total equity	ROE	$\frac{\text{Profit after tax}}{\text{Equity}} * 100$	Detthamrong et al. (2017), Ciftci et al. (2019), Al-Ahdal et al. (2020)
Return on total sales	ROS	$\frac{\text{Operating Profit}}{\text{Sales}}$	Detthamrong et al. (2017), Ciftci et al. (2019), Al-Ahdal et al. (2020), Al-Ahdal & Hashim (2022)
<b>Independent variable</b>			
Board of directors' size	BOARD1	$\frac{\text{Number of members}}{11}$	Xu et al. (2022), Siddiqui et al. (2023), Zhou et al. (2018)
Percentage of women on the board	BOARD2	$\frac{\text{Number of women members}}{\text{Board size}}$	Xu et al. (2022), Siddiqui et al. (2023), Zhou et al. (2018)
Gender of the Chairman of the Board of Directors	BOARD3	Get the value 1 if the chairman is male, and 0 if female	Xu et al. (2022), Siddiqui et al. (2023), Zhou et al. (2018)
Director's gender	BOARD4	Get the value 1 if the director is male, and 0 if female	Xu et al. (2022), Siddiqui et al. (2023), Zhou et al. (2018), Boachie & Mensah (2022)
Audit repulation	AUDIT	Get a value of 1 if the auditing firm is Big 4 and zero if it is not	Alsmady (2022), Al-Ahdal & Hashim (2022), Khader (2023)
Financial reporting quality	FRQ	$\Delta AR_{i,t} = \beta_0 + \beta_1 \Delta Sales_{i,t} + \epsilon_{i,t}$	McNichols & Stubben (2008)
Age	AGE	Year of calculation - Year of establishment	Mallinguh et al. (2020)
Leverage	Leverage	$\frac{\text{Total debt}}{\text{Total assets}}$	Detthamrong et al. (2017)
Short-term debt ratio	Short	$\frac{\text{Short-term debt}}{\text{Total assets}}$	Nazir et al. (2021)
Firm size	Size	The natural logarithm of total assets	Nguyen (2020)
Liquidity	Liquidity	$\frac{\text{Short-term assets}}{\text{Short-term liabilities}}$	Samo & Murad (2019)
Ratio of tangible assets	Tangible	$\frac{\text{Tangible assets}}{\text{Total assets}}$	Nguyen & Huynh (2023)
Ratio of intangible assets	Intangible	$\frac{\text{Intangible assets}}{\text{Total assets}}$	Nguyen & Huynh (2023)

Source: Authors' compilation.

In this paper, BOARD1 is calculated by number of members in BODs over 11. We use this to make the research results smoother and at the same time evaluate the average ratio of the number of board members compared to the maximum prescribed by Vietnamese law.

To determine the financial reporting quality (FRQ), this study uses the theory of McNichols & Stubben (2008), assuming that the residual of the model is the excess revenue, representing the change in accounts receivable that is not explained by the growth in sales. The variable FRQ is the absolute value of the model multiplied by (-1) and is determined through the following formula:

$$\Delta AR_{i,t} = \beta_0 + \beta_1 \Delta Sales_{i,t} + \epsilon_{i,t}$$

## 5. Results and discussions

### 5.1. Descriptive statistics

Table 2 is the results of descriptive statistics of the variables used in the regression model. Regarding the financial performance of the business, ROA, ROE, and ROS reached the average value of 4.51, 10.12%, 23.87%, respectively, and at the same time, it also reflects the difference in financial performance of enterprises. Regarding the corporate governance, the average number of board members is approximately 6, however, there are some enterprises with only 3 members (minimum level) or 11 members (maximum level). Regarding the participation of women, this index averages 14.14%, meaning that most of the BOD members are male and only a few are female. Regarding the gender of the chairman of the board of directors, most of the chairman of the board of directors are male (90.68%) and only 9.32% are female. Regarding the gender of executives, most of the executives are male, accounting for 89.92% and only 10.08% are female.

Regarding the characteristics of enterprises, the average age of enterprises is 20.44 years old and the minimum is 4 years old and the maximum is 51 years old. Regarding the capital structure, the enterprise mobilizes 49.34% of capital from debt and the rest is from equity. Regarding the short-term debt, this

**Table 2.** Descriptive statistics.

Variable	Obs	Mean	Std. Dev	Min	Max
ROA	381	0.045	0.088	−0.635	0.688
ROE	379	0.101	0.198	−0.628	2.585
ROS	381	0.239	2.703	−3.891	1.000
BOARD1	385	0.545	0.164	0.273	1.000
BOARD2	341	0.141	0.149	0.000	0.667
BOARD3	397	0.907	0.291	0.000	1.000
BOARD4	397	0.899	0.301	0.000	1.000
AUDIT	390	0.126	0.332	0.000	1.000
Age	397	20.441	11.213	4.000	51.000
Leverage	381	0.493	0.222	0.003	1.000
Short	380	0.428	0.217	0.003	1.000
Size	381	5.691	0.774	4.200	7.758
Liquidity	381	3.062	6.276	0.034	55.192
Tangible	379	0.107	0.116	0.000	0.710
Intangible	381	0.018	0.032	0.000	0.347

Source: Authors' calculation.

**Table 3.** Correlation matrix.

	BOARD1	BOARD2	BOARD3	BOARD4	AUDIT	leverage	short	size	liquidity	Tangible	Intangible	Age
BOARD1	1.000											
BOARD2	−0.195	1.000										
BOARD3	−0.074	−0.162	1.000									
BOARD4	−0.019	−0.079	−0.013	1.000								
AUDIT	0.184	0.107	−0.379	−0.030	1.000							
Leverage	0.054	−0.086	0.062	−0.053	−0.049	1.000						
Short	−0.011	−0.141	0.022	−0.111	−0.006	0.822	1.000					
Size	0.298	−0.045	−0.076	0.057	0.362	0.388	0.166	1.000				
Liquidity	−0.023	0.127	0.059	−0.069	−0.093	−0.492	−0.473	−0.249	1.000			
Tangible	0.173	0.038	−0.433	0.001	0.431	−0.053	−0.117	0.212	−0.144	1.000		
Intangible	0.224	−0.127	−0.123	−0.105	0.078	0.021	0.024	0.084	−0.045	0.205	1.000	
Age	0.003	0.011	0.068	−0.094	0.016	0.128	0.071	0.310	0.024	−0.019	0.062	1.000

Source: Authors' calculation.

index reaches an average of 42.84%, showing that businesses currently mainly finance capital with short-term debt and very little from long-term debt. Regarding the liquidity, this indicator reaches 3.06 on average, showing that the liquidity of the sample is relatively good. However, there are still some businesses with less liquidity. Regarding the tangible and intangible assets, this index averages 10.71% and 1.78%, respectively, indicating that most businesses have low fixed assets.

## 5.2. Correlation matrix

In order to check the correlation between the independent variables and the dependents, as well as to confirm whether there is multicollinearity or not, we conduct the correlation analysis as follows:

Table 3 shows the results of the correlation matrix of the variables used in the model. According to the theory of statistics, when the pairs of independent variables have a high degree of correlation, there is a possibility of multicollinearity. Research results show that most of the pairs of variables have a low correlation and are less than 0.8, indicating that there is no possibility of multicollinearity.

## 5.3. Multicollinearity test

To double check for the possibility of multicollinearity, we use VIF analysis. According to statistical theory, when VIF coefficient  $> 10$ , multicollinearity is likely to occur. Table 4 shows that this coefficient is equal to 1.78 and 1.99 and less than 10, respectively, so there is no multicollinearity.

## 5.4. Regression results

First, the study carried out the cross-sectional dependence test to determine the possibility of the dependence relationship between enterprises on the Vietnamese stock market. Indeed, listed companies operate in a relatively similar macro environment, so they often have a reciprocal relationship, and

**Table 4.** Multicollinearity test of VIF.

Variable	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
	ROA		ROE		ROS	
leverage	4.32	0.232	5.73	0.175	4.32	0.232
short	3.80	0.263	4.75	0.211	3.80	0.263
size	1.98	0.504	2.19	0.457	1.98	0.504
AUDIT	1.64	0.611	1.72	0.582	1.64	0.611
tangible	1.58	0.633	1.61	0.621	1.58	0.633
liquidity	1.57	0.638	1.59	0.629	1.57	0.638
BOARD3	1.42	0.706	1.42	0.702	1.42	0.706
BOARD1	1.22	0.823	1.22	0.821	1.22	0.823
age	1.21	0.824	1.21	0.825	1.21	0.824
BOARD2	1.17	0.852	1.20	0.832	1.17	0.852
intangible	1.12	0.894	1.13	0.886	1.12	0.894
BOARD4	1.09	0.917	1.09	0.913	1.09	0.917
FRQ	1.04	0.959	1.04	0.958	1.04	0.959
Mean VIF	1.78		1.99		1.78	

Source: Authors' calculation.

**Table 5.** Cross- sectional dependence test.

Variable	CD-test	p-value
FRQ	3.49	0.000
ROA	−0.37	0.710
ROS	−0.94	0.345
Age	87.62	0.000
Leverage	0.73	0.467
Short	0.34	0.730
Size	18.79	0.000
Liquidity	1.42	0.157

Source: Authors' analysis.

**Table 6.** Endogeneity test based on Wu-Hausman test.

No	Variable	F-statistic	P-value	F-statistic	P-value	F-statistic	P-value
		ROA		ROE		ROS	
1	FRQ	3.305	0.070	2.611	0.107	1.149	0.285
2	BOARD1	0.753	0.386	0.175	0.676	0.898	0.344
3	BOARD2	1.223	0.270	1.101	0.295	2.132	0.045
4	BOARD3	0.142	0.706	0.068	0.794	0.001	0.972
5	BOARD4	0.325	0.569	0.679	0.411	0.734	0.392
6	AUDIT	0.304	0.582	0.174	0.677	0.033	0.856
7	Leverage	6.614	0.011	9.079	0.003	0.049	0.826
8	Short	15.793	0.000	11.010	0.001	0.024	0.876
9	Size	6.087	0.014	6.353	0.012	0.336	0.563
10	Liquidity	7.650	0.006	2.181	0.141	0.151	0.698
11	Tangible	0.001	0.976	0.088	0.767	0.018	0.894
12	Intangible	0.838	0.361	0.843	0.359	0.011	0.916

Source: Authors' analysis.

sometimes businesses can be rivals in the marketplace. It can be seen that the dependent relationship between enterprises can occur, which is reflected in the results in [Table 5](#).

[Table 6](#) presents the results of Endogeneity test based on Wu-Hausman test and suggests that there is a possibility of endogenous phenomenon in the estimation model. The results of [Table 6](#) show that the P-value coefficients of FRQ, BOARD3, Leverage, Short, Liquidity, and SIZE are all less than 10%, that is, the hypothesis H0 with the statement is rejected, the variables are exogenous. In other words, endogeneity occurs for these variables. Therefore, we use GMM regression to overcome the endogenous phenomenon and the results are as follows:

In this study, the dependent variable is represented by one of the three variables as ROA, ROE or ROS. Therefore, this study is performed with case-by-case regression of the dependent variable, the regression results are as follows:

For the better discussion, the robustness check should be performed. In this study, we add macroeconomic variables for robustness testing, including variables on economic growth and inflation, and collected from statistical data.

**Table 7.** Regression results.

Variable	OLS	FEM	REM	FGLS	Driscoll - Kraay	IV-GMM
FRQ	−0.007 (0.181)	−0.003 (0.468)	−0.004 (0.364)	−0.007 (0.170)	−0.007 (0.103)	0.067 (0.200)
BOARD1	−0.086** (0.012)	−0.007 (0.867)	−0.046 (0.214)	−0.086*** (0.010)	−0.086* (0.054)	−0.086* (0.072)
BOARD2	0.044 (0.163)	0.076 (0.204)	0.059 (0.131)	0.044 (0.152)	0.044** (0.025)	0.039 (0.382)
BOARD3	−0.033 (0.131)	−0.012 (0.695)	−0.023 (0.350)	−0.033 (0.121)	−0.033 (0.090)	−0.050 (0.183)
BOARD4	0.003 (0.853)	−0.031 (0.312)	−0.013 (0.578)	0.003 (0.849)	0.003 (0.812)	0.022 (0.422)
AUDIT	0.026 (0.100)	−0.008 (0.750)	0.009 (0.635)	0.026* (0.091)	0.026** (0.016)	0.035 (0.155)
Leverage	−0.106*** (0.008)	−0.179*** (0.001)	−0.143*** (0.001)	−0.106*** (0.006)	−0.106** (0.039)	−0.089 (0.344)
Short	0.067* (0.089)	0.010 (0.862)	0.062 (0.164)	0.067* (0.081)	0.067** (0.026)	0.121 (0.187)
Size	0.019** (0.013)	0.057* (0.057)	0.025** (0.017)	0.019* (0.011)	0.019*** (0.002)	0.012 (0.360)
Liquidity	0.000 (0.944)	−0.002 (0.104)	−0.001 (0.497)	0.000 (0.943)	0.000 (0.972)	0.001 (0.492)
Tangible	0.032 (0.516)	0.026 (0.802)	0.033 (0.602)	0.032 (0.505)	0.032 (0.573)	0.054 (0.485)
Intangible	0.094 (0.535)	0.096 (0.602)	0.092 (0.574)	0.094 (0.525)	0.094 (0.173)	0.053 (0.803)
Age	−0.001* (0.076)	−0.000 (0.9700)	−0.001 (0.225)	−0.001* (0.068)	−0.001** (0.048)	−0.001* (0.088)
_cons	0.036 (0.472)	−0.163 (0.313)	0.008 (0.907)	0.036 (0.461)	0.036 (0.229)	0.053 (0.556)
F test	F(38, 255) = 3.07 Prob > F = 0.000					
Hausman test	Chi2(13) = 21.58 Prob > chi2 = 0.062					
Breusch and Pagan Lagrangian multiplier test for random effects	chibar2(01) = 30.64 Prob > chibar2 = 0.000					
Wooldridge test for autocorrelation	F(1, 37) = 0.036 Prob > F = 0.851					

Dependent variable ROA.

Source: Authors' analysis.

For the dependent variable ROA, the regression results from Table 7 show that the regression coefficients of the variables BOARD1 and Leverage are statistically significant and have negative signs, but the regression coefficients of the variables as Short, Size, BOARD2 and AUDIT have positive signs, and statistically significant. However, the coefficients of other variables are not statistically significant. According to the robustness test results in Table 8, the above results remain the same, and showing that the research results are relatively robust.

For the dependent variable ROE, the regression results from Table 9 show that the estimation coefficients of Size, Short, BOARD4 and Tangible are statistically significant and have positive signs. The regression coefficient of BOARD1, Leverage has negative signs and is statistically significant. The remaining cases have not found an impact. According to the robustness test results in Table 8, the above results remain the same, and showing that the research results are relatively robust.

For the dependent variable ROS, the regression results from Table 10 show that the estimated coefficient of FRQ has a negative sign and is statistically significant. Similarly, the estimation coefficient BOARD4, Size has a positive sign and is statistically significant. Table 8 indicates that the robustness test conclude the same results, and therefore the research results are robust.

The estimated results show that the estimated coefficient of BOARD1 has a negative sign and is statistically significant, thereby showing that the size of the board of directors has not had a positive impact on the financial performance of the enterprise. That is, the large board size is not compatible with the financial performance of the enterprise. It can be said that for the case of Vietnam, businesses often prioritize the board of directors with a smaller size. According to the results of statistical analysis described in Table 2, the average size of the board of directors in Vietnam is about 6 members compared to the maximum 11 members prescribed by the law of enterprises. That reflects that Vietnamese enterprises are not really open to expanding the size of the board of directors. Secondly, Vietnamese listed

**Table 8.** Regression results for robustness test.

Variable	ROA		ROE		ROS	
	FGLS	Driscoll - Kraay	FGLS	Driscoll - Kraay	FGLS	Driscoll - Kraay
FRQ	−0.006 (0.164)	−0.006 (0.122)	−0.011 (0.184)	−0.011 (0.065)	−0.008 (0.350)	−0.008 (0.081)
BOARD1	−0.084 (0.011)	−0.084 (0.054)	−0.153 (0.012)	−0.153 (0.045)	−0.169 (0.004)	−0.169 (0.000)
BOARD2	0.044 (0.155)	0.044 (0.028)	0.093 (0.103)	0.093 (0.011)	0.040 (0.453)	0.040 (0.210)
BOARD3	−0.030 (0.150)	−0.030 (0.123)	−0.042 (0.269)	−0.042 (0.267)	−0.022 (0.540)	−0.022 (0.213)
BOARD4	0.003 (0.866)	0.003 (0.836)	0.055 (0.093)	0.055 (0.121)	0.074 (0.024)	0.074 (0.128)
AUDIT	0.024 (0.121)	0.024 (0.040)	0.029 (0.302)	0.029 (0.205)	−0.046 (0.084)	−0.046 (0.016)
Leverage	−0.111 (0.004)	−0.111 (0.030)	−0.186 (0.025)	−0.186 (0.006)	−0.128 (0.063)	−0.128 (0.044)
Short	0.069 (0.067)	0.069 (0.017)	0.241 (0.003)	0.241 (0.000)	0.051 (0.446)	0.051 (0.377)
Size	0.019 (0.009)	0.019 (0.001)	0.049 (0.001)	0.049 (0.000)	0.072 (0.000)	0.072 (0.003)
Liquidity	0.001 (0.935)	0.001 (0.968)	0.001 (0.614)	0.001 (0.665)	0.006 (0.000)	0.006 (0.000)
Tangible	0.043 (0.380)	0.043 (0.463)	0.168 (0.061)	0.168 (0.173)	0.117 (0.173)	0.117 (0.094)
Intangible	0.095 (0.519)	0.095 (0.141)	0.021 (0.936)	0.021 (0.899)	0.062 (0.811)	0.062 (0.585)
Age	−0.001 (0.053)	−0.001 (0.073)	−0.001 (0.191)	−0.001 (0.193)	−0.001 (0.056)	−0.001 (0.047)
GDP	1.269 (0.097)	1.269 (0.034)	2.453 (0.081)	2.453 (0.047)	0.408 (0.765)	0.408 (0.682)
INF	−2.661 (0.108)	−2.661 (0.029)	−5.173 (0.088)	−5.173 (0.040)	−0.860 (0.771)	−0.860 (0.673)
_cons	1.438 (0.149)	1.438 (0.020)	2.644 (0.148)	2.644 (0.038)	0.197 (0.911)	0.197 (0.854)

Source: Authors' analysis.

enterprises are quite small compared to the common level of countries in the region, the charter capital of enterprises listed on the stock exchange is only 30 billion Vietnamdong (equivalent to 1.2 million USD), so many enterprises have a small scale of production activities and markets, so these enterprises have no incentive to expand the size of the board of directors. In other words, these enterprises usually give priority to the small-sized board of directors to help businesses be flexible in governance. This can be similar to the study of Sheikh & Alom (2021) who assuming that the Board of Directors is not really aware of corporate governance in some cases, the Board of Directors often relies on a smaller group to help businesses have the ability to be flexible in management, but at the same time the criticisms have become weak and have not contributed directly to the development of the business. This result is consistent with the research objectives of the paper.

The regression coefficient of BOARD2 has a positive sign and is statistically significant, which means that female participation in the board of directors has a positive impact on the financial performance of the business. Enterprises that increase the participation of women on the board of directors are likely to help businesses achieve greater financial performance. The participation of women on the board of directors helps businesses achieve gender balance and harmonious development. Women are often meticulous, careful and have high perseverance, so the participation of women in the board of directors helps the board of directors to have more correct policies for the production activities of the company. This study is similar to Yorke et al. (2023) arguing that women have the ability to improve the quality of audits and financial statements of enterprises in order to reduce transaction costs for investors and the market, so they can help businesses operate more efficiently. This result is consistent with the research objectives of the paper.

The regression coefficient of BOARD3 is not statistically significant, implying that the gender of the chairman of the Board of Directors has no influence on the financial performance of the enterprise. However, the regression coefficient of BOARD4 has a positive sign and is statistically significant, which means that enterprises with male directors have higher financial performance than enterprises with

**Table 9.** Regression results.

Variable	OLS	FEM	REM	FGLS	Driscoll - Kraay	IV-GMM
FRQ	−0.012 (0.197)	−0.006 (0.512)	−0.008 (0.360)	−0.012 (0.185)	−0.012 (0.043)	−0.011 (0.209)
BOARD1	−0.156** (0.013)	−0.024 (0.763)	−0.098 (0.153)	−0.156** (0.011)	−0.156** (0.044)	−0.143** (0.019)
BOARD2	0.094 (0.108)	0.076 (0.499)	0.103 (0.148)	0.094* (0.099)	0.094*** (0.007)	0.102* (0.085)
BOARD3	−0.047 (0.237)	0.013 (0.822)	−0.018 (0.679)	−0.047 (0.226)	−0.047 (0.216)	−0.035 (0.366)
BOARD4	0.056* (0.098)	−0.046 (0.426)	0.018 (0.668)	0.056* (0.089)	0.056 (0.115)	0.066** (0.048)
AUDIT	0.032 (0.270)	−0.008 (0.970)	0.015 (0.655)	0.032 (0.258)	0.032 (0.138)	0.040 (0.193)
Leverage	−0.184** (0.032)	−0.412*** (0.002)	−0.259*** (0.009)	−0.184** (0.028)	−0.184*** (0.007)	−0.115 (0.329)
Short	0.244*** (0.003)	0.203 (0.134)	0.254*** (0.008)	0.244*** (0.002)	0.244*** (0.000)	0.278** (0.014)
Size	0.049*** (0.001)	0.098* (0.090)	0.057*** (0.003)	0.049*** (0.001)	0.049*** (0.000)	0.037** (0.024)
Liquidity	0.001 (0.643)	−0.003 (0.175)	−0.000 (0.804)	0.001 (0.635)	0.001 (0.670)	0.003 (0.118)
Tangible	0.152* (0.100)	0.027 (0.888)	0.138 (0.224)	0.152* (0.091)	0.152 (0.214)	0.206** (0.027)
Intangible	0.010 (0.971)	0.082 (0.815)	0.055 (0.856)	0.010 (0.970)	0.010 (0.954)	0.067 (0.808)
Age	−0.001 (0.245)	0.000 (0.911)	−0.001 (0.389)	−0.001 (0.233)	−0.001 (0.140)	−0.001 (0.248)
_cons	−0.139 (0.151)	−0.323 (0.290)	−0.168 (0.163)	−0.139 (0.140)	−0.139** (0.024)	−0.170 (0.119)
F test	F(38, 255) = 2.55 Prob > F = 0.000					
Hausman test	Chi2(13) = 25.40 Prob > chi2 = 0.020					
Modified Wald test for groupwise heteroskedasticity in fixed effect regression model	chi2 (39) = 5.0e + 33 Prob > chi2 = 0.000					
Wooldridge test for autocorrelation	F(1, 37) = 0.431 Prob > F = 0.516					

Source: Authors' analysis.

Dependent variable ROE.

female directors. Chief Executive Officer is a person who is directly appointed or hired by the board of directors to perform the duties required by the board of directors. Research confirms that businesses that choose male executives often help businesses have higher operational efficiency. Indeed, in a volatile business environment, Vietnam's economy is innovating and integrating into the global economy, which requires executives with leadership, expertise, health in order to be able to better take on the task of running the business, while women are often more limited because they have to take care of the family and other social activities.

Research results show that FRQ is not statistically significant in the case of dependent variables ROA and ROE, however, FRQ has statistical significance and negative sign in case of dependent variable is ROS. Through the study, it can be seen that the quality of financial statements has not had an impact on the financial performance of listed companies. However, the research results confirm the positive impact of the selection of a reputable audit firm on the financial performance of the business. Thereby, the research results show that listed companies that choose reputable auditing firms, especially auditing firms in the BIG4 (such as KPMG, Deloitte, PWC and E&Y) will have results that improve the quality of financial statements of enterprises than choosing other less reputable auditing firms. At the same time, the enterprise can control the use of resources such as capital, assets are used optimally and can contribute to the financial performance of the enterprise. This is also confirmed by Khader (2023) confirming that the quality of financial statements is the key to gaining market and investor interest through a well-informed process. Therefore, reliable information on quality financial and audit reports can help reduce information asymmetry, thereby helping management and investment in reducing agency costs and improving efficiency of corporate performance (Alsmady, 2022). This result is consistent with the research objectives of the paper



**Table 10.** Regression results.

Variable	OLS	FEM	REM	FGLS	Driscoll - Kraay	IV-GMM
FRQ	−0.076 (0.660)	−0.080 (0.658)	−0.076 (0.660)	−0.076 (0.652)	−0.076* (0.096)	−0.076 (0.652)
BOARD1	−1.028 (0.389)	1.139 (0.488)	−1.028 (0.388)	−1.028 (0.377)	−1.028 (0.265)	−1.028 (0.377)
BOARD2	0.499 (0.649)	−2.171 (0.344)	0.499 (0.649)	0.499 (0.641)	0.499 (0.131)	0.499 (0.641)
BOARD3	0.070 (0.926)	−0.130 (0.910)	0.070 (0.926)	0.070 (0.924)	0.070 (0.675)	0.070 (0.924)
BOARD4	1.982*** (0.002)	−0.274 (0.819)	1.982*** (0.002)	1.982*** (0.002)	1.982 (0.226)	1.982*** (0.002)
AUDIT	−0.084 (0.879)	0.072 (0.940)	−0.084 (0.879)	−0.084 (0.876)	−0.084 (0.655)	−0.084 (0.876)
Leverage	−0.794 (0.570)	−2.028 (0.318)	−0.794 (0.570)	−0.794 (0.560)	−0.794 (0.345)	−0.794 (0.560)
Short	0.863 (0.527)	0.926 (0.678)	0.863 (0.526)	0.863 (0.517)	0.863 (0.389)	0.863 (0.517)
Size	0.459* (0.090)	2.998*** (0.010)	0.459* (0.089)	0.459* (0.082)	0.459*** (0.007)	0.459* (0.082)
Liquidity	0.026 (0.402)	0.028 (0.456)	0.026 (0.401)	0.026 (0.390)	0.026 (0.425)	0.026 (0.390)
Tangible	1.489 (0.752)	2.708 (0.490)	1.489 (0.752)	1.489 (0.380)	1.489 (0.109)	1.489 (0.380)
Intangible	1.669 (0.752)	−2.934 (0.681)	1.669 (0.752)	1.669 (0.747)	1.669 (0.126)	1.669 (0.747)
Age	0.006 (0.708)	−0.122 (0.112)	0.006 (0.707)	0.006 (0.701)	0.006 (0.409)	0.006 (0.701)
_cons	−4.631*** (0.009)	−14.565*** (0.0020)	−4.631*** (0.009)	−4.631*** (0.007)	−4.631** (0.040)	−4.631*** (0.007)
F test	F(38, 255) = 1.27 Prob > F = 0.147					
Hausman test	Chi2(13) = 21.70 Prob > chi2 = 0.060					
Breusch and Pagan Lagrangian multiplier test for random effects	chibar2(01) = 0.00 Prob > chibar2 = 1.000					
Wooldridge test for autocorrelation	F(1, 37) = 0.577 Prob > F = 0.452					

Source: Authors' analysis.

Dependent variable ROS.

The estimated coefficient of Leverage has a negative sign and is statistically significant, which means that firms that choose a capital structure that favor debt have lower profits, and firms that choose a capital structure with equity sources are likely to achieve higher profits. The results of this study confirm the benefits of using equity to finance investment projects in enterprises compared to using debt capital. This research result can be explained through pecking order theory, enterprises should seek internal funding, especially from retained earnings to finance investment activities and production, because this source of financing is often safer than external funding that comes mainly from debt. In some cases, businesses with too much debt may fall into the risk of financial distress because the business cannot ensure the ability to pay loans and interest, leading to the possibility of a sharp decline in the business profit, and after that will fall into a loss.

The estimated coefficient of Short has a positive sign and is statistically significant, reflecting that businesses that finance short-term debt have a higher ability to improve business operations. This reason can be explained that enterprises on the Vietnamese stock market are small in scale, so the ability to invest in fixed assets is still limited, and small-scale enterprises often find it difficult to invest in fixed assets, and the ability to borrow capital in the long-term credit market, so choosing short-term credit sources is often the choice of enterprises. Businesses should seek funding by equity, or in the case of using debt, they should use short-term debt to help them increase more efficiency.

The estimated coefficient of Size has a positive sign and is statistically significant, which indicates that large-scale firms have higher financial performance than smaller firms. This research evidence confirms the benefits of large enterprises in the market because large enterprises often have large production scale, so they often have low fixed costs, and therefore low product prices, which can create create a

great competitive advantage for large enterprises and help them achieve higher efficiency. This result is consistent with the research objectives of the paper.

The estimated coefficients of liquidity, intangible and age are not statistically significant, that is, the liquidity, intangible value of the business and the age of the business have not yet brought about the financial performance of the business. However, the research results show that the estimated coefficient of tangible has a positive sign and is statistically significant, suggesting that businesses should invest in fixed assets so that they can improve their operations. It is evident that, businesses they want to develop sustainably, they need to constantly invest in fixed assets to help them carry out production and business. Normally, strong enterprises often have large fixed assets and thus they can actively engage in production that create value for society. This result also does not contradict the results of Khalil & Nehme (2023), which argue that female auditors are less inclined towards ineffective audit behavior than male auditors. Study results differ slightly from conclusions such as racially and age-diverse structures have an independent regulatory effect on this purposeful relationship (Ozdemir et al., 2021). However, this is understood to be reasonable when directly related to the financial performance of the company.

## 7. Conclusion

Business is an important entity in the social economy of countries. In order to increase the contribution of enterprises to the economy, enterprises always improve their governance capacity and perfect the audit regime of financial statements as a condition for the enterprise's ability to develop stably. Research on the impact of governance capacity and audit quality on financial performance of enterprises listed on Vietnam stock exchange in the period 2012 to 2021; using regression method on data tables such as Pooled OLS, FEM and REM, and the feasible generalized least squares (FGLS); the study also assesses the possibility of interdependence between listed companies and estimates regression through Driscoll – Kraay standard errors. Moreover, the study also tests the possibility of endogeneity when there is a correlation between error terms and independent variables by the Wu-Hausman test, the research results confirmed that the size of the board of directors has a negative impact on the financial performance of the business, in contrast, the participation of women on the board of directors and the selection of men as CEO has a positive impact on the profitability of the business. The study also suggests businesses should choose a reputable auditing company (such as KPMG, Deloitte, PWC and E&Y) for enhancing the operational efficiency for the business. At the same time, businesses should seek funding by equity, or in the case of using debt, they should use short-term debt to help them increase more efficiency. Research results also confirm the advantage of large enterprises, enterprises investing in fixed assets in the ability to generate profits.

The research results provide theoretical implications, especially that improving corporate governance efficiency has the potential to motivate businesses to operate more effectively, especially improving women's participation and the leadership of men on the Board of Directors. At the same time, the research results also support DeAngelo's (1981a, 1981b) Scholarly Perspectives on Audit Quality theory on effective auditing activities, or the Modigliani & Miller theory on capital use for improving firm performance.

In addition, the research also provides some practical implications for Vietnam and similar economies. Firstly, Vietnam should continue to expand the activities of the board of directors, especially promoting the participation of women and the selection of male CEOs to help businesses effectively. Second, Vietnam should create a legal environment to improve audit quality, especially the participation of foreign auditing companies to improve corporate governance capacity. Third, Vietnam should develop capital markets to help businesses mobilize capital at low costs, thereby improving corporate financial efficiency.

The study has several limitations and suggestions for future research. Firstly, the data for businesses in a typical group (such as VN30 or HNX30) is large enough in the future, future research can have a more comprehensive analysis to evaluate the impact of corporate governance and audit quality on financial performance. Secondly, this study has not evaluated the influence of control variables such as: market structure and economic conditions, and that is a suggestion for future research to more fully

evaluate the impacts of corporate governance. and quality audit to corporate financial performance in the enterprise's position in the market structure and economic impacts. Thirdly, the research has not had a comparison with smaller-sized enterprises to be able to clarify the specific characteristics of the group of large enterprises and the differences compared to the group of smaller-sized enterprises.

## Disclosure statement

The authors declare no competing interests.

## Funding

This research received no external funding.

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## Data availability statement

The dataset analysed during the current study are not publicly available due confidential company data by FiinGroup but are available from FiinGroup ([info@fiingroup.vn](mailto:info@fiingroup.vn)) on reasonable request.

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