

MINISTRY OF EDUCATION AND TRAINING MINISTRY OF FINANCES

ACADEMY OF FINANCE

PHAM LE NGOC TUYET

**CHANGES IN ACCOUNTING ESTIMATES AND
ERRORS AT THE CONSTRUCTION
AND INSTALLATION COMPANIES LISTED ON
VIETNAM'S STOCK MARKET**

Specialization: Accounting

Code : 9.34.03.01

DOCTORAL THESIS SUMMARY

Hanoi – 2021

The thesis is completed at: **Academy of Finance**

Research Supervisors: Assoc. Prof., Dr. Mai Ngoc Anh

Reviewer 1:

.....

Reviewer 2:

.....

Reviewer 3:

.....

**The thesis will be evaluated at the Thesis Judging
Committee Academy level, at Academy of Finance**

Time.....

**The thesis can be found at the National Library and
Academy of Finance's Library**

PREFACE

1. Rationale

Financial statements are one of the most important source to shareholders, investors and third party. However, financial statements always have potential risks of errors (subjective or objective), distorting financial statement information, affecting the truthfulness and transparency of financial statements, thereby influencing decisions making in business of partners. Shareholders or investors may face information asymmetry leading to bias in making investment decisions due to incorrect, concealed or not fully provided information.

Companies often use a lot of accounting estimates - an approximate value of an item related to financial statements that is estimated in the event that it has actually arisen but has not yet had accurate data or there is no more accurate calculation method, or an actual item has not arisen but has been estimated to prepare the financial statements. However, businesses also use accounting estimates as a powerful tool to manipulate profits. In addition, accounting estimates might not be fully recognised in the financial statements due to the gap between the Vietnam accounting system and the current income tax policy in the recognition of related expenses and income. Companies tend to remove accounting estimates from financial statements and recognies the contents accepted by tax authorities, consequently, leading to unreasonable and illegible accounting data.

In Vietnam, the construction and installation industry is one of the key forces in building material and technical foundations, socio-economic infrastructure, civil and industrial construction throughout the country. However, in the context of increasingly complex standards, difficult and risky business activities, bad debts, slow inventory turnover, real estate market froze, ect. could lead companies to use accounting estimates to manipulate financial statements.

In addition, since the promulgation of Accounting Standards in 2000, there have been a number of studies on this issue in the Vietnam, which have initially helped to identify errors and change accounting estimates. However, this issue is very complicated, especially with the unique characteristics of construction companies, and there are not many studies focusing on theoretical and practical research on errors and changes in accounting estimates at the construction and installation companies listed on the Vietnam's stock market. Therefore, the author chooses the research topic "Changes in accounting estimates and errors at the construction and installation companies listed on Vietnam's stock market" as the research topic for his doctoral thesis.

2. Literature review

2.1 Researchs related to errors

W. R. Kinney (1979) focused on detecting errors by collecting customer data from 7 auditing firms with clients with revenue from 5-10 million USD. As the result of research, there are 25 accounting accounts with material errors.

Nguyen Cong Phuong, Nguyen Trong Hien, Nguyen Manh Cuong (2018) researched rrors in information disclosure in financial statements. The research also showed the situation of errors in financial statements according to important criteria such as profits and assets.

2.2 Researchs related to accounting estimates and change in accounting estimates

Research of Mai Ngoc Anh (2012) shows general result of accounting estimates and methods to determine each estimate specified in International Auditing Standards (ISA), International Financial Reporting Standards (IFRS) and principles of accounting. American Accounting Standards (US GAAPs) from which to provide relevant experiences for Vietnam. The topic also studies accounting standards and system on accounting estimates and methods to determine problems, assesses advantages and disadvantages and solution.

Dang Thi Hong Ha (2017) systematized the basic theories of accounting estimate, including some basic provisions at construction and installation companies: Content, characteristics of provisions and provisions for property loss; Accounting basis, accounting type and accounting principles govern the formation of provisions.

Nguyen Thi Ngoc Diep (2020) researched on "Factors affecting the application of Vietnamese accounting standards by small and medium-sized enterprises in Ho Chi Minh City" in order to determine the factors affecting the application of Vietnamese accounting standards of small and medium enterprises in Ho Chi Minh City.

2.3. Researches about factors affecting the process of errors and change in accounting estimate

(1) *Company size*: Based on the research of Agrawal (2005), there is no relationship between firm size and error, meanwhile Larcker (2007) showed a negative relationship. On the contrary, Watts & Zimmerman (1978), Perez (2004) pointed out that large-scale companies will tend to comply with regulations and disclose more voluntary information to protect their reputation and avoid government interference and other litigation activities.

(2) *Audit company*: Research by Nguyen Cong Phuong and Lam Xuan Dao (2016), Tran Thi Giang Tan (2016) shows that there is no relationship between errors and audit firms. In contrast, Farber (2005) has shown that errors

caused by weak corporate governance have a relationship with less use of Big4 audit firms.

(3) *Independence of the Chairman of the Board of Directors*: Companies with a manager, concurrently Chairman of the Board of Directors will tend to hide mistakes that are difficult for other members to detect. Agrawal and Chadha (2005) found a positive association between fraud in income.

(4) *Proportion of independent board members*: According to Yanesari (2012), if the members of the board of directors are all involved in the management or have relatives involved in managing the company, it is a high possibility that the information will be concealed to maximize the individual benefits and ignore the interests of shareholders or other investors.

(5) *Experience and qualifications of accountants*: Daniel Zeghal & Mhedhbi (2006) supposed that accountants will properly comply with regulations on applying accounting policies or other legal regulations if they are well-educated with practical knowledge and experience.

(6) *The company's level of information technology application*: The level of application of information technology in processing information about errors and changes in accounting estimates is a factor that is not inherited from the referenced studies. However, the author believes that a high level of information technology application will have a positive impact on compliance in processing information about errors and changes in accounting estimates.

(7) *The level of interest and awareness of managers*: According to Page (1984) and Collis & Jarvis (2000), business owners often prioritize the declaration and fulfillment of tax obligations over compliance with accounting standards, thus affecting the quality of financial statements.

(8) *Consulting from independent parties*: The advice from professional organizations has a great influence on compliance with accounting regulations, systems and standards. The independent parties could be the association of certified public accountants, audit firms, etc.

(9) *Pressure from Tax authorities*: Thuan (2016) supposed that tax pressure is conceptualized as pressure from tax authorities to make enterprises apply tax regulations when processing information in financial statements. According to Alm & McKee (1998), companies are often afraid of the possibility of being fined or affecting their reputation, thus forcing them to comply with tax policies rather than comply with other policy.

2.4. Review of the previous researchs

After studying some relevant domestic and foreign research on errors and changes in accounting estimates, some drawn conclusions as below:

- The research on compliance in processing errors and changes in accounting estimates in Vietnam construction and installation companies has not been carried ever.

- The reality of compliance in processing errors and changes in accounting estimates in Vietnam construction and installation companies will not be inherited from the previous domestic and foreign studies.

- Each research discovers the influencing factors which might not be applied in other countries.

- The study of compliance in processing errors and changes in accounting estimates in Vietnam construction and installation companies is not duplicated by previous studies. The thesis will use both qualitative and quantitative methods to solve the problem.

2.5. Research gap

Firstly, Currently, there have been no studies on errors and changes in accounting estimates at the construction and installation companies listed on The Vietnam's stock market.

Secondly Vietnam due to the different geography and the signature of socialist-oriented market economy, the factors inherited from previous study could not be applied.

Thirdly, research on errors and changes in accounting estimates as well as affecting factors at listed construction and installation companies has only been conducted at master thesis, at companies listed on HOSE or HNX. Therefore, more deeply studies should be carried at the whole Vietnamese stock market to supplement more empirical evidence on determining factors relating to the compliance in processing errors and changes in accounting estimates.

3. The objectives of thesis

Overall objectives of thesis:

- Researching identification, process, disclosure of errors and changes in accounting estimates in theory and practice.

Specific objectives of thesis:

- Research current International Financial Reporting Standards (IFRS), Vietnamese accounting standards and Regulations on errors and changes in accounting estimates, and evaluate the current status of identification, process and disclosure of errors and changes in accounting estimates at construction and installation companies, thereby drawing the advantages, limitations and causes.

- Determine the affecting factors of the compliances with processing errors and changes in accounting estimates at constructions and installation companies listed on the Vietnam's stock market.

– Propose some recommendation to enhance the compliance with errors and changes in accounting estimates.

4. Research question

Question 1: Are there any theoretical opinions on identification, process and disclosure of errors and changes in accounting estimates?

Question 2: How do the construction and installation companies listed on the Vietnam's stock market currently identify, process and disclose the information about errors and changes in accounting estimates?

Question 3: Which factors do affect the level of compliance with information processing (identification, processing and disclosure) of errors and changes in accounting estimates?

Question 4: What are the solutions to enhance the compliance in information process (identification, processing and disclosure) about errors and changes in accounting estimates at the construction and installation companies listed on the Vietnam's stock market?

5. The Object and Scope

Research object

This thesis studies the errors and changes in accounting estimates at the construction and installation companies listed on the Vietnam's stock market.

Research scope

Financial statements of construction and installation companies listed on HNX and HOSE for a period of 5 years from 2015-2019.

6. Research framework and process

Diagram 1: Research framework

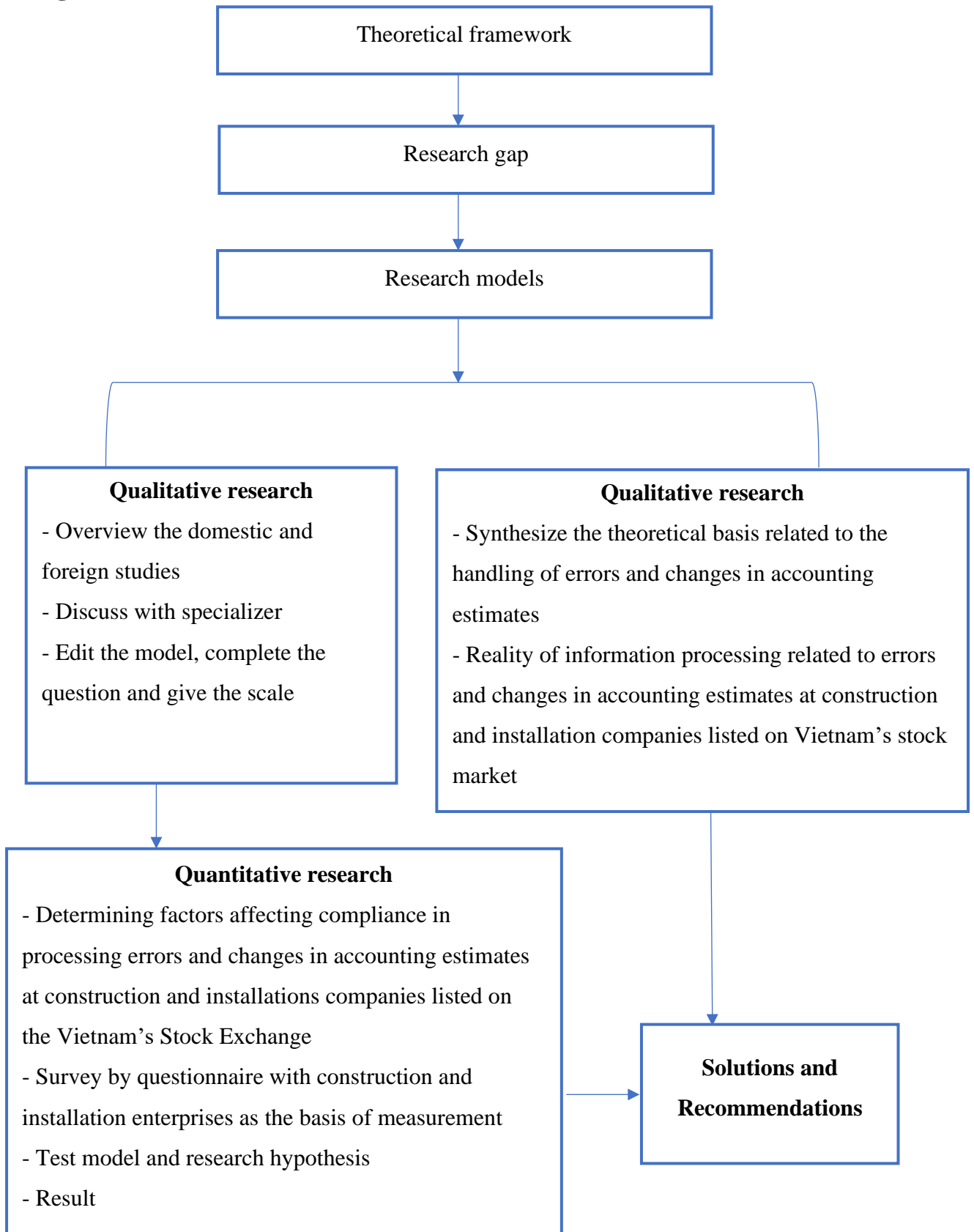
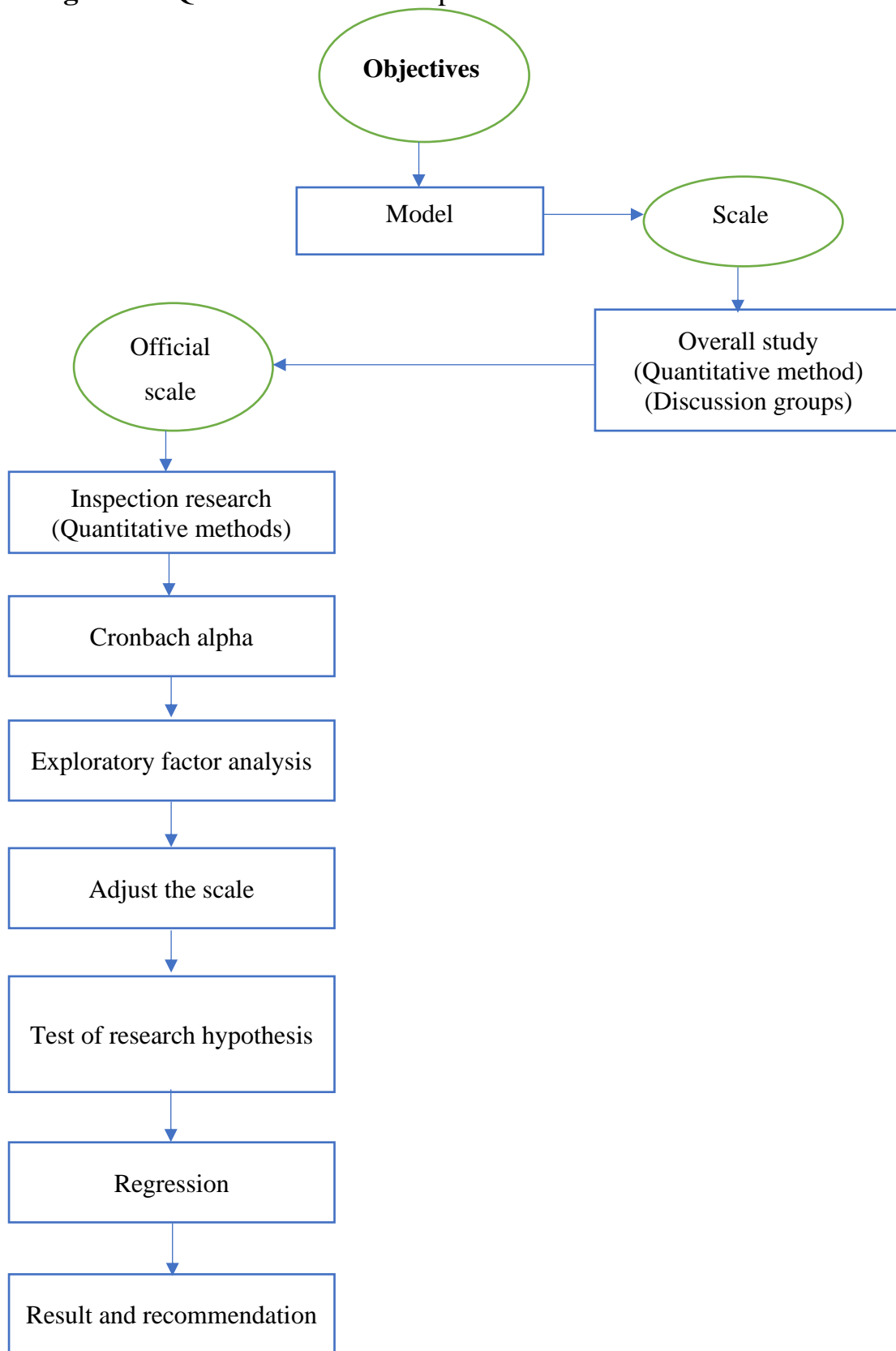


Diagram 2: Quantitative research process



7. Methodology

7.1. Data collection

Primary data: Subjective approach and data collection methods include questionnaires, surveys, interviews, etc. The respondents to the questions or forms must be people directly engaged in corporate accounting, expert.

Secondary data: Secondary data is provided by Vietstock including the audited (consolidated) financial statement comparing with unaudited financial statement (consolidated) Quarter IV.

7.2. Data processing methods

This study applies both qualitative and quantitative research. Specifically:

- Quantitative method
 - + Studying domestic and foreign researches to identify factors affecting compliance in processing errors and changes in accounting estimates.
 - + Group discussion of 13 people, who are knowledgeable and have practical experience about the construction and installation companies listed on the Vietnam's stock market (the expert criteria including: experienced university lecturers, chief accountant, general accountant...).
- Quantitative method: From the research results of the qualitative research method, the author continues to the scale and test through surveys and interviews.

Research tools include: Survey questionnaire, Interview questions, SPSS software.

8. Thesis contribution

Theoretical aspects:

- Systematize the theoretical basis of accounting standard on errors and changes in accounting estimates.
- Complete the scale of compliance with information processing and identify 9 factors affecting the level of compliance in processing errors and changes in accounting estimates.

Practical aspects:

- This thesis is a valuable reference in evaluating the compliance with Vietnamese accounting standards in general and VAS 29 in particular.
- This thesis supports reader, investors, and other third parties to evaluate the compliance in processing errors and changes in accounting estimates at listed construction and installation companies.

9. The structure of thesis: Chapter 1: Basic theoretical issues on errors and changes in accounting estimates at the construction and installation companies; Chapter 2: Reality of errors and changes in accounting estimates at

the construction and installation companies listed on Vietnam's stock market; Chapter 3: Completing the accounting processing of errors and changes in accounting estimates at the construction and installation companies listed on the Vietnam's stock market.

CHAPTER 1: BASIC THEORETICAL ISSUES ON ERRORS AND CHANGES IN ACCOUNTING ESTIMATES AT THE CONSTRUCTION AND INSTALLATION COMPANIES

1.1 Overview of errors and changes in accounting estimates

1.1.1 Overview of errors

1.1.1.1 Definition of errors

Edwin Hardin Sutherland (1883-1950)- a well-known American sociologist for White Collar Crime- a non-violent, business-related crime that often involves money, crime for self-benefit.

According to the International Accounting Standard 08 (IAS 08)- Accounting policies, changes in accounting estimates and errors: "Errors may arise from the recognition measurement, presentation or disclosure of items in the financial statements".

According to Vietnamese accounting standard 29 (VAS)- Changes in accounting policies, accounting estimates and errors: Errors may occur as a result of measurement, calculation, omission, mispresenting, and fraud.

Within the research scope of the thesis, it is consistent that errors include fraudulent content and do not separate the two contents based on intentional or unintentional factors.

1.1.1.2 Definition of errors in financial statements

Theo R K Elliot; J J Willingham; Peat, Marwick, Mitchell (1980): Financial statement fraud is the deliberate material misstatement and presentation of financial statements, resulting in loss to investors and creditors.

According to Vietnamese Accounting Standard 29 (VAS 29)- Changes in accounting policies, accounting estimates and errors: "Errors may occur in calculations, incorrect application of accounting policies, omission, misinterpreting and fraud". Errors are considered material if they could significantly distort the financial statements, affecting the economic decisions of users of the financial statements.

Therefore, errors in the financial statements might imply fraud, which can arise from data collection or processing or omissions or inaccurate accounting estimates or misapplications of standard policies thereby affecting the accuracy and truthfulness of the financial statements.

1.1.1.3 Characteristics of errors

Company might reduce profit to avoid the company income tax or increase the profit. According to the American Association of Fraud Investigator (ACFE), some errors could be specified as increasing/decreasing profits, recognizing inadequate liabilities and expenses, record wrong financial period, disclosing inadequate information, increasing/decreasing revenue.

1.1.2 Overview of accounting estimate

1.1.2.1 Accounting estimate

An accounting estimate is an approximate amount of the items for which no precise means of measurement are available. In fact, the use of accounting estimate with reasonable reliability is necessary for the following reasons:

Firstly, although accounting estimates are based on subjective professional judgments and contain potential risks, there is currently no more feasible method for enterprises to apply.

Secondly, accounting estimates could make the items in the financial statements more accurate.

1.1.2.2 Change in accounting estimate

A change in accounting estimates is an adjustment of the carrying amounts of an asset or a liability, or the amount of the periodic consumption of an asset that results from the assessment of the current status and of expected future benefits as well as the obligations relating to that asset and liability.

1.1.2.3 Classification of accounting estimates

The classification of accounting estimates will be associated with different classification criteria such as economic content and by occur time.

1.1.2.4 Accounting estimate approaches: the direct comparison approach, adjusted comparative method, collection method, regression method.

1.1.2.5 Accounting estimates in financial statements

Accounting estimates in financial statements include fixed asset depreciation, provision for loss assets (provision for bad debts, provision for devaluation of inventories, provision for payables, provision for warranty, onerous contracts.

1.1.3 Effects of errors and changes in accounting estimates in corporate financial statements

The purpose of financial statements is to provide true and fair view about statement of financial position, income statements, cash flow statements. Therefore, errors whether occurred by mistake or intentional fraud, might have potential risks for investors, businesses...

1.2 Principles of processing errors and changes in accounting estimatesz

1.2.1 Principles of processing errors

Identification of errors: Errors may arise from the recognition, valuation, presentation and disclosure of items in financial statements. Errors include material and non-material misstatements.

Processing of errors: A prior period errors should be corrected by retrospective adjustments unless it is impracticable to determine either the period-specific effects or the cumulative effects of the errors; the enterprise should restate the opening balances of assets, liabilities and equity of the earliest period (can be the current period) for which retrospective restatement is practicable.

Disclosure of errors: the presentation and disclosure of errors as well as their effects in financial statement must be clearly stated so that the reader could have true and fair view before making decision.

1.2.2 Principles for processing changes in accounting estimates

Identification of changes in accounting estimates

Changes in Accounting Estimates result from new information are not corrections of errors. If it is difficult to distinguish between a change in an accounting policy and a change in an accounting estimate, the change is treated as a change in an accounting estimate.

Processing of changes in accounting estimates

Prospective adjustment of the effect of a change in an accounting estimate means that the change is applied to transactions, other events from the date of the change in estimate. A change in an accounting estimate may affect income statement of the current period or income statement of both the current and future periods.

Disclosure of changes in accounting estimates

Where an enterprise recognizes changes in accounting estimates in a fiscal year, it is necessary to disclose and present relevant information. Accordingly, the enterprise is required to disclose the nature and value of any change in accounting estimates that affects to the current period or is effects expected to the future periods unless it is impracticable to determine.

1.3 Characteristics of construction and installation companies affecting on errors and changes in accounting estimate

Firstly, construction and installationn companies' products are known as civil construction, bridges, roads, infrastructure, houses, electrical construction, etc.). Characteristics of the products normally are individuals, large scale, great value and complex techniques, etc.

Secondly, construction and installation products have a fixed nature, associated with the place of production with the place of product consumption, Finished products will not be stored at warehouse for management like other.

Third, construction and installation products are often carried out outdoors, subject to great impacts from natural factors, condition, climate...

Fourth, construction and installation products have the characteristics of a long period, so enterprises often engage to risks oneous contracts.

1.4 Theoretical backgrounds for influence factors

Some theoretical backgrounds are applied to thesis: Signaling theory, Positive accounting theory, psychological theory.

CONCLUSION OF CHAPTER 1

Chapter 1 presents the theoretical backgrounds of errors and changes in accounting estimates as well as their effects in financial statements. In addition, Chapter 1 outlines some characteristics of the companies that affect errors and changes in accounting estimates. Besides, Chapter 1 also synthesizes the background theories identifying some factors affecting compliance in error processing and changes in accounting estimates.

CHAPTER 2: REALITY OF ERRORS AND CHANGES IN ACCOUNTING ESTIMATES AT THE CONSTRUCTION AND INSTALLATION COMPANIES LISTED ON VIETNAM'S STOCK MARKET

2.1 Overview of construction and installation companies listed on Vietnam's stock market

2.1.1 Overview of construction and installation industry, companies listed on Vietnam's stock market and products

Construction and installation industry: The construction and installation industry is the prerequisite for other industries to develop. During more than 30 years since the reform and renovation, Vietnam construction and installation industry has achieved an average growth of 8.8% per year, made great strides in the direction of modernity, and met the market demand with increasingly advanced technology.

Construction and installation companies listed on Vietnam's stock market: There are currently 118 construction and installation companies listed on Vietnam's stock market (account for about 19% listed companies), including 49 companies listed on HOSE and 69 ones listed on HNX

2.1.2 Classification of construction and installation companies listed on Vietnam's stock market

Construction and installation companies would be classified by listing year, company size and charter capital.

2.1.3 Management characteristics of construction and installation companies listed on Vietnam's stock market

The construction and installation companies listed on Vietnam's stock market are generally organized and divided into a-3-level (Company-Enterprise-Team), or a-2-level model where the company has only production teams and the groups.

2.1.4 Accounting and financial characteristics of construction and installation companies listed on Vietnam's stock market

Accounting characteristics

The recognition of revenue in the companies could be differed from others. Particularly, the revenue of other products could be determined and recognized right after the product has been sold. However, construction and installation companies' revenues, expenses and profits could only be recognized in two ways as follows: identifying revenue and expected profits, then determining the incurred costs, or identifying expenses and expected profit before determining the revenues.

Financial characteristics

Working capital in the companies accounted for a large proportion of total capital for normal production and business activities while equity is only about 5-20% of total capital. Besides, at construction and installation enterprises, under-table stuff is quite common leading to the quality of works.

2.2 Reality evaluation of errors and change in accounting estimate in financial statements of construction and installation companies listed on Vietnam's stock market

2.2.1 Reality identification, processing and disclosure of errors in financial statements of construction and installation companies listed on Vietnam's stock market

2.2.1.1 Identification of errors at the construction and installation companies listed on Vietnam's stock market

The difference between audited and unaudited financial statements might not be the basis to confirm the presence of fraud. However, it could be a prove of manipulating financial statements and give false information to readers.

Table 1: Statistics of listed construction and installation companies with errors in profit after CIT

Audited and unaudited financial statements	2015		2016		2017		2018		2019	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
1.Difference	76	70%	89	75%	90	73%	97	80%	85	72%
Unaudited FS is higher	50	46%	49	41%	58	47%	56	46%	49	42%
Unaudited FS is higher	26	24%	40	34%	32	26%	41	34%	36	31%
2.Unchanged	32	30%	30	25%	33	27%	25	20%	33	28%
Total	108	100%	119	100%	123	100%	122	100%	118	100%
3.Calculation error	1		1		2		2		4	

(Source: Author)

(1): number of companies (2): proportion

This change may be due to the fact that the business gives higher or lower profits than the audited figures. Companies with profit margin errors account for a relatively high proportion, hovering around 74% of the total number of construction and installation enterprises listed on the Vietnam's stock market.

Table 2: Scale of profit error, in case data unaudited financial statements are lower than the audited ones'

(Unit: Million dong)

Criterion	2015	2016	2017	2018	2019
Median of profit error	228	357	382	300	169
Minimum of profit error	4	0	0	0	0
Maximum of profit error	43.761	15.265	50.446	2.560	5.816
Total companies	26	40	32	41	36

(Source: Author)

Table 3: Scale of profit error, in case data of unaudited financial statements are lower than the audited ones’

(Unit: Million dong)

Chỉ tiêu	2015	2016	2017	2018	2019
Total amount of profit errors	-144.379	-297.516	- 128.914	-243.937	-250.176
Median of profit error	-648	-777	-549	-408	-470
Min of profit error	-69.769	-65.433	-30.531	-104.312	-16.340
Max of profit error	0	0	0	-1	0
Total companies	50	49	58	56	49

(Source: Author)

The Tables 2 and 3 shows that the data before and after the audit have significant changes and differences. Some errors can be identified and explained as follows:

Firstly, errors could be risen due to calculation errors or omission of transactions.

Secondly, errors due to inappropriate assessment and calculation of the provisions.

Thirdly, construction and installation enterprises listed on the stock market do not make the provisions.

Fourthly, construction and installation enterprises tend not to make provision for onerous contracts and provision for loss of assets.

Fifthly, construction and installation enterprises could apply improper provisions due to misunderstanding the regulations and standards; or might not update new regulations.

Sixthly, construction and installation enterprises might revert all amounts of provision.

2.2.1.2 Processing the errors at the construction and installation companies listed on Vietnam’s stock market

With the errors of the current period, 100% of enterprises choose to correct errors before publishing and this data will not be detailed and disclosure financial statements in the notes section. The errors detected in the previous period will be adjusted in financial statements.

2.2.1.3 Disclosure of the errors at the construction and installation companies listed on Vietnam’s stock market

As the result, 80,5% of enterprises fully disclose information about errors and other information in accordance with Accounting Standard 29. According

to the in-depth interviews with accountants, one fifth of chief accountants that there was a situation where errors in the previous period were handled in a way that was corrected directly into the bookkeeping system and did not disclose.

2.2.2 Reality identification, processing and disclosure of change in accounting estimate in financial statements of construction and installation companies listed on Vietnam's stock market

2.2.2.1 Identification of change in accounting estimate at the construction and installation companies listed on Vietnam's stock market

Firstly, some enterprises change their accounting estimates in the fiscal year to reach the expected profit or loss, not because of new experience or new information.

Secondly, according to the survey data of the construction and installation companies listed on Vietnam's stock market for a period of 5 years from 2015-2019, the data of provisions has significant changes between unaudited and audited financial statements as below:

Table 4: The data of the provisions between unaudited and audited financial statements

Audited and unaudited financial statements	2015			2016			2017			2018			2019		
	Lower	Higher	Unchanged	Lower	Higher	Unchanged	Lower	Higher	Unchanged	Lower	Higher	Unchanged	Lower	Higher	Unchanged
1. Provision for devaluation of stocks	2	6	100	4	3	112	4	2	117	3	1	118	4	1	113
2. Provision for short-term bad debt	32	15	61	33	8	80	35	15	73	9	1	112	20	8	90
3. Provision for devaluation of inventories	10	6	92	10	3	108	3	2	118	2	2	118	6	1	111
4. Provision for long-term bad debt	1	0	107	4	2	115	1	4	118	2	2	118	1	2	115
5. Provision for long term investment devaluation	4	10	94	10	11	100	15	6	102	9	8	105	0	0	118
6. Provision for short-term payables	0	0	108	0	0	121	0	0	123	0	0	122	0	0	118
7. Provision for long-term payables	0	0	108	0	0	121	0	0	123	0	0	122			118
Total companies	108			119			123			122			118		

2.3 Evaluating the reality of processing errors and changes in accounting estimates in financial statements at the construction and installation companies listed on Vietnam's stock market

2.3.1 The advantages

The accounting standards and legal framework on accounting is gradually improved to meet the needs of Vietnam's development and integration. The Ministry of Finance has been researched, amended, supplemented and promulgated accounting standards, gradually approached international accounting standards and was suitable with reality in Vietnam. Accounting Standard 29 on changes in accounting policies, change in accounting estimates and errors provides guidance to identify, process and disclose errors in financial statements.

2.3.2 The limitations

– Limitations in processing errors:

Firstly, many enterprises have not properly classified errors to choose and apply compatible processing methods. The errors are usually processed by correcting directly in the accounting books when the errors are detected.

Secondly, there is still a clear disparity in profit between audited and unaudited financial statements

Thirdly, some companies still confuse when preparing financial statements for accounting and tax purposes.

Fourthly, the disclosure and note of errors in financial statement are still limited, leading to a decrease in the transparency and comparability of accounting information.

– Limitations in processing changes in accounting estimates

Firstly, construction and installation enterprises still confuse between changes in accounting estimates and changes in accounting policies.

Secondly, the companies might change accounting estimates to reach expected profits rather than new experience or new information.

Thirdly, the companies only provide the basis for recognition, valuation, methods... rather than the own assessment for the change.

2.3.3 The cause of the limitations

– Due to the limitation of accounting standards, regulations to errors

Firstly, the accounting standards still use abstract and general terms, causing difficulties for accountants to apply.

Secondly, the manipulation of financial statements is also caused by weak sanctions

– Due to the limitation of accounting standards, regulations to change in accounting estimate

Firstly, the accounting standards still use abstract and general terms, causing difficulties for accountants to apply.

Secondly, the recognition and determination of provisions are currently tended to base on tax policies rather than the situation of the companies.

Thirdly, the estimation methods are currently the simplest one without the comparison with market price.

Fourthly, the absoluteization of the historical cost principle in the evaluation and measurement of items is also a weakness in the determination and recognition of accounting estimates.

Fifthly, the Vietnamese accounting and auditing standard systems are still lacks many standards, regulations, and specific guidelines from the authorities.

2.4 Factors affecting the level of compliance in identifying, processing and disclosing errors, changes in accounting estimates of construction enterprises listed on Vietnam's stock market

2.4.1 Research hypothesis

The thesis indicates 9 hypotheses about factors affecting the level of compliance in processing errors and changes in accounting estimates at listed companies, as follows: (1) Company size; (2) Auditing firm; (3) The independence of the Chairman of the Board of Directors; (4) Proportion of independent board members; (5) Experience of accountants; (6) Applying technologies for management; (7) Care and awareness of managers; (8) Advisory from independent organization; (9) Pressure from tax authorities.

2.4.2 Research model

The thesis uses descriptive statistics to analyze the factors affecting the compliance in processing errors and changes in accounting estimates. Descriptive statistics include mean, median, mode...

2.4.3 Research scale

The scale is adjusted to suit the research situation in Vietnam. Scale level through regression model, research using Likert scale (interval) 5. The scale is based on accounting standards and the results of group discussion with experts.

2.4.4 Data evaluation

2.4.4.1 Description of the companies

The statistical description of the listed construction and installation enterprises from 2015-2019, the survey sample includes 118 companies with 110 large ones, accounting for 93,2% and 8 medium ones, accounting for 6,8% of whole samples. The number of listed construction and installation companies choosing audit firms other than Big4 accounted for 82,2% with 97 companies, while only 21 companies chose Big4 with a rate of 17,8%. Regarding to the

independence of the Chairman, up to 73,7% of companies have the concurrent positions, only 31 companies out of 118 (accounting for 26,3%) have a non-concurrent chairman.

2.4.4.2 Cronbach alpha

The thesis uses a scale using Cronbach's Alpha coefficient to analyze and preliminary assess the reliability when measuring 5 observed variables: Testing the reliability of the scale for the factor Experience and professional qualifications of accountants (KNTDKT); Information technology applications (UDCNTT); The level of interest and awareness of managers (NQTQT); Consulting opinion (YKTV); Pressure from tax authorities (ALTT). Results: all variables are reliable when Cronbach's Alpha is greater than 0,6 and the correlation coefficient of the total variables must be greater than 0,3.

2.4.4.3 Exploratory factor analysis

2.4.4.3.1 *Exploratory factor analysis for independent variables*

Factor analysis with observed variables of independent variables showed that the analysis achieved reliability with the KMO value = 0,732 > 0,5 and the extracted variance = 71,80% greater than 50%. This proves that these scales explain well the measurement of information processing compliance.

2.4.4.3.2 *Analysis for the dependent variable*

When performing factor analysis indicates the observed variables that ensure the reliability for measurement of dependent variable TT with the KMO = 0,674 value greater than 0,5 and the extracted variance = 69,02% greater than 50%. The analysis result for the dependent variable show that there is 1 factor created similar to the original hypothesis.

2.4.4.4 Correlation analysis. Except for the pressure from tax authorities, the independent variables are all correlated with the dependent variable, so the analysis with all the independent variables is appropriate.

2.4.4.5 Regression analysis

From the analysis results, The regression model is as below:

$$TT = 1.06 + 0.31 \text{ QMDN} + 0.24 \text{ CTKT} + 0.34 \text{ DLCTHDQT} + 0.25 \text{ TVHDQTDL} + 0.23 \text{ KNTDKT} + 0.18 \text{ UDCNTT} + 0.13 \text{ NQTQT} + 0.14 \text{ YKTV} - 0.13 \text{ ALTT}.$$

CONCLUSION OF CHAPTER 2

Chapter 2 overviewed the general activities of construction and installation companies listed on Vietnam's stock market. In addition, the reality of identification, processing and disclosure of errors and changes in accounting estimates are also researched carefully. The author also proposes a model to evaluate the factors affecting the compliance of identification, processing and

disclosure of errors and changes in accounting estimates of construction and installation companies listed on the Vietnam's stock market.

CHAPTER 3: COMPLETING THE ACCOUNTING PROCESSING OF ERRORS AND CHANGES IN ACCOUNTING ESTIMATES AT THE CONSTRUCTION AND INSTALLATION COMPANIES LISTED ON THE VIETNAM'S STOCK MARKET.

3.1 Development orientation of construction and installation industry

The development of the industry will tend toward the sustainability by mastering new technologies and investment plans. Step by step research, apply science and master new technologies on environmentally friendly building materials, construction technology of works; mastering design, construction and installation technology and participating in nuclear power plant projects with a value of 30-40% of the total construction and installation value...

3.2 Principles for completing the processing errors and change in accounting estimate at construction and installation companies

Firstly, completing the accounting processing of errors and changes in accounting estimates must ensure comprehensiveness and uniformity.

Secondly, completing the accounting processing of errors and changes in accounting estimates must be consistent with the diversity and characteristics of the technical and managerial organization of the companies.

Thirdly, it should be easy to understand, apply and check.

3.3 Some solutions to improve accounting processing of errors and changes in accounting estimates in financial statements of construction and installation companies listed on Vietnam's stock market

3.3.1. Some solutions to improve accounting processing of errors in financial statements of construction and installation companies listed on Vietnam's stock market

3.3.1.1. Completing the identification technique of the error

Firstly, as the result of research, 9/72 (12.5%) construction and installation companies omitted transactions, the companies need to strengthen the review at all stages in each period, ensure arising transactions are completely recognized, accurately reflected in the financial statements.

Secondly, in fact, some companies still ignore to recognize some provisions or take advantage of accounting estimate to manipulate the financial statements. The managers of the companies should be aware full record and disclosure of information is also a preventive step to avoid related legal problems in the future.

Thirdly, in order to limit errors caused by assessment and calculation of some important provisions used at construction and installation companies, several solutions are given for each provision such as provision for bad debts; provision for warranty; Provision for devaluation of fixed assets...

Fourthly, construction and installation companies need to assess, establish and apply their own materiality in accordance with the characteristics of their company.

Fifthly, in order to limit the potential risks and errors, the accountants are required to strengthen tests of controls and substantive tests for the items on the financial statements.

3.3.1.2. Completing the procedure of processing errors

Enterprises need to map out how to recognize and adjust accounting for errors.

3.3.1.3. Completing the disclosure

The companies are required to disclose the information of financial statement completely and timely so as to support investors, shareholders and third parties to make the decisions and minimize the loss (if any).

3.3.2. Some solutions to improve accounting processing of change in accounting estimate in financial statements of construction and installation companies listed on Vietnam's stock market

3.3.2.1. Completing the identification technique of the change in accounting estimate

Firstly, companies could map out each step and each content to avoid the confusion between changes in accounting estimates and changes in accounting policies.

Secondly, the companies' managers and accountants should periodically evaluate the established basis and method of determining the accounting estimates.

Thirdly, to ensure that accounting estimates are fully recorded, the management and accountants need to evaluate the accounting problems associated with the characteristics of the business operations of the entity.

Fourthly, the managers and accountants need to strengthen the implementation of tests of controls of accounting estimates (re-evaluating the basis, evaluating control procedures and calculating accounting estimates) and substantive testing (substantive analysis procedures and detailed tests)

3.3.2.2. Completing the procedures for change in accounting estimate

For changes in accounting estimates, prospective application and recognition in the income statement will be applied for the period of change if

the change affects only the current period or the period in which the change is made or subsequent periods if the change affects these periods.

Companies could use the estimation models to base their accounting estimates with higher reliability such as: Regression model, Point and interval estimation model, Discounted Cash Flow (DCF)...

3.4 Recommendations to implement solutions to improve accounting processing of errors and changes in accounting estimates in financial statements of construction and installation companies listed on Vietnam's stock market

3.4.1 For the State authorities

– The Ministry of Finance

Firstly, the sanction for the violations of the disclosure, the sanction level should be changed. The administrative fines should be set in proportion to the amount of damage, not a definite limit. The acts of violating information in financial statements causing serious damage, there are remedial measures and criminalization.

Secondly, in terms of improving accounting policies, standards and systems, the Ministry of Finance needs specific guidance on methods of determining and recording accounting estimates.

Thirdly, it is necessary to strengthen the sanctions against violations in the preparation of financial statements of construction and installation companies in particular and listed companies in general.

Fourthly, strengthen training and update professional knowledge and ethics for accountants and companies in order to improve their capacity, qualifications and techniques to detect fraud, situations and real cases of fraud happened in Vietnam and around the world.

– State Securities Commission (SSC)

Firstly, the items on the financial statements should also be fully and accurately disclosed. The SSC needs to have plans to raise awareness for businesses to understand and disclose the information voluntarily so as to reduce the potential risks.

Secondly, SSC have more sanctions for inaccurate information disclosure or delayed information disclosure.

Thirdly, SSC needs to independently monitor the quality of audited financial statements of construction and installation companies listed on Vietnam's stock exchange.

Fourthly, SSC needs to require construction and installation companies to disclose more information about fluctuated items in their financial statements.

– **Vietnam’s stock market**

It is necessary to strengthen inspection and supervision of companies’ disclosures. The Stock Exchange needs to build a system to receive more information from enterprises, analyze, synthesize and self-disclose so that the information should be accessed more accurately.

3.4.2. Construction and installation companies listed on Vietnam’s stock market

Board of Management

With the proposed model, the company's management can evaluate the factors affecting the level of compliance in processing errors and change in accounting estimate based on variables such as: the independence of Chairman of the Board; Proportion of independent members of the Board; The interest and awareness of managers... In fact, the Board of Directors often abuses their power to manipulate the accounting information. Therefore, the minor shareholders and investors might face the potential risks if the company has the concurrent executive officer and/or a high proportion of executive board members.

Board of Directors

This research demonstrated that management's awareness and understanding directly affect the reduction of errors or frauds in the company. In contrast, leadership ignorance and superficiality often lead to mistakes that are much more costly than others.

The board of directors should recruit accountants with professional ethics, high qualifications and practical experience, this will directly affect the work results, ensure the minimization of errors, evaluate and record the change in accounting estimate more accurately.

Construction companies also need to invite experts or independent consulting units and organizations to detect the factors leading to errors and frauds in the company, as well as recommend the relevant solutions for accounting estimates.

Additionally, the company's leaders need equip up-to-date technology system to store accounting records and accounting documents longer

CONCLUSION OF CHAPTER 3

Chapter 3 shows the context, principles and requirements of completing the accounting processing of errors and changes in accounting estimates in the financial statements. The author gives some solutions and recommendations to complete the accounting processing of errors and changes in accounting

estimates at the construction and installation companies listed on Vietnam Stock Exchange.

CONCLUSION

This thesis generalizes and systematizes theoretical issues related to process errors and changes in accounting estimates as well as compliance in processing in terms of identifying, processing and disclosing errors and changes in accounting estimates at the construction and installation companies listed on the Vietnam's stock market. The thesis mentioned the reality of errors and changes in accounting estimates and used qualitative methods to point out the factors affecting the compliance level in information processing.

LIST OF ARTICLES RELATED TO THE RESEARCH TOPIC

1. Pham Le Ngoc Tuyet, “Current situation of change in accounting estimate at the construction and installation companies listed on Vietnam’s stock market”, Journal of Finance and Accounting Research (No. 4/201), Page 42-45.
2. Pham Le Ngoc Tuyet, “Evaluating errors in financial statements of construction and installation companies listed on Vietnam’s stock market”, Review of Finance (No. 2- 5/2020 (729), Page 114-116.