



Paper Code : AACT11 – 97

## **EFFECTIVENESS OF THE INTERNAL CONTROL SYSTEM IN THE PRIVATE JOINT-STOCK COMMERCIAL BANKS IN THAI NGUYEN PROVINCE, VIETNAM**

**Nguyen Phuong Thao**

*Thai Nguyen University of Economics and Business Administration  
thaonp.tueba@gmail.com*

### **Abstract**

*This paper aimed to assess the level of effectiveness of internal control system in the private joint-stock commercial banks in Thai Nguyen province. In addition, the research used Exploratory Factor Analysis, regression analysis to analyze the effect of factors on the effectiveness of the internal control system. From there, the author proposes some solutions to improve the Effectiveness of internal control at these banks.*

**Keywords:** *Effectiveness, internal control, private joint-stock commercial bank, risk assessment, control activities*

## **INTRODUCTION**

According to Committee of Sponsoring Organizations of the Tread way Commission (COSO, 1992) internal control is a major part of managing an organization. It comprises the plans, methods, and procedures used to meet missions, goals, and objectives, in doing so, supports performance-based management. Though the functions of internal control makes it wider American Institute of Certified Public Accountants(AICPA), General Accounting Office(GAO) and other sources, broadly define internal accounting control as a series of procedures and practices designed to promote and protect sound management practices, both general and financial. Thus an effective internal control procedures will significantly increase the likelihood that: financial information is reliable, so that managers and the board can depend on accurate information, assets and records of the organization are not stolen, misused, or accidentally destroyed, the organizations policies and government regulations are met, overall organization objective is achieved.

Private joint stock commercial banks are joint stock commercial banks without capital contribution by the state in the capital structure. Internal control systems of these banks follow the regulations of the State Bank according to Circular No. 44/2011 / TT-NHNN.

In Thai Nguyen province, there are branches and transaction offices of private commercial banks. The internal control system at the bank branch shall comply with the general provisions of the bank's regulations, procedures and principles. In this article, the author is generally referred to as the internal control system of the bank.

Thai Nguyen is a province in the northern mountainous midland of Vietnam, the capital of Hanoi about 80 km. In Thai Nguyen province, there are now branches of 14 private commercial banks operating. The total mobilized capital of all Thai Nguyen banks was 12,043,913 million VND, accounting for 25.68% of total mobilized capital. Total outstanding loans were 8,133,839 million VND accounting for 16.04% of total



outstanding loans of all banks. However, the ratio of bad debt to total loans at these banks is much higher than the average bad debt ratio of all banks in the province. As such, the internal control of the Branches are still ineffective. Therefore, the assessment of effectiveness and analysis of factors affecting the effectiveness of the internal control system at private joint stock commercial banks in Thai Nguyen province will contribute solutions to help the internal control system at the branches more effectively.

### **THEORETICAL BASIC**

COSO (1992) provided criteria against which effectiveness of internal controls can be assessed. Internal control can be judged effective if the entity's operations objectives are being achieved; published financial statements are being prepared, reliable and applicable laws and regulations are being complied with.

While internal control is a process, its effectiveness is a state or condition of the process at a point of time. Accordingly, the effective functioning of components of internal control provides a reasonable assurance regarding achievement of one or more of the stated categories of objectives to ensure high levels of organizational performance. Thus the company's criteria for effective internal control and success of the entire organization. Efficiency and effectiveness of operations have been taken to mean efficiencies and effective use of its resources including personnel, accurate information for decision making and safeguarding of assets and records (Aren and Lwebbecke, 1994).

As stated in internal control framework of COSO (1994) an effective internal control should in priority encompass the five elements the control. So that the effectiveness of internal control would be accessed through 5 elements of internal control system.

#### *Control Environment*

The control environment is considered as the tone at the top of an organization, influencing the control consciousness of its employees. Beneish et al (2008), defines the control environment as the tone of an organization and the way it operates.

He further says that it concerns the establishment of an atmosphere in which people can conduct their activities and carry out their control responsibilities effectively. The control environment is the foundational context within which the other aspects of internal control operate (Konrath, 1999). The philosophy and management style, organizational structure, methods of imposing control, assignment of authority and responsibility are all key aspects of the control environment (Jones, 2007). Likewise, COSO (2004) looks at the ethical environment of an organization to encompass aspects of upper management's tone in achieving organizational objectives, their value judgments and management styles. COSO argue this component is the foundation for all other components of internal control, providing both discipline and structure to the organization. Ethical business practices, management philosophy and a sense of business integrity all play key parts in the control environment component.

The control environment represents the control atmosphere for the entity and is the foundation for the other components (Nicolaisen, 2004). Bates (2001) considers the factors relating to the control environment to include the integrity, ethical values, and competence of employees and management, management's philosophy and operating style, the manner in which authority and responsibility are assigned, the organization and development of employees, and the attention and direction of the board of directors towards organizational success. Lou (2008) concurs that higher level



administrators of an organization are responsible for establishing the appropriate control environment. Guy et al (1999) states that good control environment should provide guidelines related to: ethic and integrity values that should be owned by the member of entity; commitment to competence; participation or the board of director and audit committee; philosophy and management style; job description of each personnel; and lastly policy and procedure of human resources.

#### *Risk assessment*

Community Associations Institute (CAI, 2003) described risk assessment as identification of potential misstatements and designing controls to prevent or promptly detect of misstatements. Risk assessment is the process used by an organization (management) to decide how it will deal with the risks that pose a threat to achieving its objectives (Furrugia 2002). According to Meisser, (2003) risk assessment is the component related to the identification of risk, analysis of risk and management of risk. According to Meisser Risks are assessed through management's awareness of the environment in which it operates and its direct involvement with the day to day operations of the client community association. Risk assessment entails to identification and prioritization of objectives, the identification of risks and assessment of their likelihood and impact, Jones (2007).

Consequently Jones looks at risk assessment as the identification, evaluation and management of risks. He further notes that risks can relate, to financial statement fraud or to the misappropriation of assets.

#### *Control activity.*

Under Act of Sarbanes Oxley act (SOX, 2002) Control activities are the policies and procedures that assist in ensuring that management directives are successfully implemented. They provide the means to address the various risks that may hinder the achievement of the organization's objectives. In essence, control activities are established in response to perceived risks. Junner, (1993) described Control activities as policies and procedures that help ensure that management directives are carried out. They help ensure that necessary activities are taken to address risks to achievements of the entity's objectives. Control activities occur throughout the organization at all levels and all functions.

Control activities include range of activities; authorization, verifications, reconciliations, reviews of operating performance security of assets and segregation of duties (Ernst and Yong, 1995). The American Institute of Certified Public Accountants, in Statement on Auditing Standards number 55 (SAS 55), also defined control activity as policy and procedure to ensure that every activity taken based on the consideration to minimize the risk faced by the entity. A good entity should separate transaction authorization function, accounting record function, and asset store function (Guy et al., 1999; Meisser, 2003). Accordingly it is necessary to prevent the occurrence of cheating. The independency of each function can also be used to minimize the cheating behavior of the person in charge.

#### *Information and communication*

In a good organization, information system is essential to guide its operation process. Information systems produce reports, containing operational financial and compliance – related information that makes it possible to run and control an organization (COSO, 1992). It should consist of accounting information system to ensure that the accounting process is valid and reliable.



The Standards for Internal Control (GAO, 1999) requires that Information should be recorded and communicated to management and others within the entity who need it and in a form and within a time frame that enables them to carry out their internal control and other responsibilities. Effective communications should occur in a broad sense with information flowing down, across, and up the organization. Information flow is essential to effecting control, information about an organization's plan, control environment, risks, control activities and performance must be communicated up, and access an organization (Ruttrman Working Group, 1994). Reliable and relevant information flow both internal and external sources must be identified, captured, processed and communicated to the people who need it in a form and time frame that is useful (Chambers 1995).

Management should ensure there are adequate means of communicating with, and obtaining information from, external stakeholders that may have a significant impact on the agency achieving its goals (Guy et al., 1999). According to (Guy et al., 1999), effective information technology management is critical to achieving useful, reliable, and continuous recording and communication of information. Moreover, the system should be communicated to everyone in the organization.

#### *Self-assessment (monitoring)*

Spencer (2003) used quote "hundreds killed by doctors relying on outdated manuals" from New Times (1997) to elaborate how necessary to update an internal control is within organizations. According to Spencer (2003) to ensure the reasonable assurance regarding achievement of the organizations objectives, the monitoring process should be performed to evaluate and assess the systems of internal control to ensure that the procedures are consistently applied over an extended period of time.

Spencer believes internal audit is part of monitoring internal control system. Managers should promptly evaluate findings from audits and other reviews, including those showing deficiencies and recommendations reported by auditors and others who evaluate agencies' operations, to determine proper actions in response to findings and recommendations from audits and reviews.

Jones (2008) refers monitoring as the process of assessing the quality of a system's performance over time. On an on-going basis, staff should evaluate the various systems of internal control and updates/modifies/enhances where needed. Any discovered deficiencies are addressed immediately and added to the overall systems of internal control. Monitoring of internal control should include policies and procedures for ensuring that the findings of audits and other reviews are promptly resolved. According to Coffin (2003) monitoring entails the activities and procedures designed to assess the effectiveness of the internal control system in achieving the entity's financial reporting objectives. Monitoring activities may be ongoing or may be separate evaluations and it is important given the complex and dynamic environments faced by most organizations (Henle 2005). It seeks to ensure that systems are performing as intended. However, this is accomplished through ongoing monitoring activities, periodic evaluations or a combination of the two (COSO, 2004). Henle(2005) further contends that these activities permeate the entire organization, at all levels and in all functions.

## **METHODOLOGY**

Primary data was collected through the distribution of questionnaires to staff members working in private joint-stock bank in Thai Nguyen province. The sample size



depends on the analytical method. In this study, we used an exploratory factor analysis (EFA) tool with 19 observational items. According to Hair et al (1998) to the minimum sample size that is 50, preferably 100 and the ratio of observation / measurement variable is 5/1, which means that for every item minimum measurement required 5 observations. According to Dinh Phi Ho (2012), the number of samples for exploratory factor analysis is at least three to six times the total number of observed items. Based on the number of observable variables in the study, the possible sample size could be 114.

Respondents in this study are staffs who are working in private joint-stock bank in Thai Nguyen province. Respondents were selected mainly by convenient sampling method (non-probability).

There are currently 14 private joint-stock banks with 252 staff members. The number of staffs surveyed at each bank is determined based on the number of employees per company, as follows:

**Table 1. The number of respondents in private joint-stock bank in Thai Nguyen province**

| No | NAME OF BANK   | NUMBER OF RESPONDENT | SAMPLE     |
|----|--|----------------------|------------|
| 1  | An Binh Commercial Joint Stock Bank ABBANK                         | 28                   | 13         |
| 2  | Asia Commercial Joint Stock Bank ACB bank                          | 14                   | 6          |
| 3  | Bac A Commercial Joint Stock Bank Bac A Bank                       | 12                   | 5          |
| 4  | Dong A Joint Stock Commercial Bank Dong A Bank                     | 17                   | 8          |
| 5  | Southeast Asia Commercial Joint Stock Bank (SeA Bank               | 11                   | 5          |
| 6  | Vietnam Maritime Commercial Joint Stock Bank Maritime Bank         | 18                   | 8          |
| 7  | Vietnam Technological and Commercial Joint Stock Bank Techcom Bank | 20                   | 9          |
| 8  | Lien Viet Post Joint Stock Commercial Bank Lien Viet Bank          | 13                   | 6          |
| 9  | National Citizen Commercial Joint Stock Bank National Citizen Bank | 12                   | 5          |
| 10 | Military Commercial Joint Stock Bank Military bank                 | 17                   | 8          |
| 11 | Vietnam International Commercial Joint Stock Bank VIB bank         | 32                   | 14         |
| 12 | Saigon – Hanoi Commercial Joint Stock Bank SH bank                 | 14                   | 6          |
| 13 | Sai Gon Thuong Tin Joint Stock Commercial Bank Sacom bank          | 14                   | 6          |
| 14 | Vietnam Prosperity Joint Stock Commercial Bank VP bank             | 30                   | 14         |
|    | <b>Total</b>   | <b>252</b>           | <b>114</b> |

The purpose of this study is to get the perceptions of staffs of Life Insurance companies in Ha Noi. The main tool in gathering data was a self-developed questionnaire. The staffs who can give proper evaluation of the job satisfaction and employee engagement of Life insurance companies in Ha Noi were chosen.

Descriptive statistics such as weighted mean and standard deviation were used to describe the respondents' profiles and to assess the perception of respondents on effectiveness internal control

Cronbach's Alpha: Assess the reliability of variables through Cronbach's alpha coefficient. In statistics, Cronbach's is a coefficient of internal consistency. It is commonly used as an estimate of the reliability of a psychometric test for a sample of study. The table above is Cronbach's Alpha. It's mean if Cronbach's alpha coefficient is more than 0.6 is used.

Exploratory Factor Analysis (EFA): Exploratory factor analysis is a statistical technique that is used to reduce data to a smaller set of summary variables and to explore the underlining theoretical structure of the phenomena. It is used to identify the structure of the relationship between the variable and the respondent.

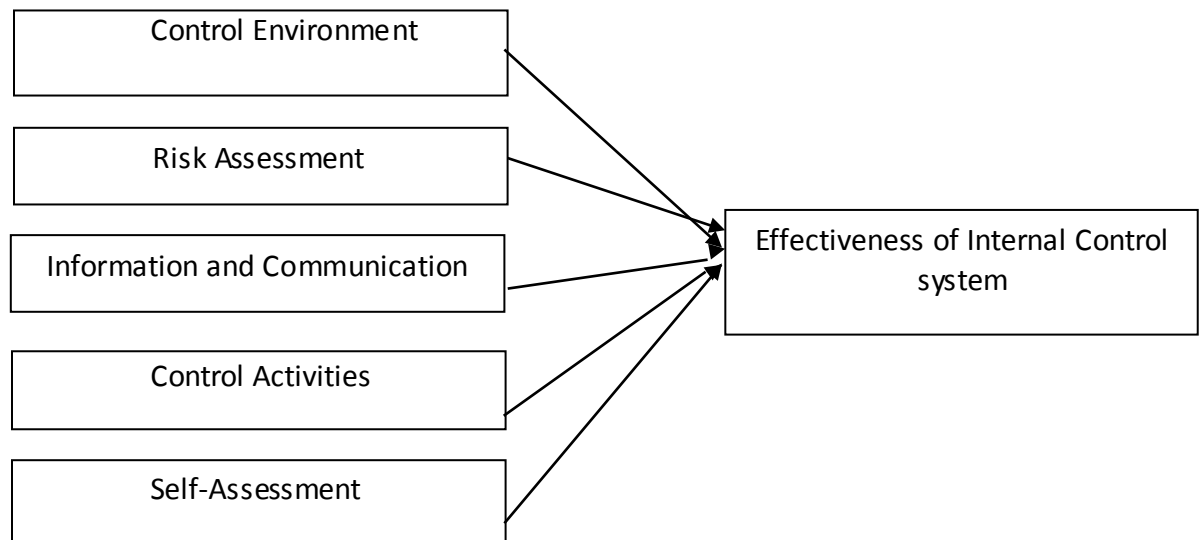
Evaluate the fit of the research model through KMO test.  $0.5 \leq KMO \leq 1$ : The KMO (Kaiser-Meyer-Olkin) coefficient is an index used to determine the suitability of factor analysis. Large KMO values have factorial analysis as appropriate.

Percentage of variance > 50%: Represent the percent variance of the observed variables. This means that the factor analysis explains how many percent of the variable groups are interrelated and represent a few basic factors.

Correlation coefficients and linear regression analysis

Multiple linear regression models were used to identify factors affecting effectiveness internal control in private joint-stock bank in Thai Nguyen.

Research model:



**Figure 1: Model to access the effectiveness of internal control in private joint-stock bank in Thai Nguyen**

The researcher coded all the variables in the Illustration below:

**Table 2. Coding factors and items for EFA analysis**

| Factors                              | Variables | Explanation  |
|--------------------------------------|-----------|--|
| Control Environment                  | CE1       | Effective policies and practices for human resources.  |
|                                      | CE 2      | Authority and responsibility that is clearly defined.  |
|                                      | CE 3      | Organizational structure that enables the management of the bank   |
| Risk Assessment                      | RA 1      | An introduction of new or expanded business lines, product activities.   |
|                                      | RA 2      | An introduction of new technologies. New or a revised information system. A change in staffing either through reassignment or new employees. |
|                                      | RA 3      | A change in a bank's operating environment.  |
| Information and Communication system | IC1       | Accounting.  |
|                                      | IC 2      | Information systems.   |
|                                      | IC 3      | Communication systems.   |
| Control Activities                   | CA1       | Operational performance.   |
|                                      | CA 2      | Information processing.  |
|                                      | CA 3      | Physical controls.   |
|                                      | CA 4      | Segregation of duties.   |
| Self-assessment                      | SA 1      | Continuous assessments.  |
|                                      | SA 2      | Documentation.   |
|                                      | SA 3      | Verification.  |
| Effectiveness of internal control    | EIC 1     | Scope of responsibilities of the accounting and financial reporting.   |
|                                      | EIC 2     | Accounting rules and procedures.   |
|                                      | EIC 3     | Reliable accounting and financial information.   |

Based on the values indicated in the questionnaire a mean value for each items is calculated. The value of each respondent for a variable is compared with the mean value.

Software used: Through analysis using SPSS 20.0 software with the support of Excel, and some other application software.

## RESULTS AND DISCUSSIONS

### *Perceived effectiveness of internal control of private joint-stock bank in Thai Nguyen*

#### Control Environment

The results from survey of staffs at 14 banks show that the Control Environment is neutral level of effectiveness. Up to 69.3% (79 staffs) rated this factor at neutral level; 2.63% (3 persons) of the staff evaluated at strongly disagree;

**Table 3. Computed Frequency, Percent of Respondents on effectiveness of internal control in Terms of Control Environment Control, Private joint-stock bank in Thai Nguyen**





|       |                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------|-----------|---------|---------------|--------------------|
| Valid | Strongly agree    | 0         | 0,00    | -             | -                  |
|       | Agree             | 0         | 0,00    | -             | -                  |
|       | Neutral           | 79        | 69,30   | 69,30         | 69,30              |
|       | Dis agree         | 32        | 28,07   | 28,07         | 97,37              |
|       | Strongly disagree | 3         | 2,63    | 2,63          | 100,00             |
|       | Total             | 114       | 100,00  | 100.0         |                    |

In terms of control environment variable, it has 3.06 mean value that is fairly supportive to effectiveness of internal control system in private bank. It can be concluded that the control environment within private bank is in moderate level of effectiveness as there are 90 employees fallen under moderately supportive level. On the whole this can be concluded that the overall awareness of management to build appropriate environment within the bank to implement control activities is in moderate level including implementing policies and practices for human resource management and giving authority and responsibilities to the right persons at right time to carry out the banking activities. The bank circulars may not be properly reviewed and not be made available to staffs for the regular exposure. The internal control policies do not promptly communicate to all the staffs and their subsequent changes. Thus, the staff organizational structure may not clearly define the responsibilities and authorities to be carried out by the each staff.

#### ***Risk Assessment***

The results from survey of staffs at 14 banks show that the Risk Assessment is neutral level of effectiveness. Up to 76.32% (87 staffs) rated this factor at neutral level; 14.04% (16 staffs) rated this factor at disagree level. 6.14% (7 persons) of the staff evaluated at agree level;

**Table 4. Computed Frequency, Percent of Respondents on effectiveness of internal control in Terms of Risk Assessment, Private joint-stock bank in Thai Nguyen**

|       |                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------|-----------|---------|---------------|--------------------|
| Valid | Strongly agree    | 2         | 1,75    | 1,75          | 1,75               |
|       | Agree             | 7         | 6,14    | 6,14          | 7,89               |
|       | Neutral           | 87        | 76,32   | 76,32         | 84,21              |
|       | Disagree          | 16        | 14,04   | 14,04         | 98,25              |
|       | Strongly disagree | 2         | 1,75    | 1,75          | 100,00             |
|       | Total             | 114       | 100,00  | 100.0         |                    |





In terms of risk assessment variable, it has a mean value of 3.6 and 87 respondents rated fairly agree. That means evaluating the risk when planning and approving new products or activities, using of new technologies such as security system for computers, adequate training programs to the employees and job rotation procedure among employees would be in the fairly level of effectiveness.

It is not said that those procedures have not been implemented fully within the bank but there may be some deviations in the implementation. Throught discussion with managers, it can be concluded that although there are some risks in assessing the procedures when introducing new products or services those are not controlled by the bank and implemented regularly within the bank. Through observation, it can be said that there is no sufficient trend in using new technological measures and bank is not tend to give training programs on their own to the employees except common programs.

**Information and Communication**

The results from survey of staffs at 14 banks show that the Information and Communication system is neutral level of effectiveness. Up to 94.74% (108 staffs) rated this factor at neutral level; 4.39% (5 persons) of the staff evaluated at agree level;

**Table 5. Computed Frequency, Percent of Respondents on effectiveness of internal control in Terms of Information and Communication system, Private joint-stock bank in Thai Nguyen**

|       |                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------|-----------|---------|---------------|--------------------|
| Valid | Strongly agree    | 0         | 0,00    | -             | -                  |
|       | Agree             | 5         | 4,39    | 4,39          | 4,39               |
|       | Neutral           | 108       | 94,74   | 94,74         | 99,12              |
|       | Dis agree         | 1         | 0,88    | 0,88          | 100,00             |
|       | Strongly disagree | 0         | 0,00    | -             | 100,00             |
|       | Total             | 114       | 100,00  | 100.0         |                    |

In terms of information and communication, it has 3.25 mean value. There are 94.74% of respondents accept fact that information and communication procedure is in fairly level of effectiveness. This indicates that technological measure adopting in the bank security such as technological failures prevention, convenience of communication method implementation around the bank such as weekly meetings, intercom system .... and line management accountability are in fairly level of effectiveness.

**Control Activities**

The results from survey of staffs at 14 banks show that the Control Activities is neutral level of effectiveness. Up to 94.74% (108 staffs) rated this factor at neutral level; 4.39% (5 persons) of the staff evaluated at agree level;

**Table 6. Computed Frequency, Percent of Respondents on effectiveness of internal control in Terms of Control Activities, Private joint-stock bank in Thai Nguyen**

|       |                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------|-----------|---------|---------------|--------------------|
| Valid | Strongly agree    | 4         | 3,51    | 3,51          | 3,51               |
|       | Agree             | 10        | 8,77    | 8,77          | 12,28              |
|       | Neutral           | 98        | 85,96   | 85,96         | 98,25              |
|       | Dis agree         | 2         | 1,75    | 1,75          | 100,00             |
|       | Strongly disagree | 0         | 0,00    | -             | 100,00             |
|       | Total             | 114       | 100,00  | 100.0         |                    |

In terms of control activities variable it has 3.05 mean value and 85.96% of respondents have accepted that control activities within the bank is fairly level of effectiveness. This refers to this level of effectiveness in the aspects of employees' performance review and documentation, policies and procedures for approvals and authorization of transactions, segregation of duties and physical controls.

Through survey data, observation and discussions held by the researcher, it can be said that although there are segregation of duties, operational performances, physical controls and information processing within the bank, it has some deviation in implementing the regular performance such as engaging in periodical external and internal auditing procedures and amending the errors at the time of regular review.

Thus it can be said that existing control activities within the bank is not in a satisfying effective level that is to say that all the personnels are not aware of all the banking activities, existing proper policies and procedures to conduct activities.

#### ***Self-assessment***

The results from survey of staffs at 14 banks show that the Self-assessment is neutral level of effectiveness. Up to 94.74% (108 staffs) rated this factor at neutral level; 4.39% (5 staffs) of the staff evaluated at agree level;

**Table 7. Computed Frequency, Percent of Respondents on effectiveness of internal control in Terms of Self-assessment, Private joint-stock bank in Thai Nguyen**

|       |                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------|-----------|---------|---------------|--------------------|
| Valid | Strongly agree    | 0         | 0,00    | -             | -                  |
|       | Agree             | 5         | 4,39    | 4,39          | 4,39               |
|       | Neutral           | 108       | 94,74   | 94,74         | 99,12              |
|       | Dis agree         | 1         | 0,88    | 0,88          | 100,00             |
|       | Strongly disagree | 0         | 0,00    | -             | 100,00             |
|       | Total             | 114       | 100,00  | 100.0         |                    |



In terms of self-assessment variable it has 3.34 of mean value and 97% of respondents have accepted that self-assessment procedure within the bank is fairly level of effectiveness. With continuous assessment item, documentation and verification are fairly level of effectiveness, as well. The reason for this condition the training programs for staffs, proper checking procedure on all vouchers and other documents, proper key handling procedure, pass word renewals systems are not properly practiced.

They are not giving prominent concern on pass-word usage in computers and proper key control system in the bank and to have continuous check on them.

***Effectiveness of internal control***

The results from survey of staffs at 14 banks show that the dependent variable Effectiveness of internal control is fairly level of effectiveness. Up to 96.49% (110 staffs) rated this factor at neutral level; 3.51% (4 persons) of the staff evaluated at agree level of effectiveness.

**Table 8. Computed Frequency, Percent of Respondents on effectiveness of internal control in Terms of Self-assessment, Private joint-stock bank in Thai Nguyen**

|       |                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------|-----------|---------|---------------|--------------------|
| Valid | Strongly agree    | 0         | 0,00    | -             | -                  |
|       | Agree             | 4         | 3,51    | 3,51          | 3,51               |
|       | Neutral           | 110       | 96,49   | 96,49         | 100,00             |
|       | Dis agree         | 0         | 0,00    | -             | 100,00             |
|       | Strongly disagree | 0         | 0,00    | -             | 100,00             |
|       | Total             | 114       | 100,00  | 100.0         |                    |

In terms of Effectiveness of internal control, staffs rated in general for Effectiveness of internal control, it has 3.48 of mean value and 96.49% agreed that Effectiveness of internal control is at fairly level. It is suitable with the result of survey with factors.

Overall discussion on independent variables means that concerning the all independent variable as whole. The overall analysis has 3.05 mean value and 100% of respondents are accepting that all variables support moderately in effectiveness of internal control system. That refers that all independent variables as one variable and support moderately in the effectiveness of internal control system.

In this case it should concern on all independent variables same at once. For example it cannot achieve good internal control system only having good control environment within the bank but it should concern on accounting procedures, communication process within the bank and should implement good self-assessment process ...etc to achieve good internal control system in the bank.

***Analyzing the effect of factors on effectiveness of internal control in Private joint-stock bank in Thai Nguyen***

Assess the reliability of the scale: All scales were rated reliability (Cronbach's reliability coefficient was calculated using SPSS 20.0 software analysis). The result for Cronbach's Alpha was greater than 0.7 and Item-Total Correlation was greater than 0.4. This proves that the scale of reliability is ensured by the following table:



**Table 9: Reliable coefficients of factors**

| No | Factor                               | Cronbach's Anpha         |
|----|--------------------------------------|--------------------------|
| 1  | Enviroment Control                   | Cronbach's Anpha = 0,809 |
| 2  | Risk Assessment                      | Cronbach's Anpha = 0,795 |
| 3  | Information and Communication system | Cronbach's Anpha = 0,72  |
| 4  | Control Activities                   | Cronbach's Anpha = 0,782 |
| 5  | Self - assessment                    | Cronbach's Anpha = 0,742 |

Source: Based on calculations by the author

#### Analysis of the EFA factor

Factor analysis was performed using SPSS 20.0 software with the Principal Axis Factoring extraction method, the Promax factorial rotation method, and the stopping factor for eigenvalue factor. Group independent variables were 5 variables including 16 observational items. After testing Cronbach's Alpha, the scale of the observed variables is appropriate. We run the EFA model.

Test the suitability of the model

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.

Approx. Chi-Square

Bartlett's Test of

|  |          |
|--|----------|
|  | ,795     |
|  | 4810,042 |
|  | 351      |
|  | ,000     |

KMO and Barlett's test results show that  $KMO = 0.795 > 0.5$ , so the exploration factor is appropriate for actual data. Correlation of observed variables in the representative metric

Also in the table above, we have Bartlet's test with  $Sig = 0.000 < 0.05$ , so the observed variables have a linear relationship to the representative factor.

The level of explanation test of the observed variables for the factor

The Cumlative column indicates the deviation of 61.177%. This means that 61,177% of the change in factors is explained by the observed variables (Factor components).

Results of grouping factors

|      | 1    | 2    | 3    | 4 | 5 | 6 |
|------|------|------|------|---|---|---|
| CE1  | .868 |      |      |   |   |   |
| CE 2 | .819 |      |      |   |   |   |
| CE 3 | .774 |      |      |   |   |   |
| RA 1 |      | .713 |      |   |   |   |
| RA 2 |      | .712 |      |   |   |   |
| RA 3 |      | .686 |      |   |   |   |
| IC1  |      |      | .854 |   |   |   |
| IC 2 |      |      | .823 |   |   |   |



|       |  |  |      |      |      |      |
|-------|--|--|------|------|------|------|
| IC 3  |  |  | .809 |      |      |      |
| CA1   |  |  |      | .879 |      |      |
| CA 2  |  |  |      | .846 |      |      |
| CA 3  |  |  |      | .843 |      |      |
| CA 4  |  |  |      | .808 |      |      |
| SA 1  |  |  |      |      | .807 |      |
| SA 2  |  |  |      |      | .744 |      |
| SA 3  |  |  |      |      | .732 |      |
| EIC 1 |  |  |      |      |      | .780 |
| EIC 2 |  |  |      |      |      | .778 |
| EIC 3 |  |  |      |      |      | .731 |

Source: Based on calculations by the author

After turning the factor, we have 5 factors.

The first factor includes the following variables: CE1, CE 2, CE 3. We see this group of factors does not change much, so we name this factor is the Control Enviroment.

The second factor includes the following variables: RA 1, RA2, RA 3. We see that this group of factors does not change much, so we name this factor is Risk Assessment, the symbol of this factor is DT.

The third factor includes the following variables: IC 1, IC 2, IC 3. We see this group of factors does not change much, so we name this factor is Information and Comunication.

The fourth factor includes the following variables: CA1,CA 2,CA 3,CA 4. We see this group of factors does not change much, so we name this factor is Control Activities.

The fifth factor consists of the observable variables: SA 1, SA 2, SA 3. We see this group of factors does not change much, so we name this factor group is Self-Assessment.

**Regression analysis of factors influencing general satisfaction**

According to the results, we have a group of observable variables that are common to a factor group. The results of the regression run are as follows:

| Model                        | Unstandardize  |            | Sig. | Collinearity Statistics |       |
|------------------------------|----------------|------------|------|-------------------------|-------|
|                              | d Coefficients |            |      | Toleranc                | VIF   |
|                              | B              | Std. Error |      | e                       |       |
| 1 (Constant)                 | - ,674         | ,151       | ,000 |                         |       |
| Control Enviroment           | ,188           | ,028       | ,001 | ,718                    | 1,392 |
| Risk Assessment              | ,387           | ,036       | ,000 | ,598                    | 1,672 |
| Control Activities           | ,342           | ,031       |      | ,579                    | 1,728 |
| Information and Comunication | ,154           | ,027       | ,000 | ,788                    | 1,270 |
| Self-Assessment              | ,120           | ,027       | ,000 | ,847                    | 1,180 |



From the regression result, we have regression equations as follows

$$EIC = -0.674 + 0.188 \text{ Control Environment} + 0.387 \text{ Risk Assessment} + 0.342 \text{ Control Activities} + 0.154 \text{ Information and Communication} + 0.120 \text{ Self-Assessment}$$

According to the regression results, all variables with Sig value = 0.000 < 0.05. This means that all variables are meaningful. In addition, the VIF coefficient is < 2,000 so there are no hyperbolic phenomena.

Through the regression result, the Control Environment coefficient of 0.188 is related to the EIC variable. When the interviewee assessed the "Control Environment" factor increase by 1 point, the level of effectiveness of internal control will increase by 0.188 points.

Through the regression result, the Risk Assessment coefficient of 0.387 is related to the EIC variable. When the interviewee assessed the "Risk Assessment" factor increase by 1 point, the level of effectiveness of internal control will increase by 0.387 points.

Through the regression result, the Control Activities coefficient of 0.342 is related to the EIC variable. When the interviewee assessed the "Control Activities" factor increase by 1 point, the level of effectiveness of internal control will increase by 0.342 points.

Through the regression result, the Information and Communication coefficient of 0.154 is related to the EIC variable. When the interviewee assessed the "Information and Communication" factor increase by 1 point, the level of effectiveness of internal control will increase by 0.154 points.

Through the regression result, the Self-Assessment coefficient of 0.120 is related to the EIC variable. When the interviewee assessed the "Information and Communication" factor increase by 1 point, the level of effectiveness of internal control will increase by 0.120 points.

### **Recommendations and Solutions**

From the results of the study, it can be seen that the internal control system of private joint stock banks in Thai Nguyen province is at a fairly level of effectiveness based on the basis factors of the Internal Control System. In addition, from the research results, the factors affecting the effectiveness of the internal control system at private joint stock commercial banks in Thai Nguyen province by the level of impact are: risk assessment, control activities, self-assessment, control environment and communication information. In order to enhance the efficiency of the internal control system at private joint stock banks in Thai Nguyen, banks should implement the following solutions:

First, strengthen monitoring activities, through quality monitoring and evaluation activities, carry out internal controls to ensure that it is deployed and adjusted when changes occur. Regularly review and report on the quality and effectiveness of the internal control system, evaluate and monitor the management as well as all employees in compliance with the regulations of the business.

Second, create a good control environment by raising the awareness of regulators on integrity and professional ethics, on the clear assignment and delegation, on the promulgation of written regulations, regulations, business processes ... A good control environment will be the foundation for effective operation of the internal control system

Third, banks should have policies on salaries, bonuses and benefits to ensure harmony between the interests and equity among individuals.

Fourth, regularly assess corporate risk, thereby setting out specific measures, plans and procedures for mitigating risk to an acceptable limit. All employees are aware of the risks and risk limits that the organization can accept.



Five, in terms of control activities, enterprises regularly summarize and notify their production results regularly and compare results obtained with prescribed norms and indexes for timely adjustment and supplementation. In particular, production cost norms are specified, and ensure high accuracy and reliability. In addition, businesses should monitor, protect and maintain their assets, supplies and equipment from loss, damage or misuse, in order to minimize the cost of operation.

## REFERENCE

- Allan J. C., & Burdett, A. L. (1995), "Interest Group Politics", *Congressional Quarterly Press*, 89.
- Beck, T., A. Demirguc-Kunt, & R. Levine. (2003), "Law, Endowment and Finance", *Journal of Financial Economics*, 70.
- D'Aquila, J. M. (1998), "Is the control environment related to financial reporting decisions?", Hagan School of Business, New York. NY.
- Dao Van Phuc & Le Van Hinh, (2012), "The internal control system is linked to risks at Vietnamese commercial banks in the current period", *Journal of Banking*, Vol. 24, pp. 20-26.
- The Government (2007), "Decree No. 139/2007 / ND-CP" detailing the implementation of a number of articles of the Enterprise Law".
- Government, (2014). "26/2014 / ND-CP on the organization and operation of banking inspection and supervision".
- Hevesi, G. (2005), "Internal Control Standards in New York States Government" Retrieved from <http://www.osc.ny.us/audit/control/standards.htm> 2009 June 6.
- Jenkinson, N. (2008). "Strengthening Regimes for Controlling Liquidity Risks: Some Lessons from the Recent Turmoil. London: the Euromoney Conference on Liquidity and Funding Risk Management. Retrieved from <http://www.bis.org/review/r080425f.pdf>
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009), "Governance matters VIII: Aggregate and individual governance indicators 1996-2008", *World bank policy research*, working paper 4280.
- S.Kumuthinidevi (2016) , " A Study on Effectiveness of the Internal Control System in the Private Banks of Trincomalee", *International Journal of Scientific and Research Publications*, Volume 6, Issue 6, June 20.
- Lannoye, M. A. (1999). *Evaluation of internal Controls*. Retrieved from [http://www.michigan.gov/documents/gf\\_master1\\_26775\\_7.pdf](http://www.michigan.gov/documents/gf_master1_26775_7.pdf).
- Nguyen Dinh Tho (2011), "Nghiên cứu khoa học trong kinh doanh", Nxb Lao động và Xã hội.