

MINISTRY OF EDUCATION AND TRAINING MINISTRY OF FINANCE

ACADEMY OF FINANCE

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**IMPROVING INTERNAL CONTROL IN COAL MINING
AND PROCESSING JOINT STOCK COMPANIES UNDER
VIETNAM NATIONAL COAL AND MINERAL INDUSTRIES
HOLDING CORPORATION LIMITED**

Major: Accounting

Code: 62.34.03.01

SUMMARY OF ECONOMIC THESIS

HA NOI - 2022

The work was completed at the Academy of Finance

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Examiner 1:

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Examiner 2:

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Examiner 3:

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The thesis will be defended at the Council of thesis assessment at the
Academy level, meeting at the Academy of Finance

At hour.....date..... month.....year 2022

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

PREAMBLE

1. Rationale of the study

Coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited (Vinacomin) are key enterprises in the process of promoting the development of the Group in particular and the coal industry of the whole country in general. According to actual surveys in recent years, coal mining and processing joint stock companies are facing an urgent requirement to restructure in a methodical way while still showing shortcomings in production, business and bearing many risks from the competitive market as well as within the enterprises. Typically, it can be mentioned that the quality of coal is still low; the effectiveness of some projects has not yet met the requirements, falling behind schedule; the coal loss rate in the mining process tends to decrease but is still large; the environmental pollution due to production activities is still high; the occupational safety risks are always present; the labor productivity gradually improves but not enough to compete with the international market; the machinery and equipment are still heavily dependent on imports...

Internal control in coal mining and processing joint stock companies is not only a mandatory issue in accordance with the law, but it must also ensure that it contributes to promoting existing resources, improving competitiveness, and developing enterprises in a sustainable manner according to the Government's roadmap and industry development planning. One of the practical and feasible solutions to help managers do that is to ensure the effectiveness of internal control in the enterprises because internal control is an integration of activities, measures and control mechanisms covering all activities of an enterprise in order to prevent and overcome problems such as inefficient operation, waste of resources, lack of vision, fragmented strategy, incomplete information, lack of effective supervision, high costs... Realizing the significance of this issue, the author

has chosen “*Improving internal control in coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited*” as the topic of the doctoral thesis.

2. Literature review of research works related to thesis

2.1. Research works on components of internal control

- *Research works on internal control with 3 components:*

According to foreign researchers such as Arens (1998), Alvin A. Aren & James K. Loebbecke (2006), Divesh Sharma (2006) and a number of domestic research works, internal control with 3 components including control environment, accounting system, and control procedures should be fully established in the enterprises. The three-component approach to internal control focuses mainly on ensuring that the financial information provided by the accounting system is reliable, but does not clarify the importance of internal control for risk management purposes, or other specific objectives when the business environment is volatile and the information technology changes rapidly. Stemming from that reason, recent research works follow the research direction of internal control with 5 components.

- *Research works on internal control with 5 components:*

Research works in recent years have focused on the five components of the COSO framework: control environment, risk assessment, control activities, information and communication, and monitoring activities. In which, there are typical ones such as: Author Jones, Michael John (2008) in the research “*Internal control, accountability and corporate governance*” which analyzes 5 components of internal control in corporate governance in the UK in the modern era; Authors Hermanson, Dana R; Smith, Jason L; Stephens, Nathaniel M (2012) in the research “*How Effective are Organizations' Internal Controls? Insights into Specific Internal Control Elements*” which conducts a survey on 500 chief audit executives and internal auditors about the components of internal control and how effective the internal control of organizations and enterprises is. The results from the research also show that the majority of auditors agree with the 5

components of COSO's internal control. In Vietnam, the majority of research works agree with the components of COSO. Specifically, theses on internal control by Vo Thu Phung (2016), Nguyen Thi Thanh Thuy (2017), Doan Thi Thu Ha (2017), Pham Thi Bich Thu (2018), and Nguyen Thi Thanh (2019)... also agree on internal control with 5 components.

2.2. Research works on factors affecting the effectiveness of internal control

Some typical foreign research works include: “*Evaluation of Internal Control Systems: A Case Study from Uganda*” by Angella Amudo and EL Inaga (2009) which evaluates internal control systems in public sector projects in Uganda funded by the African Development Bank; “*Effectiveness of internal control system in state commercial banks in Srilanka*” by Mrs. C. T. Gamage; Kevin Low Lock; AAJ Fernando (2014) which is similar to the research by Angella Amudo and EL Inaga (2009) when using the components of COSO's internal control system to evaluate the effectiveness of the internal control system in state-owned commercial banks in Sri Lanka; Research by Kamau Caroline (2014) at the School of Business, University of Nairobi on “*Effect of Internal Controls on the Financial performance of Manufacturing Firms in Kenya*” which studies the influence of internal control on financial performance in 20 manufacturing firms in Kenya; Research by O'Leary, Conor (2004) “*Developing a Standardised model for Internal Control Evaluation*” which develops a standard model for internal control evaluation from previous scientific research works on internal control and limitations of previous research models.

In Vietnam, research works on factors affecting the effectiveness of internal control are mainly doctoral theses such as the theses by Ho Tuan Vu (2016), Vo Thu Phung (2016), Pham Thi Bich Thu (2018), and Nguyen Thi Thanh (2019). In addition to the doctoral theses, there are a number of domestic research works on factors affecting the effectiveness of internal control.

2.3. Research works on internal control of specific industries and groups of companies in Vietnam

In Vietnam, researchers focus on internal control in specific enterprises and industries to assess the current situation and propose suitable solutions. In which, the typical research works may include: Thesis titled “*Improving internal control at Vietnam National Chemical Group*” (Nguyen Thi Lan Anh, 2013); Thesis titled “*Impact of components of internal control on the performance of Vietnam Electricity*” (Vo Thu Phung, 2016); Thesis titled “*Improving internal control at Vietnam Post*” (Hoang Thanh Hanh, 2017); Thesis titled “*Improving internal control at Vietnam Oil and Gas Group*” (Doan Thi Thu Ha, 2017); Thesis titled “*Improving internal control at Vietnam Electricity*” (Nguyen Thanh Thuy, 2017); and Thesis titled “*Improving internal control in small- and medium-sized paper manufacturing enterprises in the North of Vietnam*” (Nguyen Thi Thanh, 2019)... Most of the authors have considered the specific characteristics of the industries as well as the production characteristics of the industries and groups of companies within the scope of the study to assess the current situation of internal control and propose appropriate solutions.

2.4. Evaluation of research works and research orientation of the thesis

- *First*, about the application of internal control in coal mining and processing joint stock companies.
- *Second*, determine the degree of influence of factors on the effectiveness of internal control.
- *Third*, internal control is studied in the direction of risk management.

3. Research objectives

- *General research objectives*: To study internal control theory; To analyze and evaluate the current situation of internal control in coal mining and processing joint stock companies under Vinacomin, thereby proposing solutions to improve the effectiveness of internal control.

- *Specific research objectives*:

+ To systematize the theoretical issues of internal control in enterprises.

+ To analyze the current situation of internal control, identify influencing factors and measure the influence of these factors on the effectiveness of internal control in coal mining and processing joint stock companies under Vinacomin.

+ To assess the current situation of internal control in coal mining and processing joint stock companies under Vinacomin.

+ To propose solutions and conditions for implementing solutions to improve internal control in coal mining and processing joint stock companies under Vinacomin.

4. Research questions

To achieve the above research objectives, the research questions are posed as follows: (1) What is internal control? What internal control models and components are there? (2) What is the current situation of the design and operation of internal control in coal mining and processing joint stock companies under Vinacomin? (3) How do the components of internal control in coal mining and processing joint stock companies under Vinacomin affect the effectiveness of internal control? (4) What solutions should be given to improve internal control in coal mining and processing joint stock companies under Vinacomin? (5) What solutions and conditions should be given to improve internal control in coal mining and processing joint stock companies under Vinacomin?

5. Object and scope of research

- *Research object*: Internal control in coal mining and processing joint stock companies under Vinacomin.

- *Research scope*:

Scope of content: The scope of internal control approach is mainly in the direction of risk management with the main objective being to assess the current situation of internal control and propose solutions to ensure the effectiveness of internal control in coal mining and processing joint stock companies under Vinacomin.

Scope of space: The thesis only studies joint stock subsidiaries whose main business activities are coal mining and processing. Specifically, there are 8 joint stock subsidiaries of Vinacomin. The thesis does not study companies with diversified or other production and business activities.

Scope of time: *For secondary data:* The thesis uses data from 2016 to 2021. This is the period in the five-year development plan 2016-2020 of Vinacomin approved by the Prime Minister and in the early years of implementing the national energy development strategy according to the Resolution No. 55-NQ/TW dated February 11, 2020 by the Politburo; *For primary data:* The thesis uses survey data from January 2019 to December 2021. This is the period to check whether the implementation of the five-year plan (2016-2020) ensures the set objectives or not and initially implement the development tasks for the period 2020-2030, with a vision to 2045.

6. Research methods

6.1. Methodology

The thesis uses dialectical materialism, systematic viewpoint (looking at things as a whole), practical viewpoint (applicability of the research problem in practice) and historical materialism.

6.2. Specific methods

a. Qualitative research methods

Qualitative research is used to find the appropriate questionnaire as well as model for the purpose of studying the factors affecting the effectiveness of internal control based on the factors mentioned in the COSO Report 2013. The research is based on the method of interviewing experts on internal control with the information saturation rule (asking until 3 experts in a row do not give new opinions, it is considered as the saturation point and the interview will stop here) to select the information obtained from expert interviews.

b. Quantitative research methods

- *Survey method:* The survey is conducted through questionnaires for 4 groups of subjects: Company leaders; Heads of departments, divisions and

workshops; Employees; A number of related officers (independent auditors, retired officers, staff transferred outside the Group).

- *Data processing method:* After collecting the questionnaires, the author coded and put them into SPSS software for analysis.

6.3. Data collection methods

- Secondary data collection.
- Primary data collection.

7. Research process:

- Step 1: Determine the research objectives.
- Step 2: Synthesize documents and previous research works.
- Step 3: Build the research model.
- Step 4: Design the research.
- Step 5: Collect data.
- Step 6: Analyze the data and present the findings.

8. Contributions of the thesis

- *In terms of theory:* The thesis has systematized the theoretical basis of internal control from domestic and international research works, synthesized the characteristics of mining enterprises that affect the design and operation of internal control, and researched, synthesized internal control models, thereby building a model of the impact of factors on the effectiveness of internal control affecting the objectives: effectiveness, compliance, reliability of reports and risk management.

- *In terms of practice:* The thesis presents the characteristics and risks of coal mining and processing joint stock companies under Vinacomin that affect internal control. The thesis uses a combination of qualitative and quantitative methods to survey and analyze the current situation of internal control in coal mining and processing joint stock companies under Vinacomin, thereby analyzing and evaluating in detail each component of internal control of these enterprises.

- *In terms of applicability:* The thesis has proposed solutions to improve internal control in coal mining and processing joint stock companies under

Vinacomin associated with the requirements of state capital management and Group restructuring. The thesis has also provided the conditions for implementing solutions in coal mining and processing joint stock companies under Vinacomin.

9. Thesis structure

In addition to the preamble, conclusions, table of contents and list of references, the thesis is structured into 03 chapters as follows:

Chapter 1: General theory of internal control in enterprises.

Chapter 2: Current situation of internal control in coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited.

Chapter 3: Solutions to improve internal control in coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited.

CHAPTER 1

GENERAL THEORY OF INTERNAL CONTROL IN ENTERPRISES

1.1. General overview of internal control

1.1.1. Control in management

Control is a function of management, performed to measure, evaluate and influence the control object to ensure that an organization's goals and plans are effectively implemented.

1.1.2. Internal control

1.1.2.1. The concept of internal control

Internal control towards achieving the organization's objectives

Internal control is approached by many researchers and countries from different angles, but they all have common characteristics that can be mentioned as follows:

- Internal control is geared to the achievement of the organization's objectives.
- Internal control is a process.

- Internal control is designed and operated by people.
- Internal control provides reasonable assurance.
- Internal control can be adapted to different organizational structures.

Internal control as a measure to prevent risks

On the basis of research opinions of scientists and organizations, the author gives a personal view on internal control: *“Internal control is a system of components combined together to become a solid structure. Internal control is designed and operated by management to provide reasonable assurance regarding the achievement of objectives such as: reliability of reporting; compliance with laws and regulations; assurance of economy, effectiveness and efficiency of operations”*.

1.1.2.2. Objectives of internal control

- *Operational objective:* To emphasize the efficiency and effectiveness of the use of enterprise resources.

- *Reporting objective:* An enterprise must ensure the truthfulness and reliability of financial and non-financial reports provided to inside or outside the enterprise.

- *Compliance objective:* Internal control must reasonably ensure the enterprise's compliance with laws and regulations.

1.1.3. Relationship between internal control and enterprise risk management

1.1.3.1. Overview of risk and enterprise risk management

1.1.3.2. Relationship between internal control and enterprise risk management

1.2. Internal control frameworks and models

1.2.1. COSO Report 2013

1.2.2. COBIT internal control framework

1.2.3. Turnbull Report 1999 on internal control

1.2.4. COCO internal control framework

1.2.5. SAC Report

1.2.6. Reasons for choosing COSO internal control framework 2013

- *First*, the COSO internal control framework 2013 is not only related to financial and non-financial reporting but also extends to the areas of operations and compliance, corporate governance and risk management.

- *Second*, the COSO Report 2013 has high applicability in theory and practice, contributing to promoting development in many fields and industries around the world.

- *Third*, the COSO Report 2013 clearly and specifically states the principles and elements for the design, operation and detailed evaluation of internal control for each component.

- *Fourth*, the COSO framework shows the cohesion between internal control, risk management and corporate governance.

- *Fifth*, the COSO Report 2013 has made major changes compared to the COSO Report 1992 to better suit the development context of the economy and objective events affecting the success or failure of enterprises.

1.3. Components of internal control according to the COSO framework 2013

1.3.1. Control environment

1.3.2. Risk assessment

1.3.3. Control activities

1.3.4. Information and communication

1.3.5. Monitoring activities

1.4. Effectiveness of internal control

In the thesis, the author inherits three objectives of COSO 2013 (including: efficiency of operations, reliability of reporting, and compliance) and adds risk management objective in assessing the effectiveness of internal control in coal mining and processing joint stock companies under Vinacomin.

1.5. Characteristics of mining enterprises that affect internal control

- *First*, the production process is complicated and the life cycle of a mining project often takes a long time.

- *Second*, mining activities require large capital with slow payback period.

- *Third*, production activities depend heavily on natural conditions, leading to many potential risks.

1.6. International experience and lessons learned for Vietnam upon design and operation of internal control in mining enterprises

1.6.1. In India

1.6.2. In Romania

1.6.3. Lessons learned for mining enterprises in Vietnam

CONCLUSIONS OF CHAPTER 1

CHAPTER 2

CURRENT SITUATION OF INTERNAL CONTROL IN COAL MINING AND PROCESSING JOINT STOCK COMPANIES UNDER VIETNAM NATIONAL COAL AND MINERAL INDUSTRIES HOLDING CORPORATION LIMITED

2.1. General overview of coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited

2.1.1. Overview of Vietnam National Coal and Mineral Industries Holding Corporation Limited

2.1.1.1. Process of establishment and development of the Group

2.1.1.2. Organizational model of Vietnam National Coal and Mineral Industries Holding Corporation Limited

2.1.2. Characteristics of coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited that affect the design and operation of internal control

- *First*, the complex coal mining and processing process directly affects the components of internal control.

- *Second*, capital characteristics affect the internal control of coal mining and processing joint stock companies.

- *Third*, coal mining and processing joint stock companies are public companies producing and trading national strategic resources; therefore, they are affected by many different policies and laws.

- *Fourth*, competitors are foreign enterprises and corporations with modern production technology and large capital sources.

2.1.3. Risks affecting the design and operation of internal control in coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited

- *First*, financial risk.

- *Second*, compliance risk.

- *Third*, operational risk.

2.2. Current situation of design and operation of internal control in coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited

2.2.1. Research design

2.2.1.1. Proposed research model

2.2.1.2. Research methods

2.2.2. Current situation of control environment

The control environment is the foundation for the remaining four components of internal control to develop appropriate principles and operating structures. The control environment is specifically evaluated by five factors: (1) Commitment to integrity and ethical values; (2) Oversight function of the Board of Directors and the Board of Supervisors; (3) Establishing structures, authorities and responsibilities; (4) Human resource policy and commitment to competence; (5) Accountability.

2.2.3. Current situation of risk assessment

Risk assessment in coal mining and processing joint stock companies includes: (1) Establishing objectives; (2) Identifying and assessing risks (including: Financial risk; Operational risk; Compliance risk); (3) Assessing fraud risk; (4) Managing change.

2.2.4. Current situation of control activities

Control activities play an important role in ensuring the effectiveness of internal control. Control activities in internal control are concretized by 3 factors: (1) Developing control activities; (2) Using information technology in control activities; (3) Implementing control activities.

2.2.5. Current situation of information and communication

- Collection, creation and use of information: In coal mining and processing joint stock companies, the main information system serving the process of evaluating and developing business strategies is the accounting information system, including accounting document system, accounting account system, bookkeeping system, and accounting reporting system.

- Internal communication.
- External communication.

2.2.6. Current situation of monitoring activities

- Implementation of monitoring activities: In coal mining and processing joint stock companies, regular monitoring activities and periodical monitoring activities are carried out.

- Evaluate and correct weaknesses detected through monitoring activities.

2.2.7. Evaluation of the effectiveness of internal control

The effectiveness of internal control is reflected in the extent to which operational, reporting, compliance, and risk management objectives are achieved.

2.3. Assessment of the current situation

2.3.1. Advantages

✚ First, in terms of control environment

- Integrity and ethical values: In coal mining and processing joint stock companies, managers are aware of the importance of maintaining integrity and adhering to ethical values. Regulations on integrity and ethical values are developed and implemented in the enterprises.

- Oversight function of the Board of Directors and the Board of Supervisors: The Board of Directors and the Board of Supervisors ensure

sufficient professional capacity and regularly perform the oversight function in order to maintain the effectiveness of internal control. The oversight function is clearly defined in the documents of the enterprises in order to raise the sense of responsibility of the Board of Directors and the Board of Supervisors.

- Establishing structures, authorities and responsibilities: Organizational structures, authorities and responsibilities of individuals and departments are clearly established and delineated.

- Human resource policy: Salary and income policy of employees is always concerned, develops and implements annual salary increase plan. Capacity assessment is carried out regularly to ensure that the income is commensurate with the skill level of the worker.

- Accountability: Accountability is expressed regularly through regulations on monthly, quarterly, and annual reporting regimes and explanations before inspection, examination, supervision and audit teams...

Second, in terms of risk assessment

- Establishing objectives: The objectives have been established through specific targets and plans and periodically evaluate the objectives to adjust and overcome in a timely manner.

- Identifying and assessing risks: The risk assessment has identified and classified specific risks to offer appropriate prevention plans.

- Assessing fraud risk: The risk of fraud is minimized and prevented by regulatory barriers, enterprise regulations and application of inspection and monitoring technologies.

- Managing change: Initial changes have been concerned by management levels to assess the impact of the change on corporate governance, thereby offering adaptive solutions.

Third, in terms of control activities

- Developing control activities: The control process is implemented in all stages: pre-control, internal control and post-control. For control activities to

prevent risks, enterprises have classified risks to put in place appropriate control procedures.

- Using information technology in control activities: Over the years, companies have developed computerization strategies associated with production and management in the direction of improving the effectiveness of control activities in each activity.

- Control policies and procedures: Coal mining and processing joint stock companies are always interested in developing and implementing mining rules and procedures and ensuring strict control of mining activities.

Fourth, in terms of information and communication

- In general, enterprises have built an accounting information system according to the general requirements of the Group, ensuring compliance with the provisions of Circular No. 200/2016/TT-BTC of the Ministry of Finance and regulations relevant documents. Most of the documents are built with a strict circulation process, ensuring that they are fully checked and signed.

- Communication work at enterprises has been concerned by managers to deploy in many forms such as electronic information, information in magazines, information through seminars, meetings... Communication information Information is communicated in a timely, clear, and correct manner to the right audience.

Fifth, in terms of monitoring activities

Regular monitoring activities are built in association with the functions and tasks of the supervisory department. In addition to regular monitoring, businesses and the Group have carried out unscheduled monitoring when there are unusual signs, focusing on new major issues. The effectiveness of supervision activities has been promoted through timely remedial measures and correction of errors detected during the monitoring process.

2.3.2. Limitations

First, in terms of control environment

- Commitment to integrity and ethical values: A code of conduct or regulation of ethical standards has not been required by the Group to be established in companies, so most companies have not yet implemented it. construct.

- The role of the Board of Directors and the Board of Supervisors for Internal Control: Some companies have not yet ensured the minimum percentage of independent members in the Board of Directors to ensure objectivity in control activities. The standards of the Board of Supervisors are developed as appointment criteria without checking the maintenance of standards during the entire term. In addition, companies do not have a reward mechanism when the Board of Directors and Board of Supervisors detect violations.

- Regarding organizational structure and decentralization: The restructuring process at companies is mainly mechanical reduction without building specific plans and roadmaps to come up with the optimal streamlining plan to ensure keeping skilled workers, reducing the number of employees, departments and units, but the work efficiency of the whole company is still maintained.

- Personnel planning is still oriented by incumbent leaders without really paying attention to the aspirations of the collective. The assessment of KPIs in enterprises is mainly carried out for managers. managed in accordance with the Group's regulations without expanding and developing specific evaluation criteria for each division.

- In coal mining and processing joint stock companies, accountability is rarely specified in the company's regulations and regulations, but mainly when there are signs of suspicion of wrongdoing. , detecting violations through inspection, examination and audit results.

Second, in terms of risk assessment

- Establishing objectives: Coal mining and processing joint stock companies currently focus on setting targets for mining output and consumption, which have not been classified into target groups such as

operational objectives, reporting objectives, compliance objectives, risk management objectives...

- Identifying and assessing risks: Financial risks in recent years have not been overcome by joint stock companies in coal mining and processing and offering solutions to handle them thoroughly.

- Assessing fraud risk: Methods to identify potential and existing frauds such as implementing hotlines, suggestion boxes, building a dedicated position to receive complaints about fraudulent behavior. Fraud has not been implemented by many enterprises.

- Managing change: Managers are currently focusing on evaluating the changes that have occurred, but have not really paid attention to identifying changes that are likely to happen in the future. The building of hypotheses that may happen in the future helps the company and managers to proactively anticipate factors that adversely affect the business to offer solutions to prevent risks.

Third, in terms of control activities

- Developing control activities: In coal mining and processing joint stock companies, the following control activities still have loopholes that have not been thoroughly resolved for many years. Control activities at work in procurement and bidding, for many years, there is still a situation of low bid reduction rate, unable to expand suppliers to increase competitiveness.

- Using information technology in control activities: Coal mining and processing joint stock companies focus on promoting mechanization of production without really paying attention to developing information technology in parallel to meet requirements. Automation is increasing day by day. Some companies have not done well in ensuring security in software and application systems.

- Control policies and procedures: The debt control policy at coal mining and processing joint stock companies still has certain risks. Risks of unsafety at companies tend to decrease but still occur in recent years.

Fourth, in terms of information and communication

- Collection, processing and provision of information: The enterprise's management report focuses on cost calculation and the increase and decrease of a number of indicators without paying attention to the analysis of financial activities of the enterprise. enterprise. The ERP system at coal mining and processing joint stock companies still depends on the Group but has not been active in construction implementation.

- Communication: Communication channel from subordinates to superiors has not been built. The amount of public media information to the outside is not much, just stopping at the general level.

Fifth, in terms of monitoring activities

In coal mining and processing joint stock companies, most of them set up an internal audit department integrated with the inspection department and directly under the director. The establishment of an internal audit department under the Director will lack independence and objectivity in the supervision process. Current supervision activities only focus on detecting violations and pay little attention to the process. the implementation of recommendations in the process of inspection, examination and audit.

2.3.3. Reasons for limitations

Objective reasons

- *First*, the price policy is not suitable with the market mechanism.
- *Second*, the risks in mining activities are very large.
- *Third*, the monopoly and state ownership still account for a large proportion.
- *Fourth*, the effects of economic recession and epidemics.

Subjective reasons

- *First*, due to the perception and point of view of managers.
- *Second*, the policy mechanism for the control team.
- *Third*, the technology platform has not met the increasingly high requirements of the mining process.

CONCLUSIONS OF CHAPTER 2

CHAPTER 3
SOLUTIONS TO IMPROVE INTERNAL CONTROL IN COAL
MINING AND PROCESSING JOINT STOCK COMPANIES UNDER
VIETNAM NATIONAL COAL AND MINERAL INDUSTRIES
HOLDING CORPORATION LIMITED

3.1. Orientation and development objectives of coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited

3.1.1. Development perspective

- *First*, develop the coal industry on the basis of efficient and economical exploitation, processing and use of coal resources of the country.
- *Second*, step up activities of basic investigation, exploration and assessment of coal resources and reserves in the country to prepare a reliable resource base for the sustainable development of the coal industry.
- *Third*, promote business activities and invest abroad to meet enough coal for the country's socio-economic development needs.
- *Fourth*, coal production and consumption ensure sustainability.
- *Fifth*, conduct coal business according to the market mechanism under the management of the State, in harmony with the world coal market.
- *Sixth*, develop the coal industry in association with the protection and improvement of the ecological environment of the coal region.

3.1.2. Development objectives

- a. Overall objectives*
- b. Specific objectives*

3.2. Principles of improving internal control in coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited

- The improvement of internal control must ensure the principle of conformity.

- The improvement of internal control must ensure the principle of thrift and efficiency.

- The improvement of internal control must ensure the compliance principle.

3.3. Solution to improve internal control in coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited

3.3.1. Solutions to improve control environment

- *First, improve integrity and ethical values:* Develop a Code of Conduct to help orient and manage human resources by ethical standards, contributing to building corporate culture.

- *Second, improve the oversight role of the Board of Directors and the Board of Supervisors:* (1) Strengthen the function of the Board of Directors; (2) Ensure the independent position of the Board of Supervisors.

- *Third, establish rights and responsibilities in line with the Group's restructuring orientation:* Reorganize the organization, coal mining and processing joint stock companies need to ensure the quality and quantity in accordance with the regulations. workload, characteristics of each department. The process of organizational restructuring needs to be elaborated into plans and have a specific roadmap in line with the Group's overall roadmap.

- *Fourth, use the human resources*

Regarding capacity assessment: It is necessary to develop appropriate evaluation criteria. Staff evaluation must be associated with emulation and commendation work.

Regarding planning: Coal mining and processing joint stock companies need to proactively identify well-trained, practical-experienced staff who have leadership capacity and pay special attention to quality. ethics to include in staff planning. Researching and gradually implementing pilot exams for leadership positions.

- *Fifth, accountability:* In order to determine accountability, it is necessary to establish an institution that requires companies to disclose information according to international practices and Vietnamese law, forcing companies and individuals to the owner's representative and related parties are directly or jointly responsible for the results, effectiveness and efficiency of the operation of individuals and companies.

3.3.2. Solutions to improve risk assessment

- *First, establishing objectives:* Performance objectives need to calculate and clarify indicators of labor productivity.

- *Second, identifying and assessing risks*

Building a process of risk analysis and assessment: Step 1: List the activities of the enterprise; Step 2: Identify risks and possible risks; Step 3: Severity or likelihood of damage; Step 4: Determine the probability; Step 5: Determine the level of risk; Step 6: Establish control measures; Step 7: Designate someone to conduct and monitor the assessment

Establish measures to respond to risks: Overcoming capital misappropriation. Innovating forms of capital mobilization with lower costs. Strengthening debt control.

- *Third, assessing fraud risk.* Implement and build information collection channels to identify and evaluate fraud.

- *Fourth, managing change.* In order to manage change, it is necessary to identify “what needs to be changed” from the content, operation method or other related issues (determine the need for change). , change idea selection); Make a plan to implement the change; implementation of the established plan; Evaluate the results of change implementation and find ways to maintain the good results brought about by change.

3.3.3. Solutions to improve control activities

- *First, developing control activities:* (1) Control financial risks; (2) Control operational risks; (3) Control compliance risks.

- *Second, using technology in control:* Link information technology and automation. Develop a security plan suitable to the information needs of each object.

- *Third, control policies and procedures:* In order to control and minimize risks for debts, it is necessary for companies to perfect sales policies, debt handling and recovery processes.

3.3.4. Solutions to improve information and communication

- *First, in terms of collection, creation and use of information*

+ Analysis of financial situation: Analysis results need to find out unusual indicators. Thereby zoning the risks, finding the causes of the risks are objective and subjective to discuss with relevant departments to come up with an effective way to handle them.

+ Deploying the ERP system: (1) It is necessary to spend a large enough budget for the ERP system and pilot it at one enterprise; (2) At the beginning of implementation, the participation of the head is required; (3) Controlling and evaluating the effectiveness of ERP before and after acceptance.

- *Second, in terms of communication:* (1) Enhance publicity and transparency of information; (2) Completing and developing information channels; (3) Communication channels from subordinates to superiors.

3.3.5. Solutions to improve monitoring activities

- *Firstly, implementing monitoring activities:*(1) Establish the Audit Committee; (2) Establish an internal audit department under the Audit Committee.

- *Second, monitoring the implementation of recommendations:* It is necessary to classify recommendations of independent agencies (state audit, government inspector...) and recommendations of the inspection and internal control department by the inspection department. legal investigation, the Board of Supervisors in order to provide appropriate handling and remedying of violations.

3.4. Conditions for implementing the solution to improve internal control in coal mining and processing joint stock companies under Vietnam National Coal and Mineral Industries Holding Corporation Limited

3.4.1. For the State

- *First*, continue implementing equitization according to the schedule.
- *Second*, promote the role of the State Capital Management Committee.
- *Third*, regulate the amount of imported coal.
- *Fourth*, develop regulations on reporting on internal control for companies listed on the stock exchange.
- *Fifth*, manage the practice of independent board members.

3.4.2. For Vietnam National Coal and Mineral Industries Holding Corporation Limited

CONCLUSIONS OF CHAPTER 3

CONCLUSIONS

With the orientation to become a sustainable industry, applying advanced technology and equipment, constantly innovating and improving in technology, Vietnam's coal industry aims to become an important economic sector. . However, in the context of integration and globalization, the coal industry is currently facing many challenges and competition from countries around the world. Among solutions to improve competitiveness, with limited financial potential and technological potential, the solution to improve internal control is considered a feasible and effective solution that needs to be completed. Through theoretical research on typical internal control models and frameworks in the world, adjusted in accordance with the characteristics of the industry, characteristics of the macroeconomic environment of Vietnam, the thesis aims to apply these theories. discussion on solving practical problems for coal mining and processing joint stock companies under Vinacomin.

(1) Systematize and clarify the general theory of internal control in enterprises such as: General overview of internal control; Frameworks and models for internal control; Elements of internal control according to the COSO 2013 reporting format; The effectiveness of the internal control.

(2) The thesis has deeply studied the contents of internal control of some countries in the world, thereby drawing lessons to apply to mining enterprises in Vietnam.

(3) The thesis has researched and clearly analyzed the current situation of internal control at coal mining and processing joint stock companies under Vinacomin.

(4) The thesis assesses the current situation, clarifies the achieved results, limitations and causes of limitations on internal control in coal mining and processing joint stock companies Vinacomin as a basis for the complete solutions in chapter 3 of the thesis.

(5) The thesis clarifies the orientation, objectives and principles of improving internal control in coal mining and processing joint stock companies under Vinacomin to serve as the basis for complete solutions. in chapter 3 of the thesis.

(6) The thesis proposes complete solutions and conditions to effectively implement solutions to improve internal control in coal mining and processing joint stock companies under Vinacomin.

Thus, the thesis has basically completed the objectives set out with the most common goal towards perfecting internal control at joint stock companies in coal mining and processing. However, the research conditions are limited in terms of time, cost and the author's knowledge about coal mining and processing joint stock company. Therefore, the research results are somewhat incomplete and need to be supplemented in future studies. We look forward to receiving the sharing and contributions of scientists and administrators of coal mining and processing joint stock companies to make the thesis more complete./.

LIST OF PUBLISHED WORKS OF THE AUTHOR RELATED TO THE THESIS

1. Dinh Doan Cuong (2015), “Material assessment in audit planning stage”, Journal of Finance and Accounting Research (ISSN 1859-4093), No. 02 (139) 2015.
2. Dinh Doan Cuong (2016), “Factors contributing to improving the quality of internal control system”, Review of Finance (ISSN 005-56), February 2016 (627).
3. Dinh Doan Cuong (2016), “Improving the role of auditors in audit quality”, Industry and Trade Magazine (ISSN 0866-7756), March 2016.
4. Dinh Doan Cuong (2018), “Cost-fixing: An effective tool to improve business efficiency at Vietnam National Coal and Mineral Industries Holding Corporation Limited (Vinacomin)”, Asia-Pacific Economic Review (ISSN 0868-3808), April 2018 (515)
5. Dinh Doan Cuong (2021), “Experience in setting up internal control systems at State-owned corporations and enterprises”, Review of Finance (ISSN 2615-8973), 2nd Issue - July 2021 (757).
6. Dinh Doan Cuong (2021), “Some solutions to improve the control environment in coal mining and processing enterprises under Vietnam National Coal and Mineral Industries Holding Corporation Limited (Vinacomin)”, Industry and Trade Magazine (ISSN 0866-7756), No. 17 - July 2021.
7. Dinh Doan Cuong (2021), “Building an internal control system at Vietnam National Coal and Mineral Industries Holding Corporation Limited (Vinacomin)”, Review of Finance (ISSN 2615-8973), 1st Issue - August 2021 (758).