THE UNIVERSITY OF DANANG

UNIVERSITY OF ECONOMICS

NGUYEN VAN TRAM

THE INFLUENCE OF CORPORATE GOVERNANCE FACTORS AND QUALITY TO EARNINGS MANAGEMENT OF LISTED COMPANIES IN VIETNAM

SUMMARY OF DOCTORAL THESIS

Da Nang – 2024

The thesis is completed at

UNIVERSITY OF ECONOMICS - THE UNIVERSITY OF DANANG

Supervisors:

1. Assoc. Prof. HOANG TUNG
2. Dr. DO HUYEN TRANG

Reviewer 1: Assoc. Prof. Pham Duc Cuong

Reviewer 2: Assoc. Prof. ha Xuan Thach

Reviewer 1: Assoc. Prof. Nguyen Thi Hong Nga

The thesis shall be defended in front of the thesis defense committee meeting at The University of Da Nang – University of Economics on November 29, 2024

This thesis is available at:

- The National Library of Vietnam;
- The University of Danang - Information Technology and Digital Learning Resource Center;
- The University of Danang – The Library of University of Economics.

CHAPTER 1. INTRODUCTION

1.1. Reasons for choosing the research

For investors, the financial information provided by businesses is an important basis for them to make investment decisions. Among them, profit is the most useful accounting information to reflect the financial strength and prospects of a company (Teoh et al., 1998). Even so, EM (earnings management) can reduce the quality of reported earnings and their usefulness to investment decisions, thereby reducing investor's confidence in the financial statements (Klein, 2002).

Along with that common situation, Vietnamese listed companies have made many serious mistakes in the process of disclosing information on the stock market, especially information related to the company's financial situation. Therefore, there must be rules to guide and control the process of preparing financial statements to improve the quality of financial statements and to ensure that corporate managers disclose financial information openly and transparently. This can be done through the development of an effective CG (corporate governance) framework (Be'dard et al., 2004). Most of the recent rules, guidelines and regulations of countries around the world as well as Vietnam focus on how to improve the quality of CG.

With the above practical context, many studies with the aim of assessing the influence of CG on the level of EM have been carried out in the world as well as in Vietnam. However, most of the studies examining the influence of a few individual CG factors on the EM behavior of managers, there are not many studies that fully combine the three groups of factors (the board of directors, the

supervisory board, ownership structure) into the same research model. Especially, according to the author's knowledge, there has not been any research on the influence of CG quality index on the behavior of EM in listed companies in Vietnam. Most studies examine the effect of CG on accrual-based EM rather than on real EM. Moreover, like other studies in the world, the results of studies in Vietnam on the influence of individual CG factors on EM are still inconsistent. Stemming from theoretical requirements and practical context, the author chooses the topic: *"The influence of corporate governance factors and quality on earnings management of listed companies in Vietnam*" to do the thesis.

1.2. Research objectives

The overall objective of the thesis is to study the influence of CG to EM of the listed companies in Vietnam. Specifically, the thesis aims to assess the general situation of CG, measure the level of EM of listed companies in Vietnam, assess the influence of CG factors and CG quality on EM of Vietnamese listed companies.

1.3. Object and scope of the study

1.3.1. Research object

The research object of the thesis is corporate governance, earnings management and the influence of corporate governance on earnings management of listed companies on Vietnam stock market.

1.3.2. Research scope

- Scope of space: non-financial companies listed on HNX and HOSE.

- Scope of time: from 2014 to 2020.

1.4. Research methods

The thesis uses quantitative research method, specifically, to

test the hypothesis about the influence of CG on EM in Vietnamese listed companies, the author uses multivariate regression analysis method with the support of Stata 14.2.

1.5. Contribution of thesis

Theoretically, this is a pioneering empirical study examining the influence of CG on both individual factors and aggregate quality indexes on the EM behavior of managers in the context of listed companies in Vietnam. Besides, this thesis is one of the few studies that will combine both accrual-based EM and real EM in one study to provide a more comprehensive view. Therefore, the research results have enriched the theoretical basis for analyzing the influence of CG on EM; especially the influence of the CG quality index on EM.

In terms of practice, the research results of the thesis are references for State management agencies, professional associations of accounting and auditing, research institutes and training institutions on accounting majors. At the same time, the findings of the thesis will also assist the listed companies in identifying the elements of CG and effective CG models in performing the function of monitoring managers' behavior and establishing other mechanisms to help reduce the incentives for managers' opportunistic behavior.

1.6. Structure of the thesis

In addition to the list, table of contents, introduction, conclusion, appendix, the thesis is divided into 5 chapters:

Chapter 1: Introduction

Chapter 2: Theoretical basis and research overview,

Chapter 3: Hypothesis and research methods

Chapter 4: Research results

Chapter 5: Conclusion and implications

CHAPTER 2. THEORETICAL BASIS AND RESEARCH OVERVIEW

2.1. Corporate governance

2.1.1. Definition of corporate governance

According to the OECD, “CG is the internal measures for the management and control of a company, relating to the relationships between board of manager, BOD (board of directors) and the shareholders of a company with other stakeholders. CG provides a framework for setting company goals, and defining the means to achieve those goals, as well as for monitoring firm performance.

2.1.2. Roles of corporate governance

The corporate governance framework should ensure timely and accurate disclosure of information about a company's financial position and performance. On that basis, CG helps prevent and overcome imbalances between different interests and needs of a company, and helps minimize the negative impacts of opportunistic behavior of important stakeholders (especially senior management) that can endanger the effective operation of a company. To be able to perform this role well, CG must ensure the effectiveness of internal mechanisms such as the board of directors, audit committee and ownership structure.

2.1.3. Measuring corporate governance

2.1.3.1. *Corporate governance factors*

- *Board of director:* Most studies focused on factors such as: board of directors independence, board of directors size, board of directors meetings, the duality of the chairman and CEO, and financial expertise of BOD.

- *Audit Committee:* The effectiveness of the audit committee is assessed by many factors, such as audit committeeindependence, the expertise of the audit committee, audit committee meetings and audit committee size.

- *Ownership structure:* An effective mechanism to limit EM is the development of an appropriate ownership structure, including managerial ownership, foreign ownership, institutional ownership, state ownership, family ownership and ownership concentration.

2.1.3.2. *Measure according to the quality of corporate governance*

Includes two groups: (i) Overall quality measures from academic researchers such as G-index (Gompers et al., 2003), Gov-Score index (Brown and Caylor, 2006), etc. (ii) Ranking of CG quality created by trading companies such as CGQ of ISS, GMI of Governance Metrics International, TCL index, etc.

2.2. Earnings management

2.2.1. Definition of earnings management

Healy and Whalen (1999) argue that "EM occurs when managers use judgments in financial reporting and in structuring transactions to alter the financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers". In this thesis, the term EM means that managers tend to seek and take advantage of opportunities to adjust earnings by impacting on accruals or economic transactions, in order to for their own benefit.

2.2.2. Earnings management incentives

The incentives that motivate managers to engage in EM behavior include maximizing managers' earnings, avoiding debt

contract breaches, meeting regulations và reducing political costs, meeting analyst forecasts, initial public and seasoned equity offering.

2.2.3. Earnings management techniques

Accural earnings management: through accounting policy choice including keeping expenses for reversal instead of including them in the profit statement, cost capitalization, inventory changes, accelerated depreciation methods, extraordinary expenses for retirement plans, and reduced profits due to future losses.

Real earnings management: managers can change its reported profit by economic transactions such as: (1) accelerating the timing of sales and/or generating unsustainable sales; (2) reduction of discretionary expenditures (research and development costs, advertising, maintenance, staff training, travel, ...) to increase profit margins; and (3) overproduction or increasing production to report lower cost of goods sold.

2.2.4. Earnings management measurement

2.2.4.1. *Model for measuring accural-based earnings management*

Discretionary accruals allow managers to exercise their discretion over accounting and estimates choices, and many studies show that managers using discretionary accruals to implement EM. Many accrual-based models to detect EM are proposed such as Healy (1985), DeAngelo (1986), Jones (1991), Adjusted Jones (1995), Kothari (2005),…

2.2.4.2. *Model for measuring real earnings management*

To determine real earnings management, Roychowdhury (2006) focuses on three methods of profit adjustment and their impact on three factors: cash flow from operating, production costs and discretionary expenses. Roychowdhury (2006) uses the model in

Dechow et al. (1998) to calculate the normal levels of cash flow from operating, production costs and discretionary expenses for each of the firm-year observations. Deviations from normal are extraordinary cash flow from operating, extraordinary production costs, and extraordinary discretionary expenses.

2.3. Background theories

2.3.1. Agency theory

2.3.2. Resource dependence theory

2.3.3. Signal theory

2.3.4. Positive accounting theory

2.4. The influence of corporate governance on earnings management

2.4.1. The influence of CG factors on earnings management

Research on the influence of CG factors on EM has been carried out in many countries around the world, both developed and developing countries. Regarding the model of identifying EM behavior, most of the studies use Jone (1991) model, adjusted Jones (1995) model, Kothari et al (2005) model to measure the accrual-based EM; a few studies use Roychowdhury (2006) model to measure real EM.

Regarding CG factors, a summary of previous studies shows that there are three main groups of CG factors affecting EM, including: BOD's factors, audit committee's factors and ownership structure. However, the full integration of three groups of factors into the same research model is still limited. Most studies usually focus on a group of factors, even some studies only study one or two factors. In particular, studies focused on the independence of BOD and audit committee, and the duality of chairman and CEO. There

are few studies on the impact of audit committee size, expertise of audit committee, state ownership and foreign ownership on EM practices.

Moreover, the results on the direction of influence of CG factors on EM are inconsistent among countries and regions around the world. There are differences in research results between developed and developing countries, between European and American countries and Asian countries, etc. These differences may be due to individual research methods and/or differences in national ownership structures, legal systems, CG regulations, and culture.

2.4.2. The influence of corporate governance quality on earnings management

Most studies examined the relationship between EM and specific CG factors, only a few studies examined the relationship using the CG index. Although using different index, most studies show that high CG quality contributes to limited EM behavior, such as Shen and Chih (2007), Jiang et al. (2008), Abbadi et al. (2016).

2.4.3. Reviews of published studies

Research on the influence of CG on EM has been carried out in many countries around the world; however, the results on the direction of influence of CG factors on EM conflict between countries and regions around the world. In Vietnam, studies about this topic are few and there are some limitations: focus on measuring accural EM rather than real EM; most studies examine the influence of a few individual CG factors on EM behavior of managers, but do not fully combine three groups of factors (BOD, supervisory board, ownership structure) in the same research model; there have been no studies on the influence of the CG quality index on EM of

Vietnamese listed companies, there have not been many domestic studies on the influence of the factors of the supervisory board on EM in Vietnamese listed companies.

CHAPTER 3. HYPOTHESIS AND RESEARCH METHODS

3.1. Research hypothesis

H1: The more members in the BOD, the lower the level of EM.

H2: The higher the proportion of independent members in the BOD, the lower the level of EM.

H3: The higher the proportion of female members in the BOD, the lower the level of EM.

H4: The duality of Chairman and CEO will make the level of EM higher.

H5: The more meetings of the BOD, the lower the level of EM.

H6: The higher the proportion of members with financial expertise in the BOD, the lower the level of EM.

H7: The more members in supervisory board, the lower the level of EM.

H8: The higher the proportion of members with financial expertise in supervisory board, the lower the level of EM.

H9: The higher the managerial ownership percentage, the lower the level of EM.

H10: The higher the state ownership percentage, the lower the level of EM.

H11: The higher the foreign ownership percentage, the lower the level of EM.

H12: The higher the institutional ownership percentage, the lower the level of EM.

H13: The higher the ownership concentration ratio, the lower the level of EM.

H14: The higher the quality of CG, the lower the level of EM.

3.2. Regression model

3.2.1. Model of the influence of corporate governance factors on earnings management

Regression Model 1:

$$DA_{it} = \alpha_0 + \alpha_1 BDsize_{it} + \alpha_2 BDind_{it} + \alpha_3 BDfemale_{it} + \alpha_4 BDdual_{it} + \alpha_5 BDmeet_{it} + \alpha_6 BDexp_{it} + \alpha_7 BSsize_{it} + \alpha_8 BSexp_{it} + \alpha_9 MO_{it} + \alpha_9 SO_{it} + \alpha_{11} FO_{it} + \alpha_{12} IO_{it} + \alpha_{13} BLOCK_{it} + \alpha_{14} LEV_{it} + \alpha_{15} ROA_{it} + \alpha_{16} SIZE_{it} + \varepsilon_{it}$$

Regression Model 2:

$$REM_{it} = \beta_0 + \beta_1 BDsize_{it} + \beta_2 BDind_{it} + \beta_3 BDfemale_{it} + \beta_4 BDdual_{it} + \beta_5 BDmeet_{it} + \beta_6 BDexp_{it} + \beta_7 BSsize_{it} + \beta_8 BSexp_{it} + \beta_9 MO_{it} + \beta_9 SO_{it} + \beta_{11} FO_{it} + \beta_{12} IO_{it} + \beta_{13} BLOCK_{it} + \beta_{14} LEV_{it} + \beta_{15} ROA_{it} + \beta_{16} SIZE_{it} + \varepsilon_{it}$$

In there:

DA_{it} is discretionary accrual variable - representing accrual-based EM. REM_{it} is the sum of abnormal of cash flow from operation, production costs, discretionary expenses - representing real EM.

The group of BOD factors consists: size of BOD (BDsize), independence of BOD (BDind), female members of BOD (BDfemale), CEO duality (BDdual), number of meetings of BOD (BDmeet) and financial expertise of BOD (BDexp).

The supervisory board factor group includes: size of supervisory board (BSsize) and financial expertise of supervisory board (BSexp).

The group of ownership structure factors includes: managerial ownership (MO), state ownership (SO), foreign

ownership (FO), institutional ownership (IO), ownership concentration (Block).

The control variable consists: financial leverage (LEV), return on assets (ROA) and firm size (SIZE).

3.2.2. Model of the influence of corporate governance quality on earnings management

Regression Model 3:

$$DA_{it} = \mu_0 + \mu_1 Gov\text{-}Score_{it} + \mu_2 LEV_{it} + \mu_3 ROA_{it} + \mu_4 SIZE_{it} + \varepsilon_{it}$$

Regression Model 4:

$$REM_{it} = £_0 + £_2 Gov\text{-}Score_{it} + £_2 LEV_{it} + £_3 ROA_{it} + £_4 SIZE_{it} + \varepsilon_{it}$$

In which: Gov-Score is the quality index of CG.

3.3. Measurement of research variables

3.3.1. Measure the dependent variable

3.3.1.1. *Accrual-based earnings management*

Thesis uses the model Kothari et al. (2005) to determine DA, which is the residual of the following model:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \beta_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \beta_2 \frac{\Delta PPE_{it}}{A_{it-1}} + \beta_3 ROA_{it} + \varepsilon_{it}$$

Where: TA_{it}: Total accrual of company i year t, A_{it-1}: Total asset of company i year t-1, ΔREV_{it}: Change in net sales of the company i year t vs year t-1, ΔREC_{it}: Change in company's receivables year t compared to year t-1, PPE_{it}: fixed assets costs, leased fixed assets, investment property of company i year t, ROA_{it}: Return on assets of company i year t, ε_{it}: residual.

3.3.1.2. *Real earnings management*

According to Roychowdhury (2006), to measure the level of real EM, it is necessary to consider the abnormaly of 3 factors: cash flow from operating (Ab_CFO), production costs (Ab_PROD) and

discretionary expenses (Ab_DISEXP). Accordingly, the level of real EM (REM) is calculated by the sum of 3 levels of abnormal according to the following formula:

REM = Ab_CFO*(-1) + Ab_PROD+ Ab_DISEXP*(-1)

In which, Ab_CFO, Ab_PROD and Ab_DISEXP are residuals of the following models:

$$\frac{CFO_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \beta_1 \frac{S_{it}}{A_{it-1}} + \beta_2 \frac{\Delta S_{it}}{A_{it-1}} + \varepsilon_{it}$$

$$\frac{PROD_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \beta_1 \frac{S_{it}}{A_{it-1}} + \beta_2 \frac{\Delta S_{it}}{A_{it-1}} + \beta_3 \frac{\Delta S_{it-1}}{A_{it-1}} + \varepsilon_{it}$$

$$\frac{DISEXP_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \beta_1 \frac{S_{it-1}}{A_{it-1}} + \varepsilon_{it}$$

3.3.2. Measure the independent variable

3.3.2.1. *According to individual factors*

Table 3.1: Measurement corporate governance factors

Factor	Measure
BDsize	Number of directors in the BOD
BDind	Proportion of independent members in the total members of the BOD
BDfemale	Proportion of female members to the total members of the BOD
BDdual	Dummy variable, equal to 1 if the CEO is also the chairman of the BOD, equal to 0 otherwise.
BDmeet	Total number of meetings held by the BOD during the year
BDexp	Proportion of members with financial expertise to total members of the BOD
BSsize	Number of members in the supervisory board
BSexp	Proportion of members with financial expertise to the total members of the supervisory board
MO	Proportion of shares held by the BOD and total shares
SO	Proportion of shares held by the State to the total shares

FO	Proportion of shares held by foreign individuals or organizations to total shares
IO	Proportion of shares held by organizations to total shares
BLOCK	Proportion of shares held by major shareholders (≥ 5%) to total shares

3.3.2.2. *According to the corporate governance quality index*

The author uses the Gov-Score index of Brown and Caylor (2006) to measure the quality of CG. Gov-score is calculated by the sum of equal weights of 51 criteria belonging to 8 groups of factors, including: audit, BOD, charter, director education, executive and director compensation, ownership, progressive practices and state of incorporation. However, there are 12 criteria in the Gov-Score benchmark suite that did not collect. Gov-Score index was measured based on the unweighted method of the remaining 39 criteria.

3.4. Data collection

**** Selection research sample:*** The sample includes 449 non-financial listed companies on Vietnamese stock market from 2014 to 2020.

**** Data collection:*** Data on EM và CG factors are collected from financial statements, annual reports and reports on CG. The CG index are from the annual reports, management reports, resolutions of the general meeting of shareholders, resolutions of the BOD meetings.

3.5. Data processing

- Measuring DA and REM (see section 3.3.1).
- Descriptive statistics for dependent and independent variables.
- Pearson correlation analysis to determine the relationship between independent and dependent variables, between independent variables.

- Multivariate regression analysis:

+ Selecting the appropriate estimation method.

+ Testing the defects of the selected model: multicollinearity, heteroscedasticity and autocorrelation through VIF test, Modified Wald/White test, Wooldridge/Durbin – Watson test.

+ Use the Robust Standard Errors to overcome defects of the model.

CHAPTER 4. RESEARCH RESULTS

4.1. Earnings management and corporate governance at Vietnamese listed companies

4.1.1. Corporate governance at Vietnamese listed companies

Descriptive statistics of CG factors are shown in Table 4.1. It shows that some Vietnamese listed companies have not yet complied with Government's CG regulations, such as the requirements on the percentage of independent members in the BOD, number of annual BOD meetings, the number of members of BOD, financial expertise in supervisory board. In terms of ownership structure, Vietnamese listed companies have a large proportion of private ownership in the ownership structure, low state ownership and foreign ownership, and a high degree of ownership concentration.

Table 4.1: Descriptive statistics corporate governance factors

Factors	Mean	Standard deviation	Min	Max	Obs.
BDsize	5.43	1.1061	3	11	3,143
BDind	0.4449	0.1818	0	0.86	3,143
BDfemale	0.1382	0.1639	0	1	3,143
BDdual	0.2714	0.4448	0	1	3,143
BDmeet	9.28	9.5370	1	170	3,143

BDexp	0.0938	0.1303	0	0.67	3,143
BSsize	2.99	0.4632	0	5	3,143
BSexp	0.2084	0.2666	0	1	3,143
MO	0.2790	0.2376	0	0.90	3,143
SO	0.2032	0.2522	0	0.97	3,143
FO	0.0859	0.1403	0	0.92	3,143
IO	0.2332	0.2892	0	1	3,143
BLOCK	0.5151	0.2119	0	1	3,143

Regarding CG quality, with the sample of 449 Vietnamese companies in 2020, the average CG quality score is 20.95 and ranges from 18 to 25 points. The difference in CG score between companies is not large, showing that the CG quality of Vietnamese listed companies is quite uniform and average on the Gov-Score scale.

4.1.2. Earnings management in Vietnamese listed companies

Descriptive statistics of the variable DA show that the managers of Vietnamese listed companies have implemented accural-based EM and performed in both directions of increasing and decreasing profits. The average value of absolute DA is 8.36%, which proves that the managers of Vietnamese listed companies can adjust profits to increase or decrease on average equal to 8.36% of total assets at the beginning of the year, the maximum value is 66.35% and the minimum value is close to 0% (0.00675%) of total assets.

Table 4.5: Descriptive statistics discretionary accural

Variable	Mean	Standard deviation	Min	Max	Obs.
DA	0.0000	0.1175	-0.4191	0.6635	3,143
Absolute DA	0.0836	0.0826	0.0001	0.6635	3,143

DA < 0	-0.0811	0.0733	-0.4191	-0.0000	1,620
DA < 0	0.0862	0.0914	0.0002	0.6635	1,523

Descriptive statistics of variables representing real earnings management (REM, Ab_CFO, Ab_PROD, Ab_DISEXP) are presented in Table 4.8. Statistical results show that there are 1,685 observations with positive REM with an average ratio of 20.2% of total assets, proving that managers have implemented real EM.

Table 4.8: Descriptive statistics variables representing real earnings management

Variable	Mean	Standard deviation	Min	Max	Obs.
REM	***0.0000***	***0.2915***	***-1.3416***	***1.5689***	***3,143***
REM âm	-0.2334	0.2134	-1.3416	-0.000015	1,458
REM dương	0.2020	0.1765	0.00002	1.5689	1,685
Ab_CFO	***8.80e-11***	***0.1314***	***-0.6259***	***0.4843***	***3,143***
Ab_CFO âm	-0.0952	0.0882	-0.6259	-0.000093	1,612
Ab_CFO dương	0.1002	0.0876	0.000093	0.4843	1,531
Ab_PROD	***8.43e-10***	***0.1570***	***-0.8579***	***1.6844***	***3,143***
Ab_PROD âm	-0.1177	0.1106	-0.8579	-0.000066	1,503
Ab_PROD dương	0.1079	0.1083	0.00015	1.6844	1,640
Ab-DISEXP	***-3.54e-10***	***0.0805***	***-0.2661***	***0.4100***	***3,143***
Ab-DISEXP âm	-0.0450	0.0356	-0.2661	-0.000018	1,993
Ab-DISEXP dương	0.0779	0.0770	0.000028	0.4100	1,150

4.2. Analysis results of the influence of corporate governance factors on earnings management

4.2.1. Correlation analysis results

Correlation analysis results of 4 models all show that the

correlation relationship between the independent variables is very low, there is no multicollinearity between the independent variables.

4.2.2. Regression analysis results

4.2.2.1. *Regression results of model 1 và model 2*

- *Test to choose fit model:* F test, Breusch and Pagan Lagrangia Multiplier test and Hausman test show that FEM estimate is the most suitable for regression model 1 và model 2.

- *Defect testing of the model:* By the defect tests(Modified Wald, Wooldridge và VIF), it shows that model 1 and 2 exists heteroscedasticity and autocorrelation. The author will perform FEM estimation and robust standard errors model to correct these defects.

- *Multivariate regression results*

Tables 4.14 show the results of model regression analysis of the influence of CG factors on accural EM behavior, the coefficient R^2 is 9.18%.

Table 4.14: Results of model 1 - FEM (Robust)

	Coef.	t	P>|t|	Expected
BDsize	-0.0120	-4.27	0.000	-
BDind	-0.0624	-4.70	0.000	-
BDfemale	0.0189	0.95	0.345	-
BDdual	-0.0027	-0.56	0.572	+
BDmeet	-0.0026	-3.74	0.000	-
BDexp	-0.0451	-2.78	0.006	-
BSsize	0.0069	1.95	0.052	-
BSexp	-0.0255	-3.05	0.002	-
MO	-0.0308	-3.00	0.003	-
SO	-0.0522	-4.58	0.000	-
FO	-0.0236	-1.12	0.265	-
IO	-0.0369	-4.49	0.000	-
BLOCK	-0.0221	-1.58	0.115	-
ROA	0.0428	1.04	0.297	?

LEV	0.0167	1.66	0.098	?
SIZE	0.0014	3.02	0.003	?
_cons	-0.2500	-1.69	0.092	
Number of observations	3,413			
R^2	0.0918			
Prob > F	0.0000			

Tables 4.15 show the results of model regression analysis of the influence of CG factors on REM, the coefficient R^2 is 10.45%.

Table 4.15: Results of model 2 - FEM (Robust)

	Coef.	**t**	**P>|t|**	**Expected**
BDsize	-0.0120	-1.59	0.113	-
BDind	-0.1376	-4.71	0.000	-
BDfemale	0.0379	0.88	0.379	-
BDdual	0.0120	1.14	0.254	+
BDmeet	-0.0057	-4.16	0.000	-
BDexp	-0.0806	-2.27	0.024	-
BSsize	-0.0018	-0.24	0.809	-
BSexp	-0.0341	-2.27	0.024	-
MO	-0.0945	-4.79	0.000	-
SO	-0.0941	-4.33	0.000	-
FO	0.0394	0.93	0.355	-
IO	-0.0848	-4.46	0.000	-
BLOCK	-0.0281	-0.86	0.392	-
ROA	0.2541	3.91	0.000	?
LEV	0.1730	3.54	0.000	?
SIZE	0.0179	1.22	0.222	?
_cons	-0.1090	-0.28	0.782	
Number of obs.	3,413			
R^2	0.1045			
Prob > F	0.0000			

Summary of results on the influence of CG factors on accural-based EM and real EM are summarized in Table 4.16.

Table 4.16: Summary of regression results - model 1 and model 2

Factor	Hypothesis	Model 1	Model 2
Size of BOD (BDsize)	-	-	-
Proportion of independent members in the BOD (BDind)	-	-	-
Female member of the BOD (BDfemale)	-	*N*	N
CEO duality (BDdual)	+	*N*	N
Number of meetings of the BOD (BDmeet)	-	-	-
Financial expertise of the BOD (BDexp)	-	-	-
Size of Supervisory Board (BSsize)	-	+	N
Financial expertise of SB (BSexp)	-	-	-
Managerial ownership (MO)	-	-	-
State ownership (SO)	-	-	-
Foreign ownership (FO)	-	*N*	N
Institutional Ownership (IO)	-	-	-
Concentration ownership (Block)	-	*N*	N
Return on assets (ROA)	?	*N*	+
Financial leverage (LEV)	?	+	+
Firm size (SIZE)	?	+	N

Symbols : + : Positive effects ; - : Negative effects ; N: No effect

4.2.2.2. *Regression results of model 3 and model 4*

- *Test to choose fit model:* Through the F test, the author determines that the OLS estimate is suitable for both models of the influence of the CG quality index on DA and REM.

- *Defect testing of the model:* through the defect tests, it shows that model 3 does not violate any assumptions, and regression model 4 has defects with constant variance. The author will perform model 4 regression with OLS and robust standard errors model to overcome this defect.

- *Multivariate regression results:* The results of the

regression model analysis of the influence of CG quality on the accural-based EM are shown in Table 4.17, the adjusted R^2 coefficient is 2.07%. The results show that the variables of CG quality index (Gov-Score) and company size (SIZE) have a significant negative effect on the variable DA; ROA and financial leverage (LEV) do not affect the DA variable.

Table 4.17: Results of model 3 (Pooled OLS)

	Coef.	t	P>|t|	Expected	VIF
Gov-Score	-0.0081	-2.69	0.007	-	1.00
ROA	-0.0357	-0.85	0.397	?	1.23
LEV	-0.0011	-0.06	0.953	?	1.40
SIZE	-0.0055	-2.06	0.040	?	1.18
_cons	0.4059	4.36	0.000		
Number of ob.	3,413				
F(4,444)	3.37				
Prob > F	0.0000				
R^2	0.0295				
R^2 adjusted	0.0207				

Table 4.20 shows the regression model analysis results of the influence of CG quality on real EM, adjusted R^2 coefficient is 9.15%. The results show that there is a statistically significant correlation between CG quality index, return on assets, financial leverage and firm size with REM.

Table 4.20: Results of model 4 theo OLS (Robust)

	Coef coefficient.	t	P>|t|	Expected
Gov-Score	-0.0174	-3.01	0.003	-
ROA	0.5296	4.74	0.000	?
LEV	0.0812	2.14	0.033	?
SIZE	-0.0163	-2.80	0.005	?
_cons	0.9288	5.35	0.000	
Number of ob.	3.413			
F(4,444)	11.39			
Prob > F	0.0000			

R^2	0.0996
R^2 adjust	0.0915

4.3. Discussing research results

Regarding the board of directors, large boards include more independent and specialized members than small boards, thereby making their supervisory activities more effective. The presence of an independent member on the BOD has a negative effect on the EM as measured by DA and REM. The more meetings of the BOD, the better control over the management behavior of managers. The presence of a member with financial expertise in the BOD has a negative impact on the dependent variables DA and REM.

Regarding the supervisory board, the results of the thesis show that when the number of supervisory boards in Vietnamese listed companies increases, their existence does not bring much motivation in limiting the level of accural-based EM; however, the presence of a member with expertise in accounting and finance will help improve the effectiveness of the supervisory board in supervising managers.

Regarding ownership structure, consistent with agency theory, the higher the capital ownership ratio of managers, the higher the capital ownership ratio of state shareholders and institutional shareholders, the lower the level of earnings management.

Firms with high corporate governance quality will contribute to limiting both accrual-based EM and real EM. Good corporate governance mechanisms ensure that managers comply with current accounting standards, increasing the reliability of financial statements.

CHAPTER 5. CONCLUSIONS AND IMPLICATIONS

5.1. Conclusions

To achieve the goal of the thesis, the author proposes 14 hypotheses and builds four formal research models. The sample includes 449 listed companies on the Vietnamese stock market in the period 2014-2020. Fourteen hypotheses were tested using the multivariate regression technique with Stata 14.2. Some conclusions drawn after conducting this research are as follows:

Firstly, all the research objectives of the thesis are realized. (1) The thesis has generally assessed the status of CG and measured the level of EM of listed companies in Vietnam. (2) The thesis has built an empirical research model on the influence of CG factors and the CG quality index on EM in Vietnamese listed companies. (3) The thesis has performed multivariate regression analysis to test the research hypotheses.

Second, all research hypotheses are tested. There are 08 CG factors affecting the level of EM of Vietnamese listed companies. Specifically, the thesis has found a statistically significant negative correlation between the size of the BOD, the percentage of independent members in the BOD, the number of meetings of the BOD, financial expertise of the BOD, financial expertise of the supervisory board, managerial ownership, state ownership, institutional ownership with DA - representing accural-based EM and variable REM – real EM. Regarding the quality of CG, the regression results show that a company with high CG quality will contribute to limiting both accural-based EM and real EM.

5.2. Implications

5.2.1. For listed companies

5.2.1.1. *Board of directors*

The independence of the BOD: This is one of the key issues that need to be improved by Vietnamese companies in order to ensure the objective and independent supervision role of the BOD, creating conditions for the BOD to conduct effective supervision, prevent conflicts of interest and enhance the company's competitiveness.

BOD size: A reasonable BOD structure includes the number and composition of the BOD depending on the needs of the company. In order to establish a perfect board structure, it is necessary to identify the types of board members needed according to the objectives of the company.

BOD meetings: Listed companies need to ensure a reasonable number of BOD meetings, at least 4 times a year, and combine with improving the quality of BOD meetings. Members of the BOD must attend all meetings of the BOD and pay attention to the content of the meeting and have a clear opinion on the issues discussed.

Financial expertise of the BOD : The BOD needs to combine many useful ideas and suggestions for the company's operations from its members through meetings of the BOD, constantly fostering to improve professional qualifications in accounting and finance for members of the BOD, thereby better controlling the process of preparing and disclosing financial statements.

CEO duality: Listed companies need to separate the two functions of chairman and chief executive officer.

5.2.1.2. *Supervisory board*

Listed companies need to ensure that the supervisory board

has members with knowledge and experience in the field of finance - accounting. At the same time, there are necessary skills for control activities such as risk management capacity, core business capacity, and legal compliance supervision.

5.2.1.3. *Ownership structure*

The higher the company's proportion of managerial ownership, state ownership, and institutional ownership, the lower the level of profit management. Thus, an effective mechanism to limit forest management is the development of an appropriate ownership structure.

5.2.2. For the governing body

- In the legal documents, it is necessary to add provisions on the legal status of independent members of the Board of Directors.

- Through the CG Regulation, the Ministry of Finance needs to add specific contents to evaluate the performance of the BOD as well as each member of the BOD.

- It is necessary to ensure strict handling when detecting violations of regulations on corporate governance of listed companies.

- The Stock Exchange needs to evaluate and publicize the results of the assessment of weaknesses and violations in the corporate governance framework of companies.

- Professional associations need to issue detailed guidance documents on information disclosure in order to enhance the level and quality of information disclosure of listed companies.

5.3. Limitations of the thesis and future research directions

5.3.1. Limitations of the thesis

5.3.2. Future research directions

CONCLUSION

The main objective of this study is to examine and evaluate the influence of CG on EM practices in Vietnam. Theoretically, the thesis has assessed in general the status of CG, EM in listed companies in Vietnam. In particular, this study adds to measure CG through the Gov-Score quality index of Brown and Caylor (2006), which has been shortened to suit the current Vietnamese context. Second, this study evaluates the influence of CG on EM. Therefore, the research results have enriched the theoretical basis for analyzing the influence of CG on EM; especially the influence of the CG quality index on EM. Practically, the research results of the thesis are references for State management agencies, professional associations of accounting and auditing, research institutes and training institutions on accounting majors. At the same time, the findings of the thesis will also assist the listed companies in identifying the factors of CG and effective CG models in performing the function of monitoring managers' behavior and establishing other mechanisms to help reduce the incentives for managers' opportunistic behavior.

LIST OF SCIENTIFIC WORKS DISCLOSED

1. **Nguyen Van Tram** (2017). The influence of corporate governance characteristics on profit management: research model orientation in Vietnam, Proceedings of the National Conference on Accounting - Auditing and Vietnam's economy with the industrial revolution 4.0, 811-817; ISBN 978-604-922-593-2.

2 **. Nguyen Van Tram**, Pham Thi Lai (2018). Research on the relationship between audit quality and earnings management behavior of listed companies on the Ho Chi Minh City Stock Exchange, Proceedings of the National Conference on Research and Training in Accounting, Auditing math, 356-370; ISBN 978-604-65-3555-3.

3. **Nguyen Van Tram**, Le Thi Ha, Pham Thi Lai (2020). The influence of board characteristics on earnings management of listed companies on Vietnam's stock market; *Finance Journal*; Term 1, May 2020 (728); 79-81; ISSN 2615 - 8973.

4. **Nguyen Van Tram** (2023). The influence of corporate governance on earnings management of Vietnamese listed companies; *Journal of Accounting and Auditing*; March 2023 (234); 123-128; ISSN 1859 - 1914.