

**MINISTRY OF EDUCATION AND TRAINING      MINISTRY OF FINANCE**

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**PHUNG THU HA**

**LOANS PORTFOLIO GOVERNANCE AT JOINT  
STOCK COMMERCIAL BANK FOR FOREIGN  
TRADE OF VIETNAM**

Major: Finance - Banking

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**SUMMARY OF DOCTORAL THESIS**

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## **PREFACE**

### **1. Rationale**

Since its establishment, lending has always been the main business activity and brought the biggest source of income for commercial banks. Loan portfolio of commercial banks is very diverse and it can be divided by such aspects as borrowers, loan terms, economic sectors, localities and etc. In which, adjusting the loan portfolio reasonably and sound loan portfolio governance are decisive factors to lending effectively. Nevertheless, how to manage loan portfolios, by models, methods, contents ... there is not a common principle for all commercial banks in the world. With such current situation, it is necessary to study the theoretical basis for loan portfolio governance at commercial banks.

Former Foreign Trade Bank of Vietnam, now Joint Stock Commercial Bank for Foreign Trade of Vietnam (Vietcombank), was established and officially put into operation on April 1, 1963 with its predecessor, Foreign Exchange Department, (directly under the State Bank of Vietnam). Vietcombank is the first state-owned commercial bank selected by the Government to pilot equitization. From a specialized bank serving foreign trading, Vietcombank today has become a versatile bank, operating in multiple fields, providing customers with a full range of leading financial services in the field of international commerce; in traditional activities such as capital trading, capital mobilization, credit, project financing and etc as well as modern banking services: foreign currency trading and derivative services, card services, electronic banking and etc. Board of directors of Vietcombank takes interest in managing the loan portfolio from branches to the bank's head office. However, this work still has many limitations, shortcomings and lack of scientific arguments, so the bank's loan portfolio still carries many risks. These potential risks can become dangerous losses when the economy fluctuates, customers go bankrupt, and the stock market declines along with the real estate market.

With the desire to understand more about the governance fundamental of loan portfolio of commercial banks and research the status of loan portfolio governance at Vietcombank, then propose solutions to improve the management of loan portfolio in accordance with the trend of modern economy, the author selected the topic "Loan portfolio governance at Joint Stock Commercial Bank for Foreign Trade of Vietnam" as the research topic of the thesis.

## **2. Research purpose**

The research objective of the thesis is to analyze the theoretical basis of loan portfolio governance, find out the experience of loan portfolio governance of some banks in the world, to propose solutions to improve the implementation of loan portfolio governance at Vietcombank. Accordingly, the research tasks of the thesis is determined as follows:

- Firstly, Systematize and clarify the most basic theories on loan portfolio governance applied in commercial banks all over the world;
- Secondly, Analyze the status of Vietcombank's loan portfolio from 2013 to 2018, thereby showing the achieved results, as well as limitations in the management of loan portfolio at the bank;
- Third, Propose solutions to improve loan portfolio governance at Vietcombank.

## **3. Research objective and scope of study**

*Research objective:* theoretical and practical issues about loan portfolio governance at commercial banks in general and loan portfolio governance ent in Vietcombank in particular.

*Scope of study:*

Content: researching the issue of loan portfolio governance of commercial banks on the basis of loan portfolio classified by economic sectors.

Space: practical situation of loan portfolio management at Vietcombank.

Time: The documents were collected from 2013-2018 and orientation to 2025.

## **4. Research method**

### **4.1. Methodology**

In order to carry out the research objectives, scope and subject, the PhD student uses the methodology of dialectical materialism and historical materialism throughout the research process.

### **4.2. Research methods**

The general method used to inherit the theory of loan portfolio management being applied in developed countries, thereby forming a theoretical basis for the thesis topic.

Statistical method used to collect data

Quantitative method: PhD student uses Data Envelope Analysis (DEA) model to determine the group of customers in the loan portfolio that brings the best value to the bank.

Interpretation and inductive method: mainly used in chapter 2 of the thesis to analyze the status of Vietcombank's loan portfolio management.

#### **4.3. Data collection method**

The thesis uses secondary documents (audited separate financial statements, annual reports, reports of Vietcombank's risk control committee).

### **5. New contribution of thesis**

#### **5.1. Methodology**

Firstly, the thesis systematizes basic issues about lending activities, loan portfolio of commercial banks, loan portfolio risk and some methods of measuring loan portfolio risk;

Secondly, the issue of loan portfolio governance at commercial banks is clarified and concretized in detail from the concept and significance of loan portfolio governance for commercial banks, the content and methods of loan portfolio governance at commercial banks;

Thirdly, the thesis points out and analyzes the factors affecting the management of loan portfolios at commercial banks, including objective and subjective factors;

Fourthly, the experience in managing loan portfolios of some commercial banks in the world has been collected by PhD students, thereby drawing lessons for Vietcombank.

#### **5.2. Practice**

Firstly, the dissertation updated details of the loan portfolio governance at Vietcombank during the study period;

Secondly, the DEA model is applied by PhD student to evaluate the management of loan portfolio by economic sectors in some branches of Vietcombank, so that it can make recommendations on loan portfolio governance by economic sectors at Vietcombank.

Thirdly, the thesis proposes eight solutions based on the actual situation of Vietcombank to help the bank improve its loan portfolio governance.

### **6. Layout of thesis**

Excluding Preface, Conclusion and Preferences and Appendix, the thesis consists of 3 chapters as following:

**Chapter 1:** Lý luận cơ bản về quản trị danh mục cho vay tại ngân hàng thương mại;

**Chapter 2:** Current situation of loans portfolio governance at Joint Stock Commercial Bank for Foreign trade of Vietnam;

**Chapter 3:** Solutions to improve loans portfolio governance at Joint Stock Commercial Bank for Foreign trade of Vietnam

## **CHAPTER 1: FUNDAMENTAL OF LOANS PORTFOLIO GOVERNANCE AT COMMERCIAL BANK**

### **1.1. Lending operation and loan portfolio of commercial bank**

#### ***1.1.1. Lending operation of commercial bank***

##### *1.1.1.1. Lending concept of commercial banks*

Through research, the thesis reveals that *“Lending is an economic relationship between entities in an economy in which one entity transfers the right to use amount of value to another entity. (possibly in the form of goods or cash) with conditions and for a period of time agreed upon by both parties on the principle of reimbursement.”*

##### *1.1.1.2. The role of lending operations of commercial banks*

First, the banks' lending activity is basically connecting the idle funds with real people in need of capital in the economy.

Second, with the lending, banks have created a large amount of money in the economy.

Third, preferential lending is a financing activity that is part of the government's policy to develop the country.

Fourth, banks' lending operations is the main income-generating activity.

#### ***1.1.2. The loan portfolio of commercial bank***

##### *1.1.2.1. The concept of the loan portfolio of commercial bank*

According to OCC (1998): “The commercial bank's loan portfolio is a combination of holding loans to different types of customers in different business sectors, in different geographical areas. The purpose of the loan portfolio combination is to reduce risks by diversifying the loan portfolio of commercial banks”. According to David (2003), “The bank's loan portfolio includes loans that have been disbursed or repurchased. The loan portfolio is the main asset of commercial banks, its value depends not only on the profit earned from the loans, but also on the quality and recoverability of the loans”. According to the economic dictionary, “The loan portfolio of a commercial bank is all the loans owned by a commercial bank at a given time”.

From the above definitions, we can understand the loan portfolio of commercial banks through the concept: “Lending list of commercial banks is a collection of loans held by banks, classified according to different criteria with a certain percentage structure to serve the purposes of loan portfolio governance”.

##### *1.1.2.2. Features of the loan portfolio of commercial bank*

Firstly, the loan portfolio of commercial banks is highly diverse.

Secondly, commercial banks' loan portfolios account for the largest proportion of total assets and are the main source of income for banks.

Thirdly, the loan portfolio of commercial banks is potentially risky and the structure of loan portfolio is unstable.

Fourthly, the liquidity of the bank's loan portfolio is considered less flexible and more flexible than the investment portfolio in the bank's total assets.

#### *1.1.2.3. Lending portfolio structure of commercial bank*

The loan portfolio of commercial banks is a collection of individual loans arranged based on certain criteria. Here are some criteria that commercial banks often use to classify loans in the loan portfolio:

a. Term loans: short term loan, medium term loan and long term loan.

b. Economic sectors: According to economic sectors, the loan portfolio of commercial banks is divided by the fields of activities of customers such as construction, agriculture, telecommunications, oil and gas, real estate ...

c. Geographical area: Divided by geographic area, the loan portfolio will divide customers by different regions such as the North, the South and the Central.

d. For customers: According to this criterion, loan portfolio will be classified by customer groups such as enterprises (state-owned enterprises, non-state enterprises), individuals.

e. Currency: Loan portfolio by currency reflect the views and orientations in the search market to the extent of the commercial bank operation.

f. Investment fields: Lending lists by investment sectors are usually divided into two major fields: manufacturing and non-manufacturing.

g. Credit rating: The classification of this portfolio is usually based on the internal credit rating system of the bank or on the results of credit rating companies.

#### ***1.1.3. Lending portfolio risk of commercial bank***

##### *1.1.3.1. Concept of loan portfolio risk at commercial bank*

Loan portfolio risk of commercial banks is a form of credit risk that arises due to limitations in the bank's loan portfolio management, which is divided into two types: intrinsic and centralized risk.

##### *1.1.3.2. Risk structure of loan portfolio of commercial bank*

a. Internal risk: Intrinsic risk is caused by the unique characteristics of each borrower, each economic sector, each form and method of credit provision.

b. Concentration risk: the concentration risk in the loan portfolio arises when the value of the bank loan provided to a borrower or a group of borrowers is quite large and can generate losses increased to the bank.

#### 1.1.3.3. *Effects of the loan portfolio risk to commercial banks*

The risk of loan portfolio can affect the operation of commercial banks in the following aspects:

Business efficiency of commercial banks

Solvency of commercial banks

Prestige and competitiveness of commercial banks

#### 1.1.3.4. *Method to measure loan portfolio risk of commercial banks*

a. Herfindahl-Hirschman Index (HHI)

$$HHI = (\%S_1)^2 + (\%S_2)^2 + (\%S_3)^2 + \dots + (\%S_i)^2 + \dots + (\%S_n)^2 = \sum_{i=1}^n (\%S_i)^2$$

$$S_i = \frac{\text{Loan outstanding of } i \text{ industry sector}}{\text{Total Loan outstanding of commercial bank}} \times 100\%$$

In which:  $S_i$  is the percentage of component  $i$  in the loan portfolio (sorted by descending percentage) and  $n$  components of the loan portfolio (the value of  $n$  depends on the loan portfolio classification criteria).

b. Gini coefficient

$$G(b) = \frac{\sum_{j=1}^n (2j-n-1)X_i^{b,t}}{2n^2\mu}; \mu = \frac{\text{total loan outstanding of commercial bank}}{n}$$

In which:  $n$  is the total number of components of the loan portfolio (depending on classification purposes);  $j$  is the order of composition in the loan portfolio (sorted by value from low to high);  $\mu$  is the average of the loan portfolio;  $X_i^{b,t}$  is the value of the  $i$ th loan, in period  $t$ .

c. VAR (Value at risk) model: To measure the risk of the loan portfolio at commercial banks, there are currently four main groups of VAR models in the world, include: Credit Morgan's CreditMetrics, KMV's PortfolioManager, Credit Suisse's CreditRisk +, and McKinsey's CreditPortfolioView.

#### 1.1.4. *Indicators for evaluating loan portfolio of commercial bank*

##### 1.1.4.1. *Indicators for assessing profitability*

a. The proportion of income from lending activities

b. The ratio of net income from lending activities

c. Marginal interest rate

##### 1.1.4.2. *Indicators of safe operation of commercial bank*



- a. The ratio of short-term funds is used for medium and long-term loans
- b. The ratio of outstanding credit to the mobilized capital
- c. Credit risk coefficient
- d. Capital adequacy ratio (CAR)

#### *1.1.4.3. Indicators for assessing the level of growth*

Growth rate of loan outstanding.

### **1.2. Loan portfolio governance at commercial bank**

#### ***1.2.1. The concept and role of loan portfolio governance for commercial bank***

##### *1.2.1.1. Concept of loan portfolio governance at a commercial bank*

According to Farm Credit Administrative (1998), effective loan portfolio management will contribute to maximize lending opportunities, bringing benefits to both banks and their customers. In general can be understood about loan portfolio governance as follows: “*Lending portfolio governance at commercial banks is the process of planning, organizing the implementation, monitoring and adjusting the loan portfolio in order to comply with the legal and the ability to sustain losses of the bank.*”

##### *1.2.1.2. The role of loan portfolio governance for commercial bank*

Implement business objectives of commercial banks.

Strengthen the ability to control risks of commercial banks in economic instability.

Improving the competitiveness of commercial banks in terms of international integration.

#### ***1.2.2. Content of loan portfolio management at commercial bank***

##### *1.2.2.1. Create loan portfolio governance plan*

Lending portfolio governance planning is a specific type of decision-making to determine the specific future that executives desire with their lending operations, consists of two main steps: identify the objectives of the loan portfolio and construction loan portfolio plan.

##### *1.2.2.2. Assign the implementation of loan portfolio governance*

The lending portfolio implementation is part of the loan portfolio governance process, including ensuring the organizational structure and personnel for this activity.

##### *1.2.2.3. Direct and supervise loan portfolio implementation*

Managing loan portfolios: Policies and procedures for borrowing are key elements in the operator performing loan portfolio, as a basis for providing direction and control over the activities specific loans or loan programs are authorized.

Monitoring the implementation of the loan portfolio: is the responsibility of the risk management department of the commercial bank will coordinate with the credit department, internal control department to check, evaluate the loan portfolio, promptly detect abnormalities that need warning or handling.

#### *1.2.2.4. Adjust the loan portfolio*

Lending portfolio adjustment is that a commercial bank changes its loan portfolio structure with a number of technical measures to meet changes in business strategies or to adapt to changes in business cycles.

### **1.2.3. Loan portfolio governance method**

#### *1.2.3.1. Passive method of loan portfolio governance*

With the passive method of loan portfolio governance, commercial banks mainly implement content that is operating, supervising and adjusting the structure of the loan portfolio after supervision

#### *1.2.3.2. Proactive method of loan portfolio governance*

In the proactive method of loan portfolio governance, the bank will conduct full content of the work in the loan portfolio administration.

### **1.2.4. Assessing the effectiveness of the loan portfolio by economic sector of commercial banks by data envelope analysis model**

DEA is a method of calculating and estimating the efficiency (technical) of businesses, banks, schools ... (collectively called decision-making units - DMU) in using input resources to create outputs the results. The DEA model proposed by Charnes et al. (1978) is based on Farrell's (1957) idea of estimating technical efficiency based on Production Possibilities Frontier (PPF).

The formula in the DEA model

The (technical) efficiency of using input x to obtain output y can be measured in the formula:

$$TE = \frac{\text{Output}}{\text{Input}} = \frac{y}{x} \quad (1)$$

Equation (1) applies to cases where there is only one input variable and one output variable. When a DMU has k inputs and produces m outputs, it is necessary to base on the prices  $p_i$  and  $w_j$  of the inputs / outputs to calculate:

$$TE = \frac{\text{Total output}}{\text{Total input}} = \frac{p_1y_1 + \dots + p_my_m}{w_1x_1 + \dots + w_kx_k} \quad (2)$$

The determination of the price for individual inputs and outputs of a DMU will be very complex, especially with business activities of commercial banks. Therefore, in the case of the study we assume that each DMU will have certain coefficient  $u_m$  and  $v_k$  are the coefficient

that help DMU can get closest to the PPF line. Therefore, these coefficient can be allocated according to the role of inputs and outputs, that have a major role in calculating TE technical efficiency. The general DEA model will be a problem of n DMU, using k inputs  $x_k$  to produce m output elements  $y_k$ , determining the effectiveness  $TE_0$  of any DMU<sub>0</sub> will be calculated as follows:

$$\text{Max}_{u,v} TE_0 \quad (3)$$

In the following conditions:

$$TE_0 = \frac{\sum u_{0m} y_{0m}}{\sum v_{0k} x_{0k}} \quad (\text{Effective points of DMU}_0)$$

$$TE_j = \frac{\sum u_{jm} y_{jm}}{\sum v_{jk} x_{jk}} \leq 1 \quad \forall j = 1, \dots, n \quad (\text{Effective points of all DMU}$$

not exceed 1, that mean do not exceed the line PPF)

$$u_m, v_k \geq 0 \quad (\text{The coefficient are not negative})$$

DEA model evaluates the effectiveness of loan portfolio by economic sectors of commercial banks including the following variables: (i) The model's input variables include operating costs allocated to the loan and the number of credit staff allocated to the loan; (ii) Output variables representing the results of loan portfolio governance include: average loan balance, credit rating score and current interest income.

### ***1.2.5. Factors affecting the loan portfolio governance of commercial bank***

*1.2.5.1. The subjective factor:* Management strategy of commercial banks; Credit culture and risk appetite of commercial banks; The quality of human resources of commercial banks; Financial potential of commercial banks; Information technology level of commercial banks.

*1.2.5.2. The objective factor:* Domestic business environment; State management with lending activities of commercial banks; Development level of the domestic financial market; Possibility of international integration in the banking sector of the country; Financial transparency of borrowers.

## **1.3. Experience of some of commercial banks in the world on loan portfolio governance and lessons for Joint Stock Commercial Bank for Foreign Trade of Vietnam**

### ***1.3.1. The experience of some commercial banks in the world governance loan portfolio***

*1.3.1.1. Experience in loan portfolio governance from Deutsche Bank in Germany*

In 2003, the Bank established a new Loan Exposure Management Group (LEMG), equivalent to the loan portfolio governance department, and adopt a risk reduction strategy to improve credit records by transferring loans to large businesses to retail and investment banking divisions.

*1.3.1.2..Experience in loan portfolio governance from Japanese commercial banks*

Japanese banks mainly applied loan portfolio governance to reduce centralized risk; use indicators to classify loan portfolios; Stress-test application to measure loan portfolio risk.

*1.3.1.3..Experience in loan portfolio governance from National Westminster Bank in the UK*

Bank has developed an early warning system to administer the loan portfolio; loan pricing is based on a risk-based approach.

**1.3.2. Lesson learned for Joint Stock Commercial Bank for Foreign Trade of Vietnam on loan portfolio governance**

- (i) Establish a specialized lending portfolio governance unit;
- (ii) Diversify the loan portfolio to minimize the risks of the loan portfolio;
- (iii) Use the risk measurement model in loan portfolio governance to determine the current and potential risks of the entire portfolio;
- (iv) Develop a clear and legal implementation mechanism when using market and non-market transactions to adjust the loan portfolio;
- (v) Develop an early warning system for loan portfolio management.

## **CONCLUSION OF CHAPTER 1**

The main content of chapter 1 is the basic theory of loan portfolio and loan portfolio governance at commercial banks. Research, systematize scientific arguments about the content of loan portfolio governance at commercial banks as well as subjective and objective factors affecting this governance process. In addition, the dissertation also gives lessons from some countries in the world on loan portfolio governance to refer to Vietcombank.

## **CHAPTER 2**

### **CURRENT SITUATION OF LOANS PORTFOLIO GOVERNANCE AT JOINT STOCK COMMERCIAL BANK FOR FOREIGN TRADE OF VIETNAM**

#### **2.1. Operational situation overview at Joint Stock Commercial Bank for Foreign Trade of Vietnam**

### ***2.1.1. History of development and basic characteristics in operation at Joint Stock Commercial Bank for Foreign Trade of Vietnam***

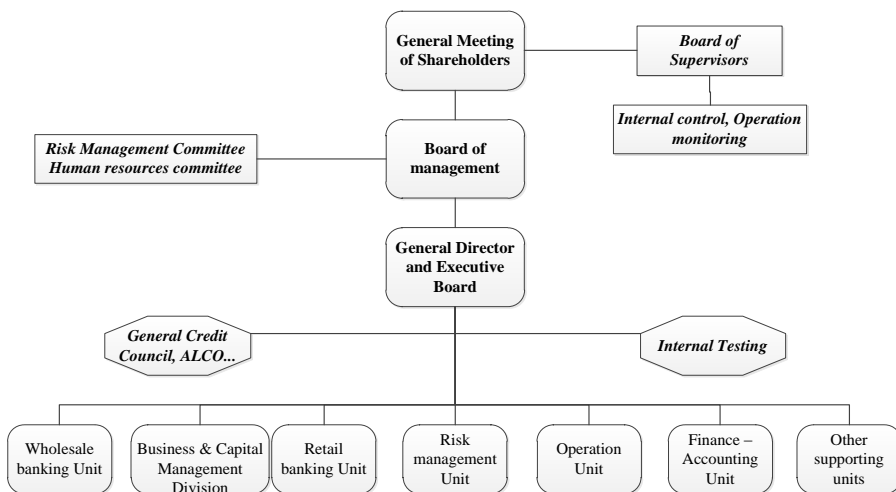
#### ***2.1.1.1. History of development of the Joint Stock Commercial Bank for Foreign Trade of Vietnam***

On October 30, 1962, Vietcombank was established in accordance with Decree No. 115/CP by the Government Council on the basis of separation from Foreign Exchange Department of the State Bank of Vietnam. On April 1, 1963, Vietcombank officially went into operation as an exclusive foreign-trade bank. On December 26th 2007, Vietcombank became a pioneer in the banking sector regarding the implementation of the equitization policy. Owing to modern banking technical infrastructure, Vietcombank has many advantages in the application of advanced technology into automatic processing of banking services, develop products, electronic banking services based on high technology.

#### ***2.1.1.2. The basic characteristics of the Joint Stock Commercial Bank for Foreign Trade of Vietnam***

Firstly, Vietcombank is a bank with strengths and historical traditions on foreign trade activities; Second, Vietcombank has been maintaining stability and continuous development for over 55 years of establishment; Third, Vietcombank receives the trust from foreign investors in Vietnam; Fourth, Vietcombank's main customers are businesses; Fifth, Vietcombank has a tradition of applying advanced technology in business activities.

### ***2.1.2. Operating organization model of Joint Stock Commercial Bank for Foreign Trade of Vietnam***



**Figure 2.1: Structure management apparatus of Joint Stock Commercial Bank for Foreign Trade of Vietnam**

*Source: Vietcombank's annual report (2013-2018)*

### **2.1.3. Overview of the business situation of Joint Stock Commercial Bank for Foreign Trade of Vietnam in the period of 2013-2018**

#### **2.1.3.1. Scale assets and equity**

The period of 2013-2018 can be considered as a time of rapid and brilliant development of Vietcombank with the significant increase of total assets and equity. From 2013 to 2018, Vietcombank's total assets has increased from VND 468,898 billion to VND 1,071,299 billion, the difference in value of VND 60,401 billion is equivalent to 128.47%. Special, 2017, total assets of Vietcombank reached 1,032,313 billion, up 31.34% compared with 2016, and the bank's equity in 2018 increased 9499 billion, corresponding to 18.52%. This growth was generated by the rapid increase of profit after tax and increase charter capital twice in 2014, in 2016.

Vietcombank's profit has increased over the years. In 2017, profit after tax reached VND 8,849 billion, an increase of 7.43% compared to 2016. Especially in 2018, Vietcombank's profit after tax reached VND 14,455 billion, the highest profit in history, that made the bank became the champion of Vietnam stock market in 2018.

#### **2.1.3.2. Capital mobilization**

The amount of capital mobilized by Vietcombank continued to increase throughout the period of 2013-2018. Thanks to stable capital flows and

continuous growth over time, Vietcombank has strong financial resources as a springboard to become a commercial bank with the highest profit target in Vietnam in 2018.

#### *2.1.3.3. Lending*

Vietcombank's total loan balance in the period of 2013-2018 tends to increase continuously. Vietcombank's credit growth is generally stable, and is within the limits of the state bank.

#### *2.1.3.4. Forex trading*

In the period 2013-2018, income from forex trading activities of Vietcombank has strong volatility, decreased between 2013-2016 and rose back in 2017-2018.

#### *2.1.3.5. Services*

Vietcombank also provides a number of services such as payment services, treasury services, guarantees, entrustments and agents ... In which payment and treasury services are two typical services of the bank.

## **2.2. Current status of loan portfolio at Joint Stock Commercial Bank for Foreign Trade of Vietnam**

### ***2.2.1. Structure of the loan portfolio***

#### *2.2.1.1. Structure of the loan portfolio by economic sector*

Economic sectors of customers on Vietcombank's loan portfolio for the period of 2013-2018 are quite diverse, including (a) Manufacturing and processing; (b) Trade and services; (c) Construction; (d) Production and distribution of electricity, gas and water; (e) Mining; (f) Agriculture, forestry and fisheries; (g) Transportation, storage and communications; (h) Restaurants and hotels; (i) Other industries. Structure of the loan portfolio of the bank to change by year, depending on macroeconomic developments and evolving needs of our customers.

#### *2.2.1.2. Structure of loan portfolio by term*

The proportion of short-term debt within six years (2013-2018) constantly over 50% of total outstanding loans of the bank. However, this proportion tended to decrease gradually, the decrease was not too large but it also showed a change in bank loan portfolio governance. The proportion of long-term debt is increasing in the structure of the loan portfolio, if in 2013 this proportion was only 25.14%, by 2018, the proportion of long-term debt reached nearly 40% of total outstanding loans. Meanwhile, the bank's medium-term debt tends to fluctuate between 8-12% of total loans in the direction of decreasing, the role of medium-term debt in the bank's loan portfolio structure is unclear.

#### *2.2.1.3. Structure of loan portfolio by loan quality*

The value and ratio of pass loan of Vietcombank continued to increase in the period 2013-2018, increasing from VND 242,551 billion (88.95%) to VND 617,258 billion (98.42%). Meanwhile, the special mentioned loans tends to decrease rapidly both in value and percentage, from 22 727 billion (8.33%) in 2013 to 3737 billion (0.60%) in 2019. In addition, the bank's NPL ratio was always at a safe level (below 3%) and continuously decreased during the research period. NPL ratio in 2013 was 2.72%, down to 0.99% in 2018. In 2016, Vietcombank became the first bank to finish settling bad debt at VAMC 3 years before its maturity.

#### *2.2.1.4. Structure of the loan portfolio according to customer*

The value of loans of state-owned enterprises tended to decrease gradually, from VND 77,447 billion in 2013 to VND 68,042 billion (down VND 9,405 billion, equivalent to 12.14%). Meanwhile, the value of loans granted to the enterprises as limited liability companies and FDI enterprises, individual customers tend to increase, from VND 37,251 billion in 2013 to VND 235,110 billion in 2018 (rising by 5.31 times).

#### *2.2.1.5. Structure of loan portfolio by currency*

Vietcombank mainly perform activities in local currency lending, the proportion of loans in foreign currencies such as USD, Euro, ... accounts for a small proportion and tends to decrease.

### ***2.2.2. Measure loan portfolio risk at Joint Stock Commercial Bank for Foreign Trade of Vietnam***

**Table 2.13: Measuring loan portfolio risk by economic sectors (2013-2018)**

<b>Year</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>HHI</b>	0,2268	0,2276	0,2058	0,2031	0,2155	0,2371
<b>Gini</b>	0,2453	0,2464	0,2321	0,2348	0,2488	0,2667

*Source: Author's research*

HHI continuous values range from 0.15 to 0.25 and the Gini coefficient is lower than 0.3 throughout the study period, indicating the concentration risk of the loan portfolio is not large.

### ***2.2.3. Assessing the loan portfolio of Joint Stock Commercial Bank for Foreign Trade of Vietnam in the period of 2013-2018***

a. Indicators reflecting profitability: The proportion of income from the loan portfolio of Vietcombank always accounted for over 60% of the bank's total income during the period from 2013 to 2018. Ratio of net income from the loan portfolio of Vietcombank recorded a



downward trend in the period 2013-2016 and increased gradually from 2017-2018. NIM of the loan portfolio in the period 2013-2018 tends to increase, from 2.36% to 2.72%.

b. Indicators reflecting the operational safety of commercial banks: The ratio of short-term capital for medium and long-term loans of Vietcombank tends to decrease rapidly in the period of 2013-2018, especially in 2015, the medium and long-term mobilization of the bank had a complete response needs of medium and long-term loans. Vietcombank CAR during the period 2013-2018 are above the threshold of 11%.

c. Indicators reflecting loan outstanding growth: Loan outstanding of Vietcombank over the years had strong fluctuations. In 2014, loan outstanding increased sharply, up 34.91% compared with 2013; in 2015, this index decreased rapidly, only at over 12%. In 2016 and 2017, the growth rate of loan outstanding was raised to over 20% in 2017. In 2018, loan outstanding returned to over 12%.

## **2.3. Situation of loan portfolio governance in the Joint Stock Commercial Bank for Foreign Trade of Vietnam**

### ***2.3.1. Creating loan portfolio governance plan***

#### *2.3.1.1. Identify loan portfolio target*

Vietcombank, the target of loan portfolio is given in the whole system to the evaluation criteria. These objectives are defined in stages, ensuring the ability to achieve and ensuring successful implementation of the strategic requirements outlined.

#### *2.3.1.2. Making loan portfolio plan*

Vietcombank's planned lending portfolio only stopped at determining the year-end loan balance of each branch, outstanding loans in each currency and the loan portfolio growth.

### ***2.3.2. Assign loan portfolio implementation***

#### *2.3.2.1. Principles of implementing the loan portfolio*

- All of the hierarchical organization of the bank have a specialized section in charge of lending;
- Ensuring the consistency in the relationship of mutual control, information is focused fully, accurately and promptly.
- Ensure the principle of flexibility, not obstructing or worsening relationships with partners and customers when performing loan portfolio governance.

#### *2.3.2.2. Structure apparatus performing loan portfolio*

Apparatus execute the loan portfolio at Vietcombank is organized in three levels: Head Office, Branch level I and Branch level II..

a. At the Head Office: including the Board of Directors; central credit council; Control Board; Risk management committee; functional departments;

b. At branch level I: Board of credit facility; The functional departments of the branch;

c. At Level II Branch: only the customer relationship department and this department will be in charge of all lending at the branch level.

### **2.3.3. Direct and supervise loan portfolio implementation**

#### **2.3.3.1. Direct the loan portfolio implementation**

a. System guidelines: Executive performing loan portfolio at Vietcombank bound and governed by a system of laws and internal regulations of the bank.

b. Operating policies for lending portfolio implementation: these policies define the basic contents of Vietcombank's loan portfolio implementation, including borrowers, lending principles, lending conditions, loan size, loan term, interest rate and loan guarantee.

#### **2.3.3.2. Supervise the loan portfolio implementation**

a. Loan portfolio risk management: Loan portfolio risk management policies regulate a number of items, such as the lending limit for one customer, loan segment, division of decision-making authority in operations, the maximum loan balance for each branch; other limits

b. Risk measurement for loans

❖ Perform credit scoring method with loans: Vietcombank using 3 different methods for scoring credit 3 types of customers: financial institutions; enterprise; and personal.

❖ Develop a risk measurement model with loans: In 2017, Vietcombank completed a project to build credit risk rating models based on the probability of default (PD). In 2018, the bank continued to announce the completion of construction models to quantify the Loss Given Default (LGD) and Exposure at Default (EAD) for the retail customer portfolio. The results of the three key risk quantification models PD, LGD and EAD are an important foundation for Vietcombank to apply the advanced internal ranking method.

❖ Internal control of lending operations: Until 2018, Vietcombank conducted internal control activities with the implementation of the loan portfolio by the Supervisory Board and the Bank's Executive Board.

#### **2.3.4. Adjust the loan portfolio**

The adjustment of Vietcombank's loan portfolio during 2013-2018 is done through debt trading. Vietcombank's total bad debt sold to VAMC in the three years from 2014 to 2016 was over six trillion dong. By the

end of 2016, Vietcombank completed the acquisition of all bad debt sold to VAMC by using VAMC reserve bonds.

### 2.3.5. Evaluate the effectiveness of the loan portfolio by economic sector with DEA model

#### 2.3.5.1. Data and variables in the research model

**Table 2.17. Describe the research sample**

	Unit	Amount	Min	Max
Customer	Customer	834		
Customer classification				
<i>Individual</i>	Customer	5		
<i>Enterprise</i>	Customer	829		
Economic sector	Sector	19		
Total current debt balance	Billion VND	47,898		
Interest rates	%/year		5	12
Credit rating score	Score		42	99
First disbursement date			29/04/2001	31/12/2018
Final due date			01/05/2019	09/10/2029

*Source: Author's research*

Analytical data was collected from business reports, loan statements of 90 branches of Vietcombank, 834 customers as of December 31, 2018.

#### 2.3.5.2. Research results

**Table 2.19. DEA analysis results**

Effective portfolio value	Number of customers	Rate (%)
1,00	116	13.91
0,90– 0,999	188	22.54
0,80– 0,899	143	17.15
0,70– 0,799	151	18.11
0,60– 0,699	84	10.07
0,50– 0,599	29	3.48
0,40– 0,499	68	8.15
< 0,40	55	6.59
Total number of customers	834	100.00
Average	0.76	
Range	0,09 - 1,00	
Standard deviation	0.34	

*Source: Author's research*

The analysis results show that the loan efficiency in the research portfolio is quite good, the efficiency ratio varies from 0.09 to 1.00 with the average value and the standard deviation respectively 0.76 and 0.34. There are 116 customers with optimal loan efficiency (accounting for 13.91%). The customer group with good lending efficiency in the portfolio with an effective score of over 0.7 accounted for 71.7%, equivalent to 598 customers. The customer group with an average efficiency score (from 0.5 to 0.69) accounted for 13.55%, equivalent to 113 customers. The customer group with low efficiency score (below 0.5) accounted for 18.23%, equivalent to 151 customers. The reason for the low efficiency of this group of customers is mainly due to low lending interest rates, branches with many credit officers but the total outstanding loans are not high, borrowers have low credit ratings. Vietcombank needs to take measures to monitor or adjust the portfolio with a group of customers had low efficiency compared to the portfolio, especially the customer group with an efficiency score below 0.4, accounting for 6.59%, corresponding to 55 customers.

## **2.4. Assess the status of loan portfolio governance at Joint Stock Commercial Bank for Foreign Trade of Vietnam**

### ***2.4.1. The achievement***

First, Vietcombank has made great efforts in implementing loan portfolio governance activities;

Second, Vietcombank has established guidelines system to perform executive governance detailed loan portfolio;

Third, Vietcombank has paid great attention to supervising the loan portfolio in the process of loan portfolio governance;

Fourth, the objective of controlling risks, profits and complying with the capital safety regulations of the SBV in the loan portfolio of Vietcombank is well implemented;

Fifth, Vietcombank focused on financial technology investment in the process of loan portfolio governance.

### ***2.4.2. The limitations***

Firstly, Vietcombank does not have specific strategies and targets for the loan portfolio;

Second, the management and supervision of loan portfolio implementation have not been effective;

Third, risk measurement model of the entire loan portfolio have not been applied in Vietcombank;

Fourth, the methods used to adjust the loan portfolio of Vietcombank are limited, only performed purchase debt instruments

with VAMC but not really true to the nature of the loan portfolio adjustment.

Fifth, Vietcombank had not done well on implemented the content of loan portfolio governance;

Sixth, Human resources for loan portfolio governance are still inadequate and lack of experience.

### **2.4.3. Causes of limitatons**

#### **2.4.3.1. Subjective causes**

Firstly, Vietcombank's Board of Directors is not fully aware of the importance as well as the need of loan portfolio governance for commercial banks;

Secondly, theoretical basis and practical models of loan portfolio governance are still a new issue at Vietcombank in particular and many commercial banks in Vietnam in general;

Thirdly, activities of analyzing and evaluating the financial situation of customers, loan projects have not been intensive, not high quality; customer analysis, borrower legal status, project appraisal are not detatiled; checking and supervising loan capital and assets to ensure loan debts are infrequent and ineffective;

Fourthly, Vietcombank's lending activities are widely distributed across the regions of the country so centralized management faces many difficulties and is indirectly affected by natural conditions;

Fifthly, the professional qualifications of the staff in charge of loan portfolio governance as well as credit officers are still weak and not good at creating plans and options to adjust loan portfolio, the evaluation draw lessons learned after each risk handling loan portfolio is not various;

Sixthly, technology to actually monitor the implementation of the loan portfolio has not been fully developed.

#### **2.4.3.2. Objective causes**

First, the credit market of Vietnam has not developed;

Second, the credit information system provided to commercial banks does not meet the needs of the loan portfolio governance process;

Third, the planning and allocation of social resources investment in Vietnam is still irrational, lacking of strategy, causing a crisis of investment surplus in some sectors;

Fourth, Vietnam's banking industry is currently facing fierce competition;

Fifth, there is a general lack of regulation on overall financial system oversight;

Sixth, impact of economic world fluctuations market to Vietnam;

Seventh, the activities of Vietnamese commercial banks in general and Vietcombank in particular are still under the direction and strict control of the State Bank of Vietnam, thus lacking the initiative in implementing loan portfolio governance.

## **CONCLUSION OF CHAPTER 2**

The main content of chapter 2 is to study the current status of loan portfolio and loan portfolio governance at Vietcombank in the period of 2013-2018. To evaluate the effectiveness of Vietcombank's loan portfolio, the data of 834 customers with debt to Vietcombank as of December 31, 2018 was used to analyze using DEA model. From the aforementioned analysis, the thesis presents the results achieved with the limitations and the causes of the limitations in loan portfolio governance at Vietcombank.

## **CHAPTER 3. SOLUTIONS TO IMPROVE LOANS PORTFOLIO GOVERNANCE IN JOINT STOCK COMMERCIAL BANK FOR FOREIGN TRADE OF VIETNAM**

### **3.1. Orientation to improve loan portfolio governance at Joint Stock Commercial Bank for Foreign Trade of Vietnam until 2025**

#### ***3.1.1. Development orientation and main tasks of Joint Stock Commercial Bank for Foreign Trade of Vietnam to 2025***

##### ***3.1.1.1. Development orientation***

Realization of strategic objectives as a solid foundation for breakthroughs in the next stage.

##### ***3.1.1.2. Main tasks***

Perform basic tasks on organizational operations, expand business scale, manage risk and improve the quality of human resources.

#### ***3.1.2. Orientation to improve the loan portfolio governance of Joint Stock Commercial Bank for Foreign Trade of Vietnam***

##### ***3.1.2.1. Target***

Implementing the organization, use models and technical tools to govern the loan portfolio at the bank.

##### ***3.1.2.2. Orientation***

Improve the management of the loan portfolio at banks in the direction of modernization.

### **3.2. Solutions for improving loan portfolio governance at Joint Stock Commercial Bank for Foreign Trade of Vietnam**

#### ***3.2.1. Develop a strategy for managing loan portfolios***

Vietcombank can choose flexible strategy and expansion. With this strategy, Vietcombank has regularly controlled the loan portfolio and proposed adjustments to the list in a timely and flexible manner. In addition, in order to have an optimal lending portfolio management strategy, the bank also needs to take two steps:

- (1) Credit culture evaluation
- (2) Define loan portfolio target and limit risks

### ***3.2.2. Construct management information system for loan portfolio governance***

The components of MIS Vietcombank can apply include the following components: a comprehensive loan accounting system and a general ledger system that tracks and reports accurately the financial status, performance of the organization. Standard accounting and regulatory reports are needed to assist the board of directors and management in fulfilling their responsibilities.

### ***3.2.3. Establishment of Loan Portfolio governance Department at Head Office***

The department will be responsible for coordinating with other functional departments to fully implement the contents of loan portfolio governance.

### ***3.2.4. Classify loan portfolio by economic sectors detailly and comply with SBV's guidances***

Vietcombank needs to conduct economic classification on the portfolio more closely to the government's regulations (21 sectors) instead of only 8 specific industry groups and 1 group of other sectors as today.

### ***3.2.5. Develop a standardized loan portfolio risk measurement method in accordance with international practices***

Among modern loan portfolio risk measurement methods, VAR is most suitable for Vietcombank to identify unintended losses of the loan portfolio as well as of the whole bank. Among the VAR model groups mentioned in chapter 1, researcher thinks that CreditPortfolioView model is most suitable for Vietcombank. This model allows assessing non-refundable and change the quality of the loan based on the volatility of the macroeconomic situation.

### ***3.2.6. Flexible implementation of loan portfolio adjustment methods***

Research tools to adjust the loan portfolio as securitized debt, credit derivatives, ...

### ***3.2.7. Strengthen supervision of loan portfolio implementation***

### ***3.2.8. Develop personnel for loan portfolio governance***

### **3.3. Proposals**

#### **3.3.1. Proposals to government**

*3.3.1.1. Stabilizing the macro-economy and creating a favorable business environment for commercial bank loan portfolio governance*

*3.3.1.2. Make specific economic development strategies for each period*

*3.3.1.3. Promote the development of e-government, towards digital government, digital economy and digital society*

*3.3.1.4. Minimize administrative intervention into the operations of the commercial bank lending*

#### **3.3.2. Proposals to SBV**

*3.3.2.1. Complete the legal system to meet the requirements of loan portfolio governance*

*3.3.2.2. Finalize the regulations on banking supervision in accordance with international standards*

*3.3.2.3. Construct a legal corridor for the exchange, trading of derivative instruments, securitization of debts and loan guarantees*

*3.3.2.4. Construct and operate effectively credit information system*

### **CONCLUSION OF CHAPTER 3**

Based on the orientations in the management of loan portfolios at Vietcombank from now to 2025, the thesis proposes solutions to improve the management of loan portfolios at banks. (1) Develop a strategy for managing loan portfolios; (2) Develop a loan portfolio governance information system; (3) Establishment of the Loan Port Administration Department at Head Office; (4) Segment the loan portfolio in detail, in accordance with government guidelines (5) Develop a standardized loan portfolio risk measurement method in accordance with international practice; (6) Flexible implementation of loan portfolio adjustment methods; (7) Strengthen supervision of loan portfolio implementation; (8) Developing human resources for loan portfolio governance.

### **CONCLUSION OF THESIS**

Managing the loan portfolio in the current commercial banks is still a new field in Vietnam. However, However, with the efforts of the Party, the State and the SBV in step by step modernizing and renewing the banking industry, requires efforts in researching and applying the principles of portfolio management, governance models, measurement analysis, supervision and inspection, financing of loan portfolio risks according to international practices and in accordance with Vietnam is a very practical activity. The thesis contributes to a systematic view of



loan portfolio governance. In scope, the object of study, the thesis has achieved the following results:

Firstly, the thesis has synthesized and systematically general theories about loan portfolio and loan portfolio governance, indicators to measure the value and risk of the loan portfolio at the bank. In addition, the thesis has provided a basic theoretical framework for loan portfolio governance. Moreover, the thesis mentions methods of data envelopment analysis (DEA) in the analysis of the loan portfolio, as basis for commercial banks operating applications in loan portfolio governance.

Secondly, on the basis of theory, the thesis has focused on analyzing, evaluating and clarifying the current status of loan portfolio as well as the status of loan portfolio governance at Vietcombank. In addition, the thesis has applied the method of analyzing DEA data packets with two output variables, risk and profit, to determine the most effective economic sectors for banks. On that basis, the thesis has evaluated the results and limitations in Vietcombank's portfolio management. Given the limitations in Vietcombank's portfolio management, the thesis outlined subjective and objective reasons for this situation. These causes will be the basis for the thesis to provide complete solutions for loan portfolio governance in chapter 3 of the thesis.

Thirdly, based on the theoretical and practical situation of Vietcombank's loan portfolio governance, The thesis proposes 8 solutions for the bank and recommendations to the government and the SBV to contribute to the improvement of the bank's loan portfolio governance.

## **LIST OF PUBLISHED WORKS RELATED TO THE TOPIC**

1. Phung Thu Ha, "Loan portfolio governance by type of economic sectors in Vietnamese commercial banks", Journal of Financial Accounting Research, No. 01 (3) - 2018, p. 69-74.
2. Phung Thu Ha, "Managing loan portfolio in modern economy and 5 lessons for Vietnam", Journal of Financial and Accounting Research, No. 02 (175) - 2018, p. 37-41.