MINISTRY OF EDUCATION AND TRAININGMINISTRY OF FINANCE

ACADEMY OF FINANCE

LƯU HỮU ĐỨC

FINANCIAL RISK MANAGEMENT OF LISTED CONSTRUCTION JOINT-STOCK COMPANIES IN VIETNAM

Major ***: Finance - banking***

Code No. ***: 62.34.02.01***

EXCUTIVE SUMMARY OFECONOMIC PHD DISSERTATION

HANOI - 2018

INTRODUCTION

1. Significance of the research

In recent times, construction companies in general, and listed construction companies in particular have had many successes in business activities. However, there is huge likelihood of high financial risks, such as capital structure, financial leverage, the ability to balance cash flow to ensure solvency, bad debts, financial investment activities... It is crucial for construction businesses to make financial risk management decisions to minimize the potential losses, especially in the circumstance that the economy has many factors causing instability in the operation of enterprises. In that context, I have chosen the topic **"Financial Risk Management ofListed ConstructionCompanies in Vietnam"** as a research topic.

2. Literature review

2.1 Domestic studies:

In Vietnam there have been a number of theoretical and practical studies on financial risks and financial risk management, as part of corporate financial management, as well as focusing on financial risk management in businesses. Documents related to financial risk management may include:

Financial risk, financial risk measurement are also mentioned in many books on corporate finance management such as: "Modern Corporate Finance" (Assoc. Prof. Dr. Tran Ngoc Tho); "Financial Management" (Dr. Nguyen Minh Kieu); Financial Management (Dr. Nguyen Hai San.); "Risk Management" (Assoc. Prof. Dr. Bui Tuong Tri, 2007); "Financial Risk Management - Theory and Exercises" (Dr. Nguyen Minh Kieu, 2009); "Financial Risk Management" (Dr. Nguyen Thi Ngoc Trang, 2009); "Financial Risk Management" (Dr. Nguyen Van Tien and Dr. Pham Huu Hong Thai, 2014).

In addition to those syllabus, there have been a number of scientific studies such as:

"Risk Management in Enterprises" (Assoc. Prof. Dr. Nguyen Thi Quy, 2008); "A study on Developing financial risk control indicators for economic groups in Vietnam" (Dr. Vu Van Ninh and Pham Van Binh MA., 2011); "A study on Financial risk management in state-owned economic groups in Vietnam - Current situation and solutions" (Assoc. Prof. Dr. Nguyen Trong Co and Assoc. Prof. Dr. Nghiem Thi Tha, 2011); "Corporate Risk Management - Risk Awareness Handbook" - jointly issued by the State Securities Commission of Vietnam and Ernst & Young Vietnam Ltd. [13].

Doctoral dissertation of Nguyen Thi Bao Hien, PhD student: "Strengthening financial risk management for pharmaceutical companies in Vietnam" (2016).

"Financial Risk Management in Enterprises" by Assoc. Prof. Dr. Vu Van Ninh and Dr. Pham Thi Thanh Hoa in January 2017.

2.2 Foreign studies

A number of research papers on financial risk management have been done worldwide. Some of them may include: "Risk, uncertainly and profit" - a book by FrankH.Knight - an American scientist with a great deal of risk research, with particular emphasis on the aspect of risk measurement. "Fundamentals of Financial Risk Management" (2005, Wiley Press) by Karen A. Horcher; "The theory of financial risk and valuation of derivative securities" (2003, Cambridge University Press) by Jean-Philippe Bouchaud and Marc Potters. "VaR: New Standard for Financial Risk Management (2006, 3rd edition) by Phillippe Jorion; "Financial Enterprise Risk Management" by Paul Sweeting (2011), introduces the basis of risk theory, definitions, risk identification, risk management models; "Financial Distress Prediction in an International Context: A Review and Empirical Analysis of Altman's Z-Score Model" by Małgorzata Iwanicz-Drozdowska from Poland, Erkki K. Laitinen and Arto Suvas from Finland, closely follows the accuracy of the Z-score model developed by Edward I. Altman, published in 1968.

There are also plenty of financial risk references such as Paul Sweeting's "Corporate Financial Risk Management," "Risk Management Basics: Understanding, Measuring and Applying Risk Management Effectiveness" by Paul Hopkin; Thomas S. Coleman's "Risk Management Practices Guide"; "The Failure of Risk Management: Why Failure and How to Fix it," by Douglas W. Hubbard and many others. Other scientific disciplines address the role of financial risk management for business managers as well as others, and outlines some of the key points in measuring and preventing financial risks.

2.3 Overview of publications

Domestic and foreign studies on financial risk management have helped me to figure out the issues that were resolved by scientists to inherit, and the issues that need to be further investigated and affirmed clearly that the dissertation that I have chosen does not overlap with previous research done in terms of scope.

3. Research Objectives

3.1 Research Objectives:

The study is to propose measures to enhance the financial risk management, contributing to the sound financial situation, minimizing negative impacts and step by step raising the efficiency of production and business activities of Listed Construction joint-stock companies in Vietnam.

3.2 Research Tasks:

First, to systematize and clarify basic theoretical issues on financial risk and financial risk management in enterprises, study international experience in financial risk management and lessons for Vietnam;

Second, to clarify the situation of financial risk management in listed construction companies, thereby drawing on the results obtained and the remaining limitations existing in risk management; its causes to take corrective measures;

Third, to propose measures to strengthen financial risk management for listed construction companies in Vietnam.

4. Subjects and Scope of the research

4.1 Subjects of the research

Financial risk and financial risk management of listed construction companies in Vietnam.

4.2 Scope of the research

In terms of context: The research studies and assesses the situation of financial risk of listed construction companies in Vietnam. The author has focused mainly on the sample selection of 47 prominent construction companies listed in Vietnam.

The author has selected listed construction companies because they are large-scale enterprises, having a relatively good governance system, transparency and good information. In addition, listed construction companies also adhere to strict regulations on publicizing information, which is the basis to help collect, assess the full operation of the business.

Among listed construction companies, in order to ensure uniformity in the series of comparative data, the author has selected the listed companies prior to 2009, which means 47 companies included in the sample.

In terms of time: From 2009 to 2015.

5. Research methodology

The author uses a combination of traditional research methods such as statistical analysis, comparison, synthesis, SWOT analysis, etc., based on dialectical materialism and historical materialism to assess and resolv issues raised in the research topic.

The financial statements of the enterprises are collected from the Stock Exchange, summed up by using excel.

The author uses the survey method, compiling questionnaires, and aggregates the survey sent to the sample companies to find out the financial risk management situation of these companies

Group averages, industry averages are compiled based on financial data of 47 companies in the sample selected on the basis of specific grouping criteria.

6. Contributions of dissertation

- The dissertation systematizes, clarifies the theoretical issues on financial risks and financial risk management in enterprises.
- The dissertation studies lessons learned on financial risk management from enterprises and foreign consulting firms, thereby drawing important lessons learned from financial risk management for businesses in Vietnam.
- The dissertationhas an in-depth review of financial risks and financial risk management inlisted construction companies in the sample. Assessments are based on the following aspects: risk identification, measurement and risk assessment, financial risk management in enterprises. The dissertation presents the results in financial risk management of the listed construction companies in the sample, as well as pointing out the shortcomings and weaknesses in the financial risk management in these companies.
- Based on the orientation of the construction industry in Vietnam, in the socio-economic context, in the coming time, the dissertation proposes some measurements to improve financial risk management in listed construction companies in Vietnam.

7. Chapter layout of dissertation

Besides the introduction, conclustion, and references, the dissertation is organzied in three chapters as follows:

Chapter 1: Theory of financial risk and financial risk management in companies.

Chapter 2: Current situation of financial risk management in listed construction companies in Vietnam.

Chapter 3: Solutions to enhance financial risk management in listed construction companies in Vietnam.

Chapter 1:
THEORY OF FINANCIAL RISK
AND FINANCIAL RISK MANAGEMENT IN COMPANIES

1.1 Overview of Corporate Finance and Financial risk.

1.1.1 Concept of corporate finance

1.1.2 Financial risk

- Concept of risk: *"Risk is a random (measurable) incidence that results in a false positive than expected (planned)".*

- *Financial risk is the risk arising from changes in interest rates, exchange rates, prices of commodities, securities and the implementation of financial decisions that change the profit of enterprises.*

1.1.3 The impact of financial risk on enterprises

- The impact of risk on the profit of the business
- The impact of risk on the cash flow and solvency of the business
- The impact of the risk on the competitiveness of the business
- The impact of risk on the growth of the business
- The impact of risk on the value of the business

1.2 Financial risk management of enterprises

1.2.1 The concept, the need for financial risk management in enterprises

- Concept: *Financial risk management is the setting up of a process that identifies, assesses and controls financial risk and the impact of that risk on the business objectives.*

- The necessity for financial risk management in businesses:

First, minimize unexpected events affecting the financial performance of the business.
Second, support for more efficient investment decisions.
Third, support the improvement of corporate governance.

1.2.2 Financial riskmanagement in enterprises

1.2.2.1 Risk indentification

Risk identification is the process of finding, acknowledging and recording the risks that affect the operations of a business. This process involves identifying the causes and sources of risk, events, and situations that may affect the business objectives.

Methods for identifying financial risks in enterprises:

- Method of setting up lists
- Method of issuing questionnaire

- Method of consultation with experts
- Methods of financial statements analysis

1.2.2.2 Risk measurement and assessment

- Risk measurement:

Qualitative research methodology: is a method based on the evaluation of gorverners, advice of experts to rank the risks as well as estimate the probability of occurrence of risk.

Quantitative research methodology: is a method of measuring risk factors by using mathematical models to quantify those factors.

- Risk assessment:

Risk Value = Impact Level * Risk Occurance Probability * Time Frame.

Based on the calculated risk value, managers make a risk ranking chart from high to low. On that basis, select the priority risks to curb.

1.2.2.3 Risk handling

- Risk avoidance
- Risk transfer
- Risk reduction
- Risk acceptance

1.2.3 Factors affecting financial risk management in enterprises

- External factors
- Internal factors

1.3 Financial risk management in some countries and lessons for Vietnam

1.3.1 Experience in financial risk management in some countries and lessons for Vietnam

1.3.1.1 Experience in applying information technology in controlling business environmental fluctuations

1.3.1.2 Experience in financial risk management in American contruction companies

1.3.1.3 Experience in financial risk management in Chinese contruction companies

1.3.1.4 Experience in financial risk management in contruction companies in some other countries.

1.3.2 Lessons learned on financial risk management in Vietnamese enterprises

First, raise the awareness of risk for all enterprises

Secondly, establish a specialized section on risk management

Third, apply advanced models to identify, measure, and assess financial risk

Fourthly, periodically, regularly and continuously conduct risk management activities
Fifth, enhance the hiring of consultants to improve the risk management process
Sixth, select the financial risk management model suitable with the scale, the development of enterprises accordingly.

CHAPTER 1 CONCLUSION

Results of the study in Chapter 1 are presented in the following points:
First, the author has systematized the whole basic theory of risk, financial risk, financial risk management. The author has introduced the concepts, characteristics, contents of financial risk management, the impact of financial risk on the operation of enterprises.
Second, the author has clarified theories of risk, financial risk and financial risk management. The author has pointed out the essence of financial risk, as well as the main contents of the financial risk management of enterprises.
Third, the author has studied and developed the experience of strengthening financial risk management in countries around the world. Thus, the author has drawn five lessons for listed construction companies in Vietnam.

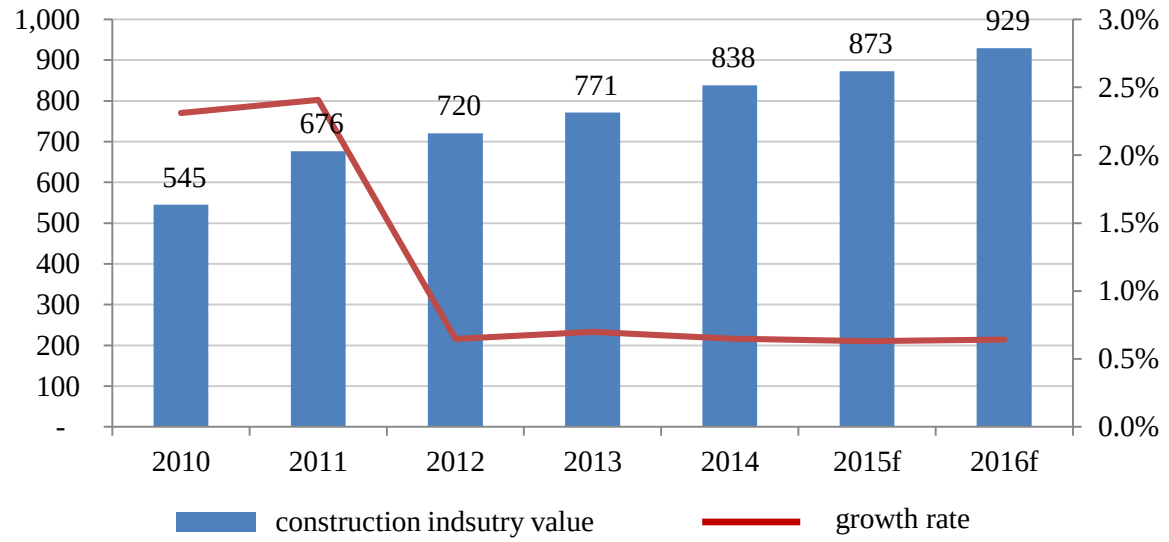
Chapter 2:
CURRENT SITUATION OF FINANCIAL RISK MANAGEMENT IN LISTED CONSTRUCTION COMPANIES IN VIETNAM

2.1Overview of the construction industry and listed construction companies in Vietnam

2.1.1 Overview of construction industry

- Position, roles of the construction industry
- Economic and technical characteristics of the construction industry
- Overview of the construction industry in Vietnam

Figure 2.1: Growth rate and value of the construction industry 2010 - 2016



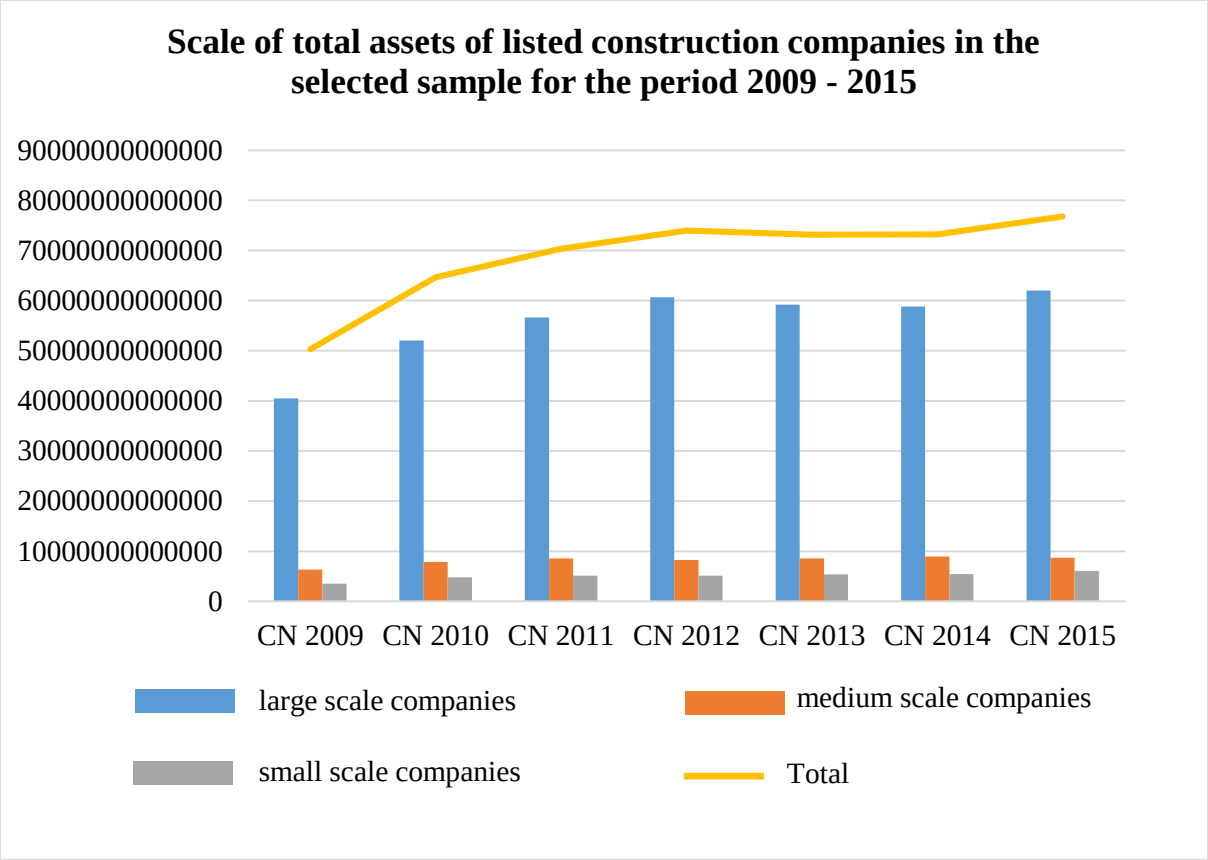
Contrary to the miracle growth rate in 2010 and 2011 (23.1% and 24.1% respectively), during the period 2012-2015 and forecasted 2016, even though the value of the construction industry increased, the growth rate fell sharply compared with the previous period, fluctuating around 6% - 7%.

Most companies were listed on the stock market in the period of 2006 - 2010. Thus, in order to ensure the length of the time series and to ensure the uniformity of comparative data of the listed companies, the author selected companies listed from and before 2009, so the sample size of the topic is 47 companies.

2.1.2 Major financial situation of listed construction companies

Scale of total assets of listed construction companies in the selected sample for the period 2009 - 2015

Figure 2.2: ***Scale of total assets of listed construction companies in the selected sample for the period 2009 - 2015***



In the period of 2009 - 2012, the listed construction companies in the sample had a strong increase in scale. Total assets of 47 companies in the selected sample increased from VND50,310 billion at the end of 2009 to VND 73,985 billion at the end of 2012, then almost levelled off during the period 2013-2015, when the total asset size of the end of 2015 increased by only VND 76,811 billion. In the period of 2009 - 2015, the total assets of enterprises in the selected sample increased by 52.7% on average.

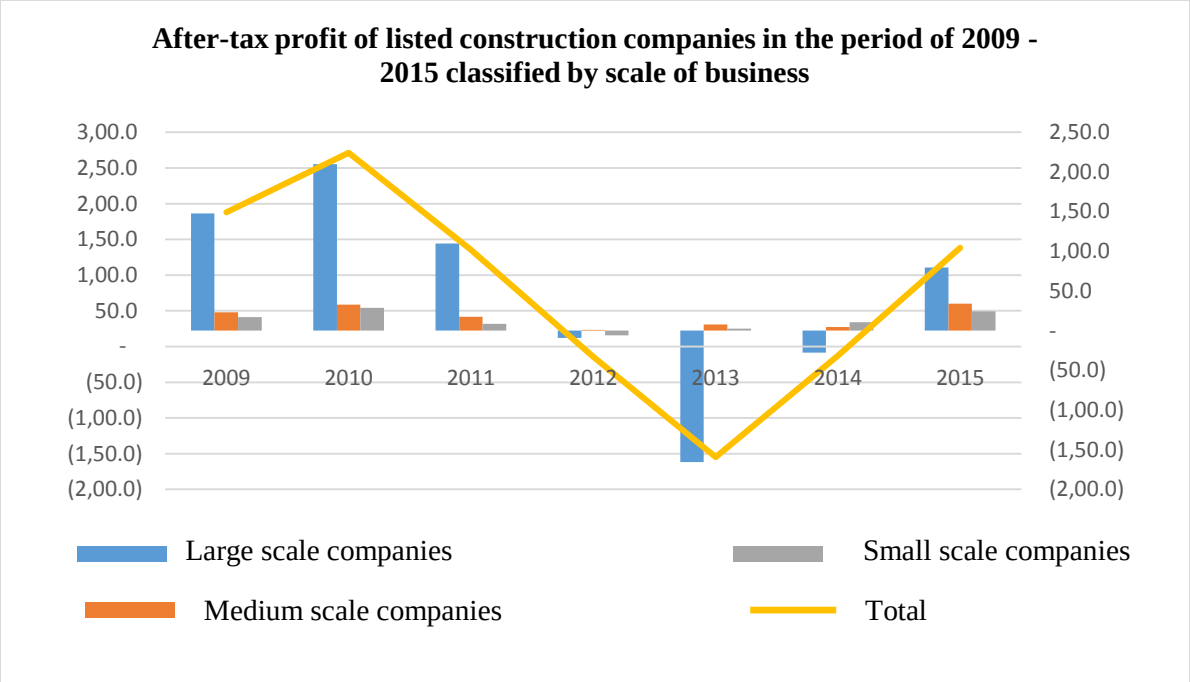
Turnover of listed construction companies in the selected sample period 2009 - 2015

Figure 2.3: Turnover of listed construction companies in the selected sample period 2009 - 2015 classified by scale of business

It can be seen in the period of 2009 - 2011, that Vietnamese State boosted their expenditure on infrastructure and real estate created opportunities for many construction companies to have mutations in the business. However, in the period of 2011- 2013, with the high inflation, the mobilizing interest rate and the lending interest rate increased sharply to over 20%, the State applied contractionary monetary policy, combined with spending cuts to curb inflation. This had a huge impact onoperations of construction companies, turnover decreased in most of the companies in the sample. In 2015, there were positive changes from the macro variables, many construction companies hadthe turnover growth again. Total turnover of 47 construction companies in the sample rose to VND35.276 trillion, up by nearly 5,000 trillion compared to 2013.

After-tax profit of listed construction companies in the period of 2009 - 2015

Figure 2.5: After-tax profit of listed construction companies in the period of 2009 - 2015 classified by scale of business



From the analysis, 2009 - 2015 was the period of fluctuations in the macro variables of the economy, the fluctuation hugely affected the revenue and profit of listed construction companies in the sample. In the period of 2009 - 2011, 47 construction companies reached a high after-tax profit: VND1.881 trillion in 2009, VND2.711 trillion in 2010, and VND1.357 trillion in 2011. The period 2012 - 2015 witnessed a decline in profit after tax of listed construction companies: VND(140) billion in2012, VND(1,548) billion in 2013. In 2014, the number of losses declined significantly to VND(126) billion. In 2015, after-tax profit of enterprises improved significantly when many enterprises gained a profit, with a total profit after tax of 47 enterprises reached VND1,380 billion.

The author analyzed the structure of assets, capital sources, indicators of performance, business efficiency, solvency indicators of listed construction companies in the sample by groups of criteria. General comments are as follows:

First,initiative and ability to cope with financial fluctuations of the construction companies in the sample is not high. Indicators of solvency, performance, profitability wildly fluctuated when there were changes in macro variables of the economy, which showed that the level of initative in financial management was not high enough to cope with the changes in the economy.

Second, cost management was still limited so the profit margin of the listed construction companies in Vietnam was still low.

Third, there is a big difference in financial ratios when dividing the listed construction companies in the sample by the company scale, whereby the medium size group had the advantage of operation efficiency and profitability. Large corporate groups were less dominant both in performance and profitability.

2.2 Current situation of financial risk management in listed construction companies in Vietnam

2.2.1 Current situation of financial risk identification in listed construction companies

- Current situation of identifying leverage risk in listed construction companies
- Current situation of identifying interest rate risk in listed construction companies
- Current situation of identifying exchange rate risk in listed construction companies
- Current situation of identifying price volatility risk in listed construction companies
- Current situation of identifying liquidity risk in listed construction companies
- Current situation of identifying commercial credit risk in listed construction companies

General assessment on financial risk identification in listed construction companies:

The financial risk identification of the listed construction companies in the sample was mainly done through the assessment of fluctuations in financial indicators of enterprises, which is a basis for assessing risks in each content. Although this method has an available database, based on the management experience of the administrators, the limitation of this method is to provide a financial risk identification when the risk has already existed and influenced on the operation of the business. Early identification, proactive implementation of enterprises is still limited.

2.2.2 Current situation of measurement and assessment of financial risks in listed construction companies

According to the survey of risk identification, up to 75% of surveyed enterprises did not use econometric models to measure and assess financial risks for enterprises, only 8.3% of normal enterprises used quantitative methods to measure and assess the financial risk affecting the business.

Table 2.25: Methods used by companies to measure and assess financial risk

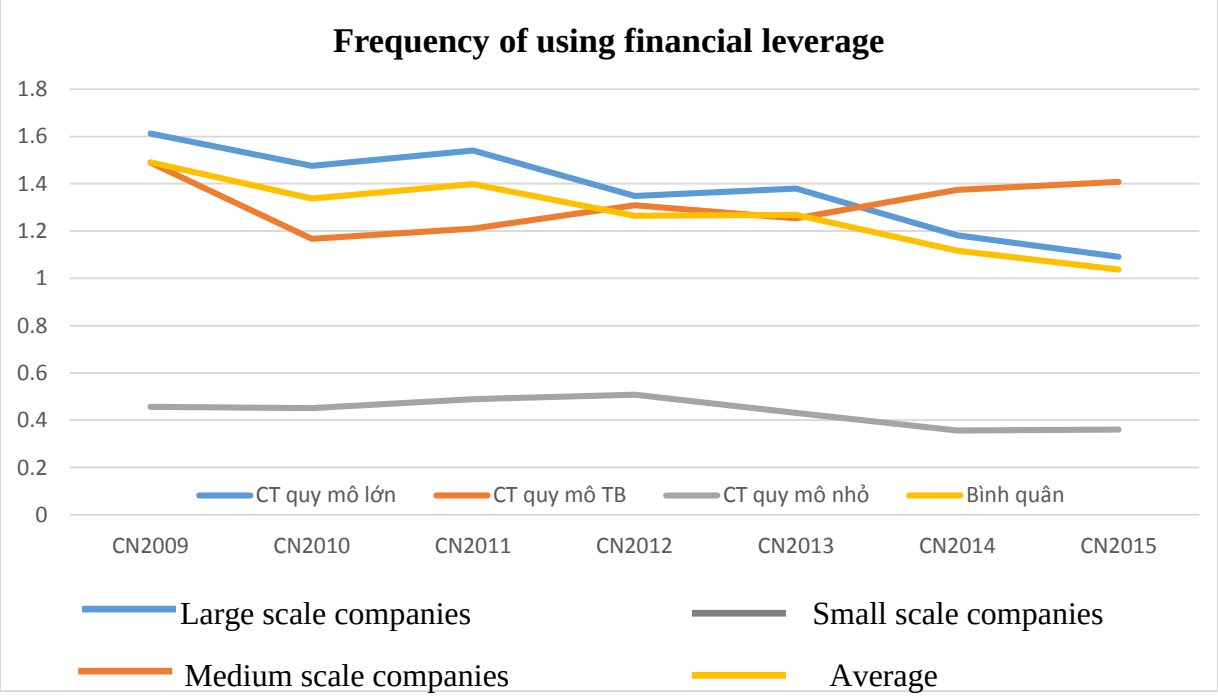
Methods	Use frequency			
	Never	Few	Often	Frequently
1. Sensitivity analysis	66,7%	0%	25%	8,3%

2. Standard Deviation	58,3%	25%	16,7%	0%
3. Value at Risk (VaR)	83,3%	16,7%	0%	0%
4. Risk of Bankruptcy Z-score	91,7%	8,3%	0%	0%
5. Qualitative method (based on assumptions)	75%	16,7%	8,3%	0%
6. Others	100%	0%	0%	0%

- *Current situation of measurement and assessment of financial risks in listed construction companies*

In the period of 2009 - 2015, there was a downward trend of using financial leverage in the listed construction companies in the sample, specifically at the end of 2009, this indicator was highest when VND1 from owner's equity could mobilize VND1.49 of loan. This number reduced to VND1.34 in 2010, and at te end of 2015 it was VND1.04.

Figure 2.21: Frequency of using financial leverage in listed construction companies in the sample (Classified by company scale)



- *Current situation of measurement and assessment of interest rate risk in listed construction companies*

Sensitivity analysis is used by businesses to assess changes in interest rates that affect firms' costs based on assumptions about the change in interest rates.

Table 2.28: Use of sensitivity analysis in interest rate analysis of construction firms in the sample

Use sensitivity analysis to assess interest rate risk	**Quantity**	**Rate**
Yes	13	27.7%
No	34	72.3%
Total	47	100.0%

General assessment: Most of the firms in the sample were quite passive in assessing the fluctuation of interest rates to business operations of the business.

- *Current situation of measurement and assessment of exchange rate risk in listed construction companies*

Liquidity risk management was implemented by businesses on the basis of establishing and setting up specific liability maturities over time and assets that the company believes to be able to create during the period.

Table 2.33: Level of liquidity risk assessment of enterprises in the sample

Level of liquidity risk assessment	Quantity	Rate
High	10	21.3%
Medium	8	17.0%
Low	29	61.7%
Total	47	100.0%

- *Current situation of measurement and assessment of price fluctuation risk in listed construction companies*

In 47 selected firms, 34 out of 47 identify that they had risks of price volatility. Although most firms had the impact of price volatility, the majority of firms did not provide a specific assessment of the impact of price volatility on their operations.

Table 2.34: Risk assessment of price volatility in the sample

Risk assessment of price volatility	Quantity	Rate
Yes	34	72.3%
No	13	27.7%
Total	47	100.0%

- Current situation of credit risk measurement and assessment in listed construction companies

With the specific characteristics of the industry, the scale of construction companies is usually large, the settlement depends on the progress, the time of disbursement ... so the emergence of receivables on a large scale is popular for listed construction companies in the sample.

Table 2.35: Credit risk assessment in listed construction companies in the sample

No	Credit risk assessment	Quantity	Rate
1	No significant credit risk	21	44.7%
2	Credit risk arising	26	55.3%
3	Total	47	100.0%

General assessment: *Basic financial risks were assessed and published by the enterprises themselves, including the risks of financial leverage, exchange rate risk, interest rate risk, price risk, liquidity risk, credit risk. The listed construction companies in the sample provided financial risk measurement data largely based on past data.Risk assessment techniques like sensitivity analysis, variable analysis marketanalysis, price volatility, interest rates, market trend forecast to assess financial risk with the company were not widely used.*

Most of current financial risk assessments indicated a lack of adequate identification, measurement and evaluation of the companies' financial risk. Specifically:

- In terms of exchange rate risk: 91.7% of companies with foreign exchange transactions did not carry out sensitivity analysis to assess the impact of exchange rate fluctuations on the performance of the company. 88.9% of the company executives rated this risk as insignificant and without specific assessment.

- In terms of credit risk: 44.7% of companies rated that there were no significant risk.

- In terms of liquidity risk: 61.7% of companies in the sample assessed that there was low liquidity risk.

- In terms of interest rate risk: Nearly 100% of the companies in the sample did not assess interest rate risk, or analyse interest rate fluctuations. Only 27.7% used sensitivity analysis, 72.3% of companies did not use any specific methods.

- In terms of price volatility risk: 72.3% of companies thought that risk may be caused by price volatility, but no company made any impact assessment.

- Use of Z-score model to measure and assess financial risk of listed construction companies

Table 2.39: Bankruptcy assessment risk

Criteria	2009	2010	2011	2012	2013	2014	2015
Safe	*5*	*2*	*1*	*2*	*4*	*1*	*3*
Warning	*34*	*37*	*24*	*22*	*17*	*24*	*21*
Risky	*8*	*8*	*22*	*23*	*26*	*22*	*23*
Total	***47***	***47***	***47***	***47***	***47***	***47***	***47***

Source: Z-Core assessment

2.2.3 Current situation of financial risk management in listed construction companies

- Solutions to handle financial leverage risk inlisted construction companies

58.3% of enterprises asked usedinitiative leverage measure to reduce the risk of financial leverage. However, 41.7% of firms did not use this measure. The businesses also did not take other specific measures to handle financial leverage.

- Solutions to handle interest rate risk in listed construction companies

Flexibly choose appropriate capital mobilization channels so that mobilization costs are the lowest.

Actively restructure capital when there is fluctuation of market interest rates.

- Solutions to handle exchange rate risk in listing construction companies

Exchange rate risk management did not yet implemented in most of the firms in the sample.

- Solutions to handle liquidity risk in listed construction companies

Table 2.41: Solutions to limit the net liquidity gap of enterprises in the sample

Improve the liquidity of enterprises	**Amount of companies**	**Rate**
Promote debt collection, settlement, take the initiative to contact the loan	3	6.4%
Use tools like convertible bonds	1	2.1%
Depend on the ability to make money from businessoperations	43	91.5%
Total	47	100.0%

Source: From Financial Statements of 47 enterprises in the sample

- Solutions to handle the price risk in listed construction companies

Solutions to handle price risk (both stock price and input price) were given by enterprises after market fluctuations, there were no comments, proactive preventation solutions.

- *Solutions to handle credit risk in listed construction companies*

+ Thorough evaluation of customers

+ Regularly urge to collect debt

+ Take the initiative in setting up provisions for bad receivables

Basically, the financial risk management of listed construction companies is still quite passive and financial risk management is mainly based on the experience and available resources of the company.

2.3 Evaluation of the impact of financial risk and performance of businesses

2.3.1 Evaluation model

By conducting parallel studies to find out the impact of a number of factors on two risk factors: solvency risk, bankruptcy risk of the business (liquidity risk), the author is going to present all the variables used in the two models.

2.3.2 Assumptions in the research model

2.3.3 Research Methodology and Procedures

Business Performance = $\beta_0 + \beta_1 x\ zz + \beta_2 x\ khttn + \beta_3 x\ size + \beta_4 x\ age + \beta_5 x\ dfl + \beta_5 x\ de + e_{it}$

And Financial Risk = $\beta_0 + \beta_1 x\ de + \beta_2 x\ bep + \beta_3 x\ size + \beta_4 x\ age + \beta_5 x\ dfl + e_{it}$

2.3.4 Research data

The author collected data of listed construction companies in the period of 2009 - 2015.

2.3.5 Results

Through the implementation of empirical research on solvency risk, potential bankruptcy risk and operational efficiency, it can be concluded that the greater the performance, the lower the risk of bankruptcy and vice versa. . But in terms ofsolvency, for construction businesses, there is a negative relationship between solvency and performance. The final conclusion is that the financial risks are closely related and interect in the same directions. This empirical conclusion is consistent with the financial data of the listed construction companies in the sample, while the medium-sized group is the most profitable group but this is also the group with the lowest solvencyduring the period of 2009 - 2015.

2.4 General evaluation of financial risk management in listed construction companies in Vietnam

2.4.1 Results

First, businesses were already interested in risk management.

Second, some of the enterprises, through the establishment and operation of a part or whole of the risk management process, got a positive impact on the business performance, partly reducing the losses when risk incident occurred.

Third, the listed construction companies in the sampleactively investigated, proposed options for handling each type of financial risk.

Fourth, financial risk management of the business was considered a regular activity.

2.4.2 Limitations and causes

2.4.2.1 Limitations

First,setting the context and goals is the basis for risk identification and measurement. Buts this is not yet properly considered by businesses.

Second, risk identification activity is mainly based on the experience of managers and available information.

Third, there is a lack of synchronous and quantifiable assessments that measure the impact of financial risk events on business performance.

Fourth, treatment of identified risk events is still relatively passive, most of the risk events identified by enterprises are presented in the financial risk assessment report when risk has already occurred.

Fifth, perception of financial risk management is not fully adequate in many enterprises.

2.4.2.2 Causes

First, enterprises are lack of accurate statistical information and forecasts of financial risk management.

Second, level of human resources in enterprises is not equal, awareness of financial risk management is limited.

Third, resources allocated to financial risk management are limited.

Fourth, the market is lack of synchronous products to support businesses to enhance the effectiveness of financial risk management.

CHAPTER 2 CONCLUSION

Based on the systematic reasoning in Chapter 1, the author, in Chapter 2, has focused on the financial risk management situation of listed construction companies in the sample with the following main results:

First, generalizethe financial situation of listed construction companies in the sample in period of 2009 - 2015.

Second, based on the financial risk management aspects discussed in Chapter 1, the author has analyzed and evaluated the financial risk management situation of listed construction companies in the sample, inculding: financial risk identification, measurement and evaluation of financial risk, financial risk handling. The author has also modeled the two-dimensional impact of risk on business performance.

Third, on the basis of assessing the financial risk management situation of the listed construction companies in the sample, the author has pointed out some results and limitations, and concurrently point out the subjective and objective causes of the limitations. These are important conditions to continue to study solutions to enhance financial risk management in listed construction companies in Chapter 3.

Chapter 3:
SOLUTIONS TO ENHANCE FINANCIAL RISK MANAGEMENT IN LISTED CONSTRUCTION COMPANIES IN VIETNAM

3.1 Development orientation of construction industry in Vietnam

3.1.1 Domestic and international socio-economic context

The business environment and the dynamics of the business environment factors have a great impact on the performance of every business, especially construction businesses.

3.1.2 Development orientation of construction industry in Vietnam

According to Business Monitor International (BMI), construction industry will have a lower growth rate compared with the previous period but higher than expected GDP growth.

Table 3.2: Construction industry value and growth rate 2017 - 2021

Criteria	2017	2018f	2019f	2020f	2021f
Construction industry value (VND bln)	289.465,75	331.598,19	372.365,76	416.896,56	466.242,17
Growth rate compared with previous year (%)	*9,56*	*9,66*	*7,49*	*7,16*	*7,14*

Source: Business Monitor International

3.2 Must-be-considered perspective in proposing solutions to strengthen financial risk management in listed construction companies

First, *enhancing financial risk management must aim to meet the requirements of business operations in the new situation.*

Second, *enhancing financial risk management should be considered in relation to the achievement of corporate management.*

Third, *enhancing financial risk management must be in a synchronous relationship, consistent with other contents and parts of corporate management.*

Fourth,*enhancing financial risk management must be implemented in a synchronous way in all stages of the process of planning, organizing and implementing financial decisions*.

3.3. SOLUTIONS TO ENHANCE FINANCIAL RISK MANAGEMENT IN LISTED CONSTRUCTION COMPANIES IN VIETNAM

3.3.1 Establish and continually improve the information database for financial risk identification

Improve the completeness, timeliness and accuracy of information for identifying financial risks:

First, diversify channels to collect information for better evaluation.

Second, use more forecasting information to identify early financial risk to the business

3.3.2 Diversification and continuous improvement of methods and forms of measurement and assessment of financial risk in listed construction companies in Vietnam

Establish risk management framework, quantify measurement and financial risk assessment in listed construction companies in Vietnam.

Table 3.4: Factors of impact on the quality of financial risk management of enterprises

Factors	Level of impact			
	No impact	**Low**	**Medium**	**High**
Establish and operate risk management framework	8,3%	8,3%	16,7%	66,7%

3.3.3 Coordinated and synchronous use of financial risk management measures in listed construction companies in Vietnam

3.3.3.1 Solutions to enhance the use of derivative instruments in financial risk management

3.3.3.2 A set of solutions to complete the financial planning process to minimizs the impact of financial risk on business

3.3.3.3 Initiative in setting up reserve capital budget

3.3.3.4 Other solutions to enhance financial risk management in listed construction companies in Vietnam

Complete the provisioning for financial risk of enterprises

Complete the analysis of customers' financial situation, using a variety of debt recovery methods to enhance the efficiency of financial risk management.

3.3.4 Other solutions

3.3.4.1 A set of solutions to raise of importance of financial risk management to enterprises

3.3.4.2 Solutions to improve the organizational structure of the risk management department

3.3.4.3 Promotion of training activities to improve the quality of human resources

3.3.4.4 Other solutions

3.4 Conditions for implementation of solutions

3.4.1 On the State side

- Complete the legal system in a uniform way, then closely monitor the compliance.
- Complete and promote the development of derivative financial instruments
- Stabilize interest rate, manage interest rate policy in the forecasteddirection
- Complete the settlement of investment projects funded by the state budget
- Enhance the effectiveness of the civil court system in resolving disputes related to contractual payment commitments
- Publicize statistics, especially supply construction industry statistics.

3.4.2 One the commercial banks side

- Design special packages for construction businesses
- Coordinate with construction companies in managing cash flow, linking product consumption.

CHAPTER 3 CONCLUSION

Based on the theory and assessment of financial risk management in the listed construction companies,in Chapter 3, the PhD student has performed the following tasks:

First, forecasting socio-economic situation in the coming time, assessing the development orientation of the construction industry as the basis for planning and building solutions.

Second, presenting a system of solutions to enhace financial risk management of listed construction companies in the future.

Third, proposing recommendations to enhance the uniformity and feasibility of the solution groups, and to contribute further enhancement in financial risk management.

CONCLUSION

In recent times, many construction companies have made losses, had unstable financial situation and a reduction in business performance. One of the reasons for this situation is that the financial risk management of enterprises is not good. Therefore, making risk management decisions to minimize potential losses is imperative, and this has a practical significance for construction enterprises, especially in the context that the economy has many potential factors causing instability in the operation of enterprises today.

The dissertation has studied the financial risk management of listed construction companies since 2009 and obtained some results as follows:

First, the dissertation has systematized in detail the risks, financial risks, financial risk management of enterprises. The dissertation has been devoted to financial risk management, studying methods proposed to implement financial risk management in enterprises.

Second, the dissertation has studied, presented and evaluated the experience of enterprises around the world. Studying international experience has helped the dissertation to find out lessons that listed construction companies in Vietna use in the present context.

Third, the dissertation has conducted survey, collected data, analysed data collected from financial reports and related information to 47 listed construction companies in Vietnam. Thus, this has given an overview on the financial risk management of these companies. Based on many research methods (such as field survey, regression modeling, data analysis ...), the dissertation has pointed out the successes as well as the limitations of the financial risk management of companies in the sample.

Fourth, the dissertation has examined the trend of the economy, especially the economic variables that strongly affect the operation of construction enterprises, studied the growth trend of the industry, which giving the author more basis for recommendations.

Fifth, the dissertation has introduced three key solutions to the three main contents of financial risk management. At the same time, there are other solutions to enhance corporate financial risk management.

Sixth, in order for solutions be put into practice, the dissertationhas proposed many policy recommendations to the Gorverment, ministries, and commercial joint stock banks. The author believes that these solutions will have suitable conditions to be

applied, and contribute to improve the financial risk management of listed construction companies in Vietnam.

Therefore, important goals of the dissertation have been solved thoroughly. Based on the solid theory framework, mordern methods of scientific research, the dissertation has given a panoramic view of financial risk management of listed construction companies. However, the study of financial risk management in 47 enterprises over a long period of time is a very difficult and complicated issue, so shortcomings are inevitable. Modern scientific research, especially social science, is constantly changing and evolving over time, the PhD student would like to receive valuable comments from scientists, teachers and colleagues to improve the dissertation.

LIST OF PUBLICATIONS OF THE AUTHOR RELATED TO THE DISSERTATION

1. Luu Huu Duc (2017), "Current situation of financial risk management in listed construction companies in Vietnam", Journal of Finance and Accounting Research, No. 01/2017, pp. 42-45.
2. Luu Huu Duc (2017), "Assessing the profitability of listed construction companies in Vietnam", Journal of Finance and Accounting Research, No. 5/2017, pp. 44-46.
3. Luu Huu Duc (2017), "Strict monitoring of financial risk management processes in listed construction companies in Vietnam", Journal of Financial Inspectorate 6/2017, pp. 33-35.
4.Luu Huu Duc, Diem Thi Thanh Hai (2017), *"Finance enterprise risks and firm performance: case study in construction sector in Viet Nam"*, Proceedings International conference for young researchers in economics and business ICYREB 10/2017, pp. 52-59
5. Luu Huu Duc, Diem Thi Thanh Hai (2017), *"Enterprises liquidity risk and firm performance: case study in construction sector in Viet Nam"*, Journal of Finance &Accounting research 01/2017, pp. 51-54