

Evaluating Credit Risk Management at Agribank Tu Liem

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Bachelor's Thesis
Degree Programme in International
Business
2015



Degree programme in International Business

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<p>Title of report Evaluating Credit Risk Management at Agribank Tu Liem</p>	<p>Number of pages and appendix pages 50 + 3</p>
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<p>In recent years, bad debts have started to become a huge threat for Vietnamese economic growth. As a result of global economic crisis and unfavorable conditions in Vietnam, the bad debt ratio of the commissioning bank has also become alarming, and the bank has struggled in controlling the credit risk.</p> <p>The aim of this research is to assess the effectiveness of the commissioning bank's credit risk management based on a comprehensive theoretical framework. Moreover, the readers will learn more about the banking business, banking risks, risk management and credit risk management. Readers will also know how the objective is reached through three investigative questions.</p> <p>In this thesis, the theoretical framework will provide evaluation criteria that will be compared to the bank's credit risk management. There are five main categories of evaluation criteria: minimizing credit risk, lending organization, written loan policy, lending process and credit analysis.</p> <p>The thesis is based on qualitative research methods, using interviews with three experienced employees, internal reports and literature about credit risk management. The evaluation of data collected indicates that the credit situation and credit risk management of the investigated bank has been satisfactory in the past few years, but there are still some weaknesses that the bank needs to consider.</p> <p>Based on the results, the recommendations for the bank, such as implementing loan pricing software, reviewing the lending organization and the lending process, are given.</p>	
<p>Keywords: Risks, credit risk, bad debt, risk management, credit risk management</p>	

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1 Introduction

This thesis is commissioned by Agribank Tu Liem, a bank in Vietnam. The bank mainly operates in lending. The current need of the bank is to improve its credit risk management.

The first chapter will provide readers an overall understanding of the thesis. Firstly, the background is introduced to clarify the reasons of choosing the topic. After that, the commissioning bank, research question and investigative questions are presented. The demarcation, structure of the thesis and international aspect will instantly follow. This chapter will also discuss the benefits for stakeholders and the key concepts of the thesis. In the end, the potential risks of the thesis will be discussed.

1.1 Background of the thesis topic

Any profit-maximizing business, including banks, needs to deal with risks, and in fact, bankers are in the business of managing risks (Heffernan 2009, 101.). Therefore, risk and the banking business are inseparable. Although risk is the uncertainty that can cause damage for business, it is the phenomenon accompanying business activities in the market mechanism and in competition.

Business operations of commercial banks, and the commissioning bank Agribank Tu Liem in particular, are not exceptions of that. Among the bank's activities, almost no kind of business or service has no risk. The reason is that banks are considered currency trading organizations that operate primarily by taking deposits from customers with the responsibility to repay and using this money to lend, implement services and trade stock. With those basic characteristics, the banking business is influenced by many factors such as environmental, economic, social, legal, macro and microeconomic policy mechanisms. Thus, banking business contains many potential risks. In other words, banking business accepts risk in exchange for profit.

The main business of the banks is not taking deposits and giving loans as bankers might think. Successful bank lending does not depend on making loans but on limiting risk. Therefore, in banking, the true core business is profitable risk management. In addition, among those risks, credit risk is often considered the most worrisome. Banks' ability to compete and survive depends mostly on the capability to manage credit risk appropriately. Throughout the history, banking crises only occur when banks create poor-quality loan and mainly, banks failed because of loan of poor quality. (Hempel & Simonson 2009, 389.).

The idea of this thesis topic is formed when the State Bank of Vietnam announced that bad debts jumped to 4.03 percent of outstanding loans in April of 2014 from 3.86 percent in February of 2014 (Thanh Nien News 2014). The high bad debt ratio is synonymous with high credit risk. In recent years, bad debts started to become a huge threat and intimidated Vietnamese economic growth (The Wall Street Journal 2014.).

In addition, as a result of global economic crisis and unfavorable conditions in Vietnam in recent years, the bad debt ratio of Agribank Tu Liem had been high, and the bank had struggled in controlling credit risk. In 2013, the bad debts over outstanding loans ratio increased to 5%, from 3.4% in 2012 (Agribank Tu Liem's internal financial reports 2012-2013).

Being aware of the aforementioned issues, along with the special interest of the commissioning bank, the author chose the theme: "Evaluating credit risk management in Agribank Tu Liem ".

1.2 Commissioning bank introduction

Established in 1988, under the Law on Credit Institutions Vietnam, Bank for Agriculture and Rural Development of Vietnam (Agribank) is a leading commercial bank that plays a key role in Vietnamese economic development. Agribank is the largest bank in Vietnam in terms of capital, assets, staff personnel, network operations and customer base. (Agribank Vietnam 2010, 1.)

Tu Liem is an important historical district and the western gateway of Hanoi. To support the economic and social development of the district, State Bank Tu Liem Branch was established. From 1988, State Bank Tu Liem Branch was renamed the Agribank Tu Liem which operated under the Credit Institutions Act and charter operations of Vietnam Bank for Agriculture and Rural Development. Agribank Tu Liem's main headquarter is located at 10 Nguyen Co Thach, Tu Liem, Hanoi. There are 15 trading places distributed in Hanoi. (Agribank Vietnam 2010, 1.)

It is important to note that Agribank Tu Liem is an independent accounting unit but still dependent on the Agribank Vietnam. Agribank Tu Liem is an autonomy business, has its own seal and open trading accounts at the State Bank of Vietnam as an independent bank. Since its founding date, Agribank Tu Liem has been doing business on the basis of self-employed. Agribank Tu Liem operates mainly as a lending bank. Like any other bank

in Vietnam, Agribank Tu Liem operates in accordance with State Bank of Vietnam’s guidelines and regulations.

1.3 Research question and investigative questions

The research question of the thesis is “Evaluating the credit risk management in Agribank Tu Liem”. The thesis aims to systemize the theoretical issues related to credit risk to create more specific perceptions and based on credit and credit risk management analysis, offer solutions and recommendations for preventing and limiting credit risks.

The investigative questions (IQs) are listed below.

IQ 1: What is credit risk and how is the current credit risk situation in Agribank Tu Liem?

IQ 2: How is the current credit risk management in Agribank Tu Liem?

IQ 3: What should be recommended to improve credit risk management in Agribank Tu Liem

The following overlay matrix explains the theories, research methods, outcomes and locations of the investigative questions in the thesis.

Investigative Questions (IQs)	Theoretical Framework	Research management method	Outcomes	Chapter
1. What is credit risk and how is the current credit risk situation in Agribank Tu Liem?	Bad debt, credit risk	Qualitative research	Analyze data of credit risk and bad debt	Chapter 3 and 4
2. How is the current credit risk management in Agribank Tu Liem?	Bad debt, credit risk credit risk management,	Desktop study and qualitative research	Find out essential criteria and procedures to assess credit risk management	Chapter 4
3. What should be recommended to improve credit risk management in Agribank Tu Liem	Bad debt, credit risk management, credit risk analysis	Desktop study and qualitative research	Perceptions	Chapter 4 and 5

Table 1. Overlay matrix.

1.4 Demarcation

The thesis topic is “Evaluating Credit Risk Management at Agribank Tu Liem”. Therefore, the scope of the thesis is an evaluation of credit risk management for Agribank Tu Liem. The thesis topic fulfils the requirements of GloBBa Financial Management thesis topic with credit risk management covered in the curriculum. The thesis scope consists of banking business, credit risk and risk management, as can be seen from figure 1

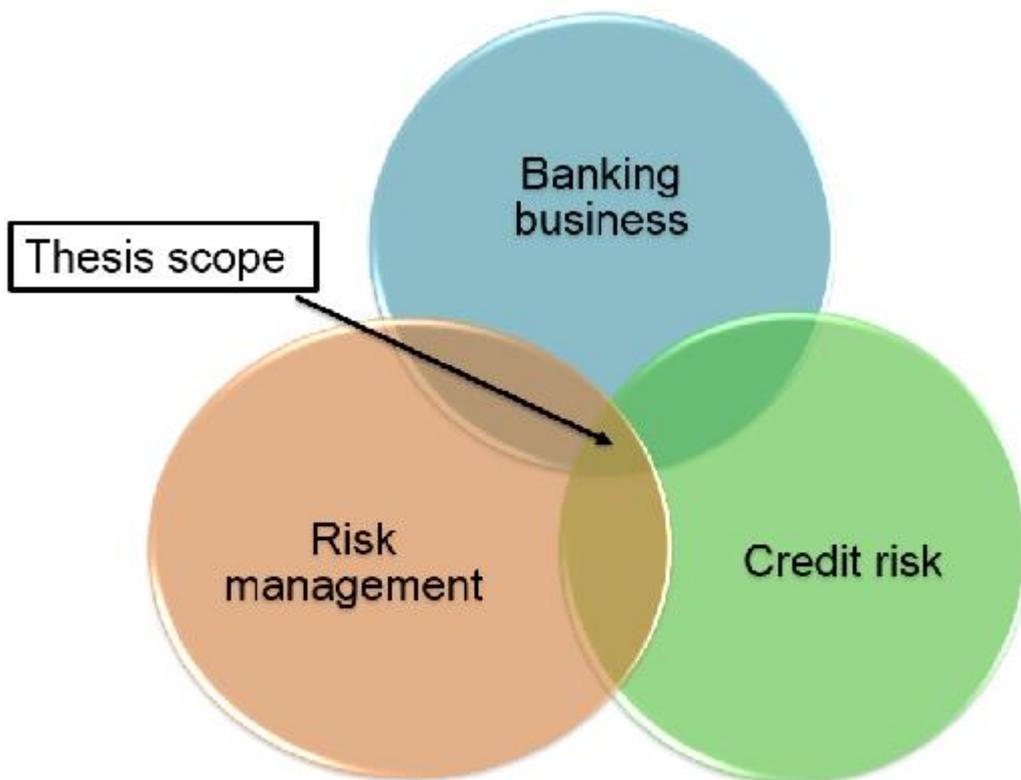


Figure 1: Demarcation of thesis topic

About theory and framework, among the three elements, banking business, its characteristics and the types of risks in banking, will not be the main focus and will be discussed briefly. Instead, the thesis will concentrate on credit risk and risk management.

About the subject of research, the thesis will not aim to investigate the whole banking system in Vietnam but focus mainly on the commissioning bank Agribank Tu Liem. The thesis aims to investigate the credit operation and credit risk management of the bank, and provide solutions for the bank. In addition, recommendations for Vietnamese government and the State Bank of Vietnam will be provide

1.5 Structure of the thesis

In this section, readers will be provided an overview of the structure of the thesis. This thesis is written based on the traditional report structure. Key elements of this structure are attached in Appendix 1.

The thesis focuses on assessing the credit risk management of the commissioning bank. It is mainly backed by the literature review as well as empirical study. In the first chapter, readers will be introduced to the thesis background, the research objectives and key concepts. Chapter 2 concentrates on revealing the decisions of research methodology supporting the thesis, including research approach, research methods, data collection and assessment of reliability and validity of the research. Once the research and data collection methods have been selected, it is essential to create the theoretical framework to support the research. Chapter 3 will discuss risks, types of risks, credit risk, risk management and credit risk management. The theories will then be used to evaluate credit risk management of Agribank Tu Liem in chapter 4. In this chapter, readers can find the answers of three investigative questions. Chapter 4 consists of the evaluation of credit risk management measures and credit management performance of the investigated bank. Finally, the key findings, recommendations for the subject bank as well as Vietnamese government and State Bank of Vietnam will be the main focus of chapter 5. In addition, suggestions for further research and evaluation of personal learning will be mentioned.

1.6 International aspect

This thesis is conducted for a Vietnamese bank by a business student studying abroad. Therefore, the international aspect is presented through the application of different theories of foreign authors into a domestic bank. In addition, the author had the opportunity to experience contrasting working environment and to develop intercultural know-how.

1.7 Benefits for stakeholders

After the project, the commissioning bank benefits from an in-depth analysis which will assess its credit risk management procedure by comparing it to the theoretical framework of credit risk management and then provide recommendations of further changes. With the evaluation in this research, the bank is able to review its credit risk management.

The author had the chance to deepen the knowledge in banking which the study program did not sufficiently offer, and he felt much more confident working in banking and financial sectors. He learned how to select information to support the thesis understanding in an effective way. His critical thinking and summarizing skills are also improved during the process. In addition, the author had the chance to work with the professionals in the field of banking, the director and employees of Agribank Tu Liem. His communication skills were polished, and this chance provided him valuable information about how a bank worked, information flow in the bank and precious contacts whom he could later use in his professional life.

For the readers, with the comprehensive theoretical framework, they will understand about main concepts about risk and credit risk management. In addition, with the approval to disclose the confidential financial data from bank's representatives, the thesis is conducted with the actual data. Therefore, readers will be given the chance to have an accurate overview of the credit risk management of the investigated bank.

1.8 Key concepts

Risk is the possibility of suffering a loss in trading (Oxford University Press 1997, 120.).

Credit is defined as the arrangement made to later pay for something (Oxford University Press 1997, 40.).

Credit risk is the possibility of a borrower that cannot fulfil the duties related to the loan (Casu & al. 2006, 259.).

Bad debt is an amount owned by a debtor that is unlikely to be paid (Oxford University Press 1997, 38.). Therefore, bad debt is the main reason of credit risk.

Risk management is the prediction and assessment of risks alongside with the recognition of procedures to nullify or minimize their consequences (Oxford University Press 1997, 122.).

Credit risk management can be simply understood as the risk management process for credit risk.

Loan-loss provision, so called provision for bad debts, is defined as a provision calculated to cover the debts during an accounting period that are not expected to be paid (Oxford University Press 1997, 79.).

1.9 Risks

Firstly, there can be the risk that the research cannot fulfil the commissioning bank's expectations and requirements. To prevent this, the author worked closely with the bank's representatives.

Secondly, lack of cooperation of the bank's representatives can be a huge trouble for the research. Therefore, the author actively contacted and discussed with them the topic to maintain their interest and their trust in the thesis work.

Thirdly, to eliminate the risk of not having the real and latest data, the author negotiated with the bank representatives to have and to be able to publish the needed data.

Finally, though the thesis process is long and sufficient for conducting the research, project management and timing can put the thesis at risk. To avoid this, the author planned specifically, thoroughly and appropriately for each stage of the process.

2 Research methodology

This chapter will clarify the research approach, research methods and data collection methods and the reasons of choosing certain methods and data.

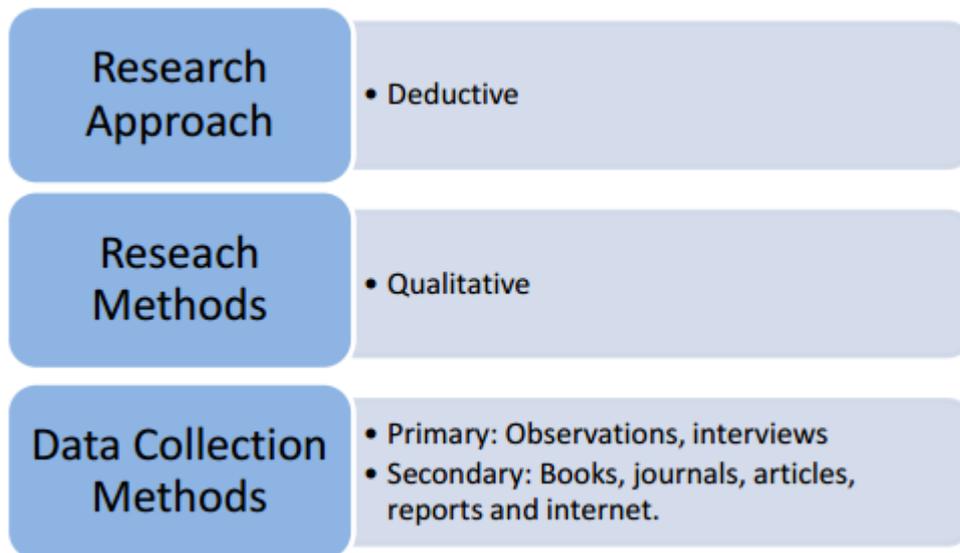


Figure 2: Methodological approach

As shown in the figure above, the research approach of the thesis will be deductive and the research methods of the thesis will be qualitative. The data sources for the research include both primary and secondary sources. Primary sources are observations and interviews, which will contribute in empirical part, while data from secondary sources such as books, journals and reports will help to build the theoretical framework and analyze the credit position of Agribank Tu Liem.

2.1 Research approach and research methods

There are two main approaches for reasoning in research: inductive and deductive. Deductive is a kind of method where the finding is the result of theory application while in inductive method, the theory is the result of the research (Bryman 2007, 11&14.). The objective of the thesis is to assess credit risk management of the subject bank with the application of the theoretical framework. Therefore, the chosen research reasoning approach will be deductive.

Bryman (2007, 11.) provided the process of deduction with six stages, as shown in the figure below. According to him, based on the theory, researchers will make a hypothesis, and collect data to examine that hypothesis. Based on Bryman's model, in this research,

the author will build a theoretical framework, collect data and examine the credit risk management of Agribank Tu Liem based on the data collected.

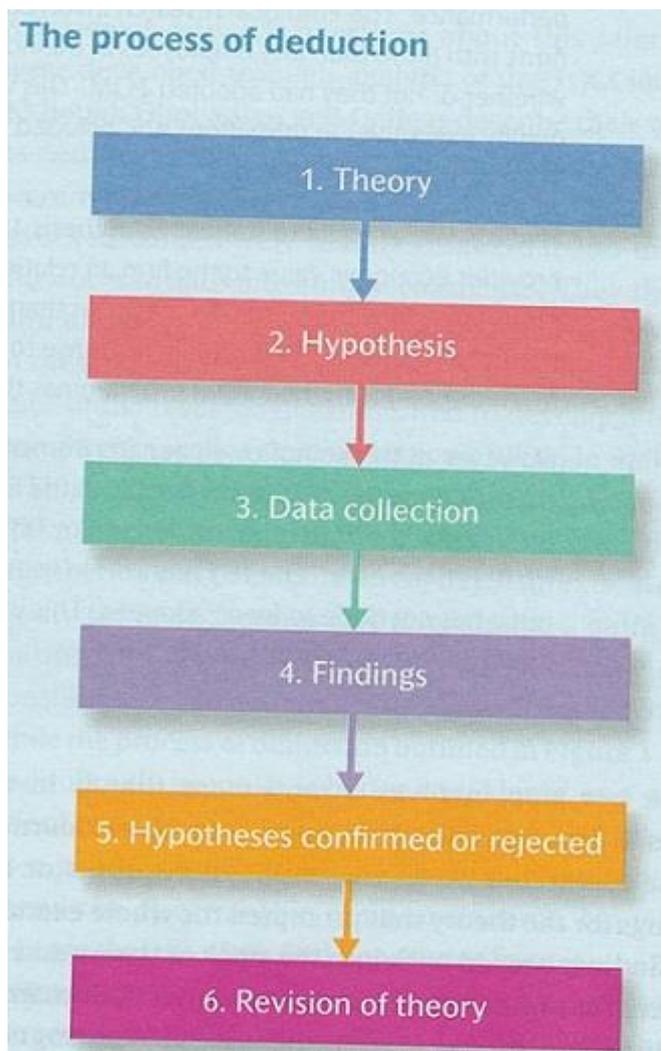


Figure 3: The process of deduction (Bryman 2007, 11.)

In addition, it is important to choose the right research methods for the research. There are also two major methods to pick from: quantitative and qualitative.

Quantitative is a research type that collects data from a large sample and is conducted in an objective and unbiased manner that gives complete description of the research question, whereas qualitative research has a small sample, asks in-depth questions and is conducted in a biased and subjective manner to explain the observations. The strengths of quantitative research are best shown in the research which explanations and trends are required to be made while qualitative research should be used when a deep comprehension of the problem needs to be obtained. (Creswell 2005, 39 & 54.)

As mentioned before, the purpose of this research is to assess the credit risk management situation of the subject bank. As a result, the research requires deep and insight knowledge of experts and bank's management officers. Furthermore, the outcome of the research would be used mainly for internal purposes, and the target readers would be the bank's managers. Therefore, qualitative methods will be used for this thesis.

2.2 Data collection

Both primary and secondary research will be used in this research. It can be seen from figure 2 that, in this thesis, the primary data collection method gathers information from observations and interviews, whereas the secondary data sources are books, journals, reports and the Internet.

The primary data sources contribute to the empirical part of the research which is the evaluation credit risk management at Agribank Tu Liem and will be discussed in chapter 4. The interviews were conducted during March 2015, in form of personal interviews with banks' representatives through calls, skype, and email. It is necessary to interview employees and representatives of the bank in order to further clarify its credit position, descriptions of the current credit management models to assess and enhance based on the theoretical framework.

Due to secrecy policy in the bank, names of the interviewees cannot be disclosed. Therefore, in this thesis, their name will be abbreviated. Their names and their positions in the bank are mentioned in the following table:

Name	Position
Mrs. T	Director
Mrs. P	Internal Auditing Department Manager
Mrs. A	Human Resource Management staff

Table 2: Interviewees

All of the interviewees have more than ten years of experience in the banking sector. Among three interviewees, two people are working as top level managers and one person is an ordinary employee who deals with credit risk and loan assessment in a daily basis. Therefore, the interviewees can provide a detailed view of credit risk management of the bank from different perspectives. In addition to the interviews, the author was also in close contact with the bank's representatives to ask questions whenever information is needed.

The secondary sources of data are books, journals, reports and the Internet and mainly contribute to a comprehensive theoretical framework of credit risk management. Also, the financial data in this research is mostly taken from internal financial reports of the bank from 2012 to 2014. With the actual data, readers will be given the chance to have a clear overview of the credit risk management of the investigated bank. The aim of the chapter is only to evaluate credit risk management at Agribank Tu Liem, not to predict a trend. Therefore, the three-year-data can be considered sufficient.

2.3 Assessment of reliability and validity

In a research, reliability is the stability of the outcomes, whereas validity indicates the measurements' accuracy (Burns & Bush 2014, 214.).

Flick (2009, 14.) indicated the important elements to evaluate the reliability and validity of a research:

- Proper selection of methods and theories
- Diversity of methods and approaches
- Variety and perspectives of the respondents

In this thesis, the methods and theories are carefully chosen as discussed before to ensure them to be appropriate. The methods and approaches to the research problem are also diverse. Perhaps, it could be beneficial to interview some experts outside the commissioning bank, but with the limited time, interviews with three different experienced employees in both top level and lower level of the bank can provide a reliable and satisfactory overview of the bank's operations. The author also reduced the possibility of misunderstandings in the interviews by using mother tongue (Vietnamese) and enabling the interviewees to ask questions if necessary. In addition, the author ensures the bank that his work is valid by carefully showing them the plan, reporting results and communicating in a closely manner as well as constantly asking for constructive feedback and maintaining understanding between both parties.

All financial data used in the thesis is real and latest data in the last three years. The data is provided by the managers and banks' representatives. Therefore, the reliability of the data is ensured. The theoretical review supporting the understanding of the research outcomes was built with reliable sources written by well-known authors. In addition, those sources have been carefully evaluated, hence the reliability of the thesis is assured. The variety of sources also provides readers different perspectives and deeper understandings of theories employed in this research.

2.4 Limitation

Due to secrecy policy in the bank, names of the interviewees cannot be disclosed and will be abbreviated in this thesis, which can cause difficulties for the readers.

With the limited scope for a bachelor thesis, this thesis will not provide a full picture of Vietnamese banking sector and Agribank Tu Liem's financial situation. Instead, the thesis will concentrate on evaluating the credit situation and credit risk management measures of the commissioning bank. Still, the information about credit risk management of Agribank Tu Liem can be valuable for other banks to adjust their policies.

Finally, the statistics are hard to obtain due to Vietnamese banking secrecy policy. There are not enough English sources to support the thesis work because most of the information about the Vietnamese banking system is in Vietnamese. Furthermore, because of the non-transparency in the Vietnamese banking sector, the government reports are not accurate. This thesis will mainly use the most reliable data provided by the bank's representatives in order to avoid inaccuracies.

3 Theoretical framework

This part is created to give readers a comprehensive understanding about main concepts about risk and credit risk management. The theoretical framework starts with risk, credit risk and risk management, and continues with credit risk management and credit risk management practices, as shown in figure 4:

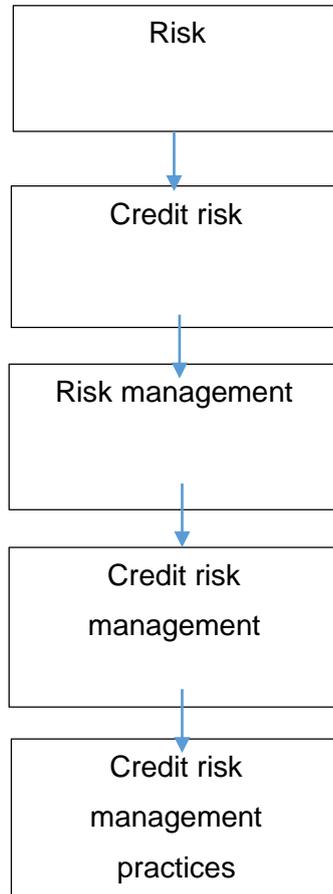


Figure 4: Theoretical framework structure

3.1 Risk

Risk exists in every part of human's life. In trading, risk is defined as the possibility of losing money (Oxford University Press 1997.). As any other trading activities, banking operation also has to deal with different types of risk. In fact, operating in the banking sector is much riskier than many other businesses. In "Introduction to banking" (2006), Casu, Girardone and Molyneux classified banking risks into eight different types, as in figure 1.

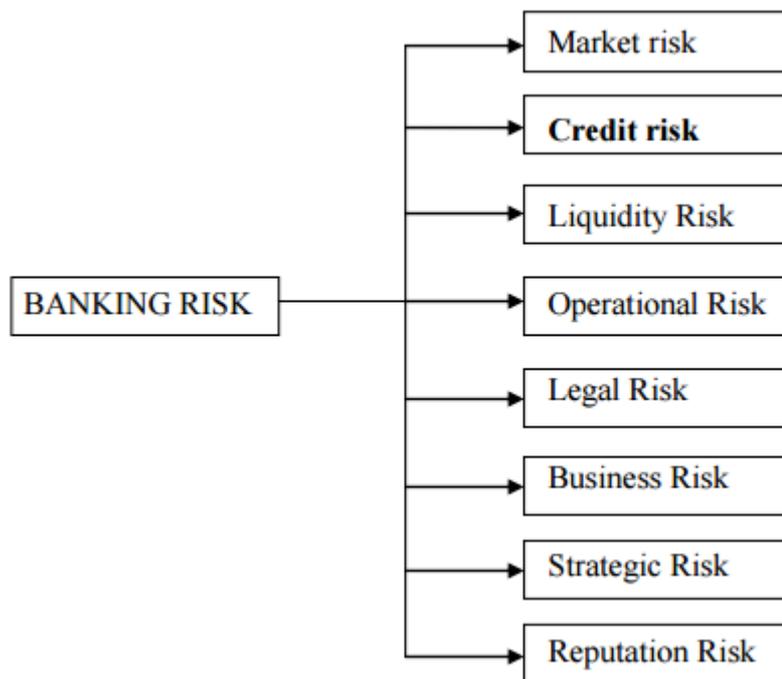


Figure 5: Types of banking risk (Casu, Girardone & Molyneux 2006, 352.)

As shown in the figure, credit risk is one eight types of risks in the banking business.

In fact, the risks of banking compare to other business sectors are quite similar. Among those risks, non-financial firms can suffer from losses because of business risk, strategic risk, operational risk, reputation risk or legal risk. However, rarely are they affected by credit risk. In contrast, banks infrequently suffer from business or operational risks, but their ability to compete and survive depends on dealing with credit risk. Throughout the history, banking crises only occur when banks create poor-quality loan and mainly, banks failed because of poor-quality loan. (Hempel & Simonson 1999, 389).

3.2 Credit, credit risk and bad debt

Credit is defined as the arrangement made to later pay for something (Oxford University Press, 1997.). Hence, basically, credit is close to debt.

Colquitt (2009, 3.) pointed out that basically every exchange banking and services is conducted on credit". Colquitt (2009, 3.) also visualized the relation of debtor and creditor as the following figure 6:

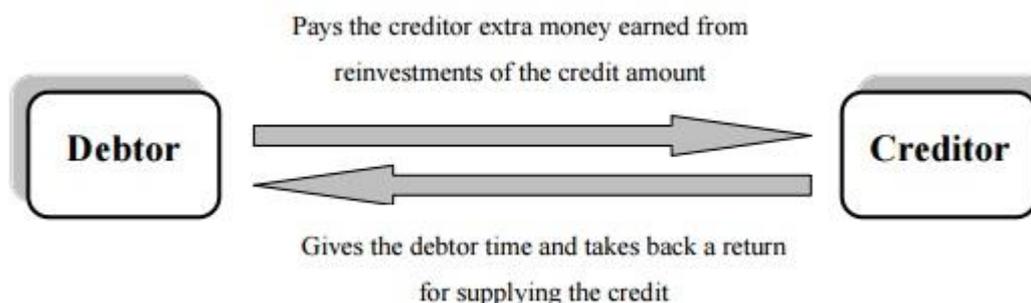


Figure 6. Relation of Creditor and Debtor (Colquitt 2009, 3)

In banking business, as stated by Colquitt, exchanges are done on credit. The banks are the creditors, and the debtors who borrow from the banks have to pay the creditors extra money (interest) generated from the credit money.

Credit risk is defined as the possibility of a borrower that cannot fulfil the duties related to the loan (Casu at al. 2006, 259.). In other words, credit risk is the risk of a debt not getting paid. Basically, one of the bank's functions is to lend money. When they lend the money, there is a risk that the borrower does not pay back the money, and the risk is called credit risk. Because banks generate profit through lending, credit risk is inevitable. Credit risk represents the most worrisome yet common type of risk for banking operations.

In "Regulation No. 493/2005 NHNN", as shown in the following table, State Bank of Vietnam classified debts into five different groups based on the length of overdue time:

Groups	Debt's characteristics
Group 1: Standard	Debts not overdue yet or overdue less than 10 days
Group 2: Noticed	Debts overdue from 10 to less than 90 days
Group 3: Substandard	Debts overdue from 90 days to 180 days
Group 4: Suspected	Debts overdue from 181 days to 360 days
Group 5: Loss-making	Debts overdue more than 360 days

Table 1: Debt groups (SBV's Regulation No. 493/2005 NHNN)

According to Regulation No. 493, bad debts are the debts from group 3 to 5. In "A dictionary of finance and banking", bad debt is explained as the amount of money borrowed that is not likely to be paid (Oxford University Press, 1997). The longer it takes to pay the debts, the bigger the possibility that customer will not repay is. Thus, bad debts can be understood as the main reason of credit risk.

Bad debt is an indispensable element of the credit operation of a bank. Under Chapter 1 of the Regulation No. 493/2005/QĐ-NHNN, State Bank of Vietnam stated that "the ratio of bad debt over total debts can assess the credit quality of credit institutions." Hence, the bad debt ratio reflects the credit quality and affects the prestige of the bank.

Banks frequently seek to minimize this rate and handle the bad debt. Over the past few years, the rise of bad debts in total debts is a huge trouble for Vietnamese banks. As an example, bad debts increased to 4.03 percent of outstanding loans in April of 2014 from 3.86 percent in February of 2014 (Thanh Nien News 2014). However, many banks in Vietnam do not have enough experience in bad debts management, and they will have a hard time if the situation becomes worse.

Thus, bad debt needs to be treated with care to ensure the safety and soundness of the operation. There can be many serious drawbacks caused by long debt recovering process. Initially, cash flow of the bank will be threatened because the loans cannot be collected in time. This seriously hinders the possibility for the bank to expand its credit operation and generate income because the companies in need cannot get the capital for their operation, which can cause long-term adverse impact to the country's economic activities.

Secondly, if the customers cannot repay their loan, it will be difficult for the bank to compensate it. Usually, banks need to ensure that they will not lose money if the debtors do not pay their debt by taking collateral assets of the debtors. If a loan is loss, bank will compensate by selling those collateral assets, but even then, it is not easy.

3.3 Risk management

Risk is an unavoidable part of everyday life. Furthermore, it is widely accepted that risk and reward are closely related to each other, as stated by the Italian political philosopher Niccolò Machiavelli: "Never was anything great accomplished without danger." Therefore, facing and effectively managing risk is the better way to go. Oxford University Press (1997.) defined risk management as "the assessment and forecast of risks as well as the creation of measures to reduce their impact". In a more academic manner, risk management can be defined as following:

Risk management is a complicated process that consists of identifying a proper environment, administering and minimizing risky activities as well as creating an

appropriate framework and an effective risk measurement structure for internal controls (Casu & al. 2006, 279.).

The International Organization of Standardization (2002, 5.) emphasized the importance of risk management by comparing it with “the heart of any organization’s strategy’. Hence, in trading context, people need to understand how to deal with risk properly. In business, there are many different ways of coping with risk. Choosing and implementing them effectively is the main question for risk management.

International Organization for Standardization (2008, 42.) indicated five key phases of the credit risk process, making a circulatory and continuously process, as can be seen from the following figure 7:

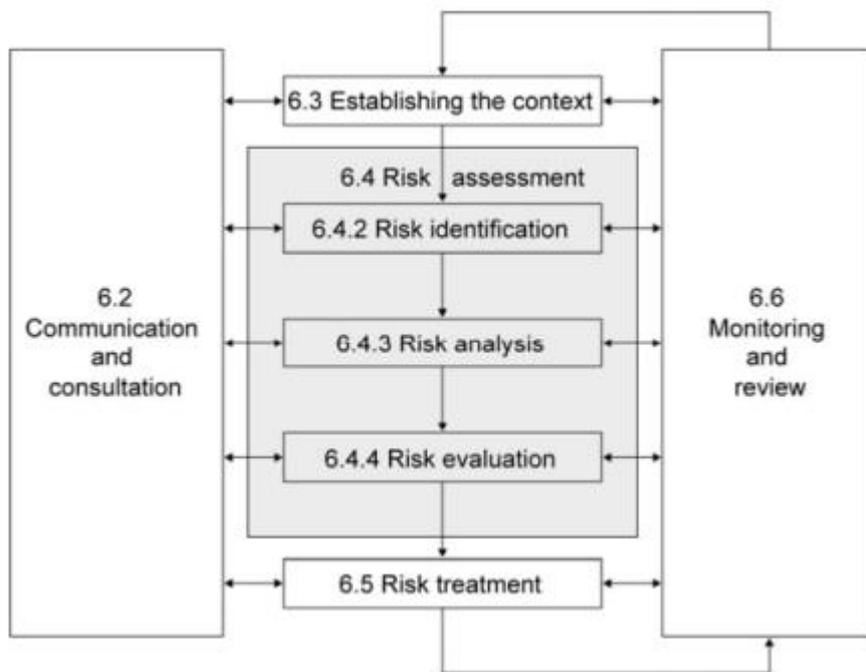


Figure 7: The Process of Risk Management (International Organization for Standardization 2008, 42.)

There are five key phases of the risk management process: communication and consultation, establishing the context, risk assessment, risk treatment and monitoring and review. The phases actively support each other in finding and dealing with risks. The relationships of the phases can be seen from figure 7, and the phases form a circulatory and continuous process of risk management.

3.4 Credit risk management

Credit risk management is one of the most important tasks for any bank. Credit risk management is critical because it gives directions for the way a bank should deal with its risk-asset exposure (Fight 2004, 61.)

Casu, Girardone and Molyneux (2006, 282.) pointed out that credit risk management aims to “maximize the bank’s risk-return rate by keeping credit risk level under acceptable thresholds”. Furthermore, Hempel and Simonson (2009, 389.) emphasized the fact that the banks’ ability to manage credit risk in a profitable manner decides its ability to compete and survive. Thus, it can be seen that credit risk management plays an essential role in banking business.

3.5 Practices in credit risk management

Because of the importance of credit risk management, many different measures are implemented by the banks. Basel Committee on Banking Supervision (2010) pointed out the most important credit risk management measures:

- Creating a proper credit risk environment.
- Operating under a suitable credit administration, monitoring procedures and evaluations.
- Creating an appropriate credit-granting procedure.
- Maintaining sufficient administration of credit risk.

(Casu & al. 2006, 283-284.)

In addition, throughout the history of the banking sector, there are many banks that had bankrupt because of credit failure. It is valuable to learn from the mistakes of the failed banks. Hempel and Simonson (2009, 391.) indicated the most common errors that caused banks’ mass collapse in mid-1980s, which need to be avoided:

- Inattention to loan policy
- Lack of clear standards
- Overly generous
- Poor control over loan personnel
- Insufficient procedures of identifying loan problems.
- Inattention to banks’ policies
- Loan growth over banks’ capability to monitor quality

The following sub-parts will discuss the specific measures and practices that can be implemented to enhance credit risk management.

3.5.1 Minimizing credit risk

Heffernan (2009, 156-158.) listed the key ways that a bank can minimize credit risk:

- Appropriate loan valuing: it is important for any bank to control the loan value as well as the loan monitoring costs, using the following formula:
 - o $R(L) = i + ip + \text{fees}$
- In which
 - $R(L)$: rate of interest of the loan.
 - i : rate of market interest.
 - ip : risk of the possibility that the loan will not be repaid.
- Security and Collateral: banks tend to take security and collateral to minimize credit risk.
- Credit limits: the maximum amount can be lent related to loan assessment's aspects like collateral or wealth.
- Diversification of risks: banks diversify risks by lending to new loan markets, performing lease financing, guarantee or diversifying banking services to minimize overall risk exposure.

3.5.2 Lending organization

Lending organization (or so-called credit organization) can be simply explained as the structure of the people involved in a lending institution. In different banks, depends on the bank's size, the lending organization can vary a lot, because usually each bank designs its own credit process (Colquitt 2009, 23.). In big banks, each department and officer focus on one main task, while in smaller banks, one officer can be responsible for many tasks. However, essentially, the tasks in the process remain the same, as shown in figure 8:

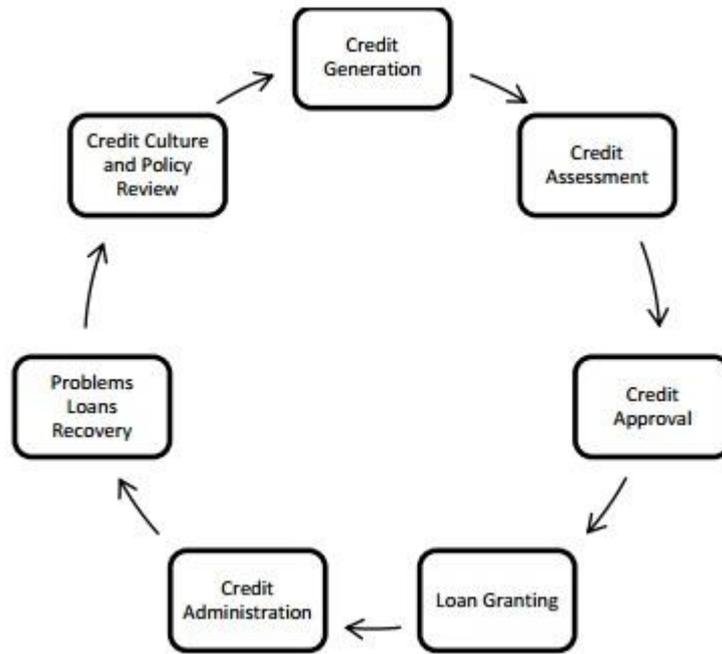


Figure 8: Credit Cycle (Colquitt 2009, 14.)

It can be seen from figure 8 that there are many different tasks, from credit generation, credit assessment to loan granting. Hence, it is extremely important for banks to have departments with clear obligations to be able to operate profitably and effectively (Hempel & Simonson 1999, 34.). As an example, the ordinary lending organization at a medium-sized bank is shown in figure 9.

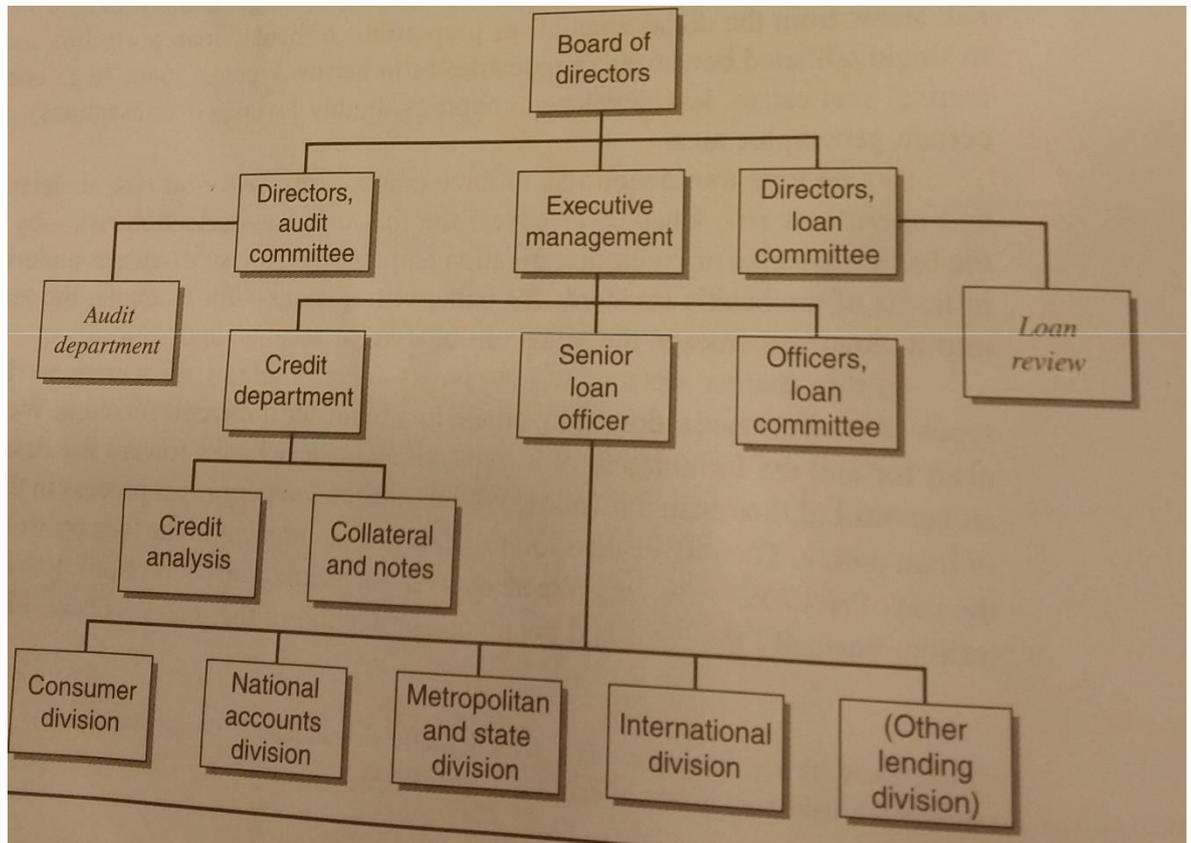


Figure 9: Typical Lending Organization at a medium-sized bank ((Hempel & Simonson, 1999, 394.)

In figure 9, the credit organization consists of three fundamental divisions: loan division, collateral department and credit department.

The responsibilities of each division are:

- Loan division: The duties of loan division are to support customer as well as develop loan business.
- Collateral and note department: The main responsibility is to administrate collateral assets related to a loan. Also, this department handles legal and paper works.
- Credit department: The main duty of the credit department is to assess the debt payment ability and credit worthiness of borrowers. This department also monitors collections of overdue loans and loan review.

(Hempel & Simonson 1999, 394-395.)

In this organization structure model, the audit department as well as loan review department work under the authority of the board of directors (Hempel & Simonson 1999, 394.). In fact, this model is similar to Agribank Tu Liem's organizational structure model, but it still consists of weaknesses. The effectiveness of it will be evaluated in later chapter.

3.5.3 Establishing a good written loan policy.

A good written loan policy is crucial to keep the lending operation and loan quality on track. Hence, Rose and Hudgins (2010, 521.) emphasized that implementing written loan policy is an essential activity that a lending institution need to implement so that its loan and are profitable and fulfils the standards by supporting officers with documented guidelines in assessing loan applications. To be more specific, all the needed information about the lending organization, loan standards, lending objectives and loan review are specified in a detailed policy guide (Francis 2001, 150.).

Therefore, it is necessary for banks to establish a reasonable written loan policy. With the consideration to that, Federal Deposit Insurance Corporation indicated the most essential elements of a well-written loan policy, including:

- Loan goal statement (statement about features of a good loan, loan quality).
- Lending procedures of processing loan application.
- Authority and duty of each loan department and officer and the required signatures for loan approval.
- The necessary documentation needed for loan application.
- Guidelines for establishing loan rate, pricing and monitoring the loan payment.
- Procedures for assessing and taking collateral assets.
- A statement that outlines the lending institution main operating area which is the source of the majority of loans.
- Guidelines of general quality standards for every loan.
- A description of maximum ratio of loan can be approved to a specific amount of assets.

(Rose & Hudgins 2010, 521.)

In addition, with a good written loan policy, Hempel & Simonson (1999, 397.) indicates three important results that should be obtained:

- Generate sound usage of bank fund.
- Increase the credit expansion that fulfil the lawful demands of the bank.
- Provide collectible and appropriate loans.

3.5.4 Lending process

The “borrower” can be a small customer who receives a minor loan or a major company whose loan exceeds the lending limits of the bank. In both cases, a set of general

regulations and guidelines will be used to assess the loan application. Whilst there are many procedures and policies in a bank, all follow a standard lending process that consists of the loan application and interview, assessment, documentation, collateral and administration. (Francis 2001, 150-151.)

Lenders evaluate each request according to its risk, expenses as well as profitability, and implement the lending process based on that evaluation. Despite the size or type of the loan, strict compliance with the lending process protects the bank from risks, but is not able to fully get rid of risks. (Francis 2001, 151.)

Therefore, lending process is a mandatory part of credit risk management for every bank. There are six essential stages of a lending process:

- Application and interview: the initial stage of lending process. The purpose of this stage to aid the loan officer in identifying the borrower's needs, gathering related documents and making the loan that will fulfil borrower's expectation. The loan officer needs to discuss this during this step of the process, and the loan officer needs to comprehend the lending regulations and bank policy.
- The assessment: at this point, banks collect and evaluate all necessary information when forming the lending decision to reduce losses. Essentially, the assessment stage is the same as credit analysis, which will be introduced in the following subpart. Information can be collected from the assessment of the applicant's capability to pay debt as well as the economic and financial position of the borrower.
- Loan documentation: begins after the loan approval is made. Loan documentation includes gathering and finishing all necessary documents to ensure the lender's interest and conformity to government requirement. Inability to legitimately document loan can make the loan agreement unachievable. Loan officer checks if all areas are finished, collateral agreement, calculations, dates and signatures are right. Besides, lenders utilize documentation to fulfil their obligation to notify borrowers about the important aspects of the loan. The loan can be considered completed when all documents are filed and signed, and the funds disbursed.
- Collateral: banks employ collateral as a way to minimize their risk from a loan. Collateral is an asset used as loan security. In case the borrower cannot repay the debt, collateral can be sold.
- Loan management: This phase begins after the loan documentation. In fact, the risks just begin after the loan approval. It is necessary to monitor a loan throughout its life to avoid trouble. Loan management consists of:
 - o Setting and securing agreed-upon payments.

- Assuring the bank's interest in the collateral.
 - Keeping the documents for review.
 - Monitoring address information.
 - Ending the loan after end payment is collected.
- Asset recovery and loan review: staff inspect every loan for risks. Standardized loan review assures the managers that officers have fulfilled their responsibility and the assessment process was adequate.

(Francis 2001, 150-155.)

Based on those elements, Francis (2001, 156.) summarized the lending process, as shown in figure 10:

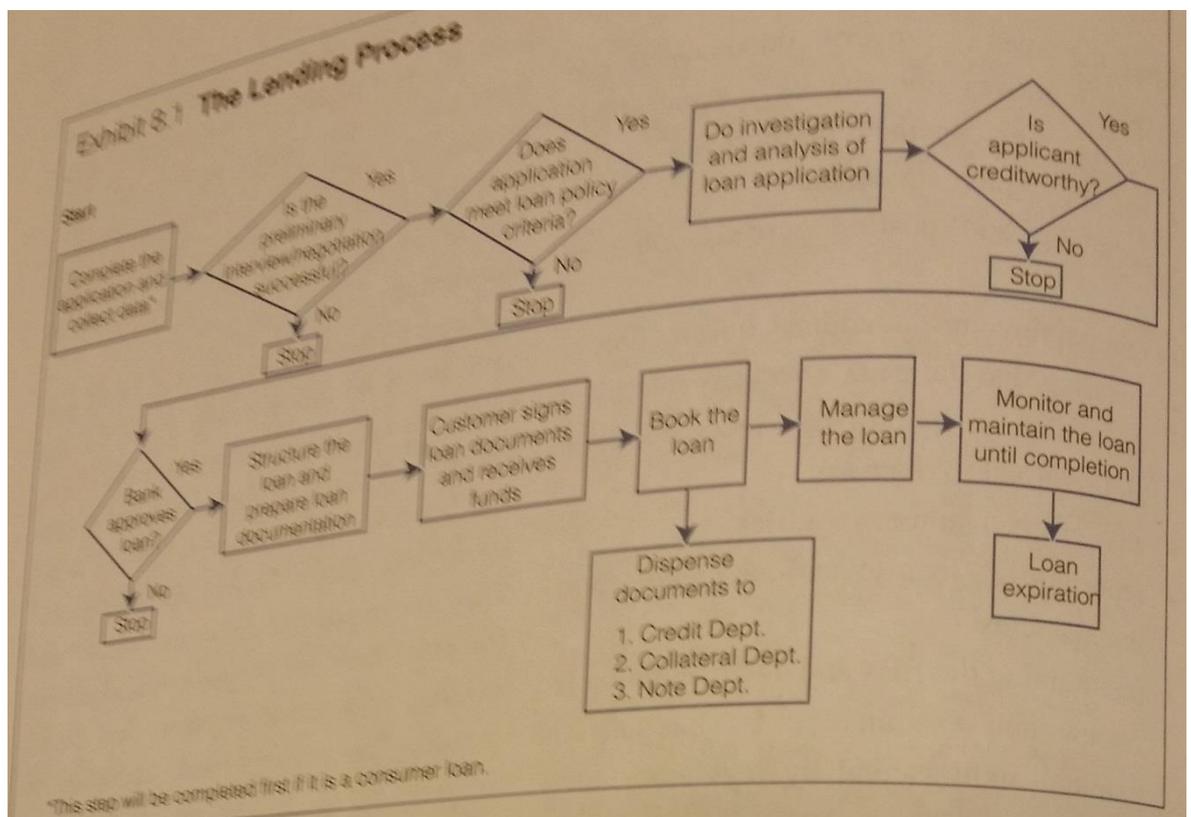


Figure 10: The lending process (Francis 2001, 156.)

3.5.5 Credit analysis:

As mentioned in the previous part, credit analysis is a part of lending process, which is the assessment stage. The process of credit analysis consists of many aspects and can be divided into different stages. In addition, depending on the angle of research, the credit process can also be divided in many different ways. In banking, credit analysis is important in a way that with it, banks can minimize the credit risk by analyzing the riskiness and profitability of a loan.

Generally, credit analysis is a risk analysis where a loan officer assesses a borrower's capability to pay back (Koch & MacDonald 2009, 558). For any credit institution, credit analysis is a strong tool to keep in the repertoire. Normally, credit analysis is under the authority of credit department. Figure 7 indicates the fundamental aspects of the credit analysis process, as stated by Heffernan:

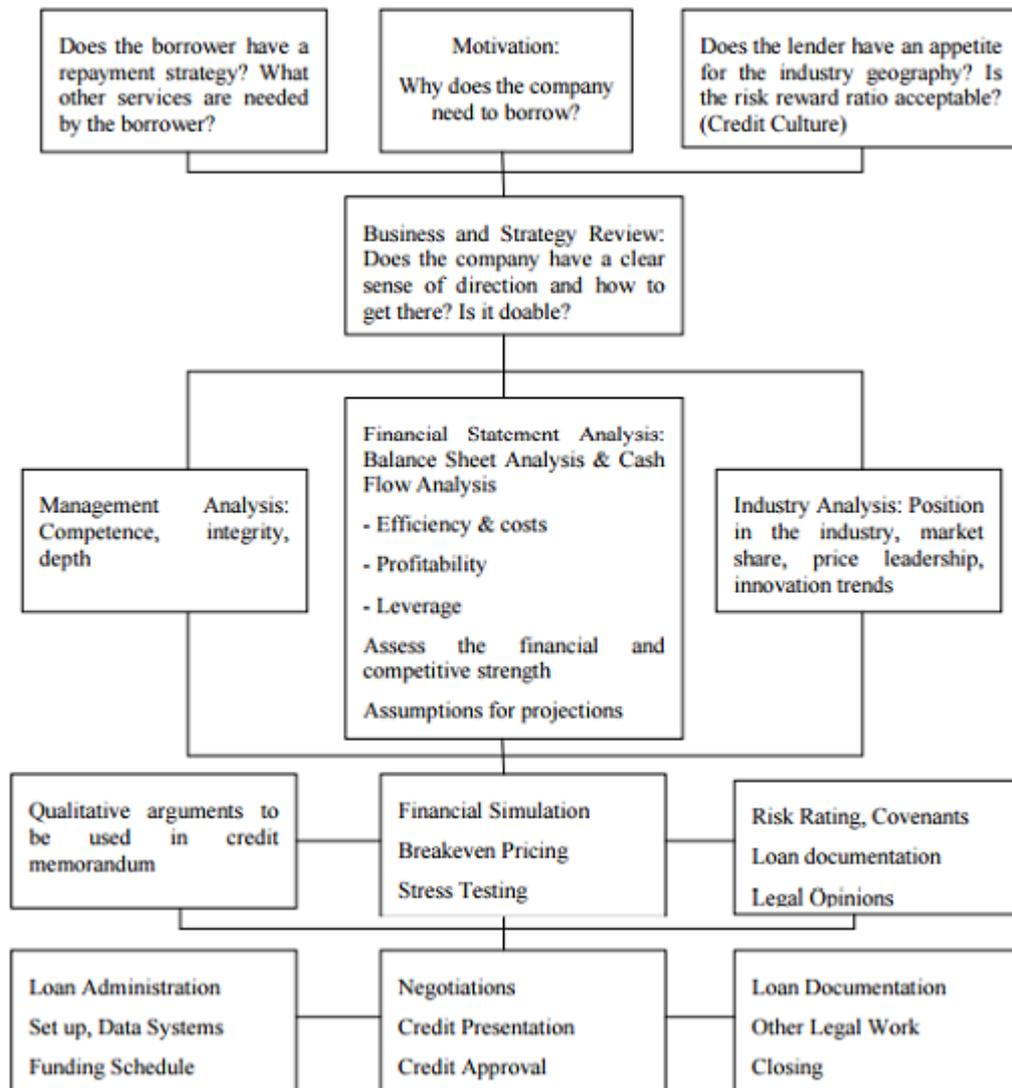


Figure 11: Credit analysis process (Heffernan 2009, 168.)

It can be seen that the model of Heffernan is specifically for lending to businesses and enterprises. However, for personal customers, credit analysis process is similar. In both cases, the bank needs to analyze both financial and non-financial aspects to decide whether to lend or not. Financial aspects can be income, costs, industrial analysis, whereas non-financial aspects can be identity, motivation and goals.

In the book “Bank management & financial services”, Rose & Huggins (2010, 524-531.) presented credit analysis in a simpler way. According to them, there are three main questions that credit analysis must answer.

- Is the borrower reliable?
- Is the loan agreement appropriately formed in a way that the lender's rights are secured, and borrower is able to repay the loan without too much stress?
- Can the lender perfect its claim against the borrower's earnings and any assets that may be pledged as collateral?

3.6 Summary of theoretical framework

The theoretical framework has discussed the main definitions and concepts of risk, banking risks, credit risk, and risk management. The research aims to assess the credit risk management measures of the commissioning bank. The evaluation of credit risk management effectiveness of the bank will be based on the comparison between the bank's credit risk management practices and the essential criteria in the theoretical framework and the interviews with the staff of the bank. As a result, this theoretical framework hopes to set a benchmark for evaluation. Therefore, after discussing risk, credit risk and credit risk management in general, the emphasis of the chapter is put on the important practices in credit management. They are minimizing credit risk, lending organization, establishing a well-written loan policy and credit analysis. The mentioned practices' framework will be then compared to Agribank Tu Liem's credit management practices to evaluate the bank's credit risk management effectiveness.

4 Credit risk management at Agribank Tu Liem

In this chapter, credit risk management of investigated bank will be evaluated. The research data in this thesis is real data adapted from the bank's internal financial report and the interviews with bank's employees and representatives. Some of the information in this paper, however, is confidential, but the bank's representatives have given the author the right to disclose them. Although, the identities of the interviewees are required not to be mentioned.

The financial data is mostly taken from internal reports of the bank from 2012 to 2014. With the actual data, readers will be given the chance to have a reliable overview of the credit risk management of the investigated bank. The aim of the chapter is only to evaluate credit risk management at Agribank Tu Liem, not to predict a trend. Therefore, the three-year-data can be considered sufficient.

4.1 Case study bank: Agribank Tu Liem

As already mentioned in 1.2, Agribank Tu Liem is a branch of Agribank Vietnam. It is important to note that Agribank Tu Liem is an independent accounting unit but still dependent on the mother bank. Agribank Tu Liem operates mainly as a lending bank. Like any other bank in Vietnam, Agribank Tu Liem operates in accordance with State Bank of Vietnam's guidelines and regulations. (Agribank Vietnam 2010, 1.)

4.2 Credit risk management at Agribank Tu Liem

This part plays the role of analyzing the overall credit risk management at Agribank Tu Liem. In an interview about the bank's current risk management practices, Mrs. T, Director of the bank, outlined five major components of credit risk management at Agribank Tu Liem based on the bank's policy: minimizing credit risk, written loan policy, loan-loss provision, lending process and credit risk handling.

4.2.1 Minimizing credit risk

As mentioned in 3.5.1, Heffernan (2009, 156-158.) listed the key ways that a bank can minimize credit risk:

- Appropriate loan valuing: it is important for any bank to control the loan value as well as the loan monitoring costs using the following formula:

- o $R(L) = i + ip + \text{fees}$

In which

- R(L): rate of interest of the loan.
- i: rate of market interest.
- ip: risk of the possibility that the loan will not be repaid.
- Security and Collateral: banks tend to take security and collateral to minimize credit risk.
- Credit limits: the maximum amount can be lent related to loan assessment's aspects like collateral or wealth.
- Diversification of risks: banks diversify risks by lending to new loan markets, performing lease financing, guarantee or diversifying banking services to minimize overall risk exposure.

Based on those key criteria and the interview with Mrs. T, Director of the bank, the minimization of credit risk in Agribank Tu Liem is briefly evaluated below:

- Loan valuing: In Agribank Tu Liem, loan valuing is implemented properly and in a similar way as Heffernan's formula. According to Agribank Tu Liem's Handbook of Credit (2010, 40.), loan interest is added up in consideration of market interest and credit risk of the loan. Normally, the total interest rate of a loan is around 3 to 4%, but this can change based on market interest and riskiness of the loan. In Agribank Tu Liem, loan valuing is done based on loan staff's experience and the bank's lending guidelines. However, in the author's opinion, this can pose difficulties for the bank's loan valuing because if the loan assessor is inexperienced or he or she makes a mistake, the loan value given cannot be optimal, which can cause credit risk for the bank. The author believes that it is better if the bank uses software to calculate the value that should be given for a loan. In fact, Heffernan (2009, 180.) pointed out that Barclays, one of the biggest banks in the world, implements a software to optimize its loans. Therefore, a loan valuing software can greatly benefit Agribank Tu Liem and minimize its credit risk.
- Security and collateral: In Agribank Tu Liem's handbook of credit (2010, 44-50.), there are detailed and well-written guidelines. Loans are classified into two different types: loan with collaterals and loans can be done without collaterals. Also, limits for lending without collateral and maximum amount allowed for each type of collateral assets are clearly given. In addition, instructions of collaterals monitoring can also be found. For example, the credit assessor needs to monitor client's collateral quality and business operations every three months.
- Credit limit: the investigated bank also has clear credit limit guidelines. For instance, Agribank Handbook of Credit (2010, 33.) stated that "The maximum amount of loan given to one borrower cannot be more than fifteen per cent of total credit institution's equity".

- Diversification of risks: The bank mainly operates as a lending bank and the diversification of risks is not paid adequate attention. Agribank Tu Liem only focuses on credit activities but does not perform activities such as lending to new loan markets, lease financing, guarantee or diversifying banking services. Therefore, the bank should consider those activities to diversify and minimize its risks.

Overall, the minimization of credit risk has been well-implemented in Agribank Tu Liem. However, there are two recommendations to consider. First, the subject bank should use a software to value loan amount that should be given to minimize loan assessors' mistake and optimize the loan value. Finally, the bank should diversify risks by diversifying banking services, lease financing or lending to new loan markets.

4.2.2 Written loan policy

As emphasized in the theoretical framework, implementing a written loan policy is a crucial activity that a lending institution can do to ensure that its loan and are profitable and fulfils the standards by supporting officers with documented guidelines in assessing loan applications. (Rose & Hudgins 2010, 521.)

Rose & Hudgins (2010, 521.) also pointed out elements of a well-written loan policy, including:

- Loan goal statement (statement about features of a good loan, loan quality).
- Loan application assessment process.
- Authority and duty of each loan department and officer and the required signatures for loan approval.
- The necessary documentation needed for loan application.
- Guidelines for establishing loan rate, pricing and monitoring the loan payment.
- Procedures for assessing and taking collateral assets.
- A statement that outlines the lending institution main operating area which is the source of the majority of loans.
- Guidelines of general quality standards for every loan.
- A description of the maximum ratio of loan can be approved to a specific amount of assets.

According to Agribank Tu Liem's Handbook of Credit (2010, 47.), the written loan policy consists of the following main elements:

- Lending process and loan monitoring guidelines

- Responsibilities of each sub-unit and credit staff
- Evaluation and approval procedure
- Loan valuing guidelines
- Necessary documents for completing loan documentation
- Loan application processing time
- Post-approval monitoring and loan collecting
- Overdue loan monitoring
- Collateral regulations
 - Requirements for borrowing without collateral
 - Stages in collateral procedure
- Approval limits
 - Limits of loan amount that different staff levels can give

By comparing Agribank Tu Liem's written loan policy with the elements indicated by Rose and Hudgins, it can be seen that it consists of all necessary elements. In addition, the commissioning bank's loan policy is detailed and clearly written. To conclude, Agribank Tu Liem's written loan policy is done properly.

4.2.3 Loan-loss provision

Loan-loss provision, so-called provision for bad debts, is defined as a provision calculated to cover the debts during an accounting period that are not expected to be paid. (Oxford University Press, 1999.)

In essence, the loan-loss provision is not to limit the risks but only to reduce the possible damage caused to bank and avoid bankruptcy. According to State Bank of Vietnam's Regulation No. 493/2005 / QD-NHNN, banks need to reserve a certain amount of money as loan-loss provision to cover the possible loan loss and prevent bankruptcy (2007).

Table 3 shows the amount of money banks need to reserve for each debt group (the debt groups are explained in 3.2):

Table 3: Loan-loss provisioning for each debt group as prescribed by State Bank of Vietnam

Groups of debt	Loan-loss provisioning (% of the debt)
Group 1: Standard	0%
Group 2: Noticed	5%
Group 3: Substandard	20%
Group 4: Suspected	50%
Group 5: Loss-making	100%.

(State Bank of Vietnam's Regulation No. 493/2005 / QD-NHNN)

The money reserved for each debt is called the specific loan-loss provision. The bank also performs the general loan-loss provision to reserve for losses not identified during the loan classification and specific provisioning or in the case of financial difficulties when the debts decline. Percentage of general loan-loss provision stipulated in Regulation No. 493 is 0.75% of total loans of group 1 to group 4. In recent years, the implementation of loan classification and loan-loss provisioning based on Regulation No. 493 provides a much more proactive prevention of not only existing risks but also potential risks.

In compliance with those regulations, the overall loan-loss provisioning of Agribank Tu Liem during the period from 2012 to 2014 was implemented, as shown in table 4:

Table 4: Loan-loss provisioning at Agribank Tu Liem (Unit: Million EUR)

Type	2012	2013	2014
Total loan-loss provision	1.26	1.93	1.65
General	0.36	0.41	0.48
Specific	0.9	1.52	1.18

(Adapted from internal financial reports of Agribank Tu Liem from 2012 – 2014)

The total loan-loss provision in 2012 was 1.26 million EUR, in which the general provision was 0.36 million EUR and specific provision is 0.9 million EUR. Total provision for risk increased to 1.93 million EUR in 2013 due to the bad economic situation that leads to bad debts. In particular, the general provision is 0.41 million EUR, and specific provision is 1.52 million EUR. In 2014, total provision fell in comparison with the previous year, down to 1.65 million EUR. Total loan-loss provisioning reduction was due to overall positive economic recovery in Vietnam. General provision of the branch in 2014 was 0.48 million EUR and specific provision was 1.18 million EUR.

In general, the loan-loss provisioning situation of Agribank Tu Liem was enough and was done properly in accordance with State Bank of Vietnam's regulations. However, the loan-loss provisioning situation of the commissioning bank was not positive in 2013, which can be seen from the increased total provision for risk, but the situation in 2014 was much better.

Although in recent years, Agribank Tu Liem is required to establish large loan-loss provisions, but the bank still exceeded the revenue targets and achieved significant business efficiency.

4.2.4 Lending process

As indicated in 3.5.4, Francis (2001, 150-155.) mentioned six essential stages of the lending process:

- Application and interview: helping the loan officer in identifying the borrower's needs, gathering related documents and making the loan that will fulfil borrower's expectation.
- The assessment: collecting and evaluating all necessary information when forming the lending decision to reduce losses.
- Loan documentation: gathering and finishing all necessary documents to ensure the lender's interest and conformity to government requirement.
- Collateral: banks employ collateral as a way to minimize their risk from a loan.
- Loan management: Consists of setting and securing agreed-upon payments, assuring the bank's interest in the collateral, keeping the documents for review, monitoring address information and ending the loan after end payment is collected.
- Asset recovery and loan review: staff inspect every loan for risks.

The lending process includes many aspects and can be divided into different steps. Based on the angle of research, credit process can be classified in many ways. However, lending process must also comply with the Vietnamese law and in accordance with Regulation No. 1627/ 2001/QD-NHNN of State Bank of Vietnam. Every branch of Agribank Tu Liem has also complied with the process in the Handbook of Credit of its own. The stages of Agribank Tu Liem's lending process are mentioned in table 5.

Table 5: Overall lending process

Stage	Source of information	Obligations of the bank	Result of the step
1. Loan application	-Customer	-Guide customer throughout the process	-Complete loan record and transfer to analytical department
2. Application assessment	-Documents from stage 1 -Additional information	-Appraisal of financial and non-financial aspects based on customer records	-Report evaluated results to switch to evaluating department
3. Lending decision	-Documents from stage 2 -The bank's internal information -The financial statements if the customer is an enterprise -Additional information	-Rate and evaluate customer -Loan approval or refuse	-Lending decision: disburse or refuse -Introduce other products to customer -Customer service.
4. Disbursement	-Documents from stage 3 -Related contracts	-Appraise documents based on contractual conditions and lending decisions	Disbursing money
5. Monitoring, debt collection and credit liquidation	-Documents from stage 4 -Additional information	-Check customer base -Debt collection -Customer review -Credit liquidation	-Report the results of monitoring and providing solutions -Establish procedures to liquidate credit

(Adapted from Agribank Tu Liem Handbook of credit 2010, 22.)

As can be seen from table 5, there are five stages in Agribank Tu Liem's lending process: loan application, application assessment, lending decision, disbursement, monitoring, debt collection and credit liquidation. The stages of the bank's lending process are slightly different from Francis's six stages. However, the stages are clearly defined with the necessary elements.

At the first stage, customer coming to the bank will be guided and helped to make a loan request by a service employee. Then, the application will be forwarded to the Evaluating Department to process. After that, the loan application will be assessed and rated

carefully in order to minimize potential credit risk. Initially, the Evaluating Department will verify if there is any missing information, and only approve the eligible applications.

Then, the most important step of the assessment takes place. The evaluating staff will check the information of customer like financial situation, background, collateral assets' value to lend them a suitable amount of money. In Agribank Tu Liem, evaluating staff have access to a huge credit information database of State Bank of Vietnam, which facilitates and improves the accuracy of the process.

After making the lending decision, if the Evaluating Department agrees to disburse the money, a contract will be signed between both parties. However, an interview with Mrs. P revealed a limit of this procedure. Usually, the bank director has the responsibility of the final loan approval decision. Hence, a customer with connection to the director can get loan approval for a huge loan without fulfilling the requirements. In a country like Vietnam, this is not a rare situation and may cause many problems for Agribank Tu Liem to manage bad debts. In the author's opinion, instead of only the director, there needs to be a council who carefully reviews and makes the final decision.

And finally, after signing the contract, the money will be disbursed, and the loan will be further supervised by the Loan Monitoring Department.

In fact, apart from the aforementioned weakness, the investigated bank was prudent in dealing with the lending process. The bank advises clients with the right business direction, in order to avoid risks for customers. In addition, Agribank Tu Liem also pinpoints objects of lending, evaluate loan applications from customers carefully to comply with the principles and conditions for borrowing.

4.2.5 Credit risk handling

Bad debt is an indispensable element of credit operation of a bank. Under Chapter 1 of the Regulation No. 493/2005/QĐ-NHNN, State Bank of Vietnam stated: "The ratio of bad debt over total debts can assess the credit quality of credit institutions". Hence, the bad debt ratio reflects the credit quality and affects the prestige of the bank. As a result, banks frequently seek to minimize this rate and handle the bad debt thoroughly.

In recent years, Agribank Tu Liem actively handled credit risk by dealing with bad debt and taking measures to recover old debts. To recover the outstanding debts, investigated bank coordinated with government agencies to push the debtors to repay the debts,

usually small debts or debts with legal collateral assets. Agribank Tu Liem also specified the repayment period to match production needs of customers.

Table 6: Credit risk handling situation (Unit: million EUR)

Debt type	2012	2013	2014
Debts with credit risk handled	0.1	0.068	0.032
Debts collected	0.08	0.052	0,02
Loss	0	0	0

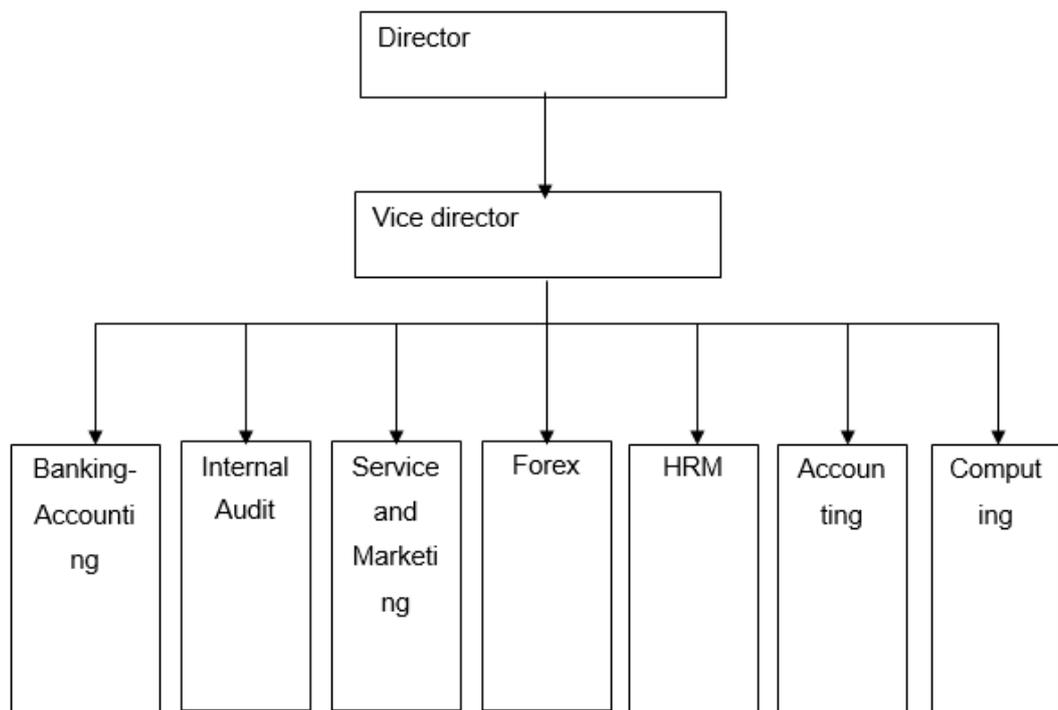
(Adapted from internal financial reports of Agribank Tu Liem from 2012 – 2014)

According to the table above, it can be seen that the credit quality of the case study bank over the past few years is gradually getting better, especially after the global economic crisis. The amount of high-risk debts to be handled is declining and no loss occurred. Thus, the credit handling situation of Agribank Tu Liem has been excellent during the past few years, which proved that the measures implemented to handle risky debts were effective.

4.3 Credit management structure of Agribank Tu Liem

In Agribank Tu Liem, the credit management structure is built according to lending process. It consists of Board of Directors and seven different departments. Board of Directors includes of a Director and a Vice Director who monitors the operation of the departments underneath.

Figure 12: Organizational structure of Agribank Tu Liem



(Adapted from interview with Mrs. A, customer relation staff)

The functions of each department, based on Agribank Tu Liem's internal operational report of 2014, are mentioned below:

- Board of Directors comprises one Director and one Vice Director who lead and manage all business operations of the bank.
- Banking-Accounting Department directly manages statistical accounting and payment as prescribed by Agribank Vietnam. This department also performs tasks in foreign and domestic payments and observes of vault safety regulations.
- Service and Marketing Department researches the market, categorizes and classifies customers and markets to offer banking products.
- Internal Control Department controls all operations of the branch to ensure the implementation of the rules and regulations of the State Bank of Vietnam and Agribank Vietnam.
- Forex Department does foreign currency trading and currency exchange.
- Human Resource Management (HRM) Department is responsible for monitoring personnel, receive and organize staff training.
- Accounting Department is responsible for accounting and making financial reports- --
- Computing Department provides software for business evaluation and management: to ensure accurate and updated information.

In fact, the credit management structure of Agribank Tu Liem is similar to the typical lending organization of a medium-sized bank of Hempel & Simonson (1999, 394.), as

mentioned in the previous chapter, which is understandable. Agribank Tu Liem, despite being a branch of the biggest bank in Vietnam, is an independent medium-sized bank.

However, there are certain drawbacks of this structure. Firstly, as can be seen from the functions of the departments, the structure is not designed specifically for credit risk management. Thus, it cannot maximize the effectiveness of the lending process and credit analyzing. Because the structure is not built for managing credit risk, each department has many different tasks, therefore hinders the ability to deal with risk. Secondly, the internal audit department is not correctly placed. Internal audit is defined as an independent consulting activity to improve the operations of an organization” (Institute of Internal Auditor Australia). **Therefore, internal audit cannot be put under the administration of any officer, and is also responsible for credit risk management.** The obligation of internal audit is to minimize this by internal monitoring. In Agribank Tu Liem’s structure, internal audit department is put under Board of Directors’ authority, thus hinders the ability to work fairly and freely. Agribank Tu Liem needs to change its credit risk management structure so that the Internal Audit Department does not work under anyone’s management and can operate independently without any obstacle.

4.4 Credit management performance at Agribank Tu Liem

This part will analyze the credit operational results of the bank based on its credit activity. To be specific, the calculations and assessments of debt structure, debt situation and loan-loss provisioning will be provided. With the approval to disclose the confidential financial data from bank’s representatives, this part will provide readers a comprehensive understanding of credit management performance at Agribank Tu Liem.

The numbers are presented in million euros. All the data was taken from the internal financial reports from 2012 to 2014. The main purpose of the calculations is to evaluate credit performance and the bank’s credit management in compliance with the regulations of State Bank of Vietnam, not to anticipate the future. As a result, the results of three latest years can be considered sufficient.

4.4.1 Debt structure

As mentioned in 3.2, according to State Bank of Vietnam’s Regulation No. 493/2005/QĐ – NHNN, debts are divided into five different groups

- Group 1: Standard (Debts not overdue yet or overdue less than 10 days)
- Group 2: Noticed (Debts overdue from 10 to less than 90 days)

- Group 3: Substandard (Debts overdue from 90 days to 180 days)
- Group 4: Suspected (Debts overdue from 181 days to 360 days)
- Group 5: Loss-making (Debts overdue more than 360 days)

The debt structure of Agribank Tu Liem from 2012 to 2014 is shown in table 7:

Table 7: Debt structure of Agribank Tu Liem (Unit: Million EUR)

Indicator	Year			Comparison			
	2012	2013	2014	2013/2012		2014/2013	
	Total	Total	Total	+/-	%	+/-	%
Total debts	24	28	32	8	16.7	8	14.3
Group 1	39.76	45.92	52.41	6.16	15.5	6.48	14.1
Group 2	7.42	8.67	10.8	1.244	16.8	2.13	24.6
Group 3	0.28	0.26	0.132	-0.02	-7.1	-0.13	-49.2
Group 4	0.12	0.23	0.1	0.104	83.9	-0.13	-56.1
Group 5	0.41	0.92	0.56	0.512	125.5	-0.36	-39.1

(Adapted from internal financial reports of Agribank Tu Liem from 2012 to 2014)

Generally, the analysis of the bank's operations shows positive results. Total outstanding loans' growths next year are higher than the previous year. Debt structure of Agribank Tu Liem had complex changes over the past few years, but it was relatively positive. In 2013, there were more difficulties for Vietnamese economic development than the previous years. Outside the country, the world market prices had complex fluctuations. Furthermore, the global economic turmoil and financial crisis had a huge impact on many Vietnamese economic sectors such as tourism, exports and various industries. Domestically, calamities with severe damages happened on a large scale. During the year, there were 11 hurricanes that swept through the territory. Thus, prolonged flooding in the Central Highlands caused serious damage. In addition, diseases, especially influenza H1N1, broke out in many regions and localities. Still, there were a few positive

aspects. Because of the unfavorable conditions, companies had hard time in operating, which resulted in difficulties in paying debt. Therefore, in 2013, Agribank Tu Liem's debt groups had the following changes. Group 1 reached 45.924 million EUR, increasing 15.5% respectively compared to the previous year. It was a good sign for the bank that these loans accounted for a large proportion in total loans. Group 2 was 216.7 billion, which was an increase of 16.8% compared to year 2012. Although debts in group 2 increased in 2013, the debts in this group remained at low-risk and could be fully collected. In 2013, the total amount of debts in group 3 decreased slightly by 0.02 million EUR, a 7.1% decline. Group 4 rose to 0.228 million EUR, about an 83.9% growth and group 5 increased by 125.5%, to 0.92 million EUR. The growth rate of group 4 and 5 were too high considered these groups had high level of risk and could cause losses because it was unlikely for the bank to collect all this debt.

Year 2014 witnessed positive developments in Vietnamese economic situation and social development. While global economic conditions were still complicated, Vietnamese economy recovered rapidly. Therefore, living standard was enhanced, political and social stabilities were guaranteed. This condition gave enterprises an environment to perform effectively, so did the banks. Thus, the situation of overdue loans at Agribank Tu Liem fell sharply. Debts of Group 1 increased by 6.16 million EUR, about 15.5% over 2013. In group 2, the total amount of debts increased by 24.6% compared to 2012. This growth rate was significantly higher than in 2013. Therefore, Agribank Tu Liem should perform measures to reduce this proportion. The amount of debts in group 3 fell sharply to 3.3 billion, about a 49.2% decrease compare to year 2013. Group 4 also shared the same a downward trend. In 2013, debts of this group fell from 0.26 million EUR to 0.132 million EUR, resulted in a 56.1% decrease. Finally, group 5 was also down 0.36 million, about a 39.1% decrease compared to the previous year.

In summary, the amount of total loans of Agribank Tu Liem was really fast in the period from 2012 to 2014, which appeared to be positive. However, the bad debt situation of the bank in 2013 was worse compared to 2012, but credit activities of the bank have improved significantly in 2014. The bad debt groups had a strong downward trend, which proved the positive impacts of the banks' measures to minimize risks and collect the debts.

4.4.2 Bad debt situation at Agribank Tu Liem

In any bank or business activity, risk is an essential part of the operation. With the operation of a bank like Agribank Tu Liem, risk can be assessed through the bad debt indicator. According to State Bank of Vietnam's Regulation No. 493/2005/QD-NHNN, bad

debt includes debts from group 3 to 5 (2007). These debts are the major reason of banking credit risk. High proportion of bad debts compared to total outstanding debts shows that the credit risk of a bank is significant, and it will be hard to maintain and expand credit operations.

Table 8: Bad debts at Agribank Tu Liem (Unit: Million EUR)

Indicator		Year			Year			
		2012	2013	2014	2013/2012		2014/2013	
		Total	Total	Total	+/-	%	+/-	%
Debts	With deposit assets	37.44	45.75	52.86	8.31	22,2	7.11	15,5
	Without deposit assets	10.56	10.25	11.14	-0.31	-3	0.89	8,7
Total debts		24	28	32	8	16,7	8	14,3
Bad debts		0.81	1.4	0.79	0.59	73,4	-0.61	-43,6
Bad debts/Total debts		3.4%	5%	2.4%				

(Adapted from internal financial reports of AGRIBANK TU LIEM from 2012 to 2014)

According Regulation No. 493/2005/QD-NHNN of State Bank of Vietnam, the higher the ratio of bad debts over total outstanding debts, the lower the credit quality of credit institution is. In addition, if the bad debt ratio of a bank exceeds 9%, the State Bank of Vietnam will terminate the operation of the bank.

Therefore, over the past few years, it can be seen that the bad debt situation of the bank had fluctuated, especially in 2014. In 2012, the bad debt was 0.81 million EUR, representing 3.4% of total loans as a safe ratio. Bad debts incurred in 2013 was 1.4 million EUR, accounting for 5% of outstanding loans. The reason for that was because of the impact of the long-lasting floods as well as the global economic crisis. Keeping in mind

that 9% is enough for termination of operation of the bank, the bad debt ratio of Agribank Tu Liem was alarming in 2013. Simultaneously, the domination of imported goods to domestic goods hindered the ability of companies to repay debts. Slow economic growth coupled with the fluctuation of VND/USD exchange rate continued to cause difficulties to businesses.

In 2014, bad debts reduced drastically to 0.79 million, representing a decrease of 43.6% compared to 2013. Bad debts in 2014 accounted for only 2.4% of total loans. This success was due to active handling and recovery of overdue debts and classifying customers for accurate investment orientation. The bank has cooperated closely with customers to provide most suitable solutions. As a result, bad debt rate fell rapidly in 2014.

4.5 Causes of credit risk at Agribank Tu Liem

In the authors' opinion, there are three main causes of credit risk in Agribank Tu Liem's operation: from the customer, from the bank and external causes. Based on these causes, the investigated bank can also improve its credit risk management.

Firstly, about the customers, there are many customers who do not have business and market knowledge. Therefore, they do not have the ability to cope with the unfavorable factors in the past few years. On the other hand, some individuals are not properly aware of the use of bank credit and thus, use it with low efficiency, leads to credit risk.

Secondly, inside the bank, it is possible that lending executives do not accurately assess the loan applications before lending, because loan assessment is a complex process that requires experience and deep knowledge. In addition, officers are sometimes sketchy and do not supervise closely the use of customer loans. Furthermore, qualified staff of the bank is still inadequate and not keeping up the development of the technology.

Lastly, there are other external causes that strongly affect the credit risk of the investigated bank. The legal framework in Vietnam is still inconsistent. There are too many separate legal documents for banking business, which leads to the difficulty to apply and supervise them. Global economic crisis, exchange rate fluctuation, inflation and domestic natural disasters also affected the credit situation of the bank adversely. Though, the staff are not supposed to blame the unfavorable economic conditions, it is their responsibility to cope with the situation and bring satisfactory results for the bank.

5 Summary and conclusion

In general, the research evaluated credit risk management of Agribank Tu Liem based on the theoretical framework and regulations of State Bank of Vietnam with additional viewpoints from the author and the bank's representatives. This final chapter will conclude the thesis by answering the investigative questions of the research and provide recommendations. In addition, suggestions for further research and learning process evaluation are also presented.

5.1 Key outcomes

This part provides readers the key outcomes of the research. The investigative questions are briefly answered in the following table:

Investigative question	Brief answer
1. What is credit risk and how is the current credit risk situation in Agribank Tu Liem?	Credit risk is the risk of a debt not getting paid. The current credit risk situation in Agribank Tu Liem is positive. The ratio of bad debts over total debts was reduced from 5% in 2013 to 2.4% in 2014, the number of credit risk cases to be handled and total loan-loss provision decreased.
2. How is the current credit risk management in Agribank Tu Liem?	Minimizing credit risk, written loan policy, loan-loss provision, lending process and credit risk handling are five major parts of credit risk management in Agribank Tu Liem. The current credit risk management of Agribank Tu Liem is implemented appropriately in compliance with internal guidelines and regulations of State Bank of Vietnam. However, there are still some weaknesses that need to be overcome.
3. What should be recommended to improve credit risk management in Agribank Tu Liem	It is necessary for the bank to review its credit risk management structure, lending process, diversification of risk and staff training quality. The bank should also implement software to optimize loan size.

	The details of recommended changes will be discussed in recommendation section.
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Table 9: Brief answer of investigative questions

5.2 Recommendations

Within the limits of a bachelor thesis, it would not be practical to recommend for the management of State Bank of Vietnam or for the whole banking sector. This study only concerns the management of credit risk of one particular bank. In fact, the bank's activities may be different from the standards. Hence, it is highly necessary for the bank to implement appropriate practices to enhance its credit risk management.

This section will provide the recommendations in both governmental and bank's level, with the emphasis on the bank. Besides, during the research, the author discovered some aspects that the government and the state bank of Vietnam can improve, and they will also be mentioned. Furthermore, to conclude the chapter and the thesis, suggestions for further research and evaluation of personal learning process and commissioning bank collaboration will be discussed.

5.2.1 Recommendations for the government

Vietnamese government needs to promote a fair-trade environment and provide a basis for financing activities by improving the legal framework. The orientations of economic development of the state should be uniform to avoid frequent changes in the policies that cause difficulties for businesses.

5.2.2 Recommendations for the State Bank of Vietnam

The system of regulations of the State Bank of Vietnam is quite complex with many different documents. Therefore, the State Bank of Vietnam needs to unify the regulations to simplify the rules in order to be used and checked more easily. In addition, the State Bank of Vietnam needs to submit the difficulties that the banks have to face to the government for solutions by amending the legal documents relating to the procedure for loans, thereby forming conditions for enterprises to borrow in a more favorable way.

Also, the State Bank of Vietnam should provide accurate and timely information to the commercial banks and businesses. On top of that, it needs to continue to improve the regulatory role of macro economy with the appropriate tools such as: interest rates, loan-

loss provision ratios to strengthen credit quality management to ensure financial market activity and healthy competition and to prevent the lowering of standards. Finally, the State Bank of Vietnam needs to improve the efficiency of the inspection and control of credit activities at commercial banks.

5.2.3 Recommendation for Agribank Tu Liem

Overall, credit risk management in Agribank Tu Liem had positive results over the past few years. Though, through evaluating the credit risk management of Agribank Tu Liem, there are some critical recommendations to the bank.

The commissioning bank needs to focus on improving the staff training quality, since staff competency is extremely important throughout the whole lending process. The bank needs to encourage employees and enable them to participate in training to enhance their competence to perform better. Agribank Tu Liem should also improve the quality of loan assessment.

As discussed in 4.3, Internal Audit Department cannot be put under the authority of the Board of Directors, in order to work freely and fairly. Agribank Tu Liem needs to change its credit risk management structure so that the Internal Audit Department does not work under anyone's management and can operate independently without any obstacle.

In addition, as mentioned in 4.2.2, the bank director has the responsibility of the final loan approval decision, and a customer can get approval for a huge loan simply based on the relationship with the director. Therefore, Agribank Tu Liem needs to revise the loan process critically. In the author's opinion, instead of only the director, there needs to be a council who carefully reviews and makes the final decision.

A bank can diversify the credit risks by lending to new loan markets, performing lease financing, guaranteeing or diversifying banking services to minimize overall risk exposure. (Heffernan 2009, 156-158.). Hence, instead of just operating as a lending bank, Agribank Tu Liem needs to diversify the risks by diversification of services. This is also the necessary path for commercial banks nowadays. However, Agribank Tu Liem has not paid proper attention to other activities but almost exclusively focuses on credit activities. Therefore, the bank's operational results depend on these risky activities. The bank should diversify its operation by, for example, performing lease financing, guarantee or diversification of banking services.

Agribank Tu Liem has not used a software that calculates the loan limit that should be given, which was done by many major banks to minimize credit risk such as Barclays. Therefore, the bank should implement reliable loan valuing software to improve its credit risk management.

5.3 Suggestions for Further Research

Within the limits of a bachelor thesis, the author is unable to assess the credit situation from a more complex approach with credit models and formulas. It can be an important point to be taken into consideration in further studies.

The current research questions can be developed more. Further research can include evaluation of bad debts, credit risk and credit risk management of the whole Vietnamese banking sector in general, and compare that to see the effectiveness of investigated bank's credit risk management.

Further research would also benefit from quantitative research methods. Several suggestions are interviewing the customers to understand credit risk from their point of view and customer survey about the investigated bank's lending procedure. Those can be in the form of online questionnaires, face-to-face interview or survey. From those, the bank would have a better view on customer's perspective about credit risk and credit risk management procedure.

5.4 Evaluation

During his academic life, the author has actively participated in many studies and team projects related to business. Though, for him, this thesis research is completely different from the others and is a long-lasting and challenging individual work. The following parts will discuss the author's personal learning process and the collaboration with the commissioning bank.

5.4.1 Personal learning process

For the author, conducting an in-depth academic research and writing the bachelor's thesis is an interesting but challenging experience. The biggest challenges he had to face were to find a good commissioning company and the lack of specialized knowledge in banking. The author had difficulties in finding a commissioning company, and after sending nearly a hundred emails, he was finally accepted by Agribank Tu Liem. The

attempts trained him to be patient and gave him useful knowledge for job finding after graduation.

Although, the author was specialized in financial management, the study program did not provide deep knowledge about banking in general but more about accounting. Therefore, he needed to overcome shortcomings in knowledge from various sources of literature and discussing with the experts in the field of banking. However, it provided him the chance to enhance his knowledge in banking, and he felt much more confident working in banking and financial sectors. In addition, he learned how to select information to support the thesis understanding effectively. His critical thinking and summarizing skills are also improved during the process.

Also, the author had the chance to work with the professionals in the field of banking, the director and employees of Agribank Tu Liem. His communication skills are polished, and this chance provided him valuable information about how a bank worked, information flow in the bank and precious contacts that he could later use in his professional life.

5.4.2 Commissioning bank collaboration

During the process, the author and the commissioning bank collaborated effectively.

The author actively communicated with the commissioning party to ensure essential mutual understandings about the research and their expectations. During the process, he negotiated with the bank representatives about the thesis topic, asked for necessary information and convinced them to let him publish the bank's financial data in his thesis.

The bank's representatives were professional and enthusiastic in giving valuable information for the research as well as arranging Skype meetings and phone calls to ensure the quality of the thesis work. The contact persons were a bit reluctant in allowing the author to disclose the confidential information about the bank's financial data, but agreed to after discussing its necessity with the author.

In summary, the author wants to thank the bank and the representatives for their great contributions to the success of the thesis. He is extremely grateful, and he hopes that the thesis meets their expectations.

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Interviews

Mrs. T. 2015. Director. Agribank Tu Liem. 10 March 2015

Mrs. P. 2015. Internal Auditing Department Manager. Agribank Tu Liem. 25 March 2015

Mrs. A. 2015. Loan assessment staff. Agribank Tu Liem. 28 March 2015

Appendices

Appendix 1. Traditional report structure

Cover page, abstract, table of contents
Introduction <ul style="list-style-type: none">– general introduction– objectives, (research) problem setting, delimitation– concepts.
Theoretical part <ul style="list-style-type: none">– theoretical and previous practical and experiential information– establishing a research space among earlier studies, theories and models, with reference to professional literature and other sources.
Empirical part <ul style="list-style-type: none">– target of research– objective, problems, development task– methodological choices¹ or project plan² with justification– description of implementation or working methods– data and types of analysis used¹– results¹ or product²– summary.
Discussion <ul style="list-style-type: none">– consideration of results– trustworthiness of the research¹– ethical viewpoints– conclusions and suggestions for development or further work– an evaluation of the thesis process and one's own learning.
References
Appendices <ul style="list-style-type: none">– questionnaire/interview forms and analysis results¹– the product (if possible to include in the report)²

¹A research oriented thesis, including quantitative or qualitative research.

²A product-oriented, practice-based thesis, involving a product development or planning task, event, publication, multimedia product or the like.

Appendix 2. Preliminary Table of Contents for the thesis

1. Introduction
 - 1.1. Background
 - 1.2. Project objective and Project tasks
 - 1.3. Demarcation
 - 1.4. Benefits for the stakeholder
 - 1.5. Risks
 - 1.6. Key concepts
 - 1.7. Structure of the report
2. Theoretical Framework
 - 2.1. Risk management
 - 2.2. Credit risk
 - 2.3. Credit risk management
3. Research methods
 - 3.1. Research Approach
 - 3.2. Risks and limitations
 - 3.3. Reliability and validity
4. Project evaluation
 - 4.1. Limitations
 - 4.2. Recommendations
 - 4.3. Commissioning company feedback
 - 4.4. Personal learning

References

Appendices

- Appendix 1: Gantt chart
- Appendix 2: Overlay Matrix
- Appendix 3: Interview questions

Appendix 3: Interview questionnaire

This interview contributes to the data collection process for bachelor thesis.

The identities of the respondents and the interview content are guaranteed to be kept confidential.

Question related to credit risk management

1. Credit risk is unavoidable in banking business. Could you please tell about the credit risk situation in Agribank Tu Liem?
2. How is credit risk management structure of Agribank Tu Liem?
3. Could you please tell about the credit risk management measures implemented in your bank?
4. How is lending procedure and loan application assessment of Agribank Tu Liem? Vietnam. What categories are considered during the assessment?

Questions on the bank's performance

1. What do you think about credit risk management of your bank in general?
2. What do you think should be improved about credit risk management of your bank? Any further suggestions?

Thank you for your time!